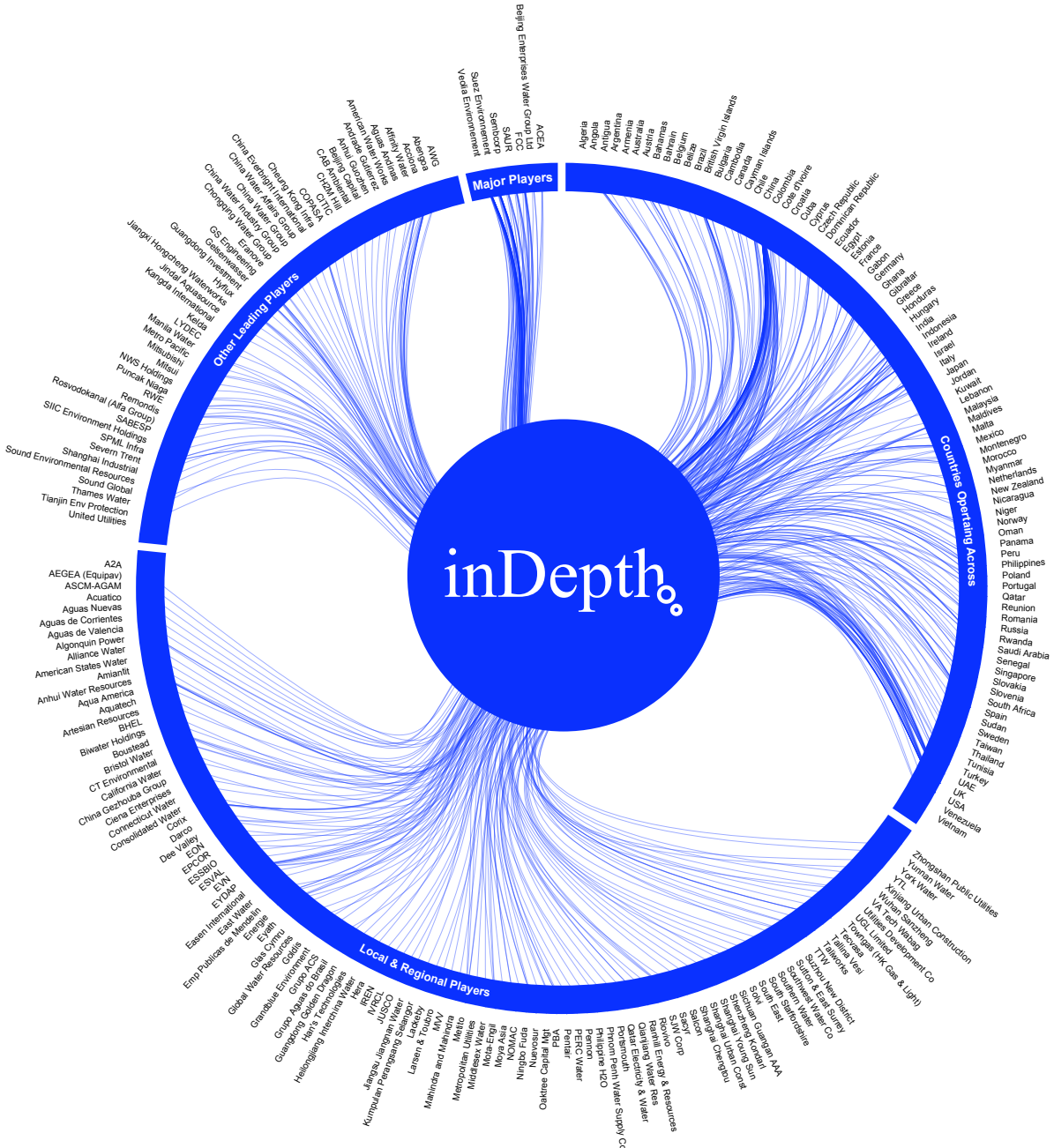
inDepth Water Yearbook

Your Guide to Global Water Industry Data: 2014-15



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Your feedback much appreciated

If you would like to provide any comments or feedback about the website or this version of the yearbook we would be happy to hear from you and will try to respond expediently to any message received. Please email us at: indepth@arup.com.

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Welcome to the Arup inDepth Water Yearbook 2014-15

By Dr Mark Fletcher, Arup Global Water Leader

Timely and clear coverage of a complex world

Offering a unique review of the dramatic changes affecting both companies operating in the sector and its investment climate. Drawing from a wide range of sources our Yearbook highlights companies' active in the water and wastewater services sector and their corporate strategies globally. It is a key reference document for those looking to understand water industry players, trends and issues both globally, regionally and in over 80 countries. The detailed analysis by country and company should prove useful.

We are very proud to be sharing this important piece of global research and hope that it will be welcomed as a valuable industry tool. It is intended to be practical and easy to use and we are sure there will be areas of interest for all, as well as areas for improvement. Your feedback in shaping inDepth going forward will be most welcome. The PDF download is a free resource – with our compliments.

Water's complex footprint

The development of the website to support our Yearbook has provided a real opportunity to share insight to some of the serious contrasting challenges facing the world of water. The World Economic Forum 2015 has identified water crises, failure of climate change adaptation and extreme weather events as some of the top global risks in terms of likelihood or impact. Water is essential for life and in a changing climate the shocks (such as storms and floods) and incremental changes, for example global sea levels rising, across the water cycle increasingly affect our lives. We only have to consider the real issues in Sâo Paolo and California to recognize the importance of water to society.

In a global world of water, the issue of public or private water is frequently discussed. It provides a subtle but very relevant context for public participation which is becoming increasingly relevant in rapidly urbanising and customer-centric societies. Are you a customer or a citizen? The relationship between public utilities and their citizens may be fundamentally different to that between private utilities and their customers. It makes you think about multi-agency working and how best to engage people.

We hope to add new and interesting content around key themes with contributions from global industry experts. Our first theme presented as a special feature on our inDepth website: www.indepthwateryearbook.com, is broadly introducing 'The Future of Water' based on our research and foresight work with Sydney Water and we have been delighted to receive viewpoints from a wide range of backgrounds and sectors to kick-start re-thinking around these important topics. This new section is only available online.

We have an increasingly important role to play in providing 'solutions' to some of the global issues identified. If you are passionate about water issues and would like to have a voice through our 'perspectives' we would love to hear from you: indepth@arup.com.

Preface by Dr David Lloyd Owen

Plunging inDepth: the world of water in 2015

Plunging in

This publication marks the return of my Water Yearbook, now published by Arup. It is three years since the launch of the 14th and final edition of the previous Water Yearbook and it is evident that the need for this Yearbook has not gone away. I am grateful to Arup for taking this project on.

Over the past three years I have concentrated on maintaining and developing the databases that lie at the heart of the Yearbook as well as considering how this information can be most effectively used. As a result, in terms of company coverage, the changes in this edition have tended to be of a conservative nature. In terms of presentation, all the company entries now start with a summary of the number of people they serve. The country entries now consist of three interconnected datasets, covering demographics, water resources and infrastructure and the role played by the private sector. The company and country data has been integrated into the following section, which looks at how the world of water has changed over the past 25 or so years.

How the world of water has changed

Since the 2012 survey, there have been ten new company entries, 22 deletions and eight name changes. This is the first time the number of entries has fallen, partly due to companies being omitted because of a stricter selection criteria and also because of several were acquired by other companies. Five of the ten new entries are Chinese and one is a Singapore based company that focuses on the Chinese market. In four cases, companies had acquired water activities from other companies slimming down their water activities. Eight companies have been acquired, two of the smaller Water Only Companies of England & Wales have been merged with larger entities along with one relatively young Italian multi-utility (Acegas-Aps) which itself was the product of a merger of two recently formed companies, along with Acqua Potabili, which traces its origins back to the mid nineteenth century. Finally, three companies based in Singapore and one in China which were acquired by Chinese water companies.

1,903 contract awards and transactions have been identified between 1987 and 2015, which involve a total of 2,080 separate contracts. Looking back, there were 325 contracts (for the 1988-2000 period) noted in the 2000 edition and 1,380 (for 1997-2012) in the 2012-13 edition.

In the current edition, 2,080 contract awards covering 1,052 million people have been identified. There has a shift away from combined water and wastewater contracts towards individual service contracts for both annual and cumulative contract awards. By 2014, the overall number of people served by sewage contracts had nearly equaled those served for water contracts, with just 20% accounted for by combined contracts.

Back in 2003, there were five companies that accounted for 73% of the global market in terms of numbers served under PPP. Three of those top five companies have changed beyond all recognition. Meanwhile both Suez Environnment and Veolia Environnement remain the global leaders in this business. Today, they command a 24% share of the global market, while the current five largest companies account for 35% of the global market in population served terms.

Looking at the top fifty companies in terms of population served, Suez Environnement heads the table for the first time, followed by Veolia Environnement and in third place, the notable rise of Beijing Enterprise Water Group. In 2012 Chinese companies were growing their domestic customer bases beyond 15 million people. Today, Shanghai Industrial / SIIC, Sound Global / Sound ER and Beijing Capital all now serve well over 20 million people in China, based upon a quasi-national presence. Indeed, 19 of the 50 leading players are primarily involved in China, including 10 of the top 20.

Data has improved in terms of both quantity and quality. For example, we had data on water and wastewater volumes handled for 16 companies in 2010. In this edition, it extends to 50.

It remains a challenging sector do business in. When 12% of all contracts awarded to date (120 contracts, covering 119 million people) in population terms have ended (for whatever reason) this highlights the need to be able to monitor how a contract has progressed after its award and entering into service. When 8.9% of contracts have ended prematurely, that is a significant risk factor.

Globally, we estimate that 1,140 are currently served to some extent by private sector contracts. In 2012 971 million people were identified as being served by the private sector. This compares with, for example 563 million people as being identified as served by the private sector 2005 and 335 million in 2000.

Of the 884.9 million people covered by the top 50 players, 548.1 million were served in the company home country and 336.9 million in other countries. The next 112 companies covered a total of 198.7 million people, 150.3 million in their home markets and 48.4 million internationally.

While the Top 50 companies covered an average of 17.4 million people, the second tier companies covered 1.7 million people on average. The Top 50 companies also tend to have more international activities, with 38% of their contracts taking place in other countries against 25% for the second tier companies.

A considerable number of smaller, unlisted payers also exist. The 58 million people served by the 254 contracts awarded to companies that do not have a full entry here compares with 42 million people in 2012 and 32 million in 2008.

Companies based in OECD member states dominated the company entries until 2007. Since 2011, there have been roughly equal numbers for developed and advanced developing / developing economies. Mergers and reclassifications have affected companies in the OECD more than in the rest of the world.

In this edition, there are 162 entries from 22 countries. In 1999, there were 71 companies from 14 countries. This reflects the emergence of as new generation of locally based companies.

Since 1999, the various editions of the Yearbook have forecasted that 15-16% of the world's population would be served through water or sewage PPP contracts in 2015. It now looks as if 16% is indeed the correct figure, although not due to where contracts would have been anticipated in 1999. China is the main new driver, followed by Brazil and more recently, India.

Looking ahead

Over the original Yearbook's 14 editions, there was a gradual migration from paper to PDF, via a compact disc or a download. This edition marks the start of a migration towards a web based form as well. Given that as I write, there are 592 A4 pages with over 188,000 words of text and data, this will be an increasingly important step in keeping all of this information together in a manageable and accessible way.

Your feedback is always appreciated. It played an important role in the preparation for this edition and helps us to ensure the Yearbook evolves in a way that reflects your interests. Any possible errors and omissions need to be pointed out as do areas where we could focus our attention towards in the future. If there is one overarching ambition behind this Yearbook, it is to help foster understanding about the world of water and the role various players have in moving towards universal access to sustainable water and sanitation services. Debates about how we can attain these ambitions need to be based on informed opinions. We hope that the Yearbook will make a contribution here.

David Lloyd Owen

Envisager Limited

October 2015

Why this Yearbook

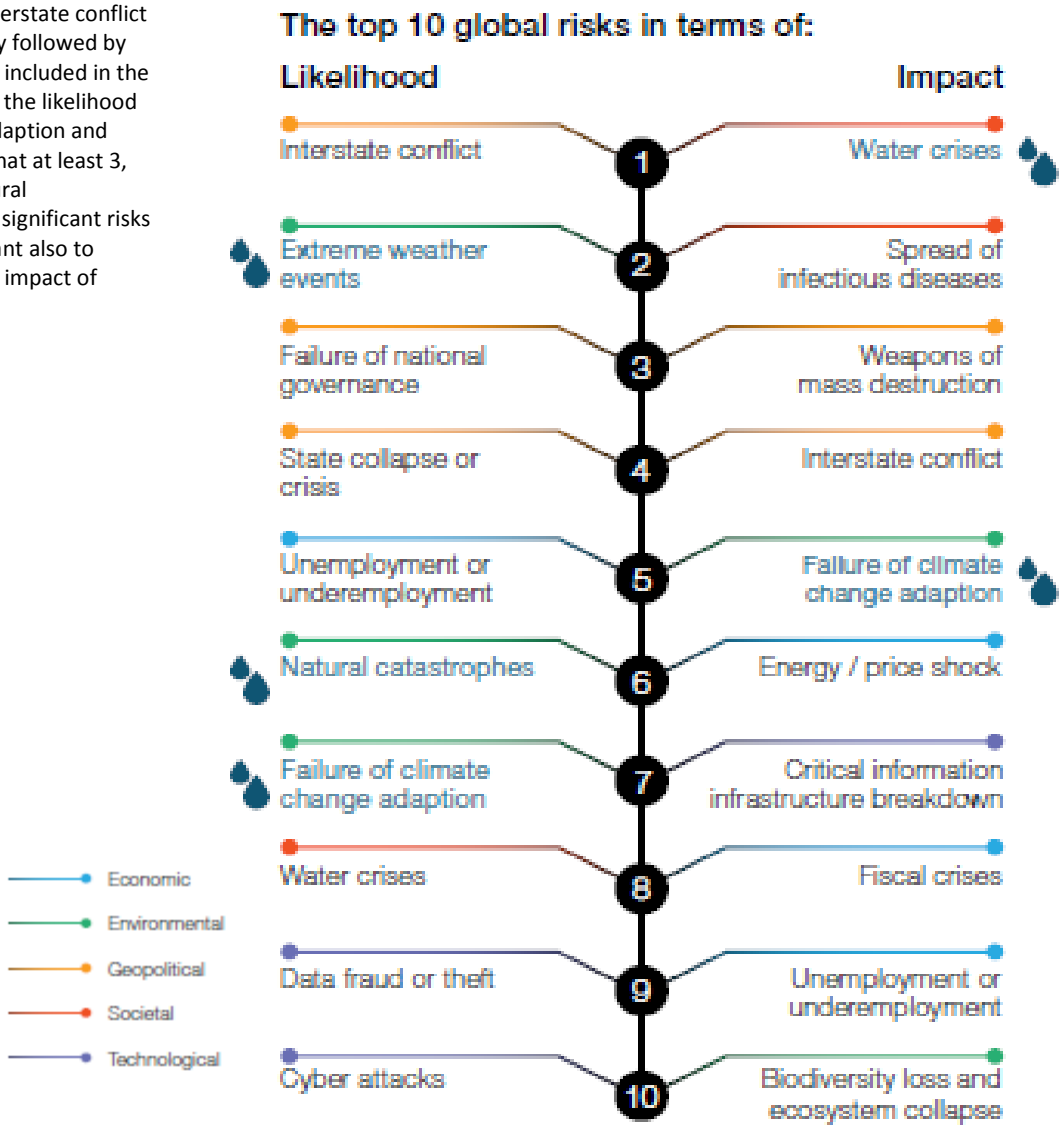
Addressing the global challenges

This year the Global Risks Landscape, a map of the most likely and impactful global risks, puts forward that 25 years after the fall of the Berlin Wall, “interstate conflict” is once again a foremost concern. However, 2015 differs markedly from the past, with rising technological risks, notably cyber-attacks, and new economic realities, which remind us that geopolitical tensions present themselves in a very different world from before. Information flows instantly around the globe and emerging technologies have boosted the influence of new players and new types of warfare. At the same time, past warnings of potential environmental catastrophes have begun to be borne out, yet insufficient progress has been made – as reflected in the high concerns about failure of climate-change adaptation and looming water crises in this year’s report.

Source: www.weforum.org/reports/global-risks-report-2015

Ten global risks of highest concern

The World Economic Forum Global Risks 2015 identifies the linkelhood of interstate conflict as the highest concern. Closely followed by extreme weather events. Also included in the top 10 global risks in 2015 are the likelihood of failure of climate change adaption and water crises. Demonstrating that at least 3, possibly 4 (if we consider natural catastrophes) of the ten most significant risks are water-related. It’s important also to consider that the number one impact of these risks is water crises.



About Arup

We shape a better world

We are an independent firm of designers, planners, engineers, consultants, economists, scientists and technical specialists offering a broad range of professional services across the water cycle. Through our work we make a positive difference in the world for people and the environment.

Arup is the creative force behind many of the world's most prominent projects in the built environment and across industry. From 90 offices in 38 countries with over 13,000 designers, engineers, scientists, planners and business consultants delivering innovative projects across the world with creativity and passion.

Water at Arup

Social impact

To date, 210 million people around the world have benefited from Arup's involvement across the water cycle since 2012. We embrace our role in influencing positive solutions to global water issues and take very seriously our opportunities to improve the lives of those we come in contact with. Our aim is to shape a better world for over 500 million in the next ten years.

This last year much of our 'social benefit' has been earned from a number of projects in two main areas: impact on water supply accounting for 42%, closely followed by wastewater at 33%. This is reflective of the demands placed on our global urban environments and the need to replace and improve existing systems.

Our capability encompasses water in natural catchment systems, including flood risk management, water treatment and supply, its uses in municipalities, the built environment and industry, and its treatment, re-use, recycling and return to the environment.

For more detailed information about our services and projects please visit us at: www.arup.com/water.

Design with water

Our Design with Water approach recognises the need to change the way we live within our constraints and leverage the full benefits of taking a water cycle approach to water management. At its core, this innovative process is about reducing risk, increasing resilience and perhaps most importantly making better, healthier places and improving the local environment. This can be achieved through the reintegration of catchment-scale water management with urban planning and landscape design. By understanding and influencing the whole water cycle, Arup has developed particular expertise that enables us to assess risks and support our clients in taking a strategic approach to water management – as well as minimising mankind's impact on the environment.

We provide services across the water cycle, addressing issues relating to resilience, flood risk, water supply and wastewater treatment through sustainable and innovative planning, design and delivery.

To download our interactive PDF please go to: www.arup.com/water and download from the page.

Research and development

The Arup Water business has a great track record in supporting and developing meaningful research in the water space. Investing significantly in water research over the last 12 months. Our research programme is informed by our 3 year Research Roadmap, which was refreshed last year, with a focus this year on flooding; green infrastructure and catchment management.

Our programme includes:

Now Research - responding to current business needs
New Research - pushing the boundaries of a discipline
Next Research - opening up new business areas.

For further information please read our Global Water Research Review 2015 and Research Roadmap please go to: www.arup.com/water and download from the page.

Drivers of Change

Arup's Drivers of Change investigate the key global issues and trends driving change in our societies and markets. It is one of the most well-known and comprehensive series of its kind. The cards are an effective way of raising awareness about our environment – both man-made and natural. They help initiate conversations, act as workshop materials, provide a foundation for further study and serve as an input for strategy and innovation processes. Drivers of Change: Water delivers a 2015 update of the previous water cards (first published in 2008). The new version was developed through a global programme of research, consultation and workshops. It includes new drivers such as smart infrastructure and waterless design, while continuing to highlight key social and political issues around water such as water access and privatisation.

For further information please view our interactive PDF of the cards at:
http://publications.arup.com/Publications/D/Drivers_of_Change_Water_cards_2015.aspx

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Dr David Lloyd Owen biography

Managing Director, Envisager Limited.

David has followed the technology sector for 29 years and the water and waste management sectors since 1989. He was an equity analyst at Savory Milln / Swiss Bank Corporation and Banque Paribas and was a founding director of Ecofin Limited and head of research at Delphi International. In 2003, he set up Envisager, a company that advises multilateral institutions, financiers, companies and governments on the water & wastewater market, policy, environmental and management issues.

He is a member of the Advisory Board for the Pictet Funds Water Fund, an advisor to XPV Capital Corporation (a Toronto-based water VC fund) and a member of the Investment Advisory Committee of WHEB Asset Management. He was a Member of Glas Cymru Cyf from 2001-11 and a non-executive director of EnviroGene Limited from 2006-09.

Envisager has developed two databases. [1] The Envisager PPP Database covers all water and sewage PPP contract awards outside France, Spain and the USA that have been identified since 1985. [2] CEWWT is a detailed assessment of water and sewage infrastructure capital and operating spending needs at the country level, based upon the current state of their infrastructure and services and their water resources.

An ecologist with a BSc in Environmental Biology from Liverpool University and a DPhil in Applied Ecology from Jesus College, Oxford University, he is a Chartered Environmentalist (CEnv, Soc Env, MIEEM) and a Chartered Geographer (CGeog, FRGS).

He has written a number of peer reviewed papers on water management along with a broad range of articles, commentaries and presentations at conferences and seminars. ‘The Sound of Thirst: Why urban water for all is essential, affordable and achievable’ was published by Parthian Books in 2012. A book exploring the potential and practicalities of ‘smart water’ is to be published by John Wiley in 2016. He also writes a monthly column for Global Water Intelligence.

Other books on the water sector published include:

‘Tapping Liquidity: Financing water & wastewater 2010-29’ (Thomson Reuters, 2009)
‘Financing water and wastewater to 2025: From necessity to sustainability’ (Thomson Financial, 2006)
‘European Water: Market drivers and responses’ (CWC, 2002)
‘European Water Company Profiles’ (FT Energy, 1998)
‘The European Water Industry: A country-by-country analysis’ (FT Energy, 1998)

David is a member of the Worshipful Company of Water Conservators, a City of London Livery Company, where he serves as a Court Assistant. He is also an Ambassador for Pump Aid.

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How to use this book

The yearbook is divided into three parts. "Part 1: Plunging inDepth " takes a look at trends noted in water and wastewater services worldwide since the previous edition and considers how these are set to evolve. "Part 2: Country Analysis" in this edition covers countries of interest to those involved in providing water and wastewater services. "Part 3: Company Analysis" covers companies providing these services that are wholly or partly in the private sector; firstly the major international players and then the other leading 50 companies in terms of populations served and finally, other companies based in Asia, the Americas, and Europe and the MENA region. A glossary of terms and abbreviations used in the Yearbook and a listing of the main references used.

Country entries

Data is provided for countries where current PPP contracts have been identified in three tables.

[1] Water resources, consumption and urban infrastructure

This includes access to urban water and wastewater services, sewage treatment, water abstraction by sector and current and future exposure to water scarcity and water stress at the national level.

[2] Population and Public Private Participation

The current and future national and urban population along with the level of urbanisation in each country. Current estimates and forecast numbers of people served by PPP.

[3] PPP company presence

Summary of people served via PPP by each company identified as being active in the country.

The water data outlines how much water is available in each country on an annual basis, along with how much is currently being taken out. Generally, any country that takes more than 20% of these renewable resources is likely to be facing at least regional water shortages, while a figure in excess of 40% points to severe scarcity in at least one part of the country.

Data sources

Population and demographics is adapted from the United Nations World Population Prospects: 2015 Revision and World Urbanisation Prospects: 2014 Revision. Water resources data comes from the UN FAO Aquastat database.

Urban infrastructure data is derived from a variety of sources, particularly the OECD and Eurostat databases, Global Water Markets 2016 (Global water Intelligence / Media Analytics Limited), UN Joint Monitoring Project (country data files and the 2015 Update and MDG Assessment), OECD reports on Eastern Europe & Central Asia and national assessments and surveys.

Company entries

The company entries provide a brief description of how each company became involved in the sector and its overall strategies, when known. Wherever possible, a profit & loss account is provided along with contact data (company address, main switchboard, website, and senior management) and details about water and wastewater services in their home and international markets.

Each company entry has a summary of the number of people served by country of activity.

While the company contact details are as up-to-date as possible, turnover in senior management means that sometimes names change between documents such as Annual Reports being published.

In addition, wherever possible, international contracts are tabulated to show [1] year of contract award, [2] city/region, [3] contract type and duration and [4] population served and service provided.

Data sources

Annual Reports and (in the USA) SEC Annual Returns
Company Annual Corporate Social Responsibility / Sustainability Reports
Company annual and interim results announcements
Company presentations to investors and conference presentations
Company press releases
Company web sites
Information returns to regulators (for example, Ofwat in England & Wales).
Dedicated financial information providers such as FT.Com, MorningStar and Bloomberg
Articles in the specialist media (most notably, Global Water Intelligence).

Making sense of the numbers

Contracts are classified as being water only (water treatment and / or provision), sewage only (wastewater treatment and / or sewerage) for both services.

In some cases involving combined water and wastewater provision there will be some customers that do not receive both services. For example, Thames Water provides sewage services to all customers within its operating area, but in some parts of its region, there are other incumbent water-only providers. In the case of SABESP in Brazil, more customers are provided with water services than for sewerage, reflecting the better developed water services there. In company coverage, these overlaps will be expressed in terms of 'water only' or 'wastewater only' as appropriate.

Definitions – privatisation and the private sector

Privatisation is used to mean an asset sale (or developing the assets from scratch) which, with some exceptions in China, has only been used in the USA, England & Wales and Chile. Otherwise, the TLAs (triple letter acronym) PSP (private sector participation) or PPP (private-public partnership) are used. To count as the latter, where a design-build-operate contract, the operating contract had to be of at least four years in duration and to involve either operations and management (O&M), lease (affermarge) or a concession (BOT, etc). In all cases, contracts have to be of a total of at least five years in duration.

Why numbers change from year to year

Estimating numbers served is an inexact art at the best of times. The expansion of the sector has hardly lessened this challenge in recent years. Sometimes companies vary the stated numbers served and do not explain why. For example there has been a fall in the number served in France by both Veolia Environnement (Générale des Eaux) and Suez Environnement (Lyonnaise des Eaux) due to the ending of various cross holdings. Wherever possible new data is used to track contracts and ensure the information is accurate. At the time of writing, there were 1,904 contract awards covering 2,080 individual contracts in the database. Given that there were 1,379 contracts in the 2012-13 Yearbook database, there is plenty of scope for changes each year.

Corporate changes

Since the 2012 survey, there have been ten new company entries, 22 deletions and eight name changes. This is the first time the number of entries has fallen, but not too much should be read into this, since it is in part due to companies being omitted and also because of considerable activity on the mergers & acquisitions front.

Table 1.1: New Entries

Name (country)	Comments
China Gezhouba Group (China)	Acquired Kardan Water International Group
CT Environmental (China)	IPO
Empresas Publica de Mendelin (Colombia)	Acquired ANSA from Antofogasta
Kangda International (China)	IPO
NOMAC (Saudi Arabia)	Newly identified
Oaktree Capital Management (USA)	Acquired Veolia's Israeli activities
Pentair (USA)	Acquired Aecom's water activities
SIIC Environment (China)	Spun-off by Shanghai Industrial after AWT buy
Sound Environmental Resources (Singapore)	Spun-off from Sound Global
Yunnan Water (China)	IPO

Source: Company entries

Five of the ten new entries are Chinese and one is a Singapore based company that focuses on the Chinese market. In four cases, companies had acquired water activities from other companies slimming down their water activities.

Saudi Arabia's NOMAC was the only company that was newly identified, while there were three Initial Public Offerings (IPOs), all of Chinese companies. While the three Chinese IPOs all involved private sector companies, it is likely that future IPOs in China will feature state controlled entities offering a portion of their shares to outside investors.

Table 1.2: Deleted Entries

Name (country)	Comments
Acegas-Aps (Italy)	Acquired by Hera
Acqua Potabili (Italy)	Acquired by Iren
Aecom (USA)	Sold water activities to Pentair
Antofogasta (UK)	Sold ANSA to Empresas Publica de Mendelin
Aquaplus (Austria)	No data available
Asia Water Technology (Singapore)	Acquired by Shanghai Industrial
Beijing Herocan (China)	Acquired by BEWG
Benguet Corporation (Philippines)	No current water activities identified
Cadiz (USA)	Water rights only - no actual service
Cambridge Water (UK)	Acquired by South Staffs
Cathay International Holdings (UK)	Sold Cathay International Water
Galaxy Water (China)	Sold water activities
Global Greentech (China)	No current water activities identified
Han Kore (Singapore)	Acquired by China Everbright
Kardan (Netherlands)	Water arm sold to China Gezhouba Group
Mongolia Investment / Ming Hing (China)	Acquired by China Water Affairs
Nature Technology Solutions (UK)	Falls outside scope of this survey
Pico (USA)	Water rights only - no actual service
PPB (Malaysia)	No projects under its operational control
Pure Cycle Water (USA)	Water rights only - no actual service
Synergy Heights (Singapore)	No current water activities identified
United Envirotech (Singapore)	Acquired by CITIC

Source: Company entries

An element of self-denial has been adopted in this edition. Three companies which have been developing water rights portfolios in the USA have been removed on the basis that they are not offering a water or wastewater service. Likewise, Nature Technology Group's industrial effluent activities are better seen as in the industrial liquid waste sector than the industrial wastewater sector. A further four companies have been removed because they do not appear to be currently active in the sector, while another four have sold their water activities.

Finally eight companies have been acquired, two of the smaller Water Only Companies of England & Wales have been merged with larger entities along with one relatively young Italian multi-utility (Acegas-Aps) which itself was the product of a merger along with Acqua Potabili, which traces its origins back to the mid nineteenth century. Finally,

three companies based in Singapore and one in China were acquired by Chinese water companies.

With the exception of Oaktree Capital Management's acquisition of Veolia Environnement's Israeli activities, all the above companies and activities were acquired by companies already active in the water sector rather than by private equity investors.

Table 1.3: Name Changes

Previous name (country)	New name
Calapan Ventures (Philippines)	Philippine H2O Ventures
Grupo Equipav (Brazil)	Aegea
Intan Utilities (Malaysia)	Metropolitan Utilities
Latin Aguas (Argentina)	Aguas de Corrientes
Nanghai Development (China)	Grandblue Environment
Ranhill Utilities (Malaysia)	Ranhill Energy & Resources
Thai Tap Water (Thailand)	TTW
United Group (Australia)	UGL Limited

Source: Company entries

It has not been a vintage period for poetic corporate rebrandings, but in two cases, it is clear that the attraction of becoming a TLA (Triple Letter Acronym) remains undiminished.

Looking to the future, 17 unlisted companies have been identified that serve at least a million people along with 18 that serve at least half a million people. If enough information about these companies (and indeed smaller companies of interest and other hitherto overlooked companies) they will merit entries in subsequent editions. In addition, a number of Chinese private and state held entities are actively preparing for stock market listings in the next couple of years, for example Guangxi Lvcheng.

Number of people served by country and company

Three types of contract coverage have been used:

[1] Water only (water treatment and / or distribution)

[2] Sewage only (sewerage and / or sewage / wastewater treatment)

[3] Water & wastewater (a combination of the above)

Where a contract is for water and sewage services, but more people are provided with one service than for the other, this is classified as a water & sewage contract. The number of people served with one service but not the other are placed in the water or sewage only column as appropriate.

For a contract to be included it needs to involve outsourcing contracts of at least five years duration and accounting for a significant element of any water or sewage related activity. So for example, a meter reading contract would not count, while managing a sewage treatment works does.

1,903 contract awards and transactions have been identified between 1987 and 2015, which involve a total of 2,080 separate contracts. The database does not include contract awards in France, the USA or Spain as the lack of consistently available information means that neither a comprehensive nor a coherent picture can be derived. With hundreds of outsourcing contracts serving 500-5,000 people being awarded in each year, these markets are essentially different from those covered in this survey.

Data in these tables excludes subsequent service extension whereby people are subsequently served either through connection programmes (Manila Water in the Philippines), through the absorption of adjacent utilities (Eyath in Greece) or because of population growth within their operating area (Thames Water in the United Kingdom). This is a significant factor, since in 112 contracts where post-award service extension has been noted, this covers an additional 77.8 million people.

The database continues to grow. There were 325 contracts for the 1998-2000 period noted in the 2000 edition against 1,380 for 1982-2012 in the 2012-13 edition. More years and more data continue to improve the scope for its meaningful interrogation.

2015 data is not included in the graphs, as the data available is not currently sufficient to use for meaningful comparisons.

Table 2.1: People served; contracts by type of coverage and year, 1987-2015

Million people	Water	Sewage	W & WW	Total
1987	2.00	0.00	3.00	5.00
1988	0.37	0.00	0.00	0.37
1989	1.42	10.79	38.93	51.14
1990	0.00	0.00	0.00	0.00
1991	0.40	3.80	0.30	4.50
1992	1.49	1.47	0.51	3.46
1993	8.59	6.75	7.77	23.11
1994	12.37	2.57	3.62	18.56
1995	7.90	0.93	6.00	14.83
1996	20.27	4.39	15.26	39.92
1997	29.41	3.69	4.11	37.22
1998	13.75	0.99	10.98	25.72
1999	23.05	5.63	18.77	47.45
2000	22.48	10.63	18.74	51.85
2001	16.45	11.96	9.67	38.08
2002	13.68	11.36	2.69	27.73
2003	18.14	11.17	13.68	42.99
2004	29.58	26.92	7.01	63.51
2005	25.83	35.97	6.24	68.04
2006	19.07	24.90	16.38	60.35
2008	22.13	29.48	7.66	59.28
2009	10.32	23.06	1.39	34.77
2010	16.89	45.35	6.42	68.65
2011	20.15	21.22	3.21	44.58
2012	9.77	22.00	4.33	36.09
2013	23.54	35.80	1.80	61.14
2014	24.43	28.20	0.62	53.25
2015	4.01	6.92	0.55	11.48

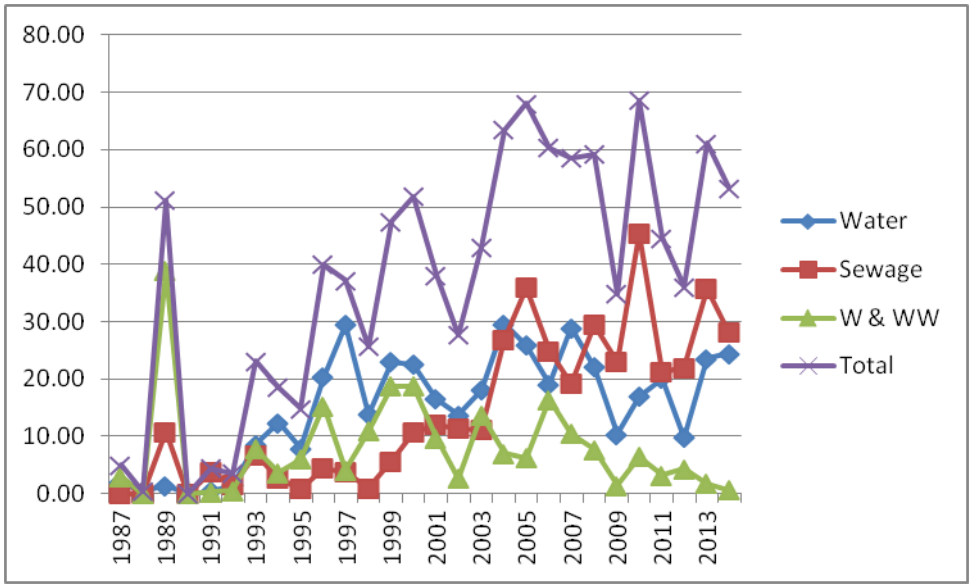
Million people	Water	Sewage	W & WW	Total
Total	426.38	405.15	220.07	1051.60

Source: Envisager contract database, 2015

Recent developments

2009, 2011 and 2012 all had lower than usual numbers being served by new contract awards. In contrast, numbers were high in 2010, 2013 and 2014. It is reasonable to assume the 2008 financial crisis has had a material impact on contract awards. For example, desalination contracts have been impacted by the difficulty in raising funding for new projects.

Figure 2.1: Million people served by type of contract each year, 1987-2014



As figure 2.1 highlights, overall contract award levels have been at a high level since 2004. This is in contrast to arguments put forward by opponents of private sector participation (PPP) that PPP has been in decline since 2000.

Table 2.2: Number of contract awards identified by year, 1987-2015

	Water	Sewage	W & WW	Total
1987	1	0	1	2
1988	1	0	0	1
1989	3	0	10	13
1990	0	0	0	0
1991	3	1	1	5
1992	2	3	1	6
1993	6	4	6	16
1994	12	7	11	30
1995	12	3	15	30
1996	16	8	13	37
1997	19	5	17	41
1998	12	6	15	33
1999	27	13	38	78
2000	56	13	45	114
2001	20	13	32	65
2002	14	16	23	53
2003	31	25	29	85
2004	50	54	32	136
2005	40	50	26	116
2006	27	53	17	97
2007	40	52	15	107
2008	44	112	22	178
2009	24	65	8	97
2010	30	79	11	120
2011	31	65	8	104
2012	32	78	18	128
2013	87	104	5	196
2014	40	109	2	151
2015	17	21	3	41

	Water	Sewage	W & WW	Total
Total	697	959	424	2,080

Source: Envisager contract database, 2015

The number of contracts being awarded is also at a high level. It is also evident that combined water and wastewater contracts have diminished in size and frequency, especially since 2006. This highlights the shift away from large, multi-service contracts to more focused contracts, seeking to address a particular service.

Figure 2.2: Frequency of contract awards, by type and year, 1987-2014

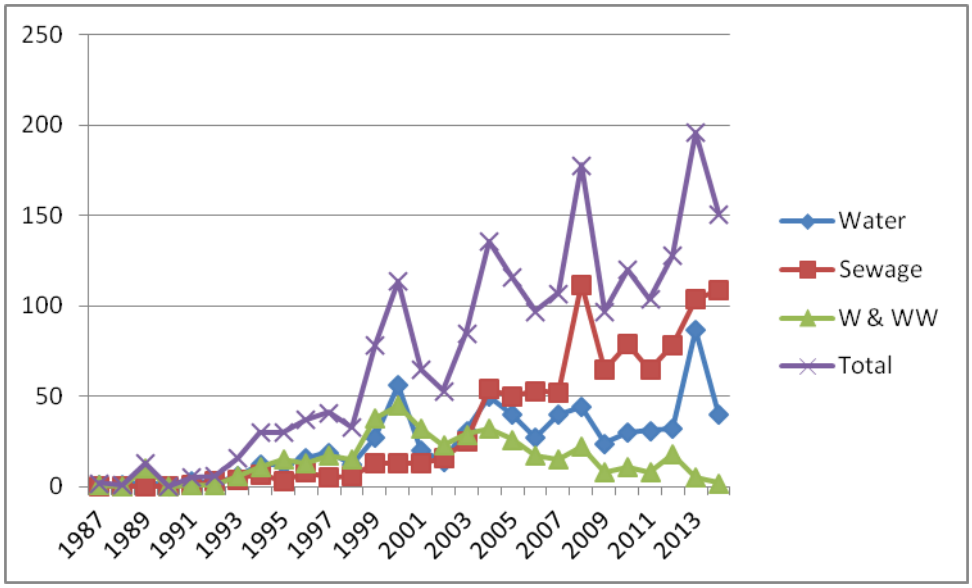


Figure 2.2 highlights how the annual contract frequency rose from 0-41 per year in 1987-1998 to 97-195 per year in 2004-14. The increasing number of sewage treatment plant contracts has had a particular impact here.

Table 2.3: Average number of people served per contract award by year, 1987-2015

Million people	Water	Sewage	W & WW	All
1987	2.00	0.00	3.00	2.50
1988	0.37	0.00	0.00	0.37
1989	0.47	0.00	3.89	3.93
1990	0.00	0.00	0.00	0.00
1991	0.13	3.80	0.30	0.90
1992	0.75	0.49	0.51	0.58
1993	1.43	1.69	1.30	1.44
1994	1.03	0.37	0.33	0.62
1995	0.66	0.31	0.40	0.49
1996	1.27	0.55	1.17	1.08
1997	1.55	0.74	0.24	0.91
1998	1.15	0.16	0.73	0.78
1999	0.85	0.43	0.49	0.61
2000	0.40	0.82	0.42	0.45
2001	0.82	0.92	0.30	0.59
2002	0.98	0.71	0.12	0.52
2003	0.59	0.45	0.47	0.51
2004	0.59	0.50	0.22	0.47
2005	0.65	0.72	0.24	0.59
2006	0.71	0.47	0.96	0.62
2007	0.72	0.37	0.70	0.55
2008	0.50	0.26	0.35	0.33
2009	0.43	0.35	0.17	0.36
2010	0.56	0.57	0.58	0.57
2011	0.65	0.33	0.40	0.43
2012	0.31	0.28	0.24	0.28
2013	0.27	0.34	0.36	0.31
2014	0.61	0.26	0.31	0.35

Million people	Water	Sewage	W & WW	All
2015	0.24	0.33	0.18	0.28
Total	0.61	0.42	0.52	0.51

Source: Envisager contract database, 2015

There has been a move away from a small number of major contracts to more contracts which are smaller in size. This is especially apparent since average contract sizes peaking in 1993-98. This was the period when major, multi-service contracts (for example, Aguas Argentinas, serving Buenos Aries and the two contracts serving Manila) were being awarded with the assistance of the World Bank. This change also reflects an enduring challenge the sector faces, that of wedding debt finance that is payable in a hard currency to tariffs generated in a soft currency. The Peso crises in Argentina and the Philippines are examples where contracts (Aguas Argentinas and Maynilad Water) became unworkable when the local currency collapsed against the US Dollar.

Figure 2.3: Proportion of contract awards by contract type, 1987-2014

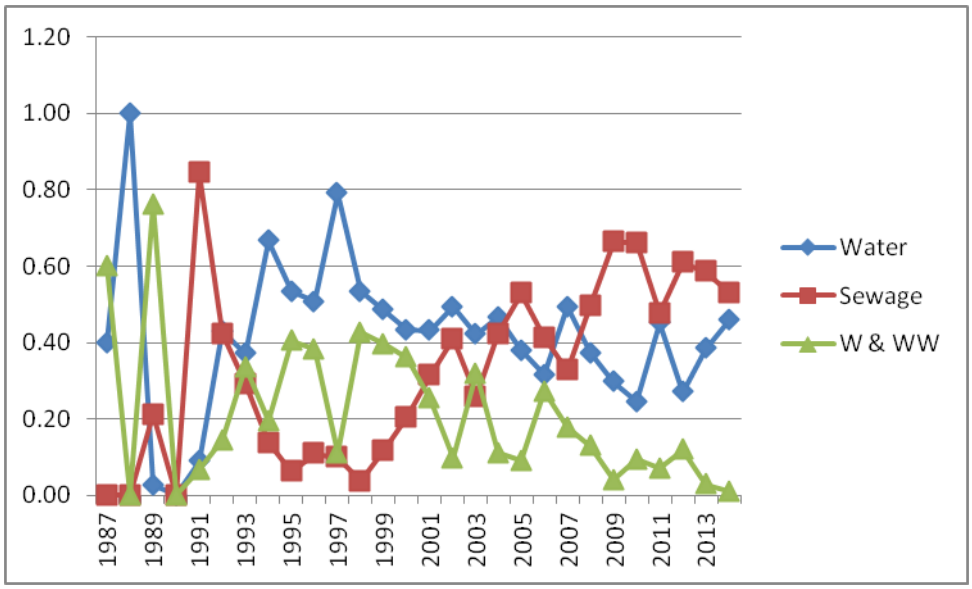


Table 2.4: Proportion of people served by contracts, 1987-2015 by contract coverage

	Water	Sewage	W & WW
1987	0.40	0.00	0.60
1988	1.00	0.00	0.00
1989	0.03	0.21	0.76
1990	-	-	-
1991	0.09	0.84	0.07
1992	0.43	0.42	0.15
1993	0.37	0.29	0.34
1994	0.67	0.14	0.19
1995	0.53	0.06	0.40
1996	0.51	0.11	0.38
1997	0.79	0.10	0.11
1998	0.53	0.04	0.43
1999	0.49	0.12	0.40
2000	0.43	0.20	0.36
2001	0.43	0.31	0.25
2002	0.49	0.41	0.10
2003	0.42	0.26	0.32
2004	0.47	0.42	0.11
2005	0.38	0.53	0.09
2006	0.32	0.41	0.27
2007	0.49	0.33	0.18
2008	0.37	0.50	0.13
2009	0.30	0.66	0.04
2010	0.25	0.66	0.09
2011	0.45	0.48	0.07
2012	0.27	0.61	0.12
2013	0.38	0.59	0.03

	Water	Sewage	W & WW
2014	0.46	0.53	0.01
2015	0.35	0.60	0.05

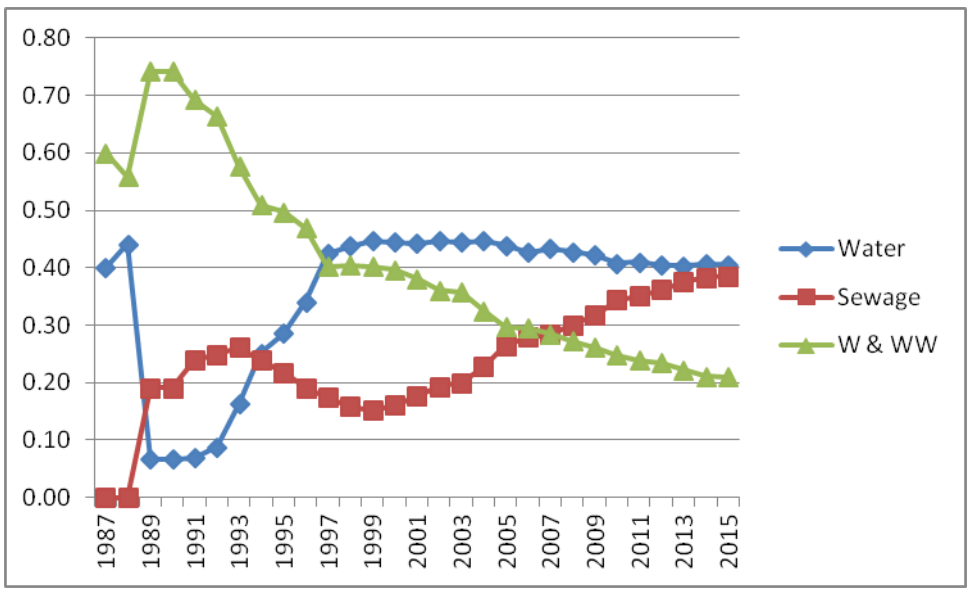
Source: Envisager contract database, 2015

Table 2.5: Accumulated populations served by contracts, 1987-2015

Million people	Water	Sewage	W & WW	Total
1987	2.00	0.00	3.00	5.00
1988	2.37	0.00	3.00	5.37
1989	3.79	10.79	41.93	56.51
1990	3.79	10.79	41.93	56.51
1991	4.19	14.59	42.23	61.01
1992	5.68	16.06	42.73	64.47
1993	14.26	22.81	50.50	87.58
1994	26.64	25.39	54.12	106.14
1995	34.54	26.31	60.12	120.97
1996	54.81	30.70	75.38	160.89
1997	84.22	34.39	79.49	198.10
1998	97.97	35.38	90.47	223.82
1999	121.02	41.01	109.25	271.28
2000	143.50	51.64	127.99	323.13
2001	159.94	63.61	137.66	361.21
2002	173.62	74.97	140.35	388.94
2003	191.76	86.14	154.03	431.93
2004	221.35	113.05	161.04	495.44
2005	247.18	149.02	167.28	563.47
2006	266.25	173.92	183.65	623.82
2007	295.16	193.11	194.09	682.36
2008	317.29	222.59	201.76	741.64
2009	327.61	245.66	203.14	776.41
2010	344.50	291.01	209.56	845.06
2011	364.64	312.23	212.77	889.64
2012	374.41	334.23	217.10	925.73
2013	397.94	370.03	218.90	986.87
2014	422.38	398.23	219.51	1,040.12
2015	426.38	405.15	220.07	1,051.60

Source: Envisager contract database, 2015

Figure 2.4: Proportion of cumulative contract awards by population served over time, 1987-2014



Tables 2.4 and 2.5 and figures 2.3 and 2.4 illustrate the shift away from combined contracts towards individual service contracts for both annual and cumulative contract awards. By 2014, the overall number of people served by sewage

contracts had nearly equaled those served for water contracts, with just 20% accounted for by combined contracts.

Table 2.6: Number of contracts identified in the current and previous editions

2015-16	2,080
2012-13	1,379
2011-12	1,217
2010-11	1,120
2009-10	1,056
2008-09	935
2007-08	818
2006-07	548

Source: Previous Water Yearbook 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12 & 2012-13.

Of the 701 new contracts identified since the previous edition, 388 are new contracts for 2013-15 and 313 are contracts awarded in 2012 or earlier that have come to light since the previous edition. This consistent with previous editions, where 162 new contract entries were made for the 2012-13 edition, either from new contract awards or contracts which had not previously been identified compared with 97 in 2011-12.

It is evident that contracts in certain countries (especially in China and Brazil) are not being identified for some time after their initial award, along with new data sources becoming available. The number of Hong Kong, Singapore, Shanghai and Shenzhen listed companies posting full annual reports and regulatory updates continue to make a material impression here.

Leading companies

Table 3.1: People served by company (leading 50 companies)

Company	Total population served	% home	Change; 2015 versus 2012	Notes
Suez Environnement	144,491,000	9%	26,418,000	
Veolia Environnement	129,274,000	19%	5,300,000	1
Beijing Enterprises Water	77,030,000	99%	28,428,000	
Sabesp	28,500,000	100%	-260,000	
Beijing Capital	23,820,000	100%	11,220,000	
FCC (Aqualia)	22,541,000	58%	-920,000	
SIIC	19,980,000	100%	5,230,000	3
Tianjin Capital Environmental	16,850,000	100%	4,500,000	
Mitsui	15,867,000	0%	8,767,000	
Sound Environmental Res	15,810,000	100%	New Entry	2
SAUR	15,719,000	45%	4,191,000	
China Water Affairs	15,550,000	100%	3,950,000	
American Water Works	15,420,000	97%	-780,000	
Shanghai Industrial Holdings	15,250,000	100%	-8,370,000	3
Copasa	15,200,000	100%	9,000,000	
Chongqing Water Group	15,000,000	100%	0	
NWS Holdings	14,820,000	100%	-1,300,000	4
Thames Water	14,706,000	100%	906,000	
China Everbright	14,585,000	100%	5,935,000	
Severn Trent	13,563,000	66%	-67,000	
Eranove (Bouygues)	13,500,000	0%	1,500,000	
ACEA	11,836,000	70%	-6,144,000	
Kangda International	11,750,000	100%	New Entry	
Acciona Agua	11,277,000	26%	3,942,000	
Andrade Gutierrez	10,800,000	100%	-210,000	
RWE	10,095,000	91%	-4,250,500	
Maynilad Water (MPIC)	9,860,000	100%	1,660,000	
Guangdong Investment	8,550,000	100%	2,350,000	
Manila Water	8,400,000	86%	-4,900,000	
Jiangxi Hongcheng Waterworks	8,000,000	100%	500,000	
CITIC	7,900,000	100%	New Entry	8
Sound Global	7,625,000	100%	-10,775,000	2,5
Abengoa Water	7,480,000	10%	New Entry	7
United Utilities	7,377,000	100%	127,000	
Puncak Niaga	7,350,000	97%	250,000	
Aguas Andinas	7,320,000	100%	200,000	6
Cab Ambiental	7,230,000	100%	New Entry	
Anglian Water	7,163,000	83%	121,000	
Anhui Guozhen Env. Ptn.	6,700,000	100%	-3,300,000	
CH2M Hill	6,500,000	100%	New Entry	
SPML Infra	6,270,000	100%	150,000	
Gelsenwasser	6,240,800	94%	-460,000	
Remondis Aqua	6,215,500	26%	345,000	
Kelda Group	6,025,000	100%	32,000	
Shanghai Urban Construction	6,000,000	100%	New Entry	
Hyflux	5,730,000	15%	500,000	
GS Engineering (Inima)	5,726,000	38%	726,000	
CKI (Northumbrian Water)	5,519,000	96%	-1,023,000	
Sembcorp	5,167,000	0%	-500,000	
Rosvodokanal	5,066,000	100%	-1,034,000	
Empresas Publica de Mendelin	5,060,000	20%	New Entry	

Sources: Data derived from company entries.

Notes:
[1] Net of the sale of activities in Israel, Portugal, Germany and Morocco
[2] Beijing Sound and Sound Environmental are combined, net of Sound Global
[3] People served for SIHL is for General Water of China only
[4] Also included in Suez Environnement; SE holds 50% of the joint venture

[5] Year to 12/2013 data as the 2014 results have been delayed
[6] Also included in Suez Environnement; SE holds 50.1% of AA
[7] Net of the sale of the Qingdao desalination contract
[8] Does not include CITIC Pacific stakes in some of Veolia's Chinese projects

Of the 884.9 million people covered by the top 50 players, 548.1 million were served in the company home country and 336.9 million in other countries. Due to contract cross holdings and multiple ownerships, these numbers are higher than the actual number of people served by the underlying contracts.

Changes in market share since 2012

Back in 2003, there were five companies that accounted for 73% of the global market in terms of numbers served under PPP. One of the top five has sold off most of its water activities (RWE), one has been split into two (SAUR, now SAUR and Bouygues) and one (Aguas de Barcelona) acquired by one of the leading two (Suez Environnement). Despite their ups and downs over the years, it is evident that both Suez Environnement and Veolia Environnement remain the global leaders in this business. Today, they command a 24% share of the global market, while the current five largest companies account for 35% of the global market in population served terms.

Thus we have seen a move away from a world dominating ‘top five’ to two players with a genuine global presence (Veolia and Suez) and then a plethora of local, regional and international players. Beijing Enterprises Water’s place as by some way the third largest in the world in population terms is testimony to that change.

Veolia and Suez have benefitted from a number of major contract awards, especially in India as well as organic growth at their existing contracts. Suez’s faster growth puts it ahead of Veolia for the first time. Veolia has felt the impact of its contract sales in Europe and the MENA region. Interestingly the two sides of SAUR have performed well, with SAUR enjoying contract gains in Saudi Arabia and France while the populations served by Bouygues’ two contracts in Africa have notably increased.

Leading Chinese players

Finding out about many of the Chinese companies remains a case of alternating between scarcity and plenty. Beijing Capital has notably improved its data disclosure in English in recent years. The Listing Document for Kangda International’s IPO was also most useful. Other companies have only provided new information in Chinese for a number of years.

In 2010-12, Chinese companies were struggling to grow their domestic customer bases beyond 15 million. In part this was due to companies staying to one part of China. We are now seeing more companies build a significant presence in a number of provinces. Along with Beijing Enterprises (acquisitions, contract gains and the start of an international presence), Shanghai Industrial / SIIC, Sound Global / Sound ER and Beijing Capital all now serve well over 20 million people in China, based upon a quasi-national presence. Indeed, 19 of the leading players are primarily involved in China, including 10 of the top 20.

Eight new entries

Four of the new entries are solely (for now at least) concerned with water in China. CITIC acquired United Envirotech and has built up its activities. Kangda International has its IPO in 2014 and has used the proceeds to develop a significant portfolio of contracts. Yunnan water, another Chinese IPO in 2014, concentrates on rural and small town contracts and so despite having 73 contracts, remains some way from inclusion in this list. Sound Global has separated its activities into two entities, again. The new generation of smaller contracts and rural contract ‘bundles’ are to be found in Sound Global while its traditional larger contracts are retained in Sound Environmental Resources.

CH2M Hill has enjoyed a good run developing its O&M outsourcing contracts in the USA. Abengoa has expanded its activities, especially outside Spain and is broadening its offerings. Contract gains and acquisitions have increased the reach of Cab Ambiental in Brazil and Empresas Publica de Mendelin in Colombia and beyond.

My adoption of a five million cut off point this year means there is one more new entry than those leaving the list.

And eight depart

Golden State has gone, acquired by Beijing Enterprises, United Envirotech likewise acquired by CITIC, and China Everbright has reversed into HanKore. Gruppo IREN has slipped away as they no longer count their minority stakes as part of their water business. Contract losses (including all of its activities in Argentina) mean that Grupo ACS is no longer large enough. Heliongjiang Interchina Water was launched a decade ago to become one of the leading Chinese players. A lack of information on new contracts means it has eased too far back. China Water Industry once had similar ambitions, but it has not been able to build on its early promise and also fails to make the cut. LYDEC has been overtaken by others - it is the only company serving at least five million people that is not in the top 50.

Market Listings retain their charms

While much attention has rightly been focused on the inroads being made by private equity into the water business, it is interesting to see that amongst the larger companies, stock market listings remain the norm. Six companies identified here are at least primarily held by private equity companies, three are privately owned (including one which is staff held) and the other 41 have a listing.

Ups and downs

As time goes by, the impact of contract expiries is becoming more important. In Turkey, Ismit's 15 year completion in 2014 (originally awarded to Thames Water) at Mitsui and ACEA losing most of its Colombian activities as they reached their conclusion (Bogota reached its ten year expiry in 2013). Meanwhile, Rosovodokanal discovered that Russian companies are not particularly popular in Ukraine for the time being and its contracts there were terminated in 2014.

Manila Water has seen its Tirupur go (ended by the municipality), along with Saigon (at its five year completion). In fact, the company is performing pretty well in gaining new longer-term contracts as well as in Manila. The same applies for Maynilad Water. In both cases, the real challenge remains getting their achievements in sewerage to match those in drinking water provision.

Guangdong Investment has expanded from water to sewage in China. SPML Infra Ltd also benefitted from the continuing development of the Indian PPP market. Brazil's CAB Ambiental serves over seven million, but this does include a contract with SABESP for 5.5 million which is included for SABESP. Another to watch out for includes Aegea Saneamento (3.6 million).

Leading companies by volume

While population served is the most appropriate yardstick for municipal contracts, it does leave out industrial contracts and serving business parks and enterprise zones. This can be addressed by considering how much water is provided and how much wastewater is treated. The table below was developed by the author (with thanks to Ian Elkins at Global Water Intelligence for the idea and some supporting data) as a first stab at ranking the leading companies in volumetric terms. Clearly it depends on data available and is therefore something of a work in progress, although it is evident that the comparability of data appears to be improving, as shown by the volume gap between Suez Environnement and Veolia Environnement closing.

Water and waste water volume distributed and / or treated is provided either in terms of operational capacity or in the actual amounts dealt with in a given year. Where possible, operating data is used as while some facilities may be operating at or above full capacity, many will be operating below full capacity. Capacity data is based on plants that are currently being operated.

Table 3.2: Million m^3 of water / wastewater handled in most recent year

Company	Country	Year	Water	WW	Combined	Notes
Veolia Environnement	France	2014	5,968	5,800	11,768	
Suez Environnement	France	2014	3,185	4,641	7,826	
Beijing Capital	China	2014	858	3,827	4,685	4
SABESP	Brazil	2014	2,069	1,562	3,629	
Beijing Enterprises WG	China	2014	602	2,390	2,992	
China Water Affairs	China	2014-15	1,985	264	2,249	5
Shanghai Industrial	China	2014-15	1,436	775	2,211	5
Guangdong Investment	China	2014	2,006	102	2,108	
Thames Water	UK	2014-15	939	1,061	2,000	7
Mitsui	Japan	2012	24	1,894	1,918	5
Chengdu Xinrong	China	2014	858	953	1,808	4
SembCorp	Singapore	2014	1,593	139	1,732	3
ACEA Spa	Italy	2014	657	941	1,598	
American Water Works	USA	2014	1,562	0	1,562	9
Chongqing Water	China	2014	704	745	1,449	4
FCC	Spain	2014	844	557	1,401	2, 8
SIIC Environment	China	2014-15	657	680	1,337	5
Tianjin Capital EP	China	2014	59	1,175	1,244	
China Everbright	China	2014-15	0	1,241	1,241	5
SAUR	France	2014	712	528	1,240	
Aguas Andinas	Chile	2014	559	660	1,219	1
Severn Trent	UK	2014-15	662	517	1,179	7
Hyflux	Singapore	2014	825	323	1,148	5

Company	Country	Year	Water	WW	Combined	Notes
COPASA	Brazil	2014	690	453	1,143	
United Utilities	UK	2014-15	626	437	1,063	
Wuhan Sanzhen	China	2014	475	569	1,044	4
Jiangxi Hongcheng	China	2014	526	514	1,040	4
Andrade Gutierrez	Brazil	2014	587	385	972	
Anhui Guozhen EP	China	2014	0	934	934	5
Zhongshan PU	China	2014	748	183	931	4
Sound Global	Singapore	2014	58	829	887	5
Guangxi Lvcheng	China	2014	471	322	793	4
Yorkshire Water	UK	2014-15	452	330	782	7
Anglian Water	UK	2014-15	399	346	745	6
CITIC	China	2014	128	600	728	5
Puncak Niaga	Malaysia	2014	716	0	716	
Grandblue Environment	China	2014	213	460	673	5
Manila Water	Philippines	2014	671	0	671	9
Qiangjiang Water	China	2014	533	113	646	4
Gelsenwasser	Germany	2014	396	204	600	
EYDAP	Greece	2014	315	282	597	
Yunnan Water	China	2015	223	372	595	5
Heilongjiang Interchina	China	2014	259	333	592	4
Northumbrian Water	UK	2014-15	401	185	586	6
Hera	Italy	2014	295	243	538	
Kangda International	China	2015	0	511	511	5
DCWW	UK	2014-15	292	207	499	6
Remondis	Germany	2014	115	370	485	
Jiangsu Jiangnan	China	2014	423	69	482	4
Pengyao Env Protn	China	2014	146	310	456	4

1 - WW collected (474 million m3 treated)
2 - Water distributed and WW collected
3 - WW data is for operational capacity
4 - W & WW data is for operational capacity (from GWI, 08/2015)
5 - W & WW data is for operational capacity
6 - WW is 2011 data (June Return)
7 - WW is 2010 data (June Return)
8 - WW data is for 2013
9 - Wastewater is in fact handled, it accounts for a small volume

Sources: Company Corporate Social Responsibility and Sustainability Reports (principally for European companies), non-statutory disclosures in Regulatory Accounts for water companies in England & Wales, IPO

Listing Documents (Yunnan Water and Kangda International), Annual Reports and Form 10K (for USA and Brazil), Global Water Intelligence (Chinese companies) and company web sites.

In total, these companies handled 38,922 million m^3 of water and 40,336 million m^3 of wastewater in the most recent year. That is nearly 80 cubic kilometres.

In 2012, 20 companies were included, handling at least 536 million m^3 of water or effluent in a year. This survey extends to 50 companies as the amount of data continues to improve. Volumes also rise, with 27 companies handling at least 1,000 million m^3 of water or effluent in a year against 15 in the 2012 survey.

As in 2012, there are three French companies in the top 20, but just one from the UK (Thames Water) against five previously, while there are ten Chinese companies against five previously. This reflects the improved operating data now available. The high placing of companies such as Beijing Capital and SembCorp demonstrates the importance of their industrial activities.

One area of regret is that since the end of Ofwat June Returns in 2011, water companies in England & Wales have yet to publish data about the amount of wastewater handled.

Three perspectives on contracts awarded

The contract award database can been used to provide a series of perspectives on the patterns of contract awards over the past three decades.

The tables and graphs below compare contract awards to national companies (companies based and operating solely within one country), regional companies (companies operating within a region such as Manila Water of the Philippines or based in one area and operating in another such as Han's Water, which is based in the USA and only operates in China) and international players, who operate in a variety of markets. The final set of tables compares the size of contracts awards in the OECD (Organisation for Economic Cooperation and Development, the larger, developed economies) member countries, the BRICs (Brazil, Russia, India and China, which are often seen as emerging economic powerhouses) and the rest of the world.

Table 4.1: Overall contract awards per five year period, 1985-2014 (million people)

	Water	Sewage	W & WW	Total
1985-89	3.79	10.79	41.93	56.51
1990-94	22.85	14.59	12.19	49.64
1995-99	94.38	15.63	55.13	165.13
2000-04	100.33	72.04	51.79	224.16
2005-09	106.27	132.61	42.10	280.97
2010-14	94.98	152.65	16.37	264.00
Total	422.59	398.31	219.51	1,040.41

Source: Envisager contract database, 2015

Table 4.2: Contract awards to companies in their home country, 1985-2014 (million people)

Home	Water	Sewage	W & WW	Total
1985-89	2.72	10.79	38.93	52.44
1990-94	6.38	9.84	1.44	17.66
1995-99	35.74	6.37	36.29	78.39
2000-04	35.34	43.73	25.66	104.73
2005-09	44.37	81.42	29.30	155.09
2010-14	53.28	115.92	10.58	179.77

Source: Envisager contract database, 2015

The 1985-89 data is distorted by the impact of the water and sewerage privatisation in England and Wales in 1989.

Table 4.3: Contract awards to companies in other countries, 1985-2014 (million people)

Abroad	Water	Sewage	W & WW	Total
1985-89	1.07	0.00	3.00	4.07
1990-94	16.47	4.76	10.76	31.98
1995-99	58.65	9.26	18.84	86.74
2000-04	64.99	28.31	26.13	119.43
2005-09	61.89	51.19	12.81	125.88
2010-14	41.70	36.74	5.80	84.23

Source: Envisager contract database, 2015

The peak period for international contract awards was in 1990-04, with a slight majority continuing from 1995-2004. Since then, there has been a steady shift towards awards in a company's home country. For water and wastewater contracts the 1990-94 period was dominated by a number of major contracts awarded to international operators. Since then, combined contracts have tended to be awarded at home.

It appears that water only contracts are more to be awarded internationally while sewage contracts are more likely to be awarded to home based companies. Both show a trend towards home based companies over the past 15 years.

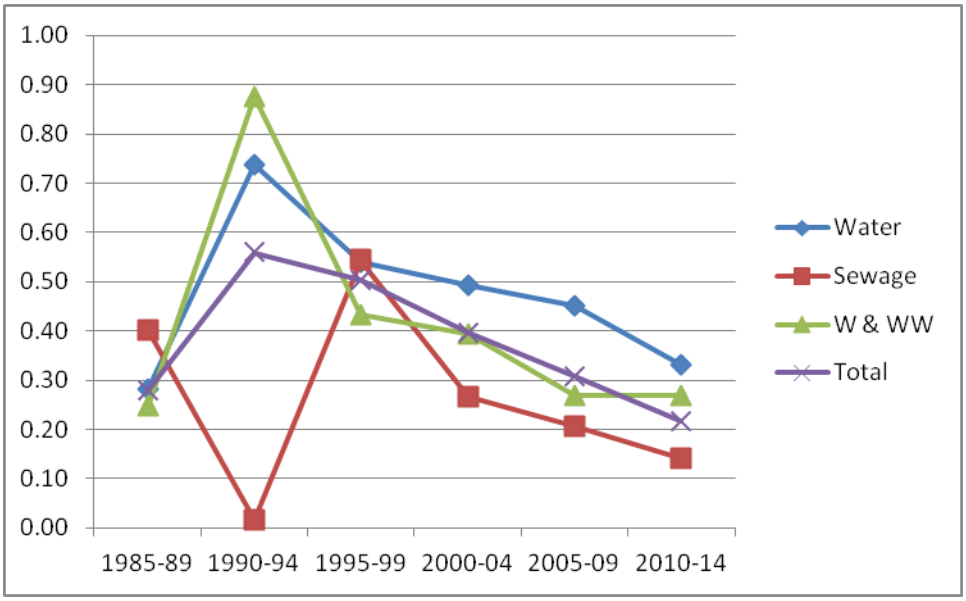
Table 4.4: Contract awards to companies active worldwide, 1985-2014 (million people)

Major	Water	Sewage	W & WW	Total
1985-89	1.07	4.34	10.36	15.77
1990-94	16.84	0.25	10.67	27.76

Major	Water	Sewage	W & WW	Total
1995-99	50.89	8.49	23.81	83.19
2000-04	49.48	19.13	20.37	88.97
2005-09	47.86	27.45	11.34	86.66
2010-14	31.49	21.56	4.39	57.44

Source: Envisager contract database, 2015

Figure 4.2: Proportion of contract being awarded to international companies



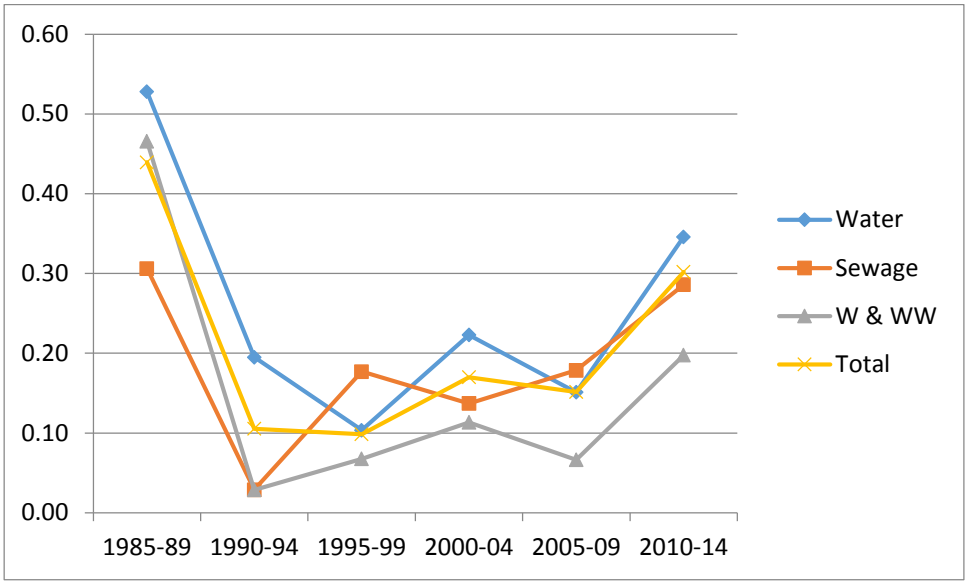
Again, the 1990-94 data is markedly different from the rest of the period. For example, sewage only contracts were dominated by the Malaysian national urban sewerage award while major water and combined service contracts were taken up by the international which had far more contract preparation and operating experience than locally based companies at the time.

Table 4.5: Contract awards to companies active within a region, 1985-2014 (million people)

Regional	Water	Sewage	W & WW	Total
1985-89	2.00	3.30	19.52	24.83
1990-94	4.46	0.42	0.35	5.23
1995-99	9.78	2.77	3.73	16.28
2000-04	22.37	9.88	5.88	38.13
2005-09	16.06	23.69	2.80	42.55
2010-14	32.85	43.65	3.24	79.74

Source: Envisager contract database, 2015

Figure 4.3: Proportion of contracts awarded to regional companies



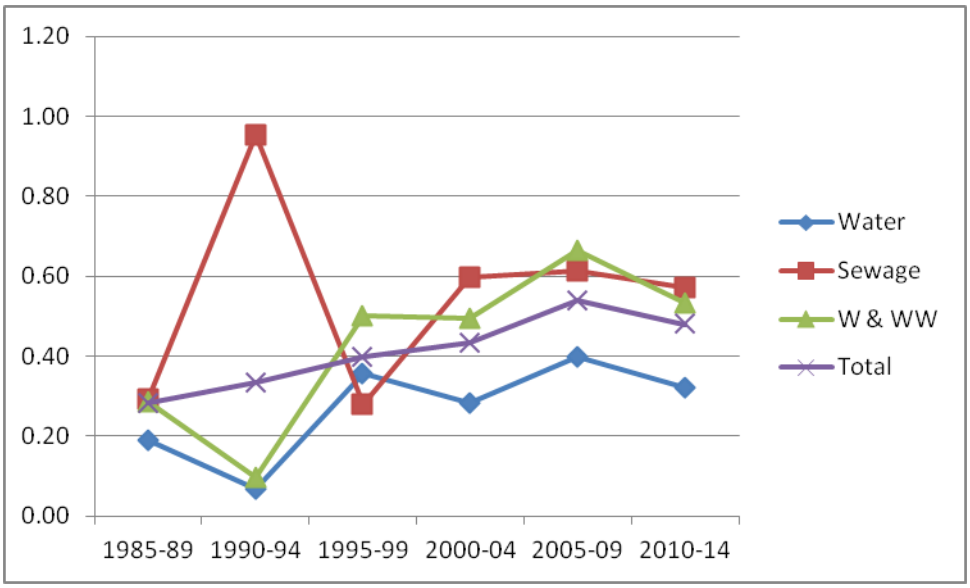
The regional companies had a limited impact in 1990-99, which has grown as companies have developed their presence focusing on Latin America, China (especially companies in Malaysia Singapore) and in South East Asia. A number of European regional specialists have also emerged, many concentrating on the Central & Eastern European market.

Table 4.6: Contract awards to companies active in one country, 1985-2014 (million people)

Local	Water	Sewage	W & WW	Total
1985-89	0.72	3.15	12.04	15.91
1990-94	1.55	13.92	1.18	16.65
1995-99	33.71	4.37	27.59	65.67
2000-04	28.48	43.04	25.55	97.06
2005-09	42.35	81.46	27.96	151.77
2010-14	30.64	87.44	8.75	126.82

Source: Envisager contract database, 2015

Figure 4.4: Proportion of contracts awarded to local companies



Local companies now account for nearly half of all contract awards in terms of population served. Their impact has been the greatest in sewage and combined services contracts. The large number of sewage treatment contract awards to Chinese companies has had a particular impact here.

Table 4.7: Contract awards in the OECD area, 1985-2014 (million people)

This is defined as contracts where the country was a member of the OECD at the time of its award.

OECD	Water	Sewage	W & WW	Total
1985-89	0.12	10.79	38.93	49.84
1990-94	3.85	4.22	0.26	8.33
1995-99	7.50	8.90	13.41	29.81
2000-04	5.98	12.03	18.08	36.08
2005-09	6.53	13.32	3.86	23.72
2010-14	3.90	15.36	6.94	26.20

Source: Envisager contract database, 2015

In the earlier years of PPP, activity in the OECD countries dominated the global landscape. That is no longer the case, partly due to the high level of penetration of PPP in a number of OECD countries (the United Kingdom, France and Chile, for example) that has already been achieved and also due to a shift in project development activity into other economies.

Figure 4.5: Proportion of contracts being awarded in the OECD

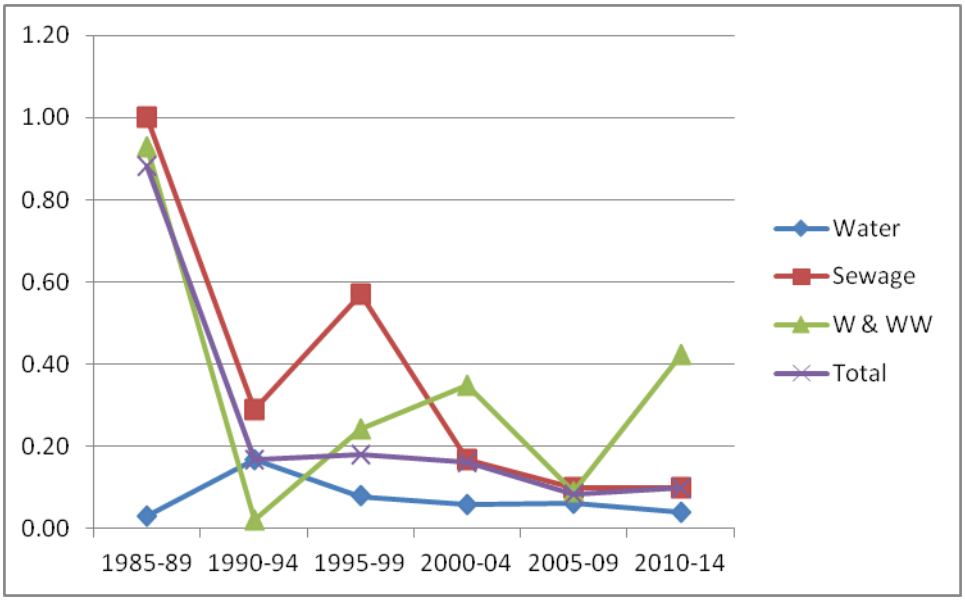


Table 4.8: Contract awards in the BRIC countries, 1985-2014 (million people)

BRIC	Water	Sewage	W & WW	Total
1985-89	0.37	0.00	0.00	0.37
1990-94	4.00	0.92	0.81	5.72
1995-99	47.06	4.34	23.29	74.69
2000-04	54.40	55.01	15.03	124.44
2005-09	70.73	103.91	27.76	202.40
2010-14	69.12	130.44	9.08	208.63

Source: Envisager contract database, 2015

The rise in the proportion of contracts going towards the BRIC quartet has been a remarkable process. While it is dominated by China's transformation since the later 1990s, activity in Brazil has been considerable since 1995 and India has emerged as a major centre of activity over the past five years.

Figure 4.6: Proportion of contracts being awarded in the BRIC countries

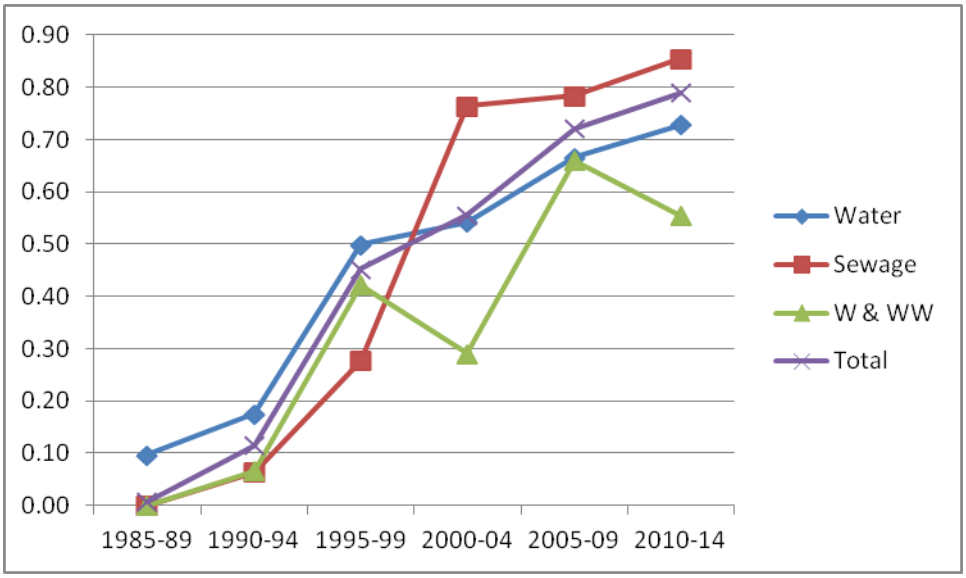
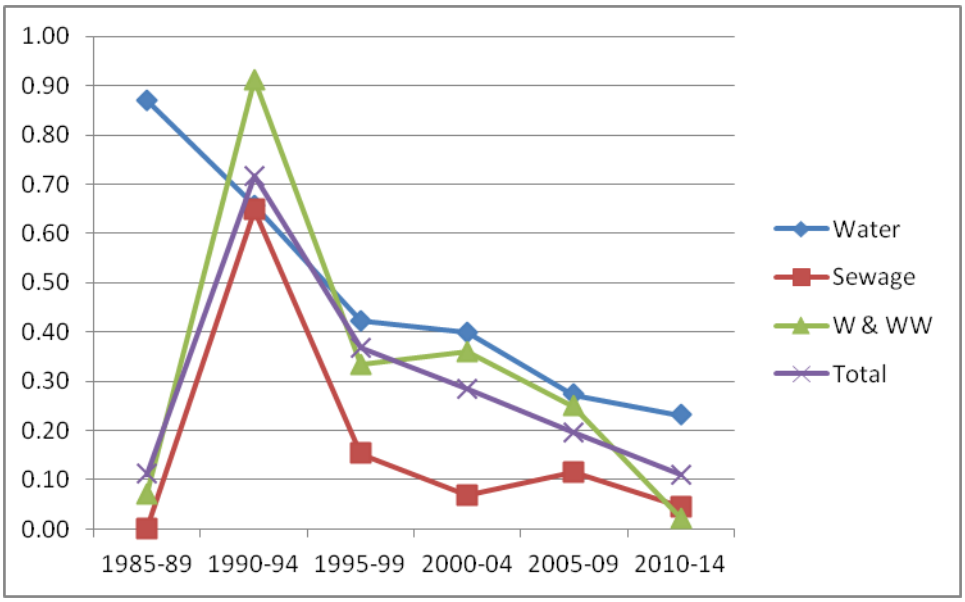


Table 4.9: Contract awards in the rest of the world, 1985-2014 (million people)

ROW	Water	Sewage	W & WW	Total
1985-89	3.30	0.00	3.00	6.30
1990-94	15.01	9.45	11.13	35.58
1995-99	39.82	2.39	18.42	60.64
2000-04	39.96	5.01	18.68	63.64
2005-09	29.00	15.37	10.49	54.86
2010-14	21.96	6.86	0.35	29.17

Source: Envisager contract database, 2015

Figure 4.7: Proportion of contracts being awarded in the rest of the world



It is difficult to generalise about activity in the Rest of the World, but countries such as Argentina, the Philippines and Indonesia made a significant impact in 1990-99, especially when looking at the larger contracts. This area today reflects a variety of themes, such as addressing specific needs in the Middle East and North Africa as well as the continuing development of South Eastern Asian markets.

Contract losses; putting contract awards in context

Progress is a subject for approbation and applause. Regress, in contrast, tends to attract little more than an embarrassed silence. Since 11% of all contract awards identified to date (in population terms) have ended for good reasons as well as for ill, they need to be fully appreciated. Indeed, it is fair to say that the incomplete understanding of international contract risk management remains as one of the sector's characteristics.

A total of 120 contract losses covering services to 119.1 million people have been identified. A contract loss is defined here as a PPP contract that has been in effect handed over from a private operator back to a municipal or state operator.

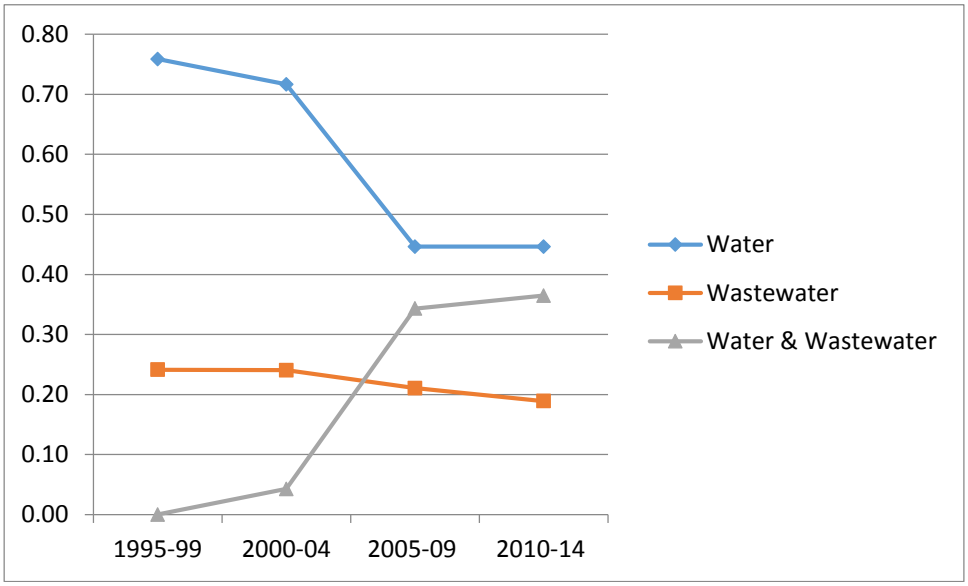
While there is an abundance of sometimes excitable coverage about contract losses, many contracts in fact end for decidedly practical reasons. To the author's knowledge, no other attempts have been made to consider how and why contracts have ended, rather than to regard every ending as a retreat away from PPP.

Table 5.1: Contract losses by service, 1995-2014 (million people)

People served (million)	1995-99	2000-04	2005-09	2010-14	1995-2014
Water	2.20	31.60	18.97	13.19	65.96
Wastewater	0.70	10.61	8.95	5.59	20.26
Water & Wastewater	0.00	1.89	14.59	10.78	21.37
Total	2.90	44.10	42.51	29.55	119.07

Source: Envisager contract loss database, 2015

Figure 5.1: Proportion of contract losses by service



The higher proportion of water only contract endings to some extent reflects the fact that the longer a contract has been in place, the more likely it is to end at some point. It also reflects the more contentious nature of a water PPP contract than a sewage PPP, since water contracts raise concerns about affordability and the 'right' to water (preferably free water) while there is no similar demand for a 'right' to sewerage, let alone sewage. Indeed, water, in Karen Bakker's memorable term, is 'an uncooperative commodity' (Bakker K (2003) An Uncooperative Commodity: Privatizing Water in England and Wales, OUP, Oxford, UK) while sewage is increasingly seen as a resource and something with a value.

Table 5.2: Contract losses by ending, 1995-2014 (million people)

People served (million)	1995-99	2000-04	2005-09	2010-14	1995-2014
Cancelled	2.50	18.86	23.45	3.38	48.19
Concluded	0.00	4.64	8.50	13.29	26.43
Sold	0.40	20.60	10.56	12.89	44.45
Total	2.90	44.10	42.51	29.55	119.07

Source: Envisager contract loss database, 2015

Contracts are cancelled when either the operator or the municipality unilaterally ends them. These are the endings that attract the greatest publicity and often do the most harm for the customers. Where a contract is concluded, it

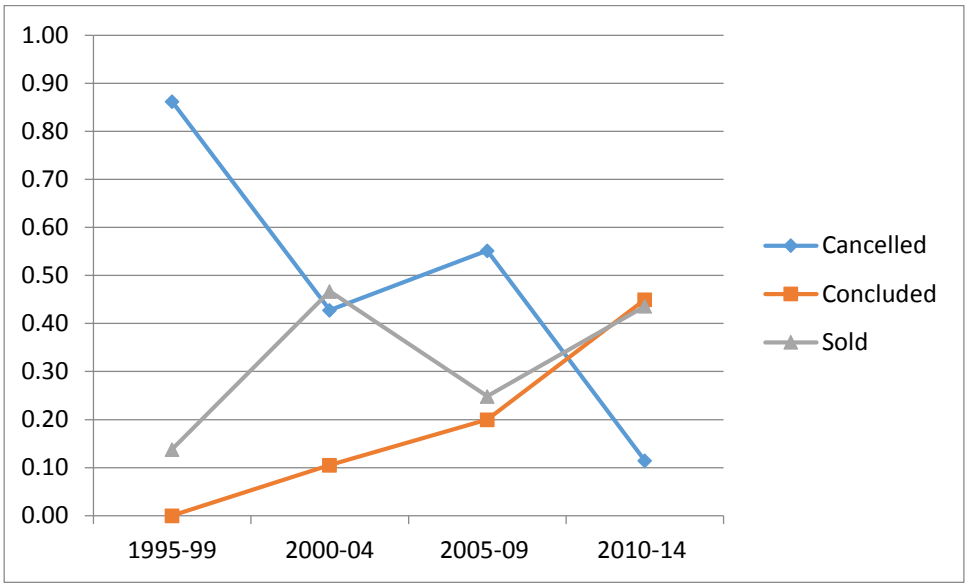
means that the contract has ended at the time set out under the original contract or after one or more extensions. Here the force of attrition is time. Finally, contracts can be sold back by the private operator to the awarding entity. This is a process of negotiation and may draw from many motives.

Looking at cancelled contracts, high profile examples include Tanzania and Bolivia, where contracts ended due to political pressures. Suez handed back the Puerto Rico contract (which has previously been handed back by VE) after being unable to renegotiate its terms and the Bogotá wastewater treatment works contract in Colombia was pulled in circumstances that still remain unclear. The Atlanta and Halifax contracts in the US and Canada were cancelled primarily due to political change and disputes about performance delivery. In the case of Halifax, a new contract was subsequently awarded to Suez. A number of contracts in Argentina were cancelled under a hardening political climate after the Peso crisis.

Concluded contracts do not generate headlines. The Yerevan (Armenia) and Tirana (Albania) contracts have been in turn replaced by successor contracts. A secondary cities project for Mozambique was meant to expire in 2004, when it was given a three year extension to 2007 and a further one year extension after that. These are a healthy reminder that a concession is not forever, it is in effect a slice of time and for a further slice to be gained, the contract has to have its evident charms for both parties. This will become a more regular feature in future years as the more contracts there are, the more contracts will in time end and the longer PPP is in operation, the more contracts will reach their expiry date.

When a contract is sold back to the vendor, it reflects changing circumstances for one or both parties. Negotiations can range from the despairing (Prime Utilities in Malaysia) to the constructive (Berlinwasser for RWE and VE). It is understood that a number of Chinese contracts with international involvement were exited profitably and this was certainly the case when Severn Trent concluded its fifteen years of involvement with Belgium's Aquafin.

Figure 5.2: Proportion of losses by type of ending



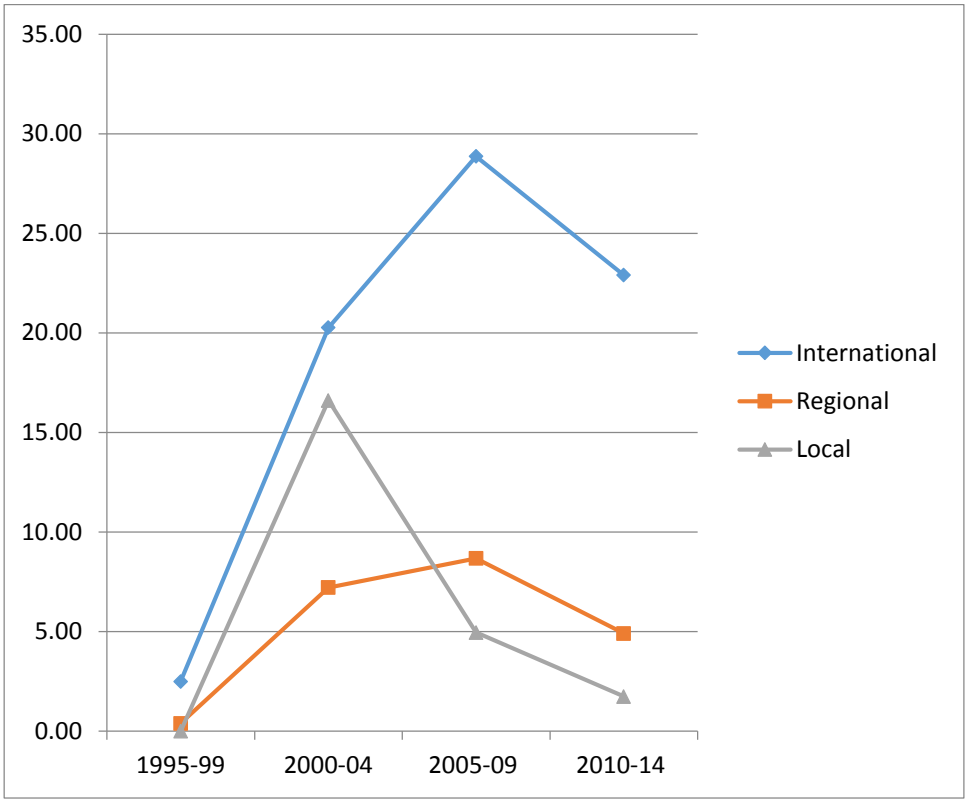
Overall, the impact of cancelled contracts appears to be falling, while there is a consistent increase in the proportion of contracts ending because they have reached their expiry dates.

Table 5.3: Contract losses by awardee company type, 1995-2014 (million people)

People served (million)	1995-99	2000-04	2005-09	2010-14	1995-2014
International	2.50	20.27	28.87	22.90	74.54
Regional	0.40	7.22	8.68	4.91	21.21
Local	0.00	16.61	4.96	1.75	23.32
Total	2.90	44.10	42.51	29.55	119.07

Source: Envisager contract loss database, 2015

Figure 5.3: Contract losses by company type (million people)



It does appear that international companies have a prominent role in contract endings. This partly due to international companies offering an attractive target for various political imperatives that may not actually be concerned about water or wastewater services.

Table 5.4: Contract losses by region, 1995-2014 (million people)

People served (million)	1995-99	2000-04	2005-09	2010-14	1995-2014
Western Europe	0.00	0.14	4.12	7.40	11.66
Central & Eastern Europe	0.00	0.00	2.19	4.91	7.09
Africa & Middle East	0.00	3.72	7.85	5.50	17.07
Latin America	1.20	10.46	17.37	8.02	37.04
East & South East Asia	1.30	28.05	10.37	2.04	41.76
North America	1.00	0.49	0.00	0.00	1.49
South & Central Asia	0.00	1.25	0.62	0.59	2.46
Oceania	0.00	0.00	0.00	2.04	2.04
Total	2.90	44.10	42.51	29.55	119.07

Source: Envisager contract loss database, 2015

Latin America (especially Argentina and Bolivia) have attracted the headlines over the years, and this has been borne out by their contract losses. Interestingly, East and South East Asia have more contract losses. Sample sizes are too small to make meaningful comparisons, but contract expiry and negotiated exits are more prevalent in East and South East Asia than in Latin America.

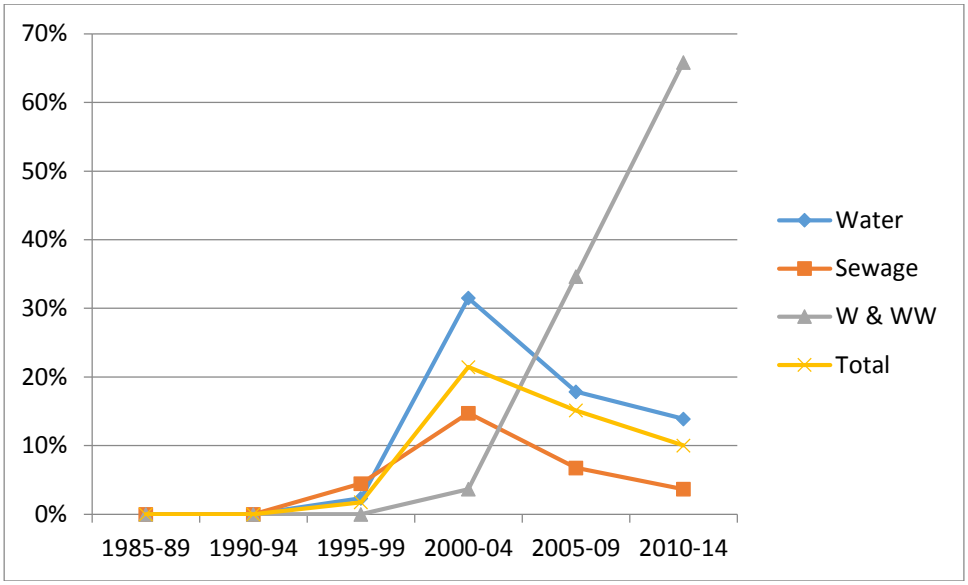
Table 5.5: Contract losses as a percentage of contract awards in each period, by service

People served (million)	Water	Sewage	W & WW	Total
1985-89	0%	0%	0%	0%
1990-94	0%	0%	0%	0%
1995-99	2%	4%	0%	2%
2000-04	31%	15%	4%	21%
2005-09	18%	7%	35%	15%
2010-14	14%	4%	66%	10%

Source: Envisager contract database, 2015 & Envisager contract loss database, 2015

When looking at contract endings as a percentage of the population served by new contracts over a given period of time, 2000-2004 appears to have been a particularly challenging time for water only contracts while the relative attrition rate for water and sewage since 2005 has been impacted by the effect of older contract ending when relatively few new contract awards have been made.

Figure 5.4: Proportion of losses in population by service type (%)



The more services offered, the greater the degree of customer contact is involved. This in turn increases the degree of political and regulatory risk. The more capital intensive a contract is, especially when in involves direct contact with customers, the greater the currency exchange risk. Indeed, little progress has been made in meeting the challenge of enabling hard currency debt to be funded by soft currency tariffs in a sustainable manner.

Table 5.6: Accumulated contract losses as a percentage of accumulated awards, by service

Cumulative	Water	Sewage	W & WW	Total
1985-89	0%	0%	0%	0%
1990-94	0%	0%	0%	0%
1995-99	2%	2%	0%	1%
2000-04	15%	10%	1%	10%
2005-09	16%	8%	8%	12%
2010-14	16%	6%	12%	12%

Source: Envisager contract database, 2015 & Envisager contract loss database, 2015

The fact that 12% of all contracts awarded to date in population terms have ended (for whatever reason) highlights the need to be able to monitor how a contract has progressed after its award and entering into service. When you exclude contracts that ended after their expiry, it turns out that 8.9% of contracts have ended prematurely. That is a significant risk factor.

Figure 5.5: Accumulated contract losses as a percentage of accumulated awards, by service

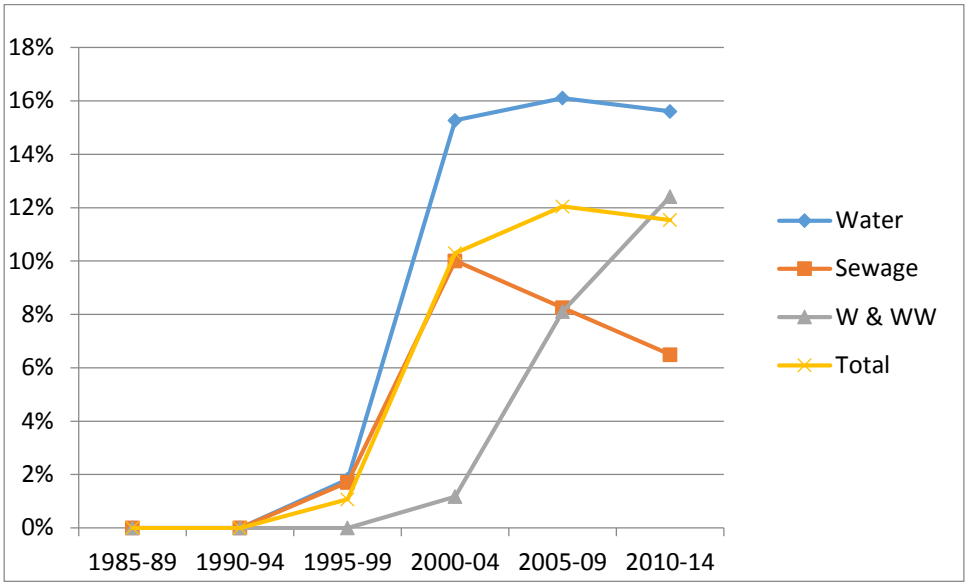


Table 5.7: Contract losses as a percentage of contracts in each period, by company type

People served (million)	International	Regional	Local	Total
1985-89	0%	0%	0%	0%
1990-94	0%	0%	0%	0%
1995-99	3%	2%	0%	2%
2000-04	23%	19%	17%	21%
2005-09	33%	20%	3%	15%
2010-14	40%	6%	1%	10%

Source: Envisager contract database, 2015 & Envisager contract loss database, 2015

Figure 5.6: Contract losses as percentage of awards in each period, by company type

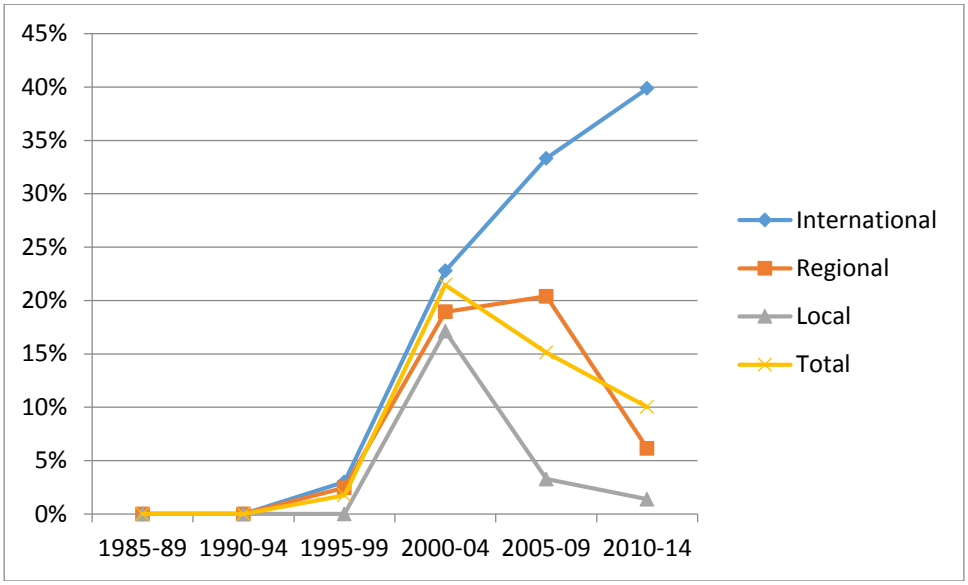


Table 5.8: Cumulative contract losses as a percentage of accumulated awards, by type

Cumulative	International	Regional	Local	Total
1985-89	0%	0%	0%	0%
1990-94	0%	0%	0%	0%
1995-99	2%	1%	0%	1%
2000-04	11%	9%	9%	10%
2005-09	17%	13%	6%	12%
2010-14	21%	10%	5%	12%

Source: Envisager contract database, 2015 & Envisager contract loss database, 2015

Tables 5.7 and 5.8 illustrate how the more locally based a company is, the lower the proportion of contract that have ended. This is likely to be due to a range of factors, including projects being financed in the local currency, a better appreciation about local operating conditions and concerns, stronger political contacts and a closer role in developing the contracts. For international companies, the project loss rate is high, perhaps exacerbated in recent years by their lower frequency of contract awards.

Figure 5.7: Cumulative contract losses as a percentage of accumulated awards, by type

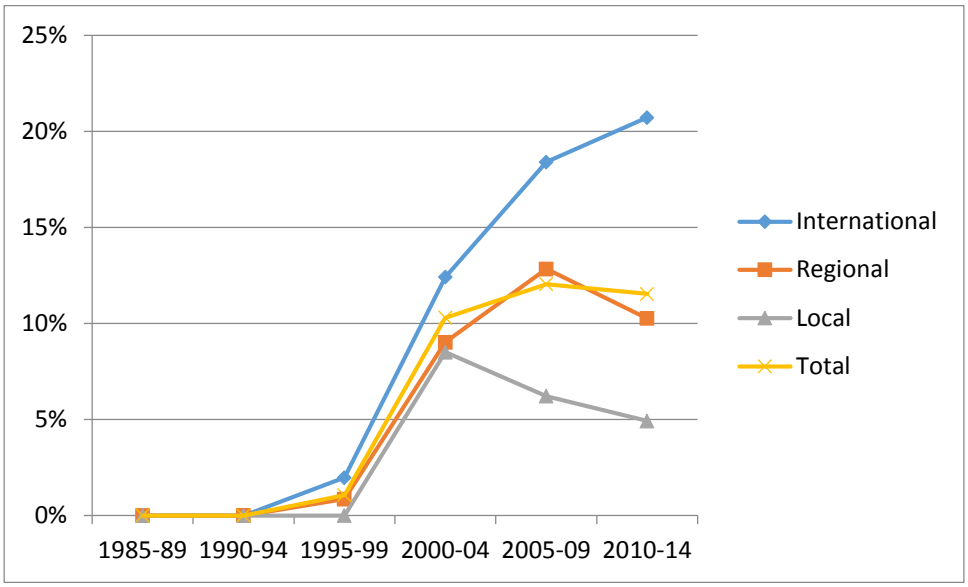


Table 5.9: Average operational life of ended contract (years)

	1995-99	2000-04	2005-09	2010-14	1995-2014
Cancelled	3.0	3.6	7.1	5.4	4.9
Completed	-	9.1	7.6	11.8	9.5
Sold	3.0	5.5	5.3	8.2	5.8
Total	3.0	5.1	6.9	9.7	6.9

As would be expected, contracts which end at their agreed expiry date tend to last longer than those which have been cancelled or sold. The average operating length of an ended contract has also increased over time, reflecting the lower proportion of contracts that have been unilaterally cancelled.

Source: Envisager contract loss database, 2015

Table 5.10: Companies and contract endings compared (million people)

	Cancelled	Completed	Sold	Total
International	32.15	16.76	26.53	75.44
Regional	9.47	4.25	7.49	21.21
Local	6.58	5.42	11.33	23.33
Total	48.19	26.43	44.45	119.07

Source: Envisager contract loss database, 2015

While 43% of international and 45% of regional company contract endings were due to unilateral cancellations, this was the case for 28% of national company contracts. The proportion of contracts ending at their expiry is at 20-23% pretty similar for all three company types.

How many people are served by the private sector?

To gain a reasonable picture of the status of private sector participation in water and wastewater services requires a suitable set of operational assumptions that are robust enough to deal with the vagaries of the data that is currently available.

There are three quantifiable sets of data available:

[1] Contract information at the time of the award
[2] Published data on service extension and demand growth
[3] Data about the current status of markets with a long-established private sector presence

In addition, populations grow within contract areas as a result of urban migration and indigenous population growth. This can be regarded as a contract's organic growth. These figures are difficult to quantify where urbanisation involves people moving into informal settlements as the likelihood of any connection to a formal water service (let alone sanitation) is minimal unless a specific initiative (such as by Manila Water) has been developed by a concession holder. As a result, population growth figures have been kept to a minimum.

For the sake of simplicity, all contracts that have subsequently been ended whether at the end of the contract life or prematurely, as a consequence of various externalities have been excluded from the ongoing picture. The contract exits identified have been included in a separate table, as these have become a material factor over the past decade.

How (and why) numbers served change

Positive drivers

Privatisations and IPOs: Contract awards (Beijing Enterprises Water's contract gains in China since 2008), the acquisition of municipal service companies by private companies (ESSAR by Chile's Aguas Neuvas) or stock market flotations of state held companies (Phnom, Penh Water's IPO in 2012). In addition, privately held companies (CT Environmental, Kangda International Anhui Guozhen EP, and Yunnan Water since the start if 2014) can be floated, bringing them to the public's attention.

Acquisitions: The acquisition of small privately held companies by larger entities. This is particularly notable in the USA, where there are many privately held companies serving 150 - 5,000 people and having a very low profile. Aqua America and AWW both pursue an aggressive tuck-in acquisition strategy, typically taking up 5,000-15,000 new customers each year this way. It is also seen in Italy and Greece, with ACEA actively seeking to take in the small municipalities in the Rome region. This is also a major driver in China as seen with Shanghai Industrial Holdings acquiring United Runtong in 2010.

Service extension and population growth: Water and sewerage services are extended to people who have previously relied on water vending or informal water supplies. New developments within a concession area are connected to the networks. Manila Water is an example of both, while Brazil's SABESP has gained a series of concessions close to its main activities in Sao Paulo.

Negative drivers

Condemnations and re-nationalisations: The USA can be a surprisingly hostile place for the private sector. Municipalities can 'condemn' a regulated operator under 'Eminent Domain' law and seek to buy its assets from the owner as seen at Pennichuck which was bought back in 2012. In France concessions were nationalised as the political climate changed between 1918 and 1939 and Suez and Veolia lost some significant contracts since 2001.

Time: Contracts do not last forever and there is no obligation to renew them at their expiry. Indeed, that can be the essence of a BOT contract, as highlighted in table 5.2 above. However, assets do not last forever and the need to upgrade, rehabilitate and extend assets points towards new contracts being awarded. As seen in the contract losses section, the number of contracts expiring has risen in recent years.

Divestment: Concessions being handed back as a company changes strategy (Suez in Puerto Rico), or judges that a contract has become inoperable (International Water in Bolivia). Companies can also be sold to municipalities when a parent company changes direction as seen with Allete's Florida water activities.

Population decrease: This will affect a number of concessions and companies in Europe in the longer term.

As noted in Table 5.1 above the 120 contract losses and endings identified account for 119.1 million people.

People served by contract awards, 1987-2015

These databases exclude France, Spain and the USA due to the contract award details in these countries not being typically available, with most being notably small. The average contract award in France for example covers 2,000 people. Not all water privatisations are fated to be subsumed within other companies, even though this sometimes appears to be the fate of the British water sector. In general, market listings to date have come about through government or municipal privatisations.

Published data on service extension subsequent to the contract award

Examples of service extension identified include Metro Manila (water service extension by both concessions), and various contracts in Brazil, Malaysia and in Shanghai. In many cases the service extension seen to date is a partial picture. The Envisager database has identified post award growth in populations served in 112 contracts, providing services to an additional 77.8 million people.

The long established markets

There were six markets with an extensive private sector presence in the start of 1987: the USA (mainly regulated activities, rather than the non-regulated O&M outsourcing contracts that have become a feature of the past twenty years); France (the private sector share has been between 67% and 69% since 2000); Italy (11% of the market served by the private sector and semi-private companies in 1987); Spain (the private sector share has advanced from 35% in 1987 to 46% by 2005 and onwards to 63% by 2015); Germany (Gelsenwasser, RWE and E.ON, along with some local companies holding approximately 12% of the market through long term contracts) and England & Wales (there were 29 Statutory Water Companies serving 13.8 million people in 1989).

We know the approximate size of the incumbent markets due to information being available about most of the private sector companies that operate in these markets.

Table 6.1: Incumbent markets

Country	Comments	Million people
USA	Non-regulated activities	39.7
USA	Regulated activities	23.5
Spain	PPP since 1867	29.8
France	PPP since 1853	44.8
Total		137.8

Source: Company entries

In the cases of Germany (9.5 million people), Italy (6.5 million people) and the UK (13.8 million people), companies involved in the long-standing contracts have been identified and factored into the contract database.

Defining private sector participation

To count as private sector participation, contracts have to be of at least five years in duration and either a formally established O&M contract, a concessional contract or an outright asset privatisation. In this context, national private water service companies are defined as legal entities that have signed a formal contract with the relevant municipal or state authorities for the provision of water or wastewater services. Wherever possible, these contracts are distinguished from formal or quasi legal contracts drawn up with small local entities. Contracts for industrial water services or for developing industrial zones, with no provision for domestic water supplies are also excluded.

A global figure

The uncorrected total feeds directly from the Envisager databases. It does not take into account all population growth within contract areas since the contract award date, nor is all service extension work. Neither does it include small, formal or semi-formal PPP projects such as those highlighted by the 2006 World Bank study (Triche T, Reqena S & Kariuki, M (2006) Engaging Local Private Operators in Water Supply and Sanitation Services. Water Supply & Sanitation Working Notes, World Bank, Manila, Philippines).

Double counting is an increasingly important area. One company may gain a contract to provide water services to all of a city while another gains a contract to develop and operate the city's new sewage treatment works. As they are serving the same people, no new people are served by PPP in the second contract, although their level of involvement with the private sector has grown.

Table 6.2: A global figure

Contract type	Million people
Contract awards	1,050.6
Contract service extension	77.8

Contract type	Million people
Contract endings	-119.1
Double counting	-56.8
Incumbent markets	137.8
Global total	1,090.3

Source: Envisager

The contract service extension figure reflects the 2009 study by the World Bank (Marin P (2009) Public-Private Partnerships for Urban Water Utilities: A Review of Experiences in Developing Countries World Bank, Washington DC, USA) which highlighted service gains for 24 million people in 36 contracts. Wherever possible, service extension has already been factored in the data used and this is taken into account.

Population growth and urbanisation data is difficult to qualify, but updated wherever possible (population is steady or even falling in parts of Europe, while rising rapidly in many developing economies) and this may still be an understatement by 5-10 million.

Smaller players are likewise hard to systematically quantify. Examples of local PPP in Cambodia have been noted, while 880,000 people are served by the 18 members of Uganda's Association of Private Water Operators (Aquafed (2012) Private Operator's delivering performance for water-users and public authorities, examples from across the world. Aquafed, Paris).

Table 6.3: A corrected global figure

Contract type	Million people
Global total – uncorrected	1,090.3
Small formal PPP	5.0
Contract service extension	5.0
Population growth & urbanisation	40.0
Global total – corrected	1,140.3

Source: Envisager

In 2012 971 million people were identified in the survey and during 2013, more than a billion people had their water or sewage services in some part managed by the private sector. The final figure here compares with, for example 563 million people as being identified as served by the private sector 2005 and 335 million in 2000.

Listed Market Entries since 1989

The three tables below outline those companies whose shares have been either listed following their sale by municipal (or state) holders, were previously held by private companies or have been spun-off by their parent companies. 75 market listings have been identified between 1989 and 2015, 45 being flotations of state held entities, 24 privately held companies and six have been spun off from their parent companies.

Table 7.1: Partial of full flotation's of public entities

IPO date	Company	Country	Current status
1989	Anglian Water	UK	Taken private
1989	Dwr Cymru Welsh Water	UK	Not for profit (Glas Cymru Cyf)
1989	Northumbrian Water	UK	Acquired, re-listed, acquired
1989	North West Water	UK	Listed (United Utilities)
1989	Severn Trent Water	UK	Listed
1989	Southern Water	UK	Bought, taken private and again
1989	South West Water	UK	Listed (Pennon)
1989	Thames Water	UK	Bought, taken private
1989	Wessex Water	UK	Bought (twice)
1989	Yorkshire Water	UK	Taken private
1991	Aquafin	Belgium	Bought back
1993	SmVaK	Czech Rep	Taken private, bought
1993	Shanghai M Raw Water	China	Listed (Shanghai Chengtou)
1994	SABESP	Brazil	Listed
1994	Prime Utilities	Malaysia	Re-nationalised
1995	Tianjin Capital EP	China	Listed
1996	AMGA	Italy	Bought by Iride (now IREN)
1996	CITIC	China	Listed
1996	Shanghai Industrial	China	Listed
1996	Suzhou New District	China	Listed
1997	Zhongshan Public Utilities	China	Listed
1997	NWS Holding	China	Listed
1997	East Water	Thailand	Listed
1998	Wuhan Sanzhen	China	Listed
1999	ACEA	Italy	Listed
2000	ASCM Como	Italy	Listed, merged with AGAM
2000	EYDAP	Greece	Listed (Athens Water)
2000	Nanhai Development	China	Listed (Grandblue Environment)
2000	Beijing Capital	China	Listed
2000	Qianjiang Water Resources	China	Listed
2001	Acegas	Italy	Listed, merged with APS
2001	EYATH	Greece	Listed (Thessaloniki Water)
2002	Aguas Andinas	Chile	Listed
2002	ASM Brescia	Italy	Merged with AEM
2002	PBA Holdings	Malaysia	Listed
2003	KPS	Malaysia	Listed
2003	Hera	Italy	Listed
2003	Meta Modena	Italy	Bought by Hera
2004	Jiangxi Hongcheng	China	Listed
2005	Tallinna Vesi	Estonia	Listed
2005	Manila Water	Philippines	Listed
2005	LYDEC	Morocco	Listed
2006	COPASA	Brazil	Listed
2010	Chongqing Water Group	China	Listed
2012	Phnom Penh Water	Cambodia	Listed

Source: Company Listing Documents, Annual Reports, media announcements and analyst presentations and reports

in Global Water Intelligence, Reuters and Bloomberg.

Apart from the ten UK companies here and Chile's Aguas Andinas, which own their assets and are fully held by private sector investors all these companies are either majority held by governments or municipalities (EYATH for example) or operate state held assets under a concession contract (Manila Water for example). 22 of these flotations were in Europe (including two in Central & Eastern Europe), three in Latin America, one in North Africa and 19 in Asia, including 13 in China.

Table 7.2: Flotation's of privately held companies

IPO date	Company	Country	Current status
1991	South Staffordshire	UK	Demerged, taken private, sold on
1996	Cheung Kong Infrastructure	China	Listed
1996	Ningbo Fuda	China	Listed
1997	Puncak Niaga	Malaysia	Listed
1997	Intan Utilities	Malaysia	Listed
2002	Darco Water Tech	Singapore	Listed
2002	Goldis	Malaysia	Listed
2003	Eco Water	Singapore	Acquired by EMS Energy in 2007
2003	Salcon	Singapore	Listed
2003	Anhui Water resources	China	Listed
2004	Asia Env Holdings	Singapore	Acquired by CITIC in 2014
2004	Bio Treat Technologies	Hong Kong	Listed
2004	Pure Cycle	USA	Listed
2005	Asia Water Technology	Singapore	Acquired by SIIC EH in 2011
2006	Epure International	Singapore	Now Sound Global
2008	Thai Tap	Thailand	Listed (TTW)
2010	VA Tech Wabag	India	Listed
2011	Global Water Resources	USA	Listed
2011	Jiangsu Jiangnan Water	China	Listed
2011	Calapan Ventures	Philippines	Listed (Philippine H2O)
2013	CT Environment	China	Listed
2014	Kangda International	China	Listed
2014	Anhui Guozhen EP	China	Listed
2015	Yunnan Water	China	Listed

Source: Company Listing Documents, Annual Reports, media announcements and analyst presentations and reports in Global Water Intelligence, Reuters and Bloomberg.

21 of the 24 IPOs noted above are for companies based in Asia, including nine in Hong Kong and China. Many of the six Singapore based companies came to the stock market and into water services on the back of their water engineering experience.

Table 7.3: Spin-offs from listed parent companies

IPO date	Company	Country	Current status
2001	Vivendi Environnement	France	Listed (Veolia Environnement)
2003	Northumbrian Water	UK	Acquired by CKI in 2011
2008	Suez Environnement	France	Listed
2008	Cascal	UK	Acquired by SembCorp in 2010
2009	American Water Works	USA	Listed
2013	CAB Ambiental	Brazil	Listed

Source: Company Listing Documents, Annual Reports, media announcements and analyst presentations and reports in Global Water Intelligence, Reuters and Bloomberg.

There are three themes in table 7.3. In the cases of Suez and Veolia Environnement, the companies had diversified away from their water-based core activities (Suez into energy and Veolia into technology, media and telecommunications) and the spin-off represented a return to those core activities. Northumbrian water had been acquired by Suez Environnement and American Water Works by RWE and subsequently re-floated. CAB Ambiental and Cascal were built up by their parent companies (Galvão Engenharia of Brazil and Biwater of the UK respectively) and listed.

Companies and their coverage

In addition to the Top 50 players listed in table 3.1 there are an additional 112 companies which merited a full company entry in this survey with the exception of E.On (Germany) where reliable population data is not currently available. They are outlined in table 8.1 below.

Table 8.1: Population served by company (home and international markets)

Company	Country	Home	International	Total	% Home
Aguas de Corrientes	Argentina	634,000	0	634,000	100%
United Group	Australia	5,000	0	5,000	100%
Energie	Austria	170,000	876,000	1,046,000	16%
EVN	Austria	511,000	3,459,500	3,970,500	13%
Gruppo Aguas do Brasil	Brazil	3,820,000	0	3,820,000	100%
Aegea	Brazil	1,490,000	0	1,490,000	100%
Riovivo	Brazil	200,000	0	200,000	100%
Solvi	Brazil	2,400,000	0	2,400,000	100%
Phnom Penh Water	Cambodia	1,230,000	0	1,230,000	100%
Alonquin Power	Canada	0	561,000	561,000	0%
Aquatech	Canada	856,000	0	856,000	100%
Corix	Canada	0	1,600,000	1,600,000	0%
EPCOR	Canada	900,000	461,000	1,361,000	66%
Aguas Neuvas	Chile	1,575,000	0	1,575,000	100%
ESSBIO	Chile	2,550,000	0	2,550,000	100%
ESVAL	Chile	2,170,000	0	2,170,000	100%
Nuevosur	Chile	850,000	0	850,000	100%
Anhui Water R D	China	3,600,000	0	3,600,000	100%
China Gezhouba Group	China	2,640,000	0	2,640,000	100%
China Water Group	China	490,000	0	490,000	100%
China Water Industry	China	2,500,000	0	2,500,000	100%
CT Environmental	China	600,000	0	600,000	100%
Easen International	China	500,000	0	500,000	100%
Guangdong Golden Dragon	China	700,000	0	700,000	100%
Heilongjiang Interchina W T	China	4,755,000	0	4,755,000	100%
Jiangsu Jiangnan Water	China	1,200,000	0	1,200,000	100%
Grandblue Environment	China	4,800,000	0	4,800,000	100%
Ningbo Fuda Company	China	400,000	0	400,000	100%
Qianjiang Water Resources	China	315,000	0	315,000	100%
Shanghai Chengtou	China	3,000,000	0	3,000,000	100%
Shanghai Young Sun	China	500,000	0	500,000	100%
Shenzhen Kondarl	China	150,000	0	150,000	100%
Sichuan Guangan AAA Public	China	100,000	0	100,000	100%
Suzhou New District	China	100,000	0	100,000	100%
Yunnan Water	China	4,910,000	0	4,910,000	100%
HK & China Gas & Light	China	3,000,000	0	3,000,000	100%
Wuhan Sanzhen	China	3,000,000	0	3,000,000	100%
Xinjiang Urban Const	China	1,000,000	0	1,000,000	100%
Zhongshan Public Utilities	China	2,000,000	0	2,000,000	100%
Emp Publicas de Mendelin	Colombia	1,000,000	4,060,000	5,060,000	20%
Tallinna Vesi	Estonia	430,000	0	430,000	100%
MVV	Germany	930,000	0	930,000	100%
Athens Water	Greece	4,300,000	0	4,300,000	100%
Thessaloniki Water	Greece	850,000	0	850,000	100%
BHEL	India	300,000	0	300,000	100%
IVRCL	India	1,100,000	0	1,100,000	100%
Jindal Aquasource	India	2,855,000	0	2,855,000	100%
JUSCO	India	1,780,000	0	1,780,000	100%
Larsen & Toubro	India	500,000	0	500,000	100%
Mahindra and Mahindra	India	1,600,000	0	1,600,000	100%
SPML Infra	India	4,150,000	0	4,150,000	100%
VA Tech Wabag	India	3,300,000	1,600,000	4,900,000	67%
Acuatico	Indonesia	3,750,000	0	3,750,000	100%

Company	Country	Home	International	Total	% Home
A2A	Italy	650,000	0	650,000	100%
ASCM-AGAM	Italy	250,000	0	250,000	100%
IREN	Italy	2,400,000	0	2,400,000	100%
Hera	Italy	3,650,000	0	3,650,000	100%
Mitsubishi	Japan	1,216,000	1,178,415	2,394,415	51%
Utilities Development Company	Kuwait	2,200,000	0	2,200,000	100%
Goldis	Malaysia	0	600,000	600,000	0%
Metropolitan Utilities	Malaysia	600,000	0	600,000	100%
K P Selangor	Malaysia	800,000	0	800,000	100%
PBA Holdings	Malaysia	1,450,000	1,100,000	2,550,000	57%
Ranhill Energy & Resoures	Malaysia	1,900,000	375,000	2,275,000	84%
Salcon	Malaysia	0	400,000	400,000	0%
Taliworks	Malaysia	2,045,000	1,700,000	3,745,000	55%
YTL Holdings	Malaysia	0	2,674,000	2,674,000	0%
Lydec	Morocco	5,000,000	0	5,000,000	100%
Philippine H2O	Philippines	235,000	0	235,000	100%
Mota-Engil	Portugal	650,000	710,000	1,360,000	48%
QEWC	Qatar	1,700,000	0	1,700,000	100%
Amiantit	S Arabia	40,000	1,000,000	1,040,000	4%
Nomac	S Arabia	3,420,000	255,000	3,675,000	93%
Ciena Enterprises	Singapore	0	4,175,000	4,175,000	0%
Boustead	Singapore	0	550,000	550,000	0%
Darco	Singapore	0	315,000	315,000	0%
Moya Asia	Singapore	0	1,800,000	1,800,000	0%
Aguas de Valencias	Spain	2,390,000	770,000	3,160,000	76%
Gruppo ACS	Spain	1,875,000	0	1,875,000	100%
Sacyr Vallehermoso	Spain	920,000	1,829,000	2,749,000	33%
Tecasva	Spain	0	4,803,000	4,803,000	0%
Lackeby Water Group	Sweden	0	280,000	280,000	0%
Thai Tap	Thailand	1,800,000	200,000	2,000,000	90%
East Water	Thailand	925,000	0	925,000	100%
Metito	UAE	50,000	4,007,000	4,057,000	1%
Biwater Holdings	UK	0	3,050,000	3,050,000	0%
Bristol Water	UK	1,160,000	0	1,160,000	100%
Portsmouth Water	UK	708,000	0	708,000	100%
Dee Valley	UK	266,000	0	266,000	100%
Glas Cymru	UK	3,188,000	0	3,188,000	100%
Sutton & East Surrey	UK	602,000	0	602,000	100%
Pennon Group	UK	2,129,000	0	2,129,000	100%
Affinity Water	UK	3,588,000	0	3,588,000	100%
Southern Water (First Aqua)	UK	4,457,000	0	4,457,000	100%
South East Water	UK	902,000	0	902,000	100%
South Staffs	UK	1,633,000	0	1,633,000	100%
Pentair	USA	0	913,000	913,000	0%
Alliance Water Resources	USA	264,500	0	264,500	100%
American States	USA	800,000	0	800,000	100%
Aqua America	USA	3,000,000	0	3,000,000	100%
Artesian	USA	300,000	0	300,000	100%
California WS	USA	2,000,000	0	2,000,000	100%
Connecticut	USA	350,000	0	350,000	100%
Consolidated Water	Cayman	50,000	267,000	317,000	16%
Global Water Resources	USA	150,000	0	150,000	100%
Han's Technologies	USA	0	1,425,000	1,425,000	0%
Middlesex	USA	375,000	0	375,000	100%
Perc Water	USA	63,000	0	63,000	100%
Oaktree Capital	USA	0	1,400,000	1,400,000	0%
SJW	USA	1,100,000	0	1,100,000	100%
Southwest	USA	430,000	0	430,000	100%
York Water	USA	145,000	0	145,000	100%

Source: Company entries

Size and scope of the Top 50 and the second tier companies compared

Due to contract cross holdings and multiple ownerships, these numbers are higher than the actual number of people served by the underlying contracts. Even so, they allow for some useful comparisons.

Of the 884.9 million people covered by the top 50 players, 548.1 million were served in the company home country and 336.9 million in other countries. The next 112 companies covered a total of 198.7 million people, 150.3 million in their home markets and 48.4 million internationally.

While the Top 50 companies covered an average of 17.4 million people, the second tier companies covered 1.7 million people on average. The Top 50 companies also tend to have more international activities, with 38% of their contracts taking place in other countries against 25% for the second tier companies.

Companies covered by country

Only companies with individual company entries in this survey (162 in total) are included in table 8.2. This list therefore excludes entries for companies only included in the country entries and they are to be found in the smaller companies list in table 14.1.

Table 8.2: Company entries by country, 1999-2015

	1999	2001	2003	2005	2007	2009	2011	2012	2015
Argentina	0	0	0	1	1	1	1	1	1
Austria	0	1	1	3	3	3	3	3	2
Australia	0	0	0	1	3	1	1	1	1
Belgium	1	1	1	1	0	0	0	0	0
Brazil	1	1	1	1	4	6	8	8	8
Cambodia	0	0	0	0	0	0	0	1	1
Cayman Islands	0	0	0	0	0	0	0	0	1
Canada	0	0	0	1	1	1	1	4	4
Chile	1	1	1	4	5	6	6	6	5
China	4	7	9	19	31	36	41	41	38
Columbia	0	0	0	0	0	0	0	0	1
Czech Republic	1	1	0	1	0	0	0	0	0
Estonia	0	0	0	1	1	1	1	1	1
France	3	3	3	4	4	4	4	4	4
Germany	5	5	4	4	5	5	4	4	5
Greece	0	2	2	2	2	2	2	2	2
Netherlands	1	1	0	0	0	0	1	1	0
India	0	0	1	3	3	4	6	7	9
Indonesia	0	0	0	0	0	1	1	1	1
Italy	5	8	12	7	9	8	7	7	5
Japan	0	0	0	0	0	1	2	3	2
Kuwait	0	0	0	0	1	1	1	1	1
Malaysia	3	2	10	11	11	11	11	11	9
Mexico	0	0	0	1	1	1	1	1	0
Morocco	0	0	0	1	1	1	1	1	1
Netherlands	0	1	1	1	0	0	1	1	0
Philippines	0	0	2	3	3	3	3	4	3
Portugal	0	0	0	1	1	1	1	1	1
Qatar	0	0	0	0	1	1	1	1	1
Russia	0	0	0	0	0	0	0	0	1
Saudi Arabia	0	0	0	1	1	1	1	1	2
Singapore	0	0	4	6	6	6	7	8	8
Spain	6	8	8	8	8	7	7	6	7
Sweden	0	0	0	1	1	1	1	1	1
Thailand	2	1	1	1	2	2	2	2	2
UAE	0	0	0	0	0	0	0	1	1
United Kingdom	18	15	18	19	15	18	17	18	16
USA	20	25	23	21	21	24	22	21	17

Source: Company entries

Table 8.3 below summarises these results in terms of the number of companies identified, along with which countries they are based in.

Table 8.3: Company entries by economic grouping, 1999-2015

	1999	2001	2003	2005	2007	2009	2011	2012	2015
Number of countries	14	17	18	28	27	29	31	33	33
Number of companies	71	83	102	128	145	158	166	174	162
- OECD countries	61	72	74	81	80	84	82	85	73
- Other developed	0	0	4	6	6	6	7	8	8
- Advanced developing	10	11	21	34	52	59	66	67	66
- Developing	0	0	3	7	7	9	11	14	15

Source: Company entries

Advanced developing and developing countries are as currently defined by the World Bank and US Aid. Singapore is a developed economy but is not a member of the OECD. In 2010 Chile became a member of the OECD and is retrospectively included in the above tables. China has been reclassified as ‘advanced developing’ instead of ‘developing’.

Companies based in OECD member states dominated the company entries until 2007. Since 2011, there have been roughly equal numbers for developed and advanced developing / developing economies. Mergers and reclassifications have affected companies in the OECD more than in the rest of the world.

Country market development, prospects and prognosis

The addressable population

The addressable population is the percentage of the population (2030 forecasts) that the author believes have a better than even chance of being served with PPP water and/or sewerage provision by 2030. This may appear to be a long way off, but as seen with the 2015 forecasts which have been updated since 2000, it is not as distant as it may appear. It does allow for current political, regulatory and market trends to be translated into realistic market developments, while allowing for years of contract award and implementation slippage for political and economic changes.

The potential for private sector participation

These tables are not targets and it must be emphasised that they consider areas where PPP has the potential to offer better services in an affordable manner, rather than PPP for its own sake. They consist of a set of estimates for the extent of private sector participation in water and sewerage services for 2000 and a provisional estimate for 2015, along with a forecast for the potential extent of PPP by 2030. Perhaps 25-30% of the market is 'suitable' for PPP in that PPP can offer genuine benefits to people under current conditions and those foreseeable in 2030. Almost all of this market is the urban market, meaning that by 2030, 45-55% of the urban market is potentially suitably placed for PPP.

Not all markets are suitable for privatisation, even on a 25 or a 50 year view. Yet the only predictable element in the above statement is its inherent unpredictability. In 2000, 8% of the world's population was served to some extent by the private sector. Since 2006, this had increased to 10% of the world's population, to 11% between 2007 and 2009 and 12% in 2010, 13% in 2011 and 14% in 2012.

Tables 9.1 - 9.8 summarise the country entries for PPP and demographics into eight regions. Tables 9.9 and 9.10 provide a global summary. Table 9.9 is comparable with table 6.2 and table 9.10 provides the corrected data as outlined in table 6.3.

Table 9.1: PPP in Western Europe, 2000-2030

Western Europe	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	390.82	418.81	431.29	PPP	147.60	193.94	210.22
Urban population	290.79	326.16	350.30	% PPP	38%	46%	49%
% Urbanisation	74%	78%	81%	% Urban PPP	51%	59%	60%

Table 9.2: PPP in Central & Eastern Europe, 2000-2030

Central & E Europe	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	338.29	324.32	305.08	PPP	16.15	35.20	50.61
Urban population	226.03	220.91	216.67	% PPP	5%	11%	17%
% Urbanisation	67%	68%	71%	% Urban PPP	7%	16%	23%

Table 9.3: PPP in the Middle East & Africa, 2000-2030

Middle East & Africa	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	991.81	1,420.71	1,947.48	PPP	24.42	91.71	155.66
Urban population	395.88	649.55	1,002.24	% PPP	2%	6%	8%
% Urbanisation	40%	46%	51%	% Urban PPP	6%	14%	16%

Table 9.4: PPP in North America, 2000-2030

North America	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	314.42	361.13	403.37	PPP	57.58	65.95	76.00
Urban population	249.50	294.83	339.78	% PPP	18%	18%	19%
% Urbanisation	79%	82%	84%	% Urban PPP	23%	22%	22%

Table 9.5: PPP in Latin America, 2000-2030

Latin America & Caribbean	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	526.28	630.09	716.67	PPP	101.37	160.14	218.77
Urban population	396.28	502.79	595.13	% PPP	19%	25%	31%

Latin America & Caribbean	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
% Urbanisation	75%	80%	83%	% Urban PPP	26%	32%	37%

Table 9.6: PPP in East & South East Asia, 2000-2030

East & South East Asia	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	2,030.97	2,270.59	2,411.10	PPP	94.49	480.08	635.20
Urban population	832.08	1,283.99	1,611.08	% PPP	5%	21%	26%
% Urbanisation	41%	57%	67%	% Urban PPP	11%	37%	39%

Table 9.7: PPP in South & Central Asia, 2000-2030

Central & South Asia	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	1,502.90	1,859.79	2,162.64	PPP	0.00	50.88	96.30
Urban population	443.56	651.20	909.21	% PPP	0%	3%	4%
% Urbanisation	30%	35%	42%	% Urban PPP	0%	8%	11%

Table 9.8: PPP in Oceania, 2000-2030

Oceania	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	31.22	39.36	47.32	PPP	5.72	12.44	14.00
Urban population	22.01	27.85	33.75	% PPP	18%	32%	30%
% Urbanisation	70%	71%	71%	% Urban PPP	26%	45%	41%

Table 9.9: Global PPP, 2000-2030

Global	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	6,127.70	7,324.78	8,424.94	PPP	447.33	1,090.34	1,456.76
Urban population	2,856.13	3,957.29	5,058.16	% PPP	7%	15%	17%
% Urbanisation	47%	54%	60%	% Urban PPP	16%	28%	29%

Table 9.10: Global PPP - corrected data, 2000-2030

Global - corrected	2000 Act	2015 Est	2030 For		2000 Act	2015 Est	2030 For
(Million people)				(Million people)			
Population	6,127.70	7,324.78	8,424.94	PPP	462.33	1,140.34	1,561.76
Urban population	2,856.13	3,957.29	5,058.16	% PPP	8%	16%	19%
% Urbanisation	47%	54%	60%	% Urban PPP	16%	29%	31%

Note:
Act = Actual
Est = Estimate
For = Forecast

Table 9.11: 2015 forecasts (million people)

Year	People served	% of global population
2004	1,125	15%
2005	1,085	15%
2006	1,145	16%
2007	1,148	16%
2008	1,161	16%
2009	1,163	16%
2010	1,202	16%
2011	1,192	16%
2012	1,138	16%
2015	1,150	16%

At first glance, this appears to be a notably consistent and successful series of forecasts. That impression in fact resembles a swan's serene progress down a river. Look under the surface and you will see a pair of legs paddling in every direction. Earlier forecasts placed a considerable emphasis on the Americas being a powerhouse of growth for PPP, driven by concessions in Latin America and by outsourcing contracts in the USA. In fact, PPP has managed to keep up with population growth in North America and while PPP expanded in Latin America, this was a notably patchy process with high profile setbacks for example in Argentina and Bolivia. In contrast, fifteen years ago, PPP in

countries such as Russia and India would have been seen by many as not occurring in the foreseeable future. In their differing ways, they are now active markets.

Global snapshot of the water business

What does this data tell us about the world of water? Interrogating the various databases developed for this survey allows us to gain some new insights into the nature of water and sewerage service provision.

Countries with and without water PPP

Countries covered in our survey, those where water and / sewage PPP contracts are currently in operation, account for 5,927 million people in 2015, which means that a substantial number of people live in countries where formal water PPP has not been identified.

Table 10.1: Global population and urbanisation (million people)

	2000 Act	2015 Est	2030 For
Population	6,127.70	7,324.78	8,424.94
Urban population	2,856.13	3,957.29	5,058.16
% Urbanisation	47%	54%	60%

Source: Country entries

Table 10.2: Countries with water PPP - population and urbanisation (million people)

	2000 Act	2015 Est	2030 For
Population	5,082.38	5,926.68	6,588.98
Urban population	2,507.00	3,403.40	4,197.72
% Urbanisation	49%	57%	64%

Source: Country entries

Table 10.3: Countries without PPP - population and urbanisation (million people)

	2000 Act	2015 Est	2030 For
Population	1,045.32	1,398.10	1,835.96
Urban population	349.14	553.89	860.45
% Urbanisation	33%	40%	47%

Source: Country entries

Nearly 1.4 billion people live in countries without water or sewage PPP. They range from those countries that are culturally opposed to most PPP (North Korea springs to mind) to those who have turned against PPP (Bolivia) and those which are either considering PPP (Pakistan and Bangladesh for example) or use PPP at the informal level (Kenya and Sri Lanka).

81% of the world's population live in countries where water PPP is currently being used including 86% of the global urban population. Countries without water PPP are characterised by an appreciably lower level of urbanisation (40%) than those with water PPP (57%).

Table 10.4: Proportion of people living in countries with water PPP that are served by the private sector

(Million people)	2000 Act	2015 Est	2030 For
PPP	457.86	1,114.10	1,481.83
% PPP	9%	19%	22%
% Urban PPP	18%	33%	35%

Source: Country entries

As well as looking at water and sewage PPP coverage in global terms, we can consider its extent within just those countries where water and sewage PPP is currently in operation. A third of people living in urban areas are served to some extent by the private sector and 19% of the overall population. The urban proportion has increased from 18% in 2000. Our 2030 forecast shows a slight increase to 35%, reflecting the high degree of urban population growth that is occurring between 2015 and 2030.

The impact of water PPP in terms of water volumes

As shown in section 3, we are at an early stage when it comes to gathering volumetric data for private sector water and wastewater operators. Even so, it is of interest to see how they are developing on a global scale.

Table 10.5: Water abstraction in countries with water PPP that are served by the private sector

Water abstraction by sector	Km³ per annum	Percentage
Municipal	423.54	12.4%
Industrial	698.03	20.4%
Agriculture	2,296.92	67.2%
Total	3,418.48	

Source: Country entries

Interestingly, the proportions between municipal, industrial and agricultural use are close to the old adage that global water consumption is 10% municipal, 20% industrial and 70% agricultural.

In table 3.2 we noted that fifty companies handled a total of 38.92 km^3 of water and 40.34 km^3 of wastewater in the most recent year. Abstraction by municipal and industrial users accounted for 1,121.57 km^3 of water according to the most recently available data. Those 50 companies therefore handled approximately 3.5% of the water abstracted (in fact more as not all water abstracted is put into distribution) and at least 3.6% of the wastewater subsequently generated.

PPP and service development

How extensive is service delivery in those countries that have water and sewage PPP? Collating the country data lets us consider service delivery in those countries where water service PPP is seen demonstrates there is plenty to do worldwide before sustainable urban water and sewerage become the norm.

Table 10.6: Service provision in countries with water PPP

People in urban areas (million)	Served	Unserved	% served
Households with piped water	2,839.5	563.9	83%
Households connected to sewage network	2,298.4	1,105.0	68%
Sewage treated to secondary level	1,303.8	2,099.6	38%
Sewage treated to tertiary level	430.4	2,973.0	13%

Source: Country entries

According to the Joint Monitoring Project (JMP (2015) Progress on Sanitation and Drinking Water: 2015 Update and MDG Assessment, UNICEF / WHO, Geneva, Switzerland) 98% of people in developed countries have household piped water supplies, against 72% in developing countries and just 32% in the least developed countries. Overall, the 83% coverage figure for the countries with PPP is close to the global total of 79%.

Table 10.7: Service provision in countries without water PPP

People in urban areas (million)	Served	Unserved	% served
Households with piped water	255.5	298.4	46%
Households connected to sewage network	158.7	392.9	29%
Sewage treated to secondary level	38.5	513.2	7%
Sewage treated to tertiary level	12.5	541.4	2%

Source: Envisager database

We cannot make a claim for causality when it comes to PPP and overall service development. Even so, services are markedly poorer in the non-water PPP countries. Outside Finland and Switzerland, there are few if any tertiary sewage treatment works and even secondary sewage treatment is very much the exception. In terms of public health, it is the absence of piped water and sewerage that is the most pressing concern.

Using the Millennium Development Goals criteria of access to 'improved' drinking water and sanitation, we are led to believe that much progress has been made in terms of improving access to water and sanitation. Unfortunately, it appears that less progress has been made in terms of access to safe drinking water and sanitation. According to the JMP report in 2015, 82% of people have access to 'improved' sanitation and 96% 'improved' drinking water in urban areas and 68% to 'improved' sanitation and 91% 'improved' drinking water globally.

Research on the 2010 JMP data published in 2012 by Jeremy Bartram and his colleagues (Onda K, LoBuglio J & Bartram J (2012) Global Access to Safe Water: Accounting for Water Quality and the Resulting Impact on MDG Progress. Int. J. Environ. Res Public Health, 2012, 9, 880-894) paints a markedly darker picture. Here 'safe' drinking water is defined as being of low sanitary risk.

Table 10.8: Access to safe drinking water in 2010

	Million people	Range
Low sanitary risk	3,180	2,510-3,220
Elevated sanitary risk	1,260	740-2,130
Unsafe	1,020	746-1,610
Unknown safety	380	380
Unimproved	780	780
No data	300	300
Global Total	6,900	

Source: Onda et at, 2015

So, 1.8 to 3.7 billion people do not in fact have access to safe drinking water. While the 2010 Millennium Development Goal of halving the percentage of people without access to 'improved' drinking water by 2015 was met, this is not the case for access to safe drinking water. The data is a global figure and was not broken down to the urban and rural level.

Table 10.9: Percentage of people without safe drinking water

	2000	2010	2015	2015
			Projected	Target
MDG 'unimproved'	23%	12%	9%	12%
Unsafe (water quality)	37%	28%	26%	18%
Unsafe (water & sanitary risk)	53%	42%	46%	26%

Source: Onda et at, 2015

So, while the target to halve dependence on 'unimproved' water was more than met (indeed, the latest survey quoted above confirms the 9% figure) the more modest targets for lowering dependence on unsafe water look like having been missed by a wide margin.

And what about sanitation? According to Onda et al, it looks more like 4.1 billion have unsafe sanitation rather than 2.6 billion with 'unimproved' sanitation. The post 2015 development goals are currently being finessed. They moot universal access to safe drinking water and 'improved' sanitation by 2030. Safe sanitation is a possible target for 2050.

The question here is how PPP can best assist in ensuring universal access to safe drinking water and sanitation, especially in urban areas.

Industrial water & waste water services

There are two sides to the industrial water and wastewater services markets. The first covers the outsourcing of water provision and effluent treatment services. The second is concerned with the development of facilities for serving industrial development zones.

Water and effluent outsourcing

Industrial water outsourcing is concerned with the provision services relating to the delivery of process water for specific industrial applications and the treatment of industrial effluents. It is a relatively small market at present, as it is not recognised as a distinct market in many countries. The market is currently found in three main key areas: [1] Developed countries where it is driven by effluent treatment standards, [2] Multi nationals operating global discharge standards in other countries, and [3] Companies needing reliable supplies of industrial process water to a stated quality.

These services are typically provided in-house, by the incumbent water and sewerage utilities or by outsourcing them to specialist companies such as Veolia Environnement and Suez Environnement. There is a shift towards utility and environmental service outsourcing by companies in the USA and a number of European and Asian countries.

In 2000, Suez Environnement estimated that the global industrial services market was worth in excess of USD 500 billion per annum (Source: SE, Annual results presentation, March 2001), with water and wastewater accounting for USD 100 billion of this. SE believes that 2% of the water market was outsourced in 2000 and that this share could expand to 20% in the future. According to VE, the industrial outsourcing market in the USA is worth USD 50 billion in 2000. Globally, to this day, this remains an emergent market, the majority being shared equally between Suez and Vivendi Environnement. There has been a paucity of subsequent market data, and so the current state of play remains something of a mystery.

Most outsourcing projects are either of a short duration or relatively small in terms of contract size, both small in terms of revenues and contract length. Three major contracts gained by Veolia Environnement in 2000-2006 demonstrate the potential for larger and longer lasting outsourcing projects.

Veolia Environnement - Korea

The USD1billion Hyundai Petrochemical's Daesan contract gained in 2000 runs for 20 years. The Hynix Semiconductors Corporation 12 year EUR900million contract for Hyundai of Korea is the largest industrial water outsourcing contract in the world to date. The contract calls for four ultra-pure water plants and two WWTWs. VE is acquiring the company's water and wastewater facilities for EUR196million and will generate EUR830million in revenues over the next 12 years. It was extended to 17 years in 2006 and in 2008, a new treatment plant entered service. A contract was gained in 2004 with the Kumho group for the maintenance and operation of water and wastewater facilities at Kumho Rubber Ulsan, and Kumho Petrochemical and Kumho Polychem (15 years, O&M) at the Yeosu National Industrial Complex.

Veolia Environnement - China

In January 2006, a 25 year industrial wastewater management contract was agreed with Sinopec at Beijing Yansan PetroChemical's Yanshan facility, 50km south west of Beijing. The EUR249million contract involves running four wastewater treatment plants with a total capacity of 129,000$m^{3/}$day including the recovery of 40,000m^3/day of process water.

Industrial water concessions

While there are a large number of contracts identified that involve municipal and industrial services, contracts solely dedicated to developing and managing industrial water and wastewater facilities are less common. The two tables below summarise the treatment capacities of such contracts that have been identified through the contract databases.

Table 11.1: Water BOT contracts (000 m^3 per day planned capacity)

Country	Company	Capacity
Chile	SembCorp	12
China	Suez Environnement	260
China	SembCorp	1,793
China	Beijing Enterprises	10
China	Kangda	31
China	CT Environmental	310
Oman	SembCorp	60
Singapore	SembCorp	4,770
South Africa	SembCorp	223

Country	Company	Capacity
Thailand	Eastern Water	70
UAE	SembCorp	592
United Kingdom	SembCorp	174

Source: Envisager contract database

Table 11.2: Wastewater BOT contracts (000 m^3 per day planned capacity)

Country	Company	Capacity
Chile	SembCorp	157
China	Beijing Enterprises	60
China	China Everbright	192
China	CITIC	739
China	Kangda	242
China	CT Environmental	940
China	Towngas	300
China	Taliworks	70
China	Suez Environnement	45
China	Ciena	240
Singapore	SembCorp	18

Source: Envisager contract database

A small market, with a greater significance

Compared with the municipal water and wastewater market, the industrial services sector is a small one. Its importance lies in the fact that industrial customers are appreciably more open to innovation, especially when it can lead to improved services and lower capital and operating costs. As industrial customers tend to be more receptive to new technology and techniques, they are playing an increasingly important role as an area for adopting innovations that can be passed on to utilities.

Mergers and acquisitions

Mergers and acquisition activity in the sector has been intense over the past 18 years, reflecting how ownership changes as strategies and perspectives change. 150 corporate transactions have been listed here, which have taken place since 1997. These transactions are primarily in the water sector and involved at least USD10million being paid for their stakes. Bids where no financial data is available have been excluded. A considerable number of smaller transactions (typically 20-40 per annum) have also been recorded, especially in the US, where regulated utilities 'tuck in' privately-owned small water systems near to their own systems, in order to expand their customer base and benefit from economies of scale. These major transactions can be divided into four areas:

1. Acquisitions of listed companies by utility companies
2. Acquisitions of municipal stakes
3. Acquisitions of private company subsidiaries by utility companies
4. Acquisitions by private equity and other financial investors

Where appropriate, an implied value has been derived for the company by dividing the actual price paid by the size of the share stake acquired. Disclosure of earnings and asset earnings is somewhat inconsistent and incomplete, so two measures have been used here: the price paid per person (implied value divided by the number of people served either by water or sewerage services), and price/turnover (implied value divided by revenues) to outline the varying valuations for these assets and activities.

Further details about many of the bids are provided in the company entry section.

Table 12.1: Acquisitions of private sector companies by other water companies

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
1998	Azurix	Wessex Water	2,500	100%	702	5.9
1998	Aqua America	Consumers	463	100%	691	4.7
1998	California WS	Dominguez	64	100%	427	2.6
1999	AWG	SmVaK	48	53%	60	2.8
1999	Union Fenosa	Cambridge	87	100%	300	2.9
1999	Anglian	Hartlepool	30	100%	333	3.0
1999	Kelda	York Waterworks	45	100%	265	3.2
1999	Thames	E'Town	923	100%	1,420	6.3
1999	Kelda	Aquarion	444	100%	888	3.8
1999	American WW	SJW Corp	390	100%	398	3.7
1999	American WW	NEI	700	100%	412	3.9
1999	Veolia	ScVK	27	38%	37	1.9
1999	Suez	United Water	927	67%	553	3.9
2000	RWE	Thames	6,750	100%	356	4.1
2000	American States	CCWC	31	100%	775	N/A
2000	American WW	Citizens Utilities	49	100%	445	0.5
2000	American WW	UWR	835	100%	835	N/A
2001	TMWA	Sierra Pacific	350	100%	1,400	N/A
2001	RWE	American WW	4,600	100%	341	3.2
2002	BOC	EMC	50	100%	N/A	1.2
2006	Agbar	Bristol Water	281	100%	264	2.2
2006	Linde	EMC	20	100%	N/A	0.3
2007	Veolia	RUAS	42	100%	323	1.1
2008	Aguas Andinas	ESSAL	269	54%	384	N/A
2009	AWW	EMC	18	100%	N/A	0.2
2010	Suez Env	Agbar	4,500	100%	102	1.7
2010	SembCorp	Cascal	206	100%	44	1.1
2011	Epcor	Chaparral City	35	100%	1,522	N/A
2011	CKI	Northumbrian	3,727	100%	571	3.3
2012	Remondis	Eurawasser	123	100%	154	1.7
2012	South Staffs Plc	Cambridge Water	124	100%	440	3.8
2013	Connecticut Water	Biddeford & Saco Water	20	100%	396	N/A
2013	Marubeni	Maynilad Water Services	400	20%	195	N/A
2013	Sumitomo Corp	East Surrey Holdings	258	100%	400	2.8
2013	Agbar / Suez Env	Aguas de Sabadell	31	64%	138	1.2
2014	Georgia Holdings	Georgia Global Utilities	26	25%	75	1.7

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
2014	Algonquin Power	Park Water	250	100%	1,030	N/A
2014	Beijing Enterprises WG	Bejing Herocan	218	100%	108	N/A
2014	CITIC	United Envirotech	940	100%	119	8.6
2014	China Everbright Water	HanKore	928	78%	151	7.9
2015	Empresas P Mendelin	ADASA	965	100%	1,720	7.9
2015	Pennon Group	Bournemouth Water	154	100%	358	2.2
2015	China Gezhouba	Kardan Water	151	100%	57	N/A
	Total	48 deals noted	32,999			

Source: Envisager M&A Database

The highest prices paid are for asset-owning companies in the US and the UK. In the former, the level of activity has been intense, with a significant proportion of the regulated customer base having seen its owners change hands twice during this period. The lower prices for SmVaK and ScVK reflect their being non-asset owning companies in the Czech Republic.

Table 12.2: Acquisition of state / municipal entities by private sector companies

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
1997	Veolia	Budapest Sewerage	80	25%	158	5.4
1997	Suez	Budapest Water	82	25%	164	5.5
1998	Veolia	Sanepar	217	30%	100	2.6
1999	Bouygues/Azurix	OSM	133	80%	88	3.0
1999	Azurix	BA Province	439	90%	244	12.2
1999	Dragados	A del Grande B A	44	31%	39	N/A
1999	EMOS	Aguas Cordeillara	193	100%	345	N/A
1999	Suez	EMOS	957	42%	226	14.2
1999	Suez	EMOS	178	9%	196	12.4
1999	Iberdrola	ESSAL	94	51%	312	10.8
1999	Thames & EDP	ESSEL	113	45%	251	13.2
1999	Suez	EMOS	957	42%	230	14.3
1999	AWG / Enersis	ESVAL	138	40%	136	5.1
1999	Gelsenwasser	Hanse Wasser	355	75%	676	N/A
1999	Vivendi / RWE	BWB	1,749	50%	448	3.1
1999	Azurix	G M de Desarrollo	39	80%	64	2.2
1999	Thames	Izmit Su As	21	12%	146	N/A
2000	Suez	Manuas Saneamento	111	90%	51	3.1
2000	Thames	ESSEL	73	26%	281	14.8
2001	EVN	Nosiwag	83	100%	184	5.5
2001	Thames	ESSBIO	336	51%	220	14.4
2001	AWG / VE	PVK	160	66%	101	2.4
2001	IW / UU	Tallinna Vesi	78	50%	186	N/A
2002	RWE	RWW	210	66%	320	309.0
2004	Falabella	ESSAT	74	100%	90	2.1
2004	Falabella	ESSAR	61	100%	55	2.0
2004	Falabella	ESMAG	35	100%	117	3.2
2004	Veolia	BVAG	450	75%	1,200	1.8
2007	DM Consunji	Maynilad Water	503	84%	85	N/A
2008	Cascal	Zhumadian Water Co	18	51%	N/A	6.0
2008	Cascal	Yancheng Water Co	29	49%	100	6.1
Total	31 deals noted	USD million	8,010			

Source: Envisager M&A Database

Table 12.3: Acquisition of subsidiaries of private sector companies

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
1999	American WW	AAET	32	50%	67	1.7
1999	Edison	Intl. Water	40	50%	70	N/A
2000	Bouygues	Crea	60	71%	30	1.7

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
2000	Nuon	Biwater Capital	130	50%	64	N/A
2000	RWE	China Water Co	70	49%	40	N/A
2000	AWG	Aguas Puerto	131	29%	179	6.7
2000	Guangdong Inv	GH Holdings	508	81%	123	1.9
2000	Bouygues	SAUR	158	13%	101	0.7
2001	Nuon	Utilities Inc.	405	100%	476	6.3
2001	Bouygues	SAUR	181	14%	108	0.7
2001	American WW	Citizens Utilities	231	100%	330	N/A
2001	American WW	Azurix NA	160	100%	80	N/A
2002	YTL	Wessex Water	2,150	100%	581	N/A
2002	Kelda	AWW New Eng	120	100%	678	N/A
2002	RWE	Citizens Utilities	859	100%	781	N/A
2003	Sime Darby	China Water Co	70	46%	43	N/A
2004	CKI	Cambridge Water	87	100%	301	3.4
2004	Aqua America	Heater Utilities	48	100%	320	N/A
2004	Aqua America	AquaSource	191	100%	382	N/A
2005	Amga	Aqua Italia	68	63%	348	2.2
2006	FCC	SmVaK	350	100%	315	4.4
2007	Aqua America	Utilities & Industries	51	100%	378	N/A
2007	Macquarie	Aquarion	760	100%	1,150	3.7
2009	Ayala	Manila Water	73	12%	105	N/A
2011	EPCOR	AWW Arizona & N Mexico	470	100%	1,020	N/A
2012	Aqua America	AWW – New York	65	100%	430	N/A
2012	AWW	AA - Ohio	88	100%	518	N/A
2013	Liberty Utilities Co.	SE - United W Arkansas	28	100%	521	N/A
2013	Three buyers [1]	Aqua America - Florida	53	100%	310	N/A
2013	Beijing Enterprises WG	VE - C GDE (Portugal)	121	100%	463	2.2
2013	VE	FCC - Proactiva Med Amb	199	50%	65	N/A
2013	Mitsui	FCC - SmVaK	128	49%	201	N/A
2014	Guangdong Investment	Super Sino (CWI)	88	70%	93	N/A
2014	Utico	Chennai Water Desal	18	75%	24	1.2
	Total	42 deals noted	8,190			

Source: Envisager M&A Database

Notes:

[1] Florida Governmental Utility Authority (USD 50 million) US Water (Suez Environnement, USD 2 million), and YES Communities Companies, LLC (USD1 million).

Table 12.4: Acquisitions by private equity companies and other financial investors

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
2001	Glas Cymru [3]	Dwr Cymru	2,646	100%	827	4.2
2001	South Downs	Portsmouth	103	100%	159	2.4
2002	RBS	Southern Water	1,512	100%	363	2.2
2003	Macquarie [3]	South East	686	100%	457	4.6
2003	Consorcio Financiero	ESVAL [1]	92	50%	118	1.1
2003	Penta Finance	SmVaK (AWG)	64	54%	157	N/A
2004	Penta Finance	SmVaK (Ondeo)	56	44%	170	N/A
2004	Arcapita Bank	South Staffs	245	100%	199	2.4
2005	PAI	SAUR	1,348	85%	56	0.7
2005	Westpac (Hastings Capital)	Mid Kent Water	453	100%	820	5.6
2005	Terra Firma (UK)	East Surrey [2]	766	100%	511	6.0
2005	Deutsche Bank	East Surrey [2]	329	100%	219	5.0
2006	Macquarie [3]	Aquarion	860	100%	1,720	N/A
2006	Aqualia	SmVak	204	98%	272	N/A
2006	Westpac [3]	South East	1,170	100%	780	5.6
2006	Osprey	AWG	4,136	100%	376	2.8
2006	Macquarie [3]	Thames Water	15,040	100%	1,011	4.8

Year	Bidder	Target	Bid price (USD million)	Stake	USD per person	Price / turnover
2007	CIF / JP Morgan [4]	Southern Water	8,558	100%	1,902	8.8
2007	Alinda IF [5]	South Staffs	816	100%	628	5.5
2007	OTPP	ESVAL	365	49%	764	4.3
2007	OTPP	ESSBIO	340	51%	669	4.6
2008	Saltaire Water [6]	Kelda	5,951	100%	1,240	4.1
2010	Carlyle Group [5]	Park Water	102	100%	453	N/A
2011	HSBC [7]	Cambridge Water	122	100%	388	3.7
2011	Capstone	Bristol Water	206	70%	401	2.7
2012	Rift Acquisitions	VE UK Water	2,020	90%	608	4.3
2014	Actis	VE Morocco Water	490	100%	55	N/A
2014	Oaktree Capital Mgt	Veolia Israel	300	100%	210	N/A
Total	29 deals noted		48,980			

Notes:

[1] 44.8% acquired by Consorcio Financiero and 5.0% by the Moneda Chile Fund

[2] The original acquisition of East Surrey Holdings plc included the assets of Phoenix Gas, which have been retained by Terra Firma

[3] Cash and assumed debt

[4] JP Morgan Asset Management Infrastructure 32%, CIF 27%, UBS 18%

[5] Price not disclosed by company. Sources as follows:

South Staffs: FT.com, 30-10-2007

Park Water: State of Montana, Department of Public Service Regulation, 10-03-2011

[6] CII 47%, GIC Infra Holdings 33% & Infracapital 20%

[7] Temporary acquisition to allow CKI's Northumbrian Water bid to proceed

Source: Envisager M&A Database

The two bids for Thames are for somewhat different entities. The EUR11.3billion bid in 2000 included GBP4.3billion bid for the company's listed shares, while the GBP8.0billion bid in 2006 includes Macquarie paying GBP250million for 11% of Thames' equity, valuing Thames' equity at GBP2,275million, with the rest being accounted for by debt. RWE believes that it has made a EUR500million profit in this sale.

The bid identified here involved a total of USD 98.2 billion changing hands, more than half of this arising from private equity companies, pension funds and other financial investors seeking to participate in the sector's stable cash flows. While comparisons between bids is clouded by differing foreign exchange rates and investment and regulatory climates over time, it does appear evident that financial sector bids have been at the higher end of the valuation spectrum.

Movement of money

In section 10, it became clear that universal access to safe water and sanitation was a long way away from ceasing to be an aspiration to becoming a reality. Achieving sustainable water and sewage services, whereby the integrity of the water cycle is maintained through sustainable water abstraction and appropriate sewage treatment, is an even more distant aspiration.

Are we spending enough on developing and maintaining water and sewage infrastructure?

In 2010, Global Water Intelligence estimated the actual size of the global water market as USD 507.5 billion for operating and capital spending, including USD 27.9 billion for industrial water and USD 395.6 billion for water utilities. They estimated global industrial water capital spending at USD 14.3 billion and USD 173.4 billion for utilities. The problem here is that these utility capital spending numbers fall far short of what is needed and as a result, infrastructure is deteriorating instead of being improved.

Table 13.1: Current capital spending on municipal water against spending needed

Current spending	USD billion pa
Water	90
Wastewater	80
Total	173
Spending to maintain services	
Current spending	173
Annual depreciation of existing assets	83
Organic growth	38
Meeting regulations	60
Security of supply	30
Total	384
Spending to secure supplies	
Current spending	173
Annual depreciation of existing assets	83
Closing the infrastructure gap	67
Meeting current and new regulations	180
Security of supply	30
Total	534

Source: Global Water Intelligence (GWI) (2011), Global Water Markets 2011, Meeting the World's Water and Wastewater Needs until 2016, Media Analytics Limited, Oxford, UK

Here depreciation refers to maintaining extant assets as they currently are and ensuring no further overall deterioration in these assets. Meeting regulations is for compliance with global drinking water standards as well as regional standards such as the EU's Water Framework Directive. Security of supply is for basic responses to climate and demographic changes. Closing the infrastructure gap is concerned with universal access to water and sanitation, along with an assumed complete compliance with all applicable regulations and security of supply for future climate and demographic change.

How much do we need to spend?

One of the greatest challenges facing the water and sewage sectors is the poor quality of information that people have to base their decisions upon. A case in point were the 11 estimates produced in 1999-2004 for additional annual spending needed each year in order to have universal access to safe water and sanitation. They ranged from USD 6.7 to 150 billion pa. The expression 'back of envelope calculation' was invoked in one review of these figures and it is not an unfair one.

In 2011, I was invited by the OECD to review these numbers and develop a forecast for the sector's global capital spending needs from 2010 to 2050. Two levels of service development were considered, 'basic' and 'full.' The difference between basic and full access by 2050 lay in the depth of infrastructure development.

Basic coverage

50% of slums to have household piped water and 50% to have yard access
50% of slums to have household mains sanitation and 50% to have access to fully maintained blocks
50% or rural households to have household piped water and 50% to have local access
50% of slums to have household water meters
50% of urban sewage in developing countries to be collected and treated to secondary level

50% of urban population to have storm sewerage

Full access means:

All urban areas to have full household access to piped water
All urban areas to have full household access to mains sanitation
All rural areas to have locally developed piped household water
All slums to have household water meters
All urban sewage to be collected and treated to at least secondary level
All urban areas to have storm sewerage

Table 13.2: Cost of basic and full water & sewage service access by 2050

	Urban - basic	Urban - full	Rural - basic	Rural - full	Global - basic	Global - full
Regional total						
Sub-Saharan Africa	523,902	819,454	81,689	104,660	605,592	924,115
Asia & The Pacific	1,900,993	2,321,971	126,189	143,336	2,027,182	2,465,307
E Europe & C A	484,010	498,219	36,350	54,489	520,360	552,708
Latin America	531,904	649,740	21,133	23,041	553,037	672,780
ME & N Africa	522,633	629,891	28,378	31,876	551,011	661,767
North America	1,124,103	1,124,103	31,666	31,666	1,155,770	1,155,770
South Asia	906,128	1,271,659	130,757	145,208	1,036,886	1,416,866
Western Europe	726,455	726,455	30,011	30,011	756,465	756,465
Global total	6,720,129	8,041,492	486,173	564,287	7,206,302	8,605,779
World Bank status						
High income	2,304,550	2,314,426	80,381	84,252	2,384,931	2,398,678
Upper mid income	808,002	905,012	40,986	51,931	848,988	956,943
Lower mid income	2,780,574	3,572,269	232,300	260,249	3,012,873	3,832,519
Low income	826,091	1,248,873	132,506	167,855	958,598	1,416,728
OECD						
Member	2,340,251	2,343,863	93,734	97,371	2,433,985	2,441,234
Rest of the World	4,383,966	5,701,717	392,440	466,916	4,776,406	6,168,633
BRIC						
Member	2,153,532	2,758,988	178,712	199,881	2,332,244	2,958,870
Rest of the World	4,567,037	5,282,944	307,461	364,405	4,874,498	5,647,349

Source: Lloyd Owen D A (2011) Infrastructure needs for the water sector. OECD, Paris

The global capital spending forecast for 2008-2050 is for USD 7.21 trillion under the 'basic' scenario and USD 8.61 trillion under the 'full' scenario. It was noted that the range of forecasts for various coverage targets in the past have varied markedly. Compared to some of the more recent ones, the forecasts may appear conservative. The range of forecasts for the OECD members (as of 2011) and BRICs is USD 4.76 to USD 5.40 trillion for the 2008 to 2050 period. In my belief, universal personal access to safe water and sanitation is both attainable and affordable.

Are we looking after what little we already have?

Before we can maintain and expend assets, money is needed. This is the essential challenge every water and sewage utility faces. A survey commissioned by the World Bank, using data from 1999 to 2004, found that 60% of the utilities examined achieved some degree of cost recovery, especially in higher income countries. Average tariffs used were based on residential consumption of 15m^3 of water per annum, from utilities serving 131 major cities worldwide, broken down as follows:

Table 13.3: Water tariffs and cost recovery, 1990-2004

			Water Tariff	Utilities with of cost recovery		
	Mean	Median	Range	None	Partial	Partial
	(USD/m^3)	(USD/m^3)	(USD/m^3)		O&M	capital
Global	0.53	0.35	0.00 – 1.97	39%	30%	30%
By income						
High income	1.00	0.96	0.00 – 1.97	8%	42%	50%
Upper-Medium income	0.34	0.35	0.03 – 0.81	39%	22%	39%
Low-Medium income	0.31	0.22	0.04 – 0.85	37%	41%	22%
Low Income	0.11	0.09	0.01 – 0.45	89%	9%	3%
By region or group						
OECD	1.04	1.00		6%	43%	51%

			Water Tariff	Utilities with of cost recovery		
Latin America	0.41	0.39		13%	39%	48%
ME & North Africa	0.37	0.15		58%	25%	17%
East Asia & Pacific	0.25	0.20		53%	32%	16%
South & Central Asia	0.13	0.16		100%	0%	0%
Sub-Saharan Africa	0.09	0.06		100%	0%	0%

Sources: Foster, V and Yepes T (2005), Is Cost Recovery A Feasible Objective for Water and Electricity? A background paper commissioned for the World Bank, and quoted in Fay, M & Morrison M (2005) Infrastructure in Latin America & the Caribbean: Recent Developments and Key Challenges. Volume I: Main Report & Volume II: Annexes, Report No. 32640-LCR, World Bank, Washington DC, USA. The paper is based on original data from Asian Development Bank (2001); Association of Water & Sanitation Regulatory Entities of the Americas (2003); Global Water Intelligence (2004); and the National Institute of Urban Affairs (1999). Further information obtained from Olivier A (2007) Affordability: Principles and practice, presentation to Pricing water services: economic efficiency, revenue efficiency and affordability, OECD Expert Meeting, 14 November 2007, Paris, France

This is a pretty bleak picture. No (or inadequate) cost recovery was interpreted as charging less than USD 0.20 per m^3 and partial cost recovery as charging USD 0.20–0.40 per m^3. Among the OECD members and in Latin America, cost recovery is the norm, but in the less developed economies in Asia and Africa it typically remains the exception.

A more recent survey by the World Bank known as the Blue Book (Danilenko et al, 2014) collated data from 1,861 utilities serving 513 million people with water and 313 million with sewerage in 12,480 towns and cities in 2010. A single utility in Western Europe and the USA participated, although many from Australia, Chile, Singapore, and Central and Eastern Europe provided data.

Danilenko A, van den Berg C, Macheve B, Moffitt L J (2014) The IBNET Water Supply and Sanitation Blue Book 2014: The International Benchmarking Network for Water and Sanitation Utilities Databook. World Bank, Washington DC.

Table 13.4: The Blue Book - Economics of water provision outside the OECD countries

	2000	2010
Revenues (USD per m^3)	0.34	0.81
Operations & maintenance costs (USD per m^3)	0.28	0.75
Revenue as a percentage of O&M costs	121%	108%
Revenue per person per annum (USD)	18	45
Tariffs as a percentage of household income	1.05%	0.59%

Source: Danilenko et al, 2014

Cost recovery is in inverse proportion to water usage; top performing utilities (tariffs cover at least 130% of operations and maintenance costs) had a median water consumption of 118 litres per capita per day, while the poorest performers (less than 85% cost recovery) consumed 258 litres per capita per day. Much of the difference is due to leakage and unbilled water. 37% of utilities had tariffs that failed to cover their most basic O&M costs.

Table 13.5: The Blue Book - Utility coverage by country income category

Median coverage by income category	Water (2009)	Wastewater (2010)
Low income	62%	14%
Lower-middle	81%	48%
Upper-middle	93%	77%
Upper	100%	89%

Source: Danilenko et al, 2014

The falloff in sanitation coverage was especially marked in lower income countries. It is also evident that household spending on water is rising at a slower rate than operating costs and that tariffs are shrinking as a percentage of household income.

Can we afford to pay more?

There does appear to be a pretty dramatic gap between the average paid by households and what they can reasonably be expected to pay. Excluding nominal tariffs, a tariff range of 0.3–3.8% of household income has been identified.

Effective average household income affordability limits of 1.4% for high income, 1.8% for medium and 2.5% for low income countries are a fair reflection as to attitudes towards affordability and willingness to pay. In OECD countries, average tariffs as a % of household income are similar to those seen in the Bluer Bok, as shown in table 13.5.

Table 13.6: Water tariffs and household incomes as a % of household income in the OECD

	Average	Bottom decile
Western Europe	0.2 - 1.0%	1.1 - 3.5%
Central & Eastern Europe	1.2 - 1.4%	3.9 - 9.0%
USA, Mexico & Canada	0.2 - 0.3%	1.3 - 3.1%
Other countries	0.3 - 1.0%	1.1 - 3.3%

Source: OECD (2009) Managing water for all: An OECD perspective on pricing and financing, OECD, Paris, Franc

One of the challenges is the ability of poorer people to pay. This is particularly marked in some societies. In Mexico, the average household pays 0.2% of household income for water, but this is 3.1% for the poorest tenth. That creates an effective barrier when considering overall tariffs and how they affect the worst off. Table 13.6 outlines what are considered to be acceptable tariff limits.

Table 13.7: Limits of affordability, water tariffs as a % of household income

Industrialised countries – Median	1.10%
Industrialised countries – Poor	2.60%
Developing countries – Median	2.50%
Developing countries – Poor	6.0-8.0%
Western Europe	3%
Developing countries – Without targeted support	7%
Developing countries – With target support	5%

Source: Smets H (2008) Water for domestic uses at an affordable price, presentation to the International Conference on the Right to Water and Sanitation in Theory and Practice, Oslo, Norway

Even so, there are a number of countries where higher tariffs than the effective limit have been broadly accepted. The scope for increases above these levels is limited. A dramatic example of willingness to pay identified is in Zambia (Klawitter S (2008), Full Cost Recovery, Affordability, Subsidies and the Poor – Zambian Experience, presentation to the International Conference on the Right to Water and Sanitation in Theory and Practice, Oslo Norway) where a range of 3–10% of family income was cited as being affordable.

Table 13.8: Consumer perception of acceptable range of % household income for services

	Range noted	Effective limit
High income (OECD)	0.5 – 2.5%	1.40%
Medium income	0.5 – 3.5%	1.80%
Low income	0.3 – 3.8%	2.50%

Source: Lloyd Owen, D A (2009) Tapping Liquidity: Financing Water and Wastewater 2010-2020. Thomson Reuters, London, UK

Smets (2008) found a wide range of tariffs in developing and transition economies, with a general understanding that in Latin America and Eastern Europe & Central Asia that the limits of affordability were identified at between 4.5% and 5.l5% of household income. Specific pro-poor subsidies were noted in 13 of the countries covered in this survey, along with policy objectives to minimise the impact on poor people (keep expenses below 3–5% of household income in the UK, US, Chile and France, as well as Venezuela, Lithuania, Argentina and Indonesia).

In 2009, I developed a series of estimates for urban water and sewerage spending needs in 69 countries for 2010-2019 and applied them to the effective limits outlined in table 13.7 above (Lloyd Owen, D A (2009) Tapping Liquidity: Financing Water and Wastewater 2010-2020. Thomson Reuters, London, UK). The ‘medium’ capital spending scenario was based on meeting various national and international targets for service coverage and infrastructure maintenance. In every case, forecast tariff revenues were less than the forecast spending needs, as outlined in table 13.8.

Table 13.9: Forecast excess of spending over revenues for three capital spending scenarios, 2010–29

Revenue-spending gap (USD billion)	Capital spending scenario		
	Low	Medium	High
North America	-344.7	-435.1	-702.3
Western Europe	-92.0	-231.2	-344.0
EU accession states	-6.7	-15.5	-29.6
Rest of Europe	-9.1	-19.5	-24.6
Developed Asia	-352.6	-419.0	-481.5
Latin America	-13.3	-38.3	-55.3
MENA	-110.4	-157.1	-189.8
Sub-Saharan Africa	-0.5	-3.6	-11.0

Revenue-spending gap (USD billion)	Capital spending scenario		
E & SE Asia	-39.5	-146.6	-282.0
South Asia	-80.2	-120.2	-197.6
Total	-1,049.0	-1,522.6	-2,296.9

Source: Lloyd Owen, D A (2009) Tapping Liquidity: Financing Water and Wastewater 2010-2020. Thomson Reuters, London, UK

Overall, the low spending forecast pointed towards a shortfall of USD 52 billion per annum, the medium forecast to USD 76 billion pa and the high forecast to a USD 115 billion pa shortfall. As with the GWI data summaries in table 13.1, there is a pronounced gap between what is being spent, what needs to be spent and the revenues needed to finance this spending.

Paying for infrastructure

When tariffs charged are often struggling to finance the operation and management of extant assets, it is clear that new sources of finance are needed.

The World Bank and water PPP

The World Bank has had a high profile when it comes to seeking to attract new sources of funding through water and sewage PPP. As seen in section 5, this has not been without its challenges. The five tables below have been adapted from the World Bank's Private Participation in Infrastructure Database sector snapshots (http://ppi.worldbank.org/snapshots/sector/water-and-sewerage).

Table13.10: Summary of investment generated by World Bank PPP projects

	1990-94	1995-99	2000-04	2005-09	2010-14
Projects	33	144	236	314	158
Investment	8,064	22,043	16,762	13,598	18,346
Distress - number	26	37	19	4	0
Distress - % investment	26%	19%	10%	0%	0%

Table 13.11: Contract investment by type and region

USD million	Concession	Divestiture	Greenfield Project	Management / lease contract	Investment (USD million)
East Asia and Pacific	23,365	1,365	6,346	156	31,232
Europe and Central Asia	731	435	1,544	1,205	3,915
Latin America & Caribbean	23,948	7,924	6,714	5	38,591
Middle East & North Africa	192	0	3,886	0	4,078
South Asia	359	0	245	2	605
Sub-Saharan Africa	76	0	259	57	392
Global total	48,671	9,724	18,994	1,425	78,813

Table 13.12: Projects cancelled or in distress, by region

USD million	Projects	Investment	% of Total investment
East Asia and Pacific	29	11,600	15%
Europe and Central Asia	2	8	0%
Latin America & Caribbean	28	9,016	11%
Middle East & North Africa	1	0	0%
South Asia	0	0	0%
Sub-Saharan Africa	3	9	0%

Table 13.13: Projects cancelled or in distress, investment represented by period of project loan

USD million	1990-94	1995-99	2000-04	2005-09	2010-14	1990-14
East Asia and Pacific	3,122	5,112	3,332	34	0	11,600
Europe and Central Asia	0	0	8	0	0	8
Latin America & Caribbean	4,081	3,223	1,695	17	0	9,016
Middle East & North Africa	0	0	0	0	0	0
South Asia	0	0	0	0	0	0
Sub-Saharan Africa	0	0	9	0	0	9
Global total	7,203	8,335	5,044	51	0	20,633

Table 13.14: Contract investment by type per time of project award

USD million	1990-94	1995-99	2000-04	2005-09	2010-14
Concession	7,790	14,177	12,452	4,245	10,007
Divestiture	0	5,127	1,078	1,193	2,326
Greenfield project	544	2,418	3,096	6,954	5,982
Management / lease contract	0	50	137	1,208	30
Period total	8,334	21,773	16,763	13,597	18,346

Over the past 25 years an average of USD 3.15 billion per annum in new funding has been generated by these projects. There has been something of a shift towards Greenfield projects, while divestitures have eased back, in part due to the challenges such projects have had in Latin America. For this source of funding to make a material impact on global funding needs, a new set of approaches may be required.

Development banks in general

There is a general commitment from the various development banks to increase funding in the sector, but this funding is increasingly tied to higher expectations about operational reform and cost recovery. Thus the higher funding outlined below remains dependent on institutional reform and capacity building.

Table 13.15: Development bank disbursements, 2000-10

Water & sewerage disbursements (USD million per annum)	2000-2005	2006-2010
World Bank	1,280	2,500
African Development Bank	70	200
Asian Development Bank	790	2,250
European Bank for Reconstruction & Development	75	150
Inter American Development Bank	200	400
Total	2,415	3,000

Source: Development bank annual reports, 2000-2010.

Again, while funding flows have increased, they only address a relatively small part of the overall need. One problem here is that due to the general reluctance to charge, let alone and pay appropriate tariffs, water projects remain riskier than almost all other forms of capital intensive projects. Between 1990 and 2005, 39% of all projects involving World Bank funding were either cancelled or in a risk position. Even so, the ongoing quality of the portfolio has improved more rapidly than any other sector, perhaps due to the lessons learnt from the loans of the 1990s, especially that foreign exchange rate collapses do happen and they have to be taken seriously when local people have to pay for their consequences (Source: World Bank, (2005) Water Supply and Sanitation Lending: Volume Rises, Quality Remains High, Water Supply and Sanitation Feature Stories, Washington DC, USA).

The role of mergers and acquisitions

As pointed out in section 12, a lot of money changes hands when the ownership of water and sewage utilities changes. Table 13.16 summarises the deals recorded in section 12. It excludes deals where financial term, were not disclosed (this is particularly prevalent in the Private Equity sector) and for the sale of strategic stakes in companies that do not involve an overall change in ownership.

Table 13.16: Mergers and acquisitions and water utilities

USD million	Number	Total	Average
Acquisitions of private sector companies by other water companies	48	32,999	687
Acquisition of state / municipal entities by private sector companies	31	8,010	258
Acquisition of subsidiaries of private sector companies	42	8,190	195
Acquisitions by private equity companies and other financial investors	29	48,980	1,689
Total	150	98,179	655

Source: Envisager contract database

Over the past 27 years, 5.6 deals have taken place each year on average, involving an annual outlay of USD 3.6 billion. These are purely transactional sums, as none of this money is in fact invested in assets. Some of the new owners may invest more in their utilities, which has certainly been the case in England & Wales since 1989, but there is no guarantee of this.

Overseas development assistance

Overseas development assistance (ODA) is the term for financial assistance from developed to developing countries. Water and sanitation-related aid has been rising in recent years having stagnated in the 1995-2001 period. In 2005-2007 is was USD 9.60 billion pa, rising to USD 12.58 billion pa in 2008-2010 and USD 13.28 billion pa in 2011-2013 (USD 2012 prices, source: http://www.oecd.org/dac/stats/water-relatedaiddataataglance.htm). Since the early

1990s, water and sanitation account for 6-8% of total sector allocable aid. It is, it appears, not a particularly glamorous sector to be associated with.

Some ways forward

As matters currently stand, financing water and sewage projects and infrastructure and service extension remains a fundamental challenge in almost all economies. In northern European countries such as Denmark, Sweden, Germany and Switzerland, sustainable services have been developed, backed by tariffs that these prosperous economies can afford to finance, whether directly or indirectly. Other countries will need other approaches. Even the water utilities in England and Wales would happily admit that the next few decades will be challenging ones, despite the dramatic advances they have made in terms of addressing their costs.

These are some themes I have considered over the last decade. I have summarised them in the hope that they will encourage debate about their applicability and other approaches.

Cutting out corruption

Transparency International's 2008 Global Corruption Report concentrated on corruption in the water sector; 10-30% of project costs are taken up by corruption and presumably more in the more corrupt economies. In extreme cases, where cartels inflate the cost of materials and services provided and poor quality work and goods impacts the infrastructure's operating life the overall impact of these practices was estimated to raise the price of providing infrastructure by 25-45%.

When suitably encouraged, the private sector can be a driving force for openness on costs. Corruption thrives when information is not available. So, when there is PPP without a suitable regulatory disclosure framework it is in danger of creating a new area for corruption. By developing integrity frameworks, costs for materials have fallen by 12-18% in for example Colombia and Pakistan.

Source: Transparency International (2008) Global Corruption Report 2008: Corruption in the Water Sector, CUP, Cambridge, United Kingdom

Making sub-sovereign debt a viable proposition

Sub-sovereign entities in developing economies, such as municipal water utilities, have considerable problems in raising debt funding for infrastructure extension and upgrading, because neither they nor their municipality are likely to have a credit rating. This means that funding is either unavailable (making companies dependent on ODA) or municipal/state funding is expensive as it has to be raised either from bank loans or from unrated debt issues.

In the Philippines, the Local Government Unit Guarantee Corporation (LGUGC) guarantees repayments to private investors in the event of default on eligible local government loans and bonds. The LGUGC provides the guarantee at a fee of 0.5% to 1.25% pa and an internal credit screening and rating system

Source: Tremolet S (2009) Private money for public water – A safe haven in the midst of a financial storm? A presentation to ICEA, 16 June 2009.

Revolving credit in Colombia

In Colombia, Financiera de Desarrollo Territorial (Findeter) lowers the cost of loans to municipalities through rediscounting up to 85% of the debt and holding the debt for 8–15 years rather than the usual 3–5 years. Where appropriate, a capital grace period of up to three years and an interest grace period of up to one year can be utilised.

This means that commercial banks are able to operate in the municipal debt market, while the state banks retain the risk. 25% of loans to date have been for water and sanitation. Findeter receives its funding from its capital and retained earnings, as well as through external borrowing and is rated AAA (Duff & Phelps). 78% of its revenues come from existing loans.

In 2009, Grupo Financiero de Infraestructura Ltda (GFI) sold USD 62.5 million of bonds for financing water and wastewater projects in local municipalities. The issue has been developed on the state revolving facility (SRF) principle. 29 small and medium municipalities have been organised into a legal trust which acts as the bond issuer and funds the loans and allows the municipalities to leverage the annual transfers of funds from the national government. In turn, it allows local investors access to long term financial products which are supporting local activities. The bonds were bought by local institutions, such as pension funds and insurance companies. With an AA+ rating from Moody's BRC Investor Services and a 19 year term, the issue is denominated in Colombian inflation adjusted units (UVR) and has a coupon of 8.0%. The Central Bank's benchmark interest rate has been held at 3.5% in recent months so this represents a 450 basis points (4.5%) premium over Colombia's base rate.

Sources: Tremolet S (2009) Private money for public water – A safe haven in the midst of a financial storm? A presentation to ICEA, 16 June 2009 & Colombia Infrastructure Group LLC, Press Release, 15th December 2009.

Local Companies - Local PPP for local people

While this survey aims to be comprehensive, there is a limit to company entries and what can be found out in terms of smaller players. Comparing the contract awards on the contract database for companies with an entry in this survey to those left outside, in terms of people served, the listed companies account for 94.5% of the 2015 total and 87.8% when looking at the total number of contract awards identified.

Information continues to emerge about smaller and lower profile companies which continue to merit keeping at least a watching brief on them. Their very nature, usually privately held and locally based, means that information about them can be patchy.

The last few years have been marked by the increase in the quality of local companies as well as their quantity. This reflects a shift away from opportunists (water vendors who provide a debatable quality of service based on exploiting deficiencies in the utility's service) to enablers, companies often working with the utilities to expand and improve services both in currently served areas and where no formal service previously existed.

To merit inclusion in the following list, companies need to have gained at least one water or sewerage contract since 1987 which is still active and serves at least 10,000 people.

Table 14.1: Non-listed companies identified as active in water & wastewater PPP

Company	Countries	Water	Sewage	W & WW	Total	N
Aboitiz	Philippines	150,000	0	0	150,000	1
Acueductos y Alcantarillados	Colombia	5,000	0	25,000	30,000	1
ACWA Power	Oman	90,000	0	0	90,000	1
Aguas de la Guajira	Colombia	10,000	0	60,000	70,000	1
Aguas de la Mojana	Colombia	3,000	0	30,000	33,000	1
Aguas de la Ribera	Colombia	5,000	0	5,000	10,000	1
Aguas de Portugal	Brazil	0	0	220,000	220,000	1
Aguas de Santo Antonio	Brazil	14,000	0	0	14,000	1
Aguas de Tucurui	Brazil	0	0	12,000	12,000	1
Aguas del Llano	Colombia	5,000	0	30,000	35,000	1
Aguas Kpital	Colombia	300,000	0	400,000	700,000	1
Aguascol	Colombia	14,000	0	220,000	234,000	3
Aguia Branca	Brazil	0	0	153,000	153,000	1
Anhui Asia-Pacific Env Eng	China	0	40,000	0	40,000	1
Anneng Group	China	0	550,000	0	550,000	2
Anxi South Water	China	0	50,000	0	50,000	1
Aqualyng	China	50,000	0	0	50,000	1
Aquaplus	Czech Rep.	0	0	70,000	70,000	1
AvtoVAZ	Russia	0	0	720,000	720,000	1
Azrieli Group	Israel	300,000	0	0	300,000	1
Balaji Industrial	India	0	100,000	0	100,000	2
Balibago Waterworks	Philippines	550,000	0	0	550,000	41
Beijing Water Business Doctor	China	0	500,000	300,000	800,000	2
Benpres	Philippines	10,000	0	0	10,000	1
Berlinwasser International	Hungary, Nepal, Maurutius, Namibia	500,000	330,000	0	830,000	4
Bermad	Colombia	50,000	0	100,000	150,000	1
Bufete	Mexico	0	130,000	0	130,000	1
Cadagua	Oman	100,000	0	0	100,000	1
Carioca Christiani-Nielsen	Brazil	450,000	0	557,000	1,007,000	4
Changye Group	China	0	200,000	0	200,000	1
Chongqiqng Taixing Env Protn	China	0	50,000	0	50,000	1
CNA Group	China	0	200,000	0	200,000	2
Cobra-Tedagua	Peru	0	3,000,000	0	3,000,000	1
Conhydra	Colombia	80,000	0	455,000	535,000	5
Construcciones Insaca	Colombia	23,000	0	80,000	103,000	1
Construtora Nascimento	Brazil	0	0	11,000	11,000	1
Conteras Hermanos / Esuco	Argentina	78,000	0	0	78,000	1
Dalian Dongda Env Eng	China	0	1,683,333	0	1,683,333	7
Datem Water	Philippines	50,000	0	0	50,000	1

Company	Countries	Water	Sewage	W & WW	Total	N
DKLS Industries Bhd	China	60,000	0	0	60,000	1
ELL Environmental	China	0	300,000	0	300,000	2
El Nitco	UAE	0	300,000	0	300,000	1
Emissao Engenharia	Brazil	26,000	0	0	26,000	1
Emp Sul-Americana de Montagem	Brazil	1,100,000	0	0	1,100,000	1
Empresa de Aguas de Giradot	Colombia	2,000	0	25,000	27,000	1
Empresa de Saneamento de Nobres	Brazil	0	0	13,000	13,000	1
Empresa de Servicos de Ocana	Brazil	0	720,000	80,000	800,000	1
Equi-Parco	Philippines	250,000	0	0	250,000	1
Eurasian Water Partnership	Russia	0	0	2,534,000	2,534,000	4
Farab Co	Iran	100,000	0	0	100,000	1
Foz do Brazil	Brazil	46,000	4,000,000	164,000	4,210,000	2
Francisco Velasquez Inginieria	Colombia	2,000	0	6,000	8,000	1
Galaxy Water	China	0	610,333	0	610,333	5
Gammon	India	350,000	0	0	350,000	1
Geo Miller	India	0	250,000	0	250,000	1
George Kent Holdings	China	200,000	0	0	200,000	1
Gharpure Eng & Construction	India	0	250,000	0	250,000	1
Global Enghenharia	Brazil	0	0	32,000	32,000	3
Global Env Solutions	Israel	0	50,000	0	50,000	1
Globalbank Consulting	Brazil	0	105,000	0	105,000	1
Grupo Colombo-Cubano	Colombia	5,000	0	15,000	20,000	1
Grupo Hydros	Colombia	13,000	0	60,000	73,000	2
Guangxi Huahong Water Affairs	China	0	425,000	0	425,000	3
Haerbin Wanxinglong Co	China	0	250,000	0	250,000	1
Hainan Runda Ind	China	800,000	0	0	800,000	1
Hebei Delong Env Eng	China	0	100,000	0	100,000	1
Hebei Yongyi Ecological & EP	China	0	250,000	0	250,000	3
Hidrogesp	Brazil	280,000	0	19,000	299,000	3
Hidroscan	Chile	0	0	301,000	301,000	2
Hitachi	Maldives	0	0	50,000	50,000	1
Hong Yuan Ju	China	560,000	0	0	560,000	1
Huaqi	China	0	125,000	0	125,000	1
Hubai Keliang Bio Tech	China	0	125,000	0	125,000	1
Huizhou Dayawan Xiayong	China	0	25,000	0	25,000	1
Hunan Capital	China	0	200,000	0	200,000	1
HydroChina Zhongnan	China	0	250,000	0	250,000	1
IDE Technologies	Israel, USA	2,200,000	0	0	2,200,000	3
IDEAL	Mexico	0	350,000	0	350,000	1
IES Holding	Russia	0	0	1,000,000	1,000,000	1
Ingenieria Sala	Colombia	26,000	0	156,000	182,000	2
Ingenieria Total	Colombia	10,000	0	50,000	60,000	1
Jiangsu Ruiisheng Water	China	0	75,000	0	75,000	1
Jieyun Intl Construction	China	0	50,000	0	50,000	1
Jinan Shifangyuantong	China	0	100,000	0	100,000	1
Kaidan Water Affairs	China	0	400,000	0	400,000	1
Kaiyuan EP	China	0	200,000	0	200,000	2
Kamaz	Russia	0	0	500,000	500,000	1
Keppel Seghers	Singapore, Algeria	700,000	300,000	0	1,000,000	3
Kharafi National	UAE	0	300,000	0	300,000	1
Latin Aguas	Peru	20,000	0	100,000	120,000	1
Lianheruitong Water	China	0	666,667	0	666,667	3
Long Quan Group	China	200,000	100,000	0	300,000	2
Maple Reinders	Canada	0	15,000	0	15,000	1
Marketing Service	Kyrgyzstan	0	0	22,000	22,000	1
Materia Perfuracao de Pocos	Brazil	30,000	0	0	30,000	1
Matonense de Saneamento	Brazil	0	360,000	0	360,000	1
Megha Engineering	India	500,000	0	0	500,000	1

Company	Countries	Water	Sewage	W & WW	Total	N
Metronic	China	60,000	0	0	60,000	1
Multiplex Solutions	Georgia	1,050,000	0	0	1,050,000	1
Nagarjuna Constructions	India	500,000	0	0	500,000	1
Nanjing Zhongdian EP	China	0	400,000	0	400,000	1
NCC / Skanska / YIT	Russia	0	720,000	0	720,000	1
North America Environmental Tech	China	0	2,333,333	0	2,333,333	3
Novacon	Brazil	5,000	0	33,000	38,000	3
N-Viro	Canada	0	250,000	0	250,000	1
Obrecht Engenharia Ambiental	Brazil	0	2,040,000	210,000	2,250,000	8
Operadores de Servicos	Colombia	5,000	0	20,000	25,000	1
Origin Water	China	0	125,000	0	125,000	1
Pamatong	Philippines	307,000	0	0	307,000	2
Perenge Engenharia	Brazil	2,000	0	94,400	96,400	5
Porr	Austria	0	10,000	0	10,000	1
Presea	Colombia	4,000	0	45,000	49,000	1
Primaverra do Leste	Brazil	0	0	31,000	31,000	1
PT Buana	Indonesia	156,000	0	0	156,000	1
PT Novco	Indonesia	100,000	0	0	100,000	1
PT Watts	Indonesia	200,000	0	0	200,000	1
PT WMD	Indonesia	250,000	0	0	250,000	2
Qingdao Huaou	China	6,000	0	0	6,000	1
R&F Properties Group	China	0	200,000	0	200,000	1
Raghuram Hume Pipes	India	30,000	0	0	30,000	1
Renova	Russia	519,000	0	2,157,000	2,676,000	6
Reynolds Water	USA	0	7,000	0	7,000	1
Rong Group	China	0	166,667	0	166,667	1
Sagua International	Argentina	410,000	0	185,000	595,000	2
SEINCO	Guatemala	0	0	30,000	30,000	1
Shandong Hezheng	China	0	100,000	0	100,000	1
Shanghai Fudalefumen	China	0	133,333	0	133,333	1
Shanghai Qingyue	China	0	66,667	0	66,667	1
Shenyang Zhenxing	China	0	250,000	0	250,000	1
Shenzhen Water Group	China	0	1,550,000	0	1550,000	1
Shenzhen Zhujiang EP	China	0	1,000,000	0	1,000,000	1
Sichuan Huajian	China	0	200,000	0	200,000	1
SIE de Colombia	Colombia	15,000	0	60,000	75,000	1
Sino-Dutch Water IC	China	0	150,000	100,000	250,000	1
Sinomem	China	0	1,350,000	0	1,350,000	7
SMP Infrastructure / Gharpure	India	0	500,000	0	500,000	1
SMS Paryavaran	India	50,000	0	0	50,000	1
Solaqua / TCS Enterprises	Mexico	0	500,000	0	500,000	1
Sonel	Brazil	0	490,000	0	490,000	1
STA / Benencio	Uruguay	0	0	100,000	100,000	1
Sudamerica de Aguas	Argentina	90,000	0	0	90,000	1
Suizhou City Water Supply	China	0	250,000	0	250,000	1
Suqian Yinkong Water Supply Co	China	0	30,000	0	30,000	1
Suzhou Zhongsheng	China	0	50,000	0	50,000	2
Tahal Consulting Engineers	India	331,000	0	0	331,000	1
Tamas Projects	UAE	0	200,000	0	200,000	1
Tata	India	0	0	250,000	250,000	1
Telar	Brazil	0	80,000	0	80,000	1
Tenix	Australia	0	15,000	0	15,000	1
Tianjin Binhai Water	China	200,000	0	0	200,000	1
Timatch Sdn Bhd / RWE	Malaysia	700,000	0	0	700,000	1
Tribasa	Mexico	0	200,000	0	200,000	1
Tri-Tech	China	0	0	50,000	50,000	1
Union Temporal Eras	Colombia	25,000	0	75,000	100,000	1
Vicuna	Chile	6,000	0	480,000	486,000	1
Villa Nova Engenharia	Brazil	45,000	0	0	45,000	1

Company	Countries	Water	Sewage	W & WW	Total	N
Vitens	Mozambique	1,100,000	0	0	1,100,000	1
Wai Kee Holdings	China	0	66,667	0	66,667	1
Weihai Dean Water	China	20,000	0	0	20,000	1
Wheelabrator / Coplata	Mexico	0	150,000	0	150,000	1
WOG Group	Singapore	125,000	0	0	125,000	1
Xucheng Industrial Dev	China	0	133,333	0	133,333	1
Yintaida Group	China	0	433,333	0	433,333	3
Yiqi Group	China	0	66,667	0	66,667	1
Zhejiang Shangda	China	0	50,000	0	50,000	1
Zhongchuang Water	China	0	150,000	0	150,000	1
Zhongxing Telecom	China	150,000	0	0	150,000	1
Ziyang Haitian Water	China	80,000	0	0	80,000	1
ZOC Investment	China	0	1,000,000	0	1,000,000	1
Total		14,335,000	31,152,333	12,195,400	57,682,733	

Source: Envisager contract database

N = Number of contracts held by each company

The impact of these companies ought to be put into their global context. The 1,836 contracts awarded to the 162 listed companies covered 992 million people, or an average of 0.54 million people per contract. The 58 million people served by the 254 contracts outlined in this section serve an average of 0.23 million per contract.

The impact of these smaller companies is increasing. In 2012, 41.8million people were covered by 191 contracts held by these companies at 0.22 million people per contract. In 2008, the number of people served by contracts awarded to unlisted companies was 32.0 million.

Country Perspectives – Table of Contents

AUSTRALIA

UGL Limited

Population served by service and country 2014 data UGL Limited	Water Only	Sewerage Only	Water & Sewerage	Total
Australia	5,000	0	0	5,000
Global total	5,000	0	0	5,000
% home markets	100%	0%	0%	100%

UGL Limited (formerly United Group) specialises in industrial maintenance, facilities management, commercial property management services, manufacturing, fabrication and construction for the power supply and distribution, water and waste management, mining and mineral processing, oil, gas and LNG and telecommunications sectors. Its United Kingdom subsidiary is involved in integrated facilities management, industrial maintenance and engineering construction. The company is active in Australia, New Zealand, the United Kingdom and Southeast Asia. Revenues for water and civil engineering were approximately AUD100 million in 2013.

In June 2004, UGL paid AUD15million for Thames Water Projects, a company covering Thames' process engineering activities in Australia, Malaysia and Singapore. Thames Water Projects is now called UGL Infrastructure. The company dates back to a water treatment chemicals company operating in Australia in the 1920s which was acquired by Thames when it bought PW Worldwide in 1989. While most of Thames Water Project's activities are for third parties, the acquisition includes Thames Water's industrial water outsourcing project in Victoria. United Water anticipates winning further contracts in water reclamation. Industrial wastewater contracts ran in Maffra, Victoria from 2010-13 and in Mornington. Victoria from 2007-14.

Contracts

Year	Location	Contract & length	People served & service
1999	Sydney	25 year BOT	5,000, water & wastewater treatment

The 8Ml per day water recycling facility entered service in 2000 for the Sydney Olympiad. It consists of a 2.2Ml per day wastewater recovery plant and a 7Ml per day microfiltration and reverse osmosis water treatment plant. The company operates the facility for the Olympic Co-ordination authority with the O&M contract worth AUD1.1million per annum.

UGL aims to develop the division to concentrate on the direct management of water and wastewater treatment assets. The Group's total water and wastewater order book is over AUD250million. Alliance projects have been gained in a number of cities, including Sydney, Perth and Melbourne.

UGL Limited, Profit & loss account, 2010-2014

Y/E 31/06 (AUDmillion)	2010	2011	2012	2013	2014
Turnover	4,186.9	4,285.1	4,454.4	3,816.1	4,041.8
Operating profits	216.6	236.6	202.6	71.8	105.3
Net income	151.1	158.7	135.4	41.2	68.5
Earnings per share (AUD cents)	87.7	95.5	80.8	21.9	37.3

Sources:

United Group / UGL, Annual Reports, 2010-2015
Thames Water, analyst presentations

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Kate Spargo (Chairman)
Ross Taylor (Managing Director & CEO)
Ray Church (CFO)

ASIA

Cambodia

Phnom Penh Water Supply Co

Population served by service and country 2014 data Phnom Penh Water	Water Only	Sewerage Only	Water & Sewerage	Total
Cambodia	1,230,000	0	0	1,230,000
Global total	1,230,000	0	0	1,230,000
% home markets	100%	0%	0%	100%

In April 2012, 15% of Phnom Penh Water Supply Co (PPWSA)'s shares were offered to investors (13.5%) and employees (1.5%), the first IPO in Cambodia. The remaining 85% are held by the Ministry of Economy and Finance. The issue raised USD20million, which was used to retire part of its corporate debt. PPWSA was founded in 1895 to manage the Chroy Changva water treatment plant. After the utility was closed down in 1975 by the Khmer Rouge, it was reopened in 1979 and was corporatised in 1993. Between 1996 and 2001 it received USD94million of donor assistance and USD56million in loans from the ADB, the World Bank, Japan's JICA, and the French Government. In 1993, there were 25,960 recorded customers, somehow broken down into 12,980 of which did not receive water and 13,901 'customers' who did receive water but were not registered. The distribution network was refurbished between 1994 and 1999 and the network expanded from 2000. From 1998, a programme to regain the public's trust in the utility and to encourage billing payments went into operation, including improved information availability and simplified payments. Tariffs were revised in 1997 and 2001 and have been unchanged since.

Phnom Penh Water, Service delivery, 1993-2014

	1993	2000	2005	2010	2014
Connections	26,881	67,016	138,226	202,929	269,993
Metered connections	3,391	66,905	138,226	202,929	269,993
Collection efficiency	48.0%	99.5%	99.8%	99.2%	-
Non-revenue water	73.0%	33.0%	8.5%	5.9%	7%
Treatment capacity (million m^3 per annum)	23.7	67.5	85.8	109.5	164.3
Output (million m^3 per annum)	19.6	37.8	61.8	102.2	135.5
Revenues (millionKHR)	1,400	25,125	64,679	106,296	156,543
Gross profit (millionKHR)	-700	4,191	23,380	36,230	78,694

There were 225,735 domestic customers in 2014 (105,981 in 2004), along with 44,258 commercial customers (14,964 in 2004). Staff per 1,000 customer connections fell from 20 in 1993 to 3.2 by 2009 and 2.96 in 2010. Water quality now meets WHO standards, with production having increased from 65,000m^3 per day to 300,000m^3 per day. The coverage area has increased from 20% to 90% with pressure at 2.5 bars against 0.2 bar and 24 hours per day water delivery against ten hours per day. The reduction in non-revenue water has resulted in a saving of 165,000m^3 of water per day, equivalent to USD100million in water treatment facilities. Service extension has been mobilised through a 'water for all' programme which has connected 30,577 low income families, providing subsidies of 30-100% for the 19,816 poorest families in 2013. Collection efficiency rose from 48% in 1993 to 97% by 1997 and has been better than 99% since 1999.

Phnom Penh Water, Profit & loss account, 2010-2014

F/Y 31/12 (KHRbillion)	2010	2011	2012	2013	2014
Net sales	106.3	115.1	135.1	151.6	156.5
Operating profit	36.2	39.2	42.7	51.5	44.7
Net profit	30.5	32.0	34.4	38.7	46.0

Water sales accounted for 88% of 2014 revenues and water meter connecting services, 10%. Currently the city is served by four water treatment plants; Chrouy Changva (140,000m^3 per day, opened in 1895 and rehabilitated in 2003), Chamkar Mon (20,000m^3 per day, opened in 1958 and rehabilitated in 1995), Phum Prek (170,000m^3 per day, opened in 1966 and rehabilitated in 1996) and Niroth (130,000m^3 per day, opened in 2012); the latter will be expanded to 260,000m^3 per day from 2016 at a cost of USD119million.

Sources:

Phnom Penh Water, company web site

Phnom Penh Water, Listing Document, 2012

FT.com

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Sim Sitha (General Director)

China

Anhui Water Resources Development Co

Population served by service and country 2014 data Anhui Water	Water Only	Sewerage Only	Water & Sewerage	Total
China	3,600,000	0	0	3,600,000
Global total	3,600,000	0	0	3,600,000
% home markets	100%	0%	0%	100%

Anhui Water Resources Development Co., Ltd was listed on the Shanghai Stock Exchange in April 2003. The company is involved in six business lines: Construction, Water, Real Estate, Development of Building Materials, Construction and Operation of Five Star Hotels and Technology consultancy. Water accounted for 43% of 2007 revenues and real estate 22%.

Anhui Water Resources, Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Water Turnover	1,307	1,510	-	-	-
Group Turnover	3,833	5,313	6,490	6,812	8,409
Operating profits	239	362	354	327	379
Net profits	203	253	258	203	231
Earnings Per Share (CNY)	0.40	0.50	0.51	0.40	0.46

Water activities include operating water, sewerage services, water and wastewater engineering work. In 2009, the company supplied 800,000m^3 of water per day, equivalent to serving 1.6million people. The population of Bengbu rose from 809,000 in 2000 to 3,165,000 in 2010 (973,000 in the urban centre) and to 3,600,000 in 2012.

Sources:

Anhui Water Resources, company web site

Bloomberg

FT.com

Contact Details

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Shiyun Zhao (Chairman)

Guangliang Yang (President)

Yuanlin Zhu (CFO)

China

China Gezhouba Group

Population served by service and country 2014 data China Gezhouba Gp	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	2,640,000	0	2,640,000
Global total	0	2,640,000	0	2,640,000
% home markets	0%	100%	0%	100%

Kardan is an Amsterdam based company specialising in developing water, financial services and real estate in developing economies, especially Central & Eastern Europe and China. Kardan Water International Group (KWIG) is the company's arm in China, was held by Tahal an Israeli water engineering company founded in 1953 which was acquired by Kardan in 2001. KWIG (China) had revenues of EUR13 million in 2010. In January 2015, Kardan announced that KWIG was being sold to China Gezhouba Group (CGGC) for EUR86 million. It is anticipated that the transaction will be completed in September 2015.

CGGC was founded in 1970 and is part of the China Energy Engineering Group. It is the leading state controlled water construction and engineering form in China.

China Gezhouba Group, contracts

2009	Tianjin Dagang	Concession	150,000, wastewater
2009	Tianjin Jinnan	Concession	150,000, wastewater
2009	Tianjin Tanggu	Concession	340,000, wastewater
2009	Tianjin Baodai	Concession	650,000, wastewater
2009	Shandong Boshan	Concession	250,000, wastewater
2009	Shandong Huantai	Concession	125,000, wastewater

This involves the upgrade and expansion of wastewater treatment plants in Tianjin and Zibo in Shandong province. The upgrading work was completed in 2009. KWIG holds 88% of the Tianjin Huanke Water Development Co., Ltd, which has six WWTW concession for four plants in Tianjin and two in Zibo. The initial capacity of the facilities is 218,000 m^3 per day and they have being upgraded to 380,000m^3 per day. The concessions have an average life of 18 years.

Kardan, contracts

Year	Location	Contract & length	People served & service
2008	Dingzhou	30-year BOT	100,000, wastewater

In September 2008, KWIG gained a WWTW BOT serving Dingzhou City, Hebei Province. The facility is in the city's Tiexi District. The initial phase will have a capacity of 20,000m^3 per day, costing CNY38million. The second phase will raise the capacity to 40,000m^3 per day. The facility entered service in December 2009, supplying grey water to a nearby power station.

2010	Zhangjiakou	30-year TOT	600,000, wastewater

In February 2010, KWIG signed a TOT agreement for the Xuanhua Waste Water Treatment Plant is located in Zhangjiakou City in Hebei Province. The facility will have a 120,000m^3 per day capacity along with a reclaimed water facility supplying 30,000m^3 of reclaimed water to local industries. The project transfer started in January 2011.

2011	Zibo	28-year BOT	275,000, wastewater

KWIG signed two BOT agreements for wastewater treatment in Zibo City, Shandong province. The facilities will cost CNY94million with a combined capacity of 55,000m^3 per day.

2007	Dazhou	28-year BOO	Industrial water & wastewater

Kardan acquired all of Tianhe Project Company equity for EUR1.8million in 2007. Tianhe owns Build-Own-Operate (BOO) concession agreements for water supply and wastewater treatment plants in Dazhou City, Sichuan Province, China. The cost for developing these facilities will be EUR50million. KWIG now operates the water supply and wastewater treatment plants in Dazhou City New Industrial Park. The project is planned to be implemented in three phases. The first phase involves 100,000m3 day of industrial water supply and 10,000m3 per day of wastewater

treatment. The ultimate capacity is expected to be 300,000m3 per day for process water and 50,000m3 per day for wastewater.

Sources:

China Gezhouba Group, company web site

Kardan, company web site

Contact Details

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Nie Kai (Chairman & President)

China

China Water Group

Population served by service and country 2014 data China Water Group	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	490,000	0	490,000
Global total	0	490,000	0	490,000
% home markets	0%	100%	0%	100%

Previously called the China Evergreen Environmental Group, China Water Group (CWG) is based in Guangzhou and is held by Evergreen Asset Group Ltd, which is domiciled in the British Virgin Islands. The holding company has four majority-owned subsidiaries, Guangdong Xinxinmei Environmental Protection Co. Ltd., Beijing Haotai Shiyuan Water Purification Co. Ltd., Shangdong Haiyang Shenshi Environmental Protection Co. Ltd. and Xianyang Beicheng Water Purification Co. Ltd. The company intends to focus on selling bottled water in the foreseeable future and aims to dispose of its BOT contracts. As of the end of 2011 (the latest SEC filing) these activities were still held by the company.

China Water Group, Profit & loss account, 2007-2011

Y/E 31/12 (USDmillion)	2007	2008	2009	2010	2011
Turnover	1.55	0.21	1.26	0.33	0.33
Operating profits	-1.79	-1.27	-0.58	-8.16	-1.17
Pre-tax profits	-1.76	-0.27	-0.74	-8.06	-1.12
Net profits	-1.79	-2.58	-0.79	-8.00	-1.08
Earnings Per Share (USD)	-0.01	-0.03	-0.00	-0.06	-0.01

To date, four BOT contracts have either been completed or are in progress. Revenues from BOT contracts were USD250, 571 in 2004, USD302, 011 in 2005 and USD989, 970 in 2006.

The company has completed the design and construction of over 14 waste water facilities across China with total daily capacity of 120,000m^3, with three BOT waste water treatment facilities with a total daily capacity of 70,000m^3. The company currently has a pipeline of ten BOT and turnkey projects principally in Guangdong Province through Guangdong Xinxinmei Environmental Protection Company and has entered into two arrangements to acquire existing BOT projects in Henan Province with a total processing capacity of 130,000m^3 per day.

BOT contracts	Cost (USDmillion)	Capacity (m^3 per day)	Contract (years)	Operational since
Tianjin Shi Shen	1.09	10,000	20	11-2003
Xinle Shen Mei	4.11	40,000	22	10-2003
Hai Yang City Shen Shi	3.62	20,000	22	06-2005
Han Dan Cheng Sheng	3.53	33,000	22	12-2007

The municipal wastewater treatment facility serving Haiyang City in Shandong Province will generate average revenue of USD 600,000 - 650,000 per annum over the total project life of 22 years.

A BOT contract in Beijing (Beijing Hao Tai) was sold to a third party in 2006, generating a net profit of USD44, 872. No material announcements regarding projects are available about the company's activities post 2006 other than in January 2007, the company decreased its investment in the Handan project from HKD17.86million to HKD7.2million, retaining a 34.32% holding in the project.

Source:

China Water Group, Form 20F, 2008-2011

Contact Details

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Tel: 86 20 3479 9768

Chong Liang Pu (Chairman)

Wenge Fang (CEO)

Ding Rencai (CFO)

China

China Water Industry Group

Population served by service and country 2014 data China Water Industry	Water Only	Sewerage Only	Water & Sewerage	Total
China	2,500,000	0	0	2,500,000
Global total	2,500,000	0	0	2,500,000
% home markets	100%	0%	0%	100%

The Sky Hawk Computer Group was listed on the Hong Kong Stock Exchange in 2002. Its computer and watch activities were consistently loss making. In 2006 the company moved into the water sector and was renamed the China Water Industry Group (CWIG). The computer peripherals and Techno Marine watch activities were either sold or wound up during 2007 in order to concentrate on its water activities.

The company aimed to have a water supply volume of 5-10million m^3 per day and a sewage treatment capacity of 2million m^3 per day by 2010-11. Letters of intent covering 3.02million m^3 per day of water supply and 820,000m^3 per day of sewage treatment capacity were signed, along with acquisitions already announced in 2008. It appears that these contracts mooted in 2007 and 2008 did not go ahead. In 2010, the company announced its intention to acquire the Zhongtian Company for not more than HKD200million. Zhongtian Company has eight sewage treatment concessions.

In fact, during 2011, the company had six water treatment works with a total treatment capacity of 1.96million m^3 per day (unchanged from 2010). Three wastewater treatment projects had a combined capacity of 130,000m^3 per day (two with a combined capacity of 110,000m^3 per day in 2010). It appears that the company was affected by a series of write downs between 2009 and 2011 and changes in management.

In 20124, treatment capacity was 1.91 m^3 million pa (1.60 m^3 million pa via associate companies) and a sewage treatment capacity of 0.13 m^3 million pa.

Sewage projects

Yichun Fangke Sewage Treatment (73%, Jiangxi, 28 million m^3 in 2014)
Jining City Haiyuan Water Treatment Co (Shandong, 11 million m^3 in 2014)
Foshan City Gaoming Huxin Sewage Treatment (Guangdong, 7 million m^3 in 2014)
In 2014, the company treated a total of 45.2 million m^3, equivalent to 600,000 people.

Water projects

Yichun Water Industry Co., Ltd (49%, Jiangxi, 30 million m^3 in 2014)
Jiangxi Yingtan Water Supply (49%, Jiangxi, 20 million m^3 in 2014)
Hainan Danzhou Water (30%, Hainan, 15 million m^3 in 2014)
Linyi Fenghuang Water (Shandong, 10 million m^3 in 2014)
Hongquan Jinan Hongquan Water Production Co. Ltd (35%, Jinan, 240 million m^3 in 2014)
In 2014, these projects supplied 316.4 million m^3 of water, equivalent to serving 3 million people.

Sale of Super Sino to GDI

Five water and sewage treatment projects held by the company's Super Sino, including Hainan Danzhou Water were partially (70%) sold to GDI (see company entry) in 2014 for CNY 175 million, CWIG continues to hold the remaining 30%.

China Water Industry Group, Profit & loss account, 2010-2014

F/Y 31/12 (HKDmillion)	2010	2011	2012	2013	2014
W&S construction & installation	132.7	153.8	171.0	324.6	283.3
Water provision	88.0	103.8	118.9	133.6	159.2
Sewage treatment	9.6	27.4	38.0	47.0	45.8
Turnover	238.8	285.0	328.0	511.0	508.0
Operating profit	-167	-502	124	202	316
Net profit	-92.7	-531.5	22	61	204

Sources:

China Water Industry Group, Annual reports, 2007-2014

China Water Industry Group, company web site

China Water Industry Group, corporate announcements, 20008

Contact Details

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De Yin Wang (Chairman)

Chun Li Zhang (Finance Manager)

China

CT Environmental Group

Population served by service and country 2014 data CT Environmental	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	600,000	0	600,000
Global total	0	600,000	0	600,000
% home markets	0%	100%	0%	100%

CT Environmental Group was founded as Xi Zhou Enterprises Hong Kong in 1999, gaining its first contracts in industrial water and wastewater treatment inn 2003 at the Guangzhou Xinzhou Environmental Protection Industrial Park. The company was renamed CT Environment in 2010 and gained a Hong Kong listing in September 2013 having previously sought to do this in 2011.

CT Environment specialises in industrial water and wastewater treatment projects and subsequently diversified into the municipal sector. The company is now developing industrial waste and sludge treatment facilities. The company does not currently expect to develop further municipal projects.

CT Environmental, Profit & loss account, 2010-2014

Y/E 31/12 (HKD million)	2010	2011	2012	2013	2014
BOO projects	171.7	256.4	242.9	267.0	444.9
BOT projects	21.6	44.2	39.6	43.6	48.3
Industrial water supply	37.0	51.4	51.7	53.4	52.3
Wastewater project construction	131.1	85.7	0.7	0.0	63.5
Total turnover	361.4	462.3	383.8	484.8	1,032.5
Pre-tax profit	151.3	203.7	213.5	273.9	471.8
Net profit	120.9	164.5	177.2	224.8	428.3
Earnings per share (HKD)	-	-	0.17	0.20	0.30

At the end of 2014, operational project capacity was as follows (m^3 per day):

	In operation	In development	Proposed
Industrial wastewater	295,000	200,000	155,000
Municipal wastewater	120,000	0	0
Industrial water	150,000	50,000	50,000
Total	565,000	250,000	205,000

CT Environmental - project portfolio, 2014

Date - of entering service
Type - Municipal; / Industrial / Both

Wastewater

Guangdong	Contract	Date	Type	M^3 / day
Foshan City Shunde District Ganghui Env WW Treatment	BOO	2014	I	60,000
Zhongshan City Zhong Tuo Kai Lan (Phase I&II)	BOO	2014	I	70,000
Guangzhou Xinzhou Ind Park (Phase I&II) Zengcheng	BOO	2003	I	100,000
Longmen Xilin (Phase I&II) Huizhou	BOO	2010	M	20,000
Yonghe Haitao (Phase I) Zengcheng	BOT	2010	M	50,000
Yonghe Haitao (Phase II) Zengcheng	BOT	2012	M	50,000
Yonghe Haitao (Phase III) Zengcheng	BOO	2013	I	50,000
Yinglong Project (Phase I) Zengcheng	BOO	2013	I	100,000
Yinglong Project (Phase II) Zengcheng	BOO	2015	I	50,000
Yinglong Project (Phase III) Zengcheng	BOO	2016	I	100,000
Shunde Ganghui Shunde	BOO	2013	I	60,000
Guangfozhao (Phase I) Huaiji	BOO	2014	M+I	50,000
Guangfozhao (Phase II) Huaiji	BOO	2015	M+I	50,000
Qingyuan Jingu Science Park Qingyuan	BOO	2015	M+I	50,000
Hunan				

Guangdong	Contract	Date	Type	M^3 / day
Huaihua Tianyuan (Phase I) Huaihua	BOT	2010	I	45,000
Huaihua Tianyuan (Phase II) Huaihua	BOT	2014	I	55,000
Sichuan				
Guangyuan Industrial Park (Phase I&II) Guangyuan	BOO	2013	I	100,000

Water

Guangdong	Contract	Date	Type	M^3 / day
Zhongshan City Zhong Tuo Kai Lan (Phase I&II)	BOO	2014	I	60,000
Guangzhou Xinzhou Ind Park (Phase I&II) Zengcheng	BOO	2003	I	150,000
Sichuan				
Sichuan Guangyuan Industrial Park (Phase I&II) Guangyuan	BOO	2013	I	100,000

Sources:

China Water Industry Group, Listing Document, 2013

China Water Industry Group, Annual reports, 2013-2014

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Cham Tsui (Chairman)

Shu Biao Xu (COO)

Yili Lu (CEO)

Hong Wing Sit (CFO)

China

Easen International

Population served by service and country 2014 data Easen International	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	500,000	0	500,000
Global total	0	500,000	0	500,000
% home markets	0%	100%	0%	100%

Easen International is a Shanghai based environmental management company, which entered the BOT/TOT sector in China in 2007. The company has a number of offices in China and the USA and has specialised in developing strategic alliances with international companies and the regional development institutions.

Easen International: Contracts

Year	Location	Contract & length	People served & service
2007	Yongshun County, Hunan	30 years, BOT	150,000, WWTW
2007	Zhaoan, Fujian	30 years, BOT	300,000, WWTW
2008	Nanjing County, Fujian Province	30 years, BOT	50,000, WWTW

In 2007 and 2008, three wastewater treatment BOT contracts were gained, serving a total of 500,000 people. The contracts were jointly awarded with Spain's Grupo Tradebe. No projects have subsequently been gained and the company has subsequently concentrated on consulting projects.

Sources:

Company web site

Bloomberg, FT.com

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Dr Ping Zhuang (Managing Director)

China

Grandblue Environmment

Population served by service and country 2014 data Grandblue Environment	Water Only	Sewerage Only	Water & Sewerage	Total
China	1,900,000	2,900,000	0	4,800,000
Global total	1,900,000	2,900,000	0	4,800,000
% home markets	100%	100%	0%	100%

Nanhai Development Company Limited (NDC) was founded in 1992 and supplies drinking water and designs and installs water supply systems in Nanhai and surrounding areas in Guangdong Province. It was renamed Grandblue Environment in 2013 to reflect its diversification into waste-to-energy projects.

NDC also has a 60% interest in a water provision company based in Jiujiang, Jiangxi Province. The company was listed on the Shanghai Stock Exchange in December 2000. 36.5% of its equity is held by the Nanhai Water Supply Group. In 2011, the company supplied a total of 359.9million m^3 of water against 274.13million m^3 in 2005, along with treating 138.6million m^3 of sewage against 42.32million m^3 treated in 2009.

In 2007, the company invested CNY59million in upgrading the Pinzhou Sewage Treatment Project, which it will operate for 24 years. Capacity rose from 42,500m^3 per day at the outset to 50,000m^3 per day from 2010 as is reflected by the increased sewage treatment activity since then.

In 2014, the company had three water treatment plants in Nanhai, with a 1.26 million m^3 per day capacity. These served 700 km^2 of the city's 1,074 km^2 area. Nanhai's 2010 population was 2.59 million in 2010.

In 2014, Grandblue operated 18 wastewater treatment works in China, with a combined daily capacity of 0.583 million m^3 per day.

Grandblue Environment, Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover – Water supply	448.1	456.8			
Turnover – Sewerage	91.3	145.6			
Total turnover	595	748	885	2,156	2,435
Operating profit	158	190	224	417	454
Net profit	558	150	190	288	309
EPS (CNY)	1.14	0.31	0.37	0.50	0.49

Sources:

Company web site

Bloomberg, FT.com

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Xiangming He (Chairman)

Duo Jin (President)

Huixia Chen (Finance Director)

China

Guangdong Golden Dragon Development Inc

Population served by service and country 2014 data Guangdong Golden	Water Only	Sewerage Only	Water & Sewerage	Total
China	700,000	0	0	700,000
Global total	700,000	0	0	700,000
% home markets	100%	0%	0%	100%

Guangdong Golden Dragon Development was founded in 1997 and is involved in the provision of drinking water and real estate development. The company owns 80% of the Quingyuan Running Water Co, which was acquired in 2000 and serves the city of Qingyuan. In 2009, Quingyuan Running Water Co had a treatment capacity of 180,000m^3 per day. The municipality has a population of 3.7million, with 707,000 living in the central Qingcheng District. The company operates its business mainly in Southern China. It is listed on the Shenzhen stock exchange. The Qingyuan District Shijiao Water Plant was acquired in November 2006.

Guangdong Golden Dragon Development, Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Water revenues	78	84			
Revenues	88	96	95	343	1,136
Operating profits	-8	-9	-11	48	172
Net profits	155	22	24	53	387
EPS (CNY)	0.26	0.04	0.03	0.06	0.43

Sources:

Company web site

Bloomberg, FT.com

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Mao Yang Zhi (Chairman)

Feng Lain Zhu (President)

Mai Mei Zhang (CFO) China

China

Heilongjiang Interchina Water Treatment

Population served by service and country 2014 data Heilongjiang Interchina	Water Only	Sewerage Only	Water & Sewerage	Total
China	1,570,000	2,810,000	375,000	4,755,000
Global total	1,570,000	2,810,000	375,000	4,755,000
% home markets	100%	100%	100%	100%

The company was founded in 1998 and is principally engaged in water supplying and drainage business, as well as sewage treatment business. The company operates its businesses primarily in Shaanxi Province and Qinghai Province, China. The company had its IPO in 2010. The company is 53% held by the Black Dragon Group, which is in turn wholly controlled by Interchina Holdings. In June 2012, Heilongjiang Interchina raised CNY1.29billion through a rights issue**,** which will dilute Interchina Holdings stake in the company to 39%. As all of the water and wastewater activities have now been vested to Heilongjiang Interchina, Interchina Holdings will have in effect left the sector. In consequence, the company entry for Interchina Holdings has been removed.

During the year ended March 31, 2009, the company supplied 31.01million m^3 of water, and treated approximately 13.92million m^3 of sewage. As of that time, the company had four subsidiaries, all of which were involved in potable water supply and sewage treatment.

In 2011, the company had 11 water and sewage treatment projects with an aggregate treatment capacity of 1million m^3 per day.

Heilongjiang Interchina, project portfolio, 2012

Project	Province	Year	Stake	M^3 per day	People served (est.)
Qinhuangdao Sewage	Hebei	2002	100%	120,000	600,000
Changli Sewage	Hebei	2005	100%	40,000	200,000
Zhuozhou Sewage & Water	Hebei	2008	100%	80,000	200,000
Hanzhong Xingyuan Water	Shaanxi	2008	100%	110,000	220,000
Yanliang Water	Shaanxi	2009	99%	120,000	240,000
Hanzhong Shimen Water	Shaanxi	2011	80%	100,000	200,000
Maanshan Sewage	Anhui	2006	100%	60,000	300,000
Xiongyue Sewage	Qinghai	2005	95%	42,500	210,000
Ordos Sewage & Water	Inner Mongolia	2009	100%	35,000	175,000
Dongying Water	Shangdong	2009	55%	150,000	300,000
Taiyuan Haofeng Sewage	Shanxi	2009	80%	160,000	800,000
Xiangtang Jiuhua Water	Hunan	2011	82%	300,000	600,000
Hekou, Dongying Sewage	Shandong	2011	100%	40,000	200,000
Xiangtang Sewage	Hunan	2012	78%	100,000	500,000
Total				1,357,500	4,755,000

The company aims to develop a total processing capacity of 5.0million m^3 per day in the medium term, and has budgeted CNY8.billion for an acquisition programme. In 2010, Interchina Holdings was aiming for a 10million tonnes per day treatment capacity by 2014-16.

Heilongjiang Interchina, Profit & loss account, 2010-2014

Y/E 31/03 (CNYmillion)	2010	2011	2012	2013	2014
Turnover - Water	58	79			
Turnover - Sewage	81	139			
Turnover	222	305	357	589	720
Operating Profit	51	56	67	137	149
Net Profit	75	66	74	143	150
EPS (CNY)	0.09	0.06	0.07	0.10	0.10

A CNY 299 million PP project franchising project with the Xiangtan economic technology administration committee was signed in 2014 to develop sewage treatment systems in the city's economic development zone.

Sources:

Interchina Holdings, Annual Reports, 2006, 2010

Interchina Holdings, company web site

Heilongjiang Interchina, company web site

Bloomberg, FT.com

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Yin Jun (Chairman)

Zhou Jianhe (President)

Wang Xia (CFO)

China

Hong Kong & China Gas and Light (Towngas)

Population served by service and country 2014 data Towngas	Water Only	Sewerage Only	Water & Sewerage	Total
China	3,000,000	0	0	3,000,000
Global total	3,000,000	0	0	3,000,000
% home markets	100%	0%	0%	100%

Hong Kong & China Gas and Light (Towngas) is a Hong Kong based power utility has embarked on a wide variety of joint venture projects. Towngas' Han Yan Water gained three water contracts in China in 2005 these contracts covered 700,000 customers, some 1.8million people in total at the time, rising to 2.21 million people by 2012.

Contracts

Year	Location	Contract & length	People served & service
2005	Wujiang	30 year concession	1 million, water treatment

An 80% stake in Wujiang Water Investment Company in Suzhou, Jiangsu was acquired for CNY 776 million in 2005. This involves a total investment of CNY 950million for a 30 year concession for supplying water to the Wujiang administrative zone. The first phase of the project with Towngas cost CNY 600million, with a treatment capacity of 330,000m^3 per day, rising to 530,000m^3 per day. Water was supplied to 180,000 households in 2005. The city had a population of 780,000 in 2005 and 1.25 million in 2010. Demand for water in Wujiang has grown at 20% per annum since 2001.

2005	Suzhou Industrial Park	35 year concession	Industrial wastewater

The Suzhou Industrial Park (50% held by Towngas) wastewater treatment plant entered service in 2009 with a capacity of 150,000m^3 per day which rose to 300,000 m^3 per day when it became fully operational. Total investment was CNY 3,685million. In 2014 a 70 million m^3 pa water treatment plant was commissioned.

2005	Wuhu	30 year concession	1.5 million, water treatment

In June 2005 Towngas gained a 75% stake in a water supplier in Anhui province for CNY 225million. The 30 year CNY 700million concession is for part of the city of Wuhu, which has a total population of 3.8 million in 2011 including 1.5 million in the urban districts, with the utility supplying 85million m^3 of water in 2005.

2013	Maanshan	30 year concession	500,000, water treatment

The Zhengpugang Xin Qu is a 21 km^2 expansion zone for Maanshan in Anhui. Maanshan had 2.2 million inhabitants in 2010.

2013	Jiangbei	30 year concession	Water treatment

The Jiangbei Concentration Zone, Wuhu, Anhui province is an expansion zone designated in 2010

Towngas, Profit & Loss Account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Water (million m3)	371	371	393	413	424
Water turnover	381	445	490	979	1,096
Group turnover	19,375	22,427	24,923	28,246	31,615
Pre-tax profits	7,088	8,069	9,886	9,411	9,875
Net profits	5,585	6,150	7,712	6,854	7,109
Earnings per share (HKD)	0.71	0.78	0.73	0.65	0.68

Sources:

Annual Reports, 2010-2014

Corporate announcement, 2005

Company web site

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Lee Shau Kee (Chairman)

Alfred Chan Wing Kin (CEO)

John Hon-Ming Ho (CFO)

James Kwan Yuk Choi (COO)

China

Jiangsu Jiangnan Water

Population served by service and country 2014 data Jiangsu Jiangnan	Water Only	Sewerage Only	Water & Sewerage	Total
China	1,200,000	0	0	1,200,000
Global total	1,200,000	0	0	1,200,000
% home markets	100%	0%	0%	100%

Jiangsu Jiangnan Water treats and distributes drinking water for the city of Jiangyin. The administrative area has a population of 1.2million, including 250,000 living in the central urban area. The company operates two water plants: Xiaowan and Xiaoshan, along with engineering, installation and maintenance works. In 2011, the company provided approximately 243.9million m^3 of water and has a treatment capacity of 900,000m^3 per day. The company was founded in 2003, with the utility being started in 1966. Jiangsu Jiangnan Water had its IPO on the Shanghai Stock Exchange in 2011.

Jiangsu Jiangnan Water Co, Profit & Loss Account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover – water	381.8	450.2			
Turnover – sewage	55.9	58.1			
Turnover	449	521	523	586	749
Operating Profit	102	161	176	188	239
Net Profit	76	120	139	146	177
EPS (CNY)	0.43	0.55	0.59	0.62	0.76

Sources:

Company web site

Bloomberg, FT.com

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Guoxian Gong (Chairman)

Wei Wang (CFO)

Jianxin Sha (General Manager)

China

Ningbo Fuda Company Limited

Population served by service and country 2010 data Ningbo Fuda	Water Only	Sewerage Only	Water & Sewerage	Total
China	400,000	0	0	400,000
Global total	400,000	0	0	400,000
% home markets	100%	0%	0%	100%

Ningbo Fuda Company Limited (Fuda) was founded in 1989 and was listed on the Shanghai Stock Exchange in 1996. It is a consumer electronics company, which is also involved in water distribution. In 2005, Fuda supplied 155million m^3 of drinking water, which rose to 164million m^3 in 2007.

Ningbo Fuda Company Ltd, Profit & Loss Account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover – water	0.0	0.0			
Turnover – industrial sludge	0.0	24.0			
Turnover	3,130	3,896	5,187	5,044	5,287
Operating Profit	521	938	830	655	598
Net Profit	339	638	348	407	112
EPS (CNY)	0.23	0.44	0.24	0.28	0.08

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Ningbo Fuda Company Limited

Address: 26F, Chengtou Mansion, NINGBO 315000, China

Tel: +86-574-8740-2545

Web: www.fuda.com

Lifeng Zhuang (Chairman)

Linxa Ma (President)

Guohua Zhou (Finance Director)

China

Qianjiang Water Resources

Population served by service and country 2010 data Qianjing Water Res	Water Only	Sewerage Only	Water & Sewerage	Total
China	315,000	0	0	315,000
Global total	315,000	0	0	315,000
% home markets	100%	0%	0%	100%

Qianjiang Water Resources Development Co (QWRD) is a municipally based company founded in 1998 providing water supply to Qianjiang City in Zhejiang Province (1999 population 313,000). QWRD had its IPO on the Shanghai Stock Exchange in October 2000. Water sales in 2005 were 96.09million m^3.

Qianjiang Water Resources Development Co, Profit & loss account, 2010-2014

Y/E 31/12/ (CNYmillion)	2010	2011	2012	2013	2014
Water - turnover	391.0	450.4			
Turnover	598	573	678	734	803
Operating Profit	193	91	18	33	-5
Net Profit	118	75	18	19	18
EPS (CNY)	0.41	0.26	0.06	0.07	0.06

In July 2008, the company acquired 70% of Lishui Water Supply and Drainage Company, from the Assets Supervision and Administration Commission of the city for CNY94.421million. Lishui City has a population of 2.5million at the prefecture level.

Sources:

Company web site

Bloomberg, FT.com

Contact Details

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Fax: +86-571-8797-4400

Web: www.qjwater.com

Zhonghui He (Chairman)

Disheng Zhang (Vice Chairman, President)

Jian Zhu (CFO)

China

China Shanghai Chengtou Holding Co Ltd

Population served by service and country 2014 data Shanghai Chengtou	Water Only	Sewerage Only	Water & Sewerage	Total
China	3,000,000	0	0	3,000,000
Global total	3,000,000	0	0	3,000,000
% home markets	100%	0%	0%	100%

Shanghai Chengtou, formerly the Shanghai Municipal Raw Water Co. Ltd. (SMRW) was founded in 1992 and abstracts water from the Yangtze and Huangpu rivers for treatment at the Shanghai municipality's water treatment stations. The company builds and operates the pumping stations, canals and reservoirs necessary for the bulk water provision to the city. 52% of SMRW's shares are held by the Shanghai State Assets Management Bureau. The Company had six subsidiaries and major associates. The company is also involved in waste collection, treatment and landfilling and waste-to-energy projects.

During 2005, SMRW supplied approximately 1.7billion m^3 of water and treated a further 0.6billion m^3 of wastewater. In addition, SMRW supplies bulk water to Veolia Water's 2002 Shanghai Pudong contract. During 2007, the company supplied 1.258billion m^3 of raw water and 0.177billion m^3 of treated water and treated approximately 0.621billion m^3 of wastewater. Sales of water and wastewater accounted for 44% and 23% of total 2007 revenues respectively.

Water price rises granted in June 2009 to its Shanghai Waterworks Minhang increased revenues by CNY7million in 2009 and an anticipated CNY15million in 2010.

Shanghai Chengtou, Profit & Loss Account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Water treatment turnover	853.9	234.4	236.2		
Total turnover	3,898	4,685	5,190	3,517	4,931
Operating profits	1,105	1,435	1,939	1,849	2,438
Net income	849	1,099	1,352	1,379	1,968
Earnings per share (CNY)	0.28	0.37	0.45	0.46	0.66

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Shanghai Chengtou Holding Co. Ltd.

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Fax: +86 21 6698 6655

Web: www.sh600649.com

Hongjun An (President)

Shanggan Wang (CFO)

China

Shanghai Young Sun Investment Co Ltd

Population served by service and country 2014 data Shanghai Young Sun	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	500,000	0	500,000
Global total	0	500,000	0	500,000
% home markets	0%	100%	0%	100%

Shanghai Young Sun Investment Co. Ltd. was founded in 1995. It owns and operates three sewage treatment plants in Shanghai, with an aggregated daily treatment capacity of 145,000m^3 per day. These activities effectively account for the company's revenues. It also has two subsidiaries and one affiliate, of which one is in Shanghai, providing consulting services of urban infrastructure investment, operation and management, and two based in Shanghai and Chengdu, Sichuan Province, engaged in water treatment business. During 2011, the company achieved a significant increase in the fees charged for its sewage treatment services.

Shanghai Young Sun Investment Co. Ltd, Profit & Loss Account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover	198	402	452	451	464
Operating Profit	9.7	41	41	46	63
Net Profit	6.8	18	35	37	61
EPS (CNY)	0.03	0.07	0.14	0.15	0.21

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Shanghai Young Sun Investment Co. Ltd.

Address: Chengtou Holdings Mansion, No.130 Wusong Road, SHANGHAI, 200080, China

Tel: +86 21 639 01001

Fax: +86 21 639 01001

Jinshan Gu (Chairman)

Liu Zhengqi (CFO)

Zhang Chunming (General Manager)

China

Shenzhen Kondarl (Group) Co Ltd

Population served by service and country 2014 data Shenzhen Kondarl	Water Only	Sewerage Only	Water & Sewerage	Total
China	150,000	0	0	150,000
Global total	150,000	0	0	150,000
% home markets	100%	0%	0%	100%

Shenzhen Kondarl (Group) Co. Ltd. was established in 1979. Its chief activity is in food production (poultry farming). In 2005 and 2007, 17% of its revenues came from water distribution, compared with 19% in 2006.

Shenzhen Kondarl (Group) Co. Ltd, Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover	1,162	1,330	1,453	1,565	2,144
Operating Profit	21	39	6	-7	293
Net Profit	-47	483	28	-9	114
EPS (CNY)	-0.12	1.24	0.07	-0.02	0.29

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Shenzhen Kondarl (Group) Co. Ltd.

Address: Level 2, Ji Hao Building No. 1086 Shen Nan East Road, Luo Hu District, Shenzhen, SHZ 518003

Tel: +86-0755-254-25020

Fax: +86-0755-254-20155

Web: www.kondarl.com

Luo Aihua (Chairman & President)

Zhu Wenxue (CFO)

China

Sichuan Guangan AAA Public Co Ltd

Population served by service and country 2014 data Sichuan Guangan	Water Only	Sewerage Only	Water & Sewerage	Total
China	100,000	0	0	100,000
Global total	100,000	0	0	100,000
% home markets	100%	0%	0%	100%

Sichuan Guangan AAA Public Co. Ltd. (SG AAA) was established in 1999. The company operates hydroelectric generation and distribution services and distributes water in part of Sichuan Province, including Guang'an City and Nanchong City in Sichuan and Yuechi County and Huaying in Yunnan. In 2005, the company sold 10.7million m^3 of water, rising to 23.9million m^3 in 2009 and 28.2million m^3 in 2011.

Sichuan Guangan AAA Public Co. Ltd, Profit & Loss Account, 2010-2014

Y/E 31/12/ (CNYmillion)	2010	2011	2012	2013	2014
Turnover	757	946	1,102	1,252	1,513
Operating Profit	75	68	68	77	129
Net Profit	56	59	66	79	-122
EPS (CNY)	0.11	0.10	0.11	0.11	-0.17

In November 2007, the company announced that it was acquiring Sichuan Linshui Aizhong Water Co Ltd, a water utility company, from Chinese state-owned Sichuan AAA Investment Holding Group Co Ltd (SA). Previous to this, SG AAA held 10% of SLAW's equity. Along with acquiring Sichuan Wusheng Aizhong Water Co Ltd and two gas companies, the transactions are worth CNY89million.

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Sichuan Guangan AAA Public Co. Ltd

Address: 86 North Qujiang Road, Guang'an District, Guang'an, Sichuan 638000

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Fax: +86-826-298-3358

Web: www.sc-aaa.com

Qinghong Luo (Chairman)

Tulin He (CFO)

Zhengjun Yu (General Manager)

China

Suzhou New District Hi-Tech Industrial Co Ltd

Population served by service and country 2014 data Suzhou New District	Water Only	Sewerage Only	Water & Sewerage	Total
China	100,000	0	0	100,000
Global total	100,000	0	0	100,000
% home markets	100%	0%	0%	100%

Suzhou New District Hi-Tech Industrial Co. Ltd. (SNDHT) is responsible for the development and operation of water, road, gas and power services for Suzhou's Hi-Tech Industrial Development Zone. The company was founded in 1994 and 24.5% of its shares were floated in August 1996, and is currently 48.6% held by Suzhou New District Economic Development Group.

There are 400 industrial facilities and 100,000 residents in the area. Demand for water is currently in excess of 300,000m^3 per day, provided by the city. The dedicated Suzhou Xinning Water Works was opened in 2000, providing 150,000m^3 per day, which can be doubled at a later date.

Suzhou New District Hi-Tech Industrial Co. Ltd., Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover	4,867	2,972	2,771	3,393	3,575
Operating profits	467	441	268	163	20
Net income	318	258	183	230	170
Earnings per share (CNY)	0.30	0.24	0.17	0.22	0.16

In December 2002, SNDHT acquired a 25% stake in Suzhou New District Xinning Running Water Development Co Ltd, a water utility company, from Suzhou New District Economic Development Group Corp, a unit of Chinese state-owned Suzhou Government, for CNY17.2million.

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Suzhou New District Hi-Tech Industrial Co. Ltd.

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Tel: +86 512 6737 9010

Fax: +86 512 6737 9060

Ming Xu (Chairman)

Ping Wang (Vice Chairman, General Manager)

Yiqun Mao (Finance Director)

China

Wuhan Sanzhen Industry Holding Co Ltd

Population served by service and country 2014 data Wuhan Sanzhen	Water Only	Sewerage Only	Water & Sewerage	Total
China	2,850,000	0	150,000	3,000,000
Global total	2,850,000	0	150,000	3,000,000
% home markets	100%	0%	100%	100%

Wuhan Sanzhen Industry Holding Co. Ltd. (WSI) was founded in 1998 and is responsible for the abstraction, treatment and distribution of drinking water to the city of Wuhan and the surrounding area. 25% of the company's shares were floated in April 1998, 71% being held by the Wuhan Water Business Group Co. Ltd.

305.5million m^3 of water was supplied in 2009 and 304.09million m^3 in 2011, equivalent to serving 2million people.

Wuhan Sanzhen Industry Holding Co. Ltd., Profit & Loss Account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover	492	277	995	1,035	1,718
Operating profits	-50	-127	150	145	217
Net income	112	61	299	272	325
Earnings per share (CNY)	0.25	0.14	0.68	0.45	0.46

WSI's Zongguan and Baihezui waterworks supply water to 97% of the Hankou area. WSI is also involved in sewage treatment through the Wuhan Water Purification Plant, a 2-class sewage treatment plant.

Sources:

Company web site

Bloomberg, FT.com

Contact Details

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Tel: +86 27 8572 5739

Fax: +86 27 5872 5739

Web: www.600168.com.cn

Liqian Chen (Chairman)

Tu Lijun (President)

Li Sun (Finance Director)

China

Xinjiang Urban Construction Co Ltd

Population served by service and country 2014 data Xinjiang Urban	Water Only	Sewerage Only	Water & Sewerage	Total
China	1,000,000	0	0	1,000,000
Global total	1,000,000	0	0	1,000,000
% home markets	100%	0%	0%	100%

Xinjiang Urban Construction (Group) Co. Ltd. is principally engaged in real estate operation, municipal infrastructure construction, the supply of source water and new construction materials. During 2007, the Company obtained approximately 51% and 35% of its total revenue from its real estate operation and municipal construction, respectively.

Xinjiang Urban Construction (Group) Co. Ltd, Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover	2,018	2,177	2,587	4,441	5,665
Operating Profit	173	180	46	-3	197
Net Profit	180	161	156	176	97
EPS (CNY)	0.27	0.24	0.23	0.26	0.14

In 2004 Xinjiang Urban Construction acquired the operational assets of water supply works in Shidunzishan from Urumqi Municipal Water Supply Company. These had an asset value of CNY216million at the time. In 2011, the company had 211 engineering projects under development and sold 99.54million m^3 of water.

Sources:

Company web site

Bloomberg, FT.com

Contact Details

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Fax: +86 991 488 9832

Web: www.xjcj.com

Jun Liu (Chairman)

Wei Ji (President)

Li Li (CAO)

China

Yunnan Water

Population served by service and country 2014 data Yunnan Water	Water Only	Sewerage Only	Water & Sewerage	Total
China	360,000	3,605,000	945,000	4,910,000
Global total	360,000	3,605,000	945,000	4,910,000
% home markets	100%	100%	100%	100%

Yunnan Water was founded in 2011 to develop urban and industrial water and wastewater projects, principally in Yunnan province. It is majority owned by the province of Yunnan. There has been an emphasis on developing projects in smaller towns than is usual for private sector companies. To date the company has been involved in developing 73 sewage treatment and 17 water treatment projects. The company was listed in Hong Kong in May 2015.

Yunnan Water, Profit & loss account, 2012-2014

Y/E 31/12 (CNY million)	2012	2013	2014
Wastewater			
BOO / TOO	27.8	40.7	57.4
BOT / TOT	19.3	42.3	90.2
Construction service	149.3	200.4	184.5
Finance income	28.0	40.5	51.5
Sub-total	224.4	323.9	383.6
Water			
BOO / TOO	100.5	101.3	122.0
BOT / TOT	1.7	1.7	20.4
Construction service	4.0	72.7	69.9
Finance income	0.0	0.0	3.7
Sub-total	106.1	175.7	216.0
Total turnover	330.5	499.5	599.7
Pre-tax profit	160.1	252.2	226.2
Net profit	126.1	200.9	187.9
Earnings per share (CNY)	0.14	0.22	0.19

Yunnan Water: Contract list to July 2015

Capex is in CNY million

Project capacities (000 m^3 per day) are for actual use at the end of 2014 and the operational capacity.

Wastewater Project	Province	Start	Year	Project	2014	Max	Capex
Cangyuan	Yunnan	2013	30	BOT	5,000	8,000	15
Dayao	Yunnan	2013	30	BOT	6,000	10,000	20
Gengma	Yunnan	2012	30	BOT	6,000	10,000	22
Heqing	Yunnan	2013	30	BOT	5,000	8,000	12
Jianshui	Yunnan	2012	30	BOT	14,000	25,000	52
Jinggu	Yunnan	2012	30	BOT	6,000	10,000	20
Jinning	Yunnan	2013	18	BOT	12,000	15,000	7
Lancang	Yunnan	2012	30	BOT	7,000	10,000	26
Lanping	Yunnan	2012	23	BOT	2,000	10,000	10
Lianghe	Yunnan	2012	30	BOT	3,000	5,000	13
Ludian	Yunnan	2011	30	BOT	14,000	15,000	20
Lufeng	Yunnan	2012	30	BOT	11,000	20,000	36
Lushui	Yunnan	2012	30	BOT	3,000	13,000	17
Luxi	Yunnan	2011	30	BOT	14,000	20,000	26
Menghai	Yunnan	2012	30	BOT	5,000	10,000	22
Menglian	Yunnan	2012	30	BOT	4,000	8,000	20
Mojiang	Yunnan	2012	30	BOT	6,000	10,000	25
Nanjian	Yunnan	2011	30	BOT	2,000	5,000	14
Ninger	Yunnan	2012	30	BOT	5,000	10,000	22
Shuangjiang	Yunnan	2013	30	BOT	5,000	10,000	22

Wastewater							
Tenchong	Yunnan	2014	30	BOT	20,000	25,000	42
Weixin	Yunnan	2011	30	BOT	8,000	10,000	24
Yaouan	Yunnan	2014	30	BOT	5,000	8,000	18
Yingjiang	Yunnan	2013	30	BOT	10,000	15,000	12
Yongren	Yunnan	2011	30	BOT	4,000	5,000	15
Yunlong	Yunnan	2011	30	BOT	2,000	5,000	14
Zhenxiong	Yunnan	2012	30	BOT	18,000	25,000	8
Datunhai	Yunnan	2015	30	BOT	0	30,000	-
Jiangsu Suining EDZ	Jiangsu	2012	30	BOT	18,000	23,000	65
Wuxi Xishan Dongguan	Jiangsu	2008	25	BOT	18,000	20,000	61
Wuxi Xishan Ehu	Jiangsu	2008	25	BOT	19,000	10,000	31
Wuxi Xishan Xibei	Jiangsu	2008	25	BOT	12,000	23,000	60
Kalemai EDZ	Xinjiang	2015	30	BOT	0	30,000	150
Jinan Lingang EDZ	Shandong	2015	21	BOT	0	25,000	83
Jinan IP	Shandong	2015	30	BOT	0	30,000	83
Longchuan	Yunnan	2010	30	TOT	3,000	5,000	13
Mile	Yunnan	2010	30	TOT	15,000	25,000	45
Shhuifu	Yunnan	2011	30	TOT	4,000	15,000	24
Yongpin	Yunnan	2014	30	TOT	3,000	8,000	11
Wuxi Xishan Anzhen	Jiangsu	2010	21	TOT	19,000	20,000	9
Dali	Yunnan	2014	30	BOO	54,000	54,000	81
Jinghong	Yunnan	2014	30	BOO	22,000	25,000	121
Dali II	Yunnan	2014	30	BOO	0	75,000	210
Jinghong II	Yunnan	2014	30	BOO	0	25,000	192
Mengla	Yunnan	2014	30	BOO	0	10,000	45
Gejiu	Yunnan	2014	30	TOO	27,000	50,000	76
Mengzi	Yunnan	2014	30	TOO	23,000	40,000	61
Binchuan	Yunnan	2014	10	O&M	10,000	10,000	-
Changjiang	Yunnan	2008	10	O&M	5,000	5,000	-
Daguan	Yunnan	2014	5	O&M	4,000	4,000	-
Hekou Yao	Yunnan	2013	10+	O&M	10,000	10,000	-
Jinping	Yunnan	2013	10+	O&M	8,000	8,000	-
Longling	Yunnan	2012	10	O&M	10,000	10,000	-
Lvchun	Yunnan	2014	10+	O&M	5,000	5,000	-
Mangshi	Yunnan	2008	10	O&M	15,000	15,000	-
Mouding	Yunnan	2012	20	O&M	12,000	12,000	-
Pingbian Miao	Yunnan	2011	10+	O&M	6,000	6,000	-
Yangbi	Yunnan	2013	15	O&M	5,000	5,000	-
Xiao County I	Anhui	2015		TOT	0	30,000	
Xiao County II	Anhui	2015		BOT	0	30,000	
					531,014	1,018,000	1,975

Water Project	Province	Start	Year	Project	2014	Max	Capex
Yunlong	Yunnan	2011	30	TOT	3,000	5,000	4
Jinan IP	Shandong	2014	30	TOT	21,000	70,000	83
Dali I	Yunnan	2014	30	BOO	32,000	40,000	38
Dali II	Yunnan	2014	30	BOO	36,000	40,000	60
Dali III	Yunnan	2014	30	BOO	8,000	10,000	15
Dali IV	Yunnan	2014	30	BOO	9,000	20,000	7
Jiangbei	Yunnan	2014	30	BOO	28,000	40,000	59
Jiangnan	Yunnan	2014	30	BOO	45,000	60,000	127
Liuku	Yunnan	2014	30	BOO	12,000	20,000	54
Mengla	Yunnan	2014	30	BOO	10,000	5,000	19
Mengpeng	Yunnan	2014	30	BOO	3,000	5,000	16
Dali I-Expansion	Yunnan	2014	30	BOO	0	25,000	37
Dali II-II	Yunnan	2014	30	BOO	0	40,000	87
Dali VI	Yunnan	2014	30	BOO	0	25,000	93
Liuku II	Yunnan	2014	30	BOO	0	10,000	45
Emin IP Reservoir	Xinjiang	2013	30	BOT	0	106,000	400
Xiao County I&II	Anhui	2015		TOT	0	30,000	

Water Project	Province	Start	Year	Project	2014	Max	Capex
Xiao County III	Anhui	2015		BOT	0	60,000	
					209,014	611,000	1,144

Sources:

Company web site

Yunnan Water, Listing Document, 2014

Yunnan Water, Annual Report, 2014

Contact Details

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Web: www.yunnanwater.cn

Lei Xu (Chairman)

Long Yu (MD)

Yunjian Huang (Deputy MD)

China

Zhongshan Public Utilities Group Co. Ltd

Population served by service and country 2014 data Zhongshan P Utilities	Water Only	Sewerage Only	Water & Sewerage	Total
China	1,500,000	0	500,000	2,000,000
Global total	1,500,000	0	500,000	2,000,000
% home markets	100%	0%	100%	100%

The company is mainly involved in water and sewerage services in Zhongshan, Guangdong Province. It is majority held by the municipality and was founded in 1992. In 2009, it gained its first contract outside the province, in Jining, Shandong Province. The city has a population of 2.49million.

Zhongshan Public Utilities Group Co. Ltd, Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover – Water	497.1	528.7			
Turnover – Sewage	82.1	100.1			
Turnover	854	795	8129	1,048	1,155
Operating Profit	77	20	41	67	152
Net Profit	667	1,094	367	634	748
EPS (CNY)	0.47	0.78	0.26	0.43	0.53

Tan Qingzhong, the previous Chairman and Zheng Xiuling, the General Manager announced in June 2010 that they were resigning as a result of Government investigations relating to the company's 2007 corporate restructuring.

Sources:

Company web site

Bloomberg, FT.com

Contact Details

Name: Zhongshan Public Utilities Group Co. Ltd.

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Web: http://www.zpug.net/

Aixue Chen (Chairman)

Ming Hua Wang (General Manager)

Hua Qun Xu (CFO)

India

Bhel

Population served by service and country 2014 data BHEL	Water Only	Sewerage Only	Water & Sewerage	Total
India	0	300,000	0	300,000
Global total	0	300,000	0	300,000
% home markets	0%	100%	0%	100%

Bharat Heavy Electricals Limited (**BHEL)** is the largest related energy and infrastructure sector-engineering and manufacturing enterprise in India. It is 67.7% held by the Indian Government. Activities include manufacturing water testing systems and desalination plants. BHEL's Industrial Systems Group (ISG) has been seeking to develop private sector operations in water and wastewater treatment projects, which was identified by the company as one of the principal areas for growth between 2002 and 2007. As part of this, the company has developed its ability to provide systems and services for water management systems including potable water pumping stations, desalination plants, water treatment plants and sewage and effluent treatment plants.

In 2003, BHEL commissioned three potable water pumping stations in the vicinity of Bangalore, providing 270,000m^3 of water per day. The fully automated project has been set up by ISG for the Bangalore Water Supply and Sewerage Board, under the Cauvery Water Supply Scheme Stage IV. This project had a subsequent three year O&M period.

In September 2003, BHEL gained a wastewater treatment construction and operations contract in Chennai. The INR364million (USD7.9million) contract was awarded by the Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB). The order envisages design, engineering, supply, installation and commissioning of mechanical and electrical equipment, besides automation and complete civil works of a 40,000m^3 per day sewage treatment plant at Nesapakkam, Chennai serving approximately 300,000 people. The facility entered service in 2005, with BHEL taking over the plant's O&M for ten years. The sewage treatment plant will have its own power plant which will be run by biogas, generated within the facility, making it self-sufficient and lowering operating costs.

In 2013, BHEL announced that it was considering entering the water and sewage treatment markets with the aim of generating revenues of R 4,000 million by 2016. The company developed a 1,000 m^3 per day sewage treatment work for its activities in Ranipet in 2013.

BHEL, Profit & loss account, 2010-2014

Y/E 31/03 (INRmillion)	2010	2011	2012	2013	2014
Revenues	338,707	436,357	498,976	510,560	403,380
Pre-tax profit	66,209	90,654	103,672	9,432	5,041
Net profit	43,269	60,534	70,874	6,615	3,461
EPS (INR)	17.68	24.73	28.76	27.03	14.14

Sources:

BHEL, Annual Reports, 2003-2014

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Shri B Prasada Rao (Chairman & Managing Director)

Shri P Bajpai (Finance Director)

India

IVRCL Construction and Projects Ltd

Population served by service and country 2014 data IVRCL	Water Only	Sewerage Only	Water & Sewerage	Total
India	1,000,000	100,000	0	1,100,000
Global total	1,000,000	100,000	0	1,100,000
% home markets	100%	100%	0%	100%

IVRCL Constructions & Projects Ltd (IVRCL) has developed a policy of moving its construction activities from civil engineering to lump sum turnkey projects, to design and execution projects and in three cases BO/BOT concessions: The Alandur WWTW; the Tirupur MSW facility and the athletes' village for the December 2002 National Games in Hyderabad.

IVRCL Constructions & Projects Ltd, Profit & loss account, 2010-2014

F/Y 31/03 (INRmillion)	2010	2011	2012	2013	2014
Net sales	58,521	56,644	49,893	38,380	43,500
Operating profit	3,781	2,326	360	3,427	2,048
Net profit	2,156	1,579	241	-1,017	-7,168
EPS (INR)	7.88	5.91	0.90	-3.31	-23.36

The company's regional structure was changed into a divisional structure in 2001. Currently water systems and pipelines account for 66% of orders as of May 2009 against 30% in 1998, although easing to 46% by 2011.

The company gained the first BOT for wastewater treatment in India: A 14 year operating contract started in March 2003 for First STP Private Ltd (95%): joint venture with VA Tech Wabag Ltd (India, see company entry). A 12 Ml per day (4.4million m^3 per annum) WWTW at Perungudi for Alandur Municipality, where IVRCL has installed the underground sewerage system. 25,162 households have been connected to the system, equivalent to 100,000 people. The facility was subsequently expanded to 24Ml per day (8.8million m^3 per annum).

In 2005, the company's Chennai Water Desalination Ltd was awarded India's first desalination contract, a 25 year DBOOT worth INR4.901billion for a 100,000m^3 per day facility at Minjure, Chennai in Tamil Nadu. This is a joint venture with Spain's Befesa: 75% IVRCL, 25% Befesa. Work started in June 2008 and the project entered service in October 2009. IVRCL is currently seeking to develop a project for a second facility serving the city, this time with a capacity of 200,000m^3 per day.

IVRCL also has a 114km bulk water provision construction project for supplying water from the Ongur River to Chennai, which contains a five year O&M component. Sources:

IVRCL, Annual Reports, 2004-2014
IVRCL, Placing Document, 2006
IVRCL, Share Prospectus, 2005
IVRCL, Water & Environment, 2007
IVRCL, analyst presentations

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E. Sudhir Reddy (Chairman & Managing Director)

R. Balarami Reddy (Finance Director)

India

Mahindra and Mahindra

Population served by service and country 2014 data Mahindra Water Utilities	Water Only	Sewerage Only	Water & Sewerage	Total
India	0	1,600,000	0	1,600,000
Global total	0	1,600,000	0	1,600,000
% home markets	0%	100%	0%	100%

Mahindra Water Utilities is a joint venture between Mahindra and Mahindra Ltd and United Utilities (UU) of the UK. Mahindra and Mahindra Ltd was first listed on the Bombay Stock Exchange in 1956.

Contracts

Year	Location	Contract & length	People served and service
2003	Tirupur	30 year BOT	1.6 million water treatment

This was the first large scale private sector water provision project in India. It was originally awarded to Mahindra Water Utilities Limited (UU Australia and Bombay's (Mumbai's) Mahindra and Mahindra Ltd), serving the capital of Tamil Nadu. This involves the construction of an 185,000 m^3 per day water treatment plant, pipeline, service reservoirs and a wastewater treatment plant and pumping stations at a total cost of USD220million. The WTP entered service in 2005 and provides water for the textile manufacturers and over 1.6million residents in the Tirupur municipal area and surrounding villages. UU has sold its stake in the project and Manila Water has been involved in the project since 2007.

The project also involves 15,000 m^3 per day of sewerage collection and treatment.

This was the first water utilities contract in India to secure ISO 9001:2000, ISO 14001:2004 and OHSAS 18001: 2007 certification.

Mahindra and Mahindra, Profit & loss account, 2010-2014

Y/E 31/03 (INRmillion)	2010	2011	2012	2013	2014
Revenues	338,707	436,357	498,976	510,560	403,380
Pre-tax profit	66,209	90,654	103,672	9,432	5,041
Net profit	43,269	60,534	70,874	6,615	3,461
EPS (INR)	17.68	24.73	28.76	27.03	14.14

Sources:

Mahindra and Mahindra, Annual Report, 2014

United Utilities, analyst presentations, 2003-2004

Mahindra and Mahindra, company web site

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Anand Mahindra (Chairman & Managing Director)

V Parthasarathy (CIO & President)

India

Jindal Aquasource

Population served by service and country 2015 data Jindal Aquasource	Water Only	Sewerage Only	Water & Sewerage	Total
India	1,130,000	1,725,000	0	2,855,000
Global total	1,130,000	1,725,000	0	2,855,000
% home markets	100%	100%	0%	100%

Jindal Aquasource (also called Jindal Waterways Infrastructure Limited) is a subsidiary of the O. P. Jindal Group, an Indian company specialising in steel production and engineering (including pipe manufacturing), power and industrial gasses. The company was incorporated in 2006 Jindal Aquasource is developing a number of BOT/BOOT projects in India and has an alliance with Biwater (UK, see company entry) and Manila Water (Philippines, see company entry).

2008 was the first full operating year for the company, with revenues of INR1.92billion and an INR5.50billion order book in September 2009.

Jindal Aquasource, projects identified to date:

Naya Raipur Development Authority project at Naya Raipur, Chhattisgarh

A BOT contract worth INR2.4billion.

Sitarganj Common Effluent Treatment Plant (BOOT) Project, Uttarakhand

JECL (Jindal ESIPL (Sitarganj) Ltd) is 51% held by Jindal Water and 49% by Eldeco Sidcul Industrial Park Ltd. It holds a 30 year BOOT concession awarded in 2007 for an 8,000m^3 per day wastewater treatment plant serving the Industrial Park being developed in Sitarganj, District Udham Singh Nagar, in the state of Uttaranchal.

Lodhika (GIDC) Industrial Association Integrated Water Supply System Project, Rajkot, Gujarat

In February 2010, a 30 year BOOT contract worth INR 1.05 billion to develop a 45,000 m^3 per day wastewater treatment works for Rajkot Municipal Corporation was signed, with construction ending in 2012. The facility will have a 60 year operating life.

Bhavnagar

A 30 year BOOT contract worth INR1.0billion to develop a 45,000m^3 per day wastewater treatment works for Bhavnagar Municipal Corporation signed in 2009, serving 200,000 people. Jindal has exclusive rights to the recycled sewage water for the first 15 years, with a profit sharing agreement being implemented for the rest of the contract.

Naya Raipur, Chhattisgarh

Signed in 2012, a Design Build project and concession period of 8 years for INR 15 billion, USD35 million. 102,000 m^3 of water per day, serving 250,000 people.

Jamalpur, Bihar

Augmentation of the town's water supply, EPC and O&M contract signed in 2012 for INR 2.9 billion, USD6.6 million.

Munger, Bihar

Augmentation of the town's water supply, EPC and O&M contract signed in 2012 for INR 2.85 billion, USD6.6 million.

Bhilwara, Rajasthan

WWTW and water for non-potable reuse, 10,000 m^3 of water per day, serving 25,000 people. INR 5.0 billion, US 11.5 million.

Sitargani, Uttrakhand

29 year BOOT, 4,000 m^3 of water per day, serving 30,000 people.

Bodhgaya Town, Bihar

Water supply distribution system, Design Build project and O&M, R 2.9 billion.

Guwahati Water Supply Project 1

62,000 m^3 of water per day, serving 200,000 people INR 8.1 billion, includes 5 year O&M.

Kalyanpuri, New Delhi

Design Build project and 10 year O&M for 70 sewage pumping station and ancillary hardware at a cost of INR 8.8 billion. 325,000 m^3 of wastewater per day, serving 1.5 million people.

Guwahati Water Supply Project 3

Mains and pumping, 191,000 m^3 of water per day, serving 650,000 people INR 13.8 billion project that includes 32 months construction and 5 year O&M.

Sources:

Jindal Aquasource, presentation, 2011

Jindal Aquasource, company web site

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Prithvi Jindal (Vice Chairman)

Sminu Jindal (Managing Director)

Indresh Batra (Managing Director)

India

Jusco

Population served by service and country 2014 data JUSCO	Water Only	Sewerage Only	Water & Sewerage	Total
India	1,680,000	0	100,000	1,780,000
Global total	1,680,000	0	100,000	1,780,000
% home markets	100%	0%	100%	100%

Jamshedpur Utilities and Services Company Limited (JUSCO) is 100% held by Tata Steel. It was formed in April 2004 and incorporated in August 2004 for improving the management of utility operations in the Tata Steel developed for the city of Jamshedpur and for leveraging this experience into other Indian markets. As Tata Steel's Town Division, JUSCO has managed municipal services in Jamshedpur since Tata Steel's foundation in 1907 and currently serves an area of 94km with a population of 725,000 with a continuous water supply for over 500,000 people. Since 2007, JUSCO has gained a series of O&M and concession contracts in India as well as a series of design and build and management contracts in Madhya Pradesh. The city had a population of 725,600 in 2011, with the Urban Agglomeration totalling 1.337 million.

JUSCO, service delivery in Jamshedpur

Y/E 31/03	2005	2008
Network coverage	67.0%	78.0%
Partnership connections	613	9,585
Bacteriological compliance	93.0%	100.0%
Non-revenue water	33.0%	11.5%
Failures in water system	44	3
Energy consumption (kWh per Ml)	332	283

JUSCO, concessions and O&M contracts

Year	Location	Contract & length	People served & service
2009	Mysore	6 year Management	800,000 water & wastewater

An INR1.62billion management contract involving rehabilitating and operating the city's water service, designed to provide a continuous water supply to the city. The project intends to extend household water supplies to poorer households. The project is split into three phases: preparatory (1 year), rehabilitation (3 years) and management (2 years).

2008	Haldia	25 year BOT	250,000 water

The West Bengal city's 113,500m^3 per day water treatment works are to be managed for 25 years, along with the construction and subsequent management for 25 years of a new 113,500m^3 per day water treatment works. Other work includes billing and bill collection and management of the distribution system. The contract has been awarded to JUSCO, with Ranhill (Malaysia) and IDFC (India). The facility will cost INR10billion to construct and concession fees of INR12.2billion will be payable to the Haldia Development Authority.

2007	Kolkata	30 year BOT	30,000 water & wastewater

A BOT for a 13,600m^3 per day water distribution network and an 8,300m^3 per day sewage treatment work are being developed by JUSCO and Voltas (India) for the Naba Diganta Industrial Township, Sector V, and Salt Lake in Kolkata.

Sources:

JUSCO, company web site

JUSCO, corporate presentations, 2007-2008

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Sandipan Chakravortty (Chairman)

Ashish Mathur (Managing Director)

India

Larsen & Toubro

Population served by service and country 2014 data Larsen & Tourbo	Water Only	Sewerage Only	Water & Sewerage	Total
India	500,000	0	0	500,000
Global total	500,000	0	0	500,000
% home markets	100%	0%	0%	100%

Larsen & Toubro (L&T) specialises in construction and heavy engineering projects. The Power and Transmission division has been involved in water and wastewater construction projects for some years and in 2015 a Water, Smart World and Communication division was established. In 2014-15 water and wastewater treatment plants with a total capacity of 3,400,000 m^3 per day were constructed and commissioned.

The first BOT contract gained by L&T is in Andhra Pradesh; the Visakhapatnam Industrial Water Supply Project. This is a 55.5km pipeline from the River Godavari to augment the 153km Yeleru Left Bank Canal. Some 15% of the output is going to domestic consumers. L&T has a 32 year concession for operating the pipeline, which started in December 2004, with equity financing from the municipality (Andhra Pradesh Industrial Infrastructure Corporation) and from the private sector; L&T Holdings and PSL Holdings, with a permitted return of 15% over the concession.

Larsen & Toubro, Profit & loss account, 2011-2015

Y/E 31/03 (INRmillion)	2011	2012	2013	2014	2015
Revenues	520,438	643,131	744,258	851,284	920,046
Operating profit	68,819	79,258	91,333	96,455	90,608
Net profit	44,562	46,937	52,057	49,020	47,648
EPS (INR)	48	51	56	53	51

Sources:

Larsen & Toubro, company presentation, 2004

Larsen & Toubro, company web site

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A M Naik (Chairman & Managing Director)

R Shankar Raman (Finance Director)

K Venkataramanan (CEO)

India

VA Tech Wabag

Population served by service and country 2015 data VA TECH	Water Only	Sewerage Only	Water & Sewerage	Total
India	1,000,000	2,300,000	0	3,300,000
Turkey	0	0	1,600,000	1,600,000
Total - home markets	1,000,000	2,300,000	0	3,300,000
Total - international	0	0	1,600,000	1,600,000
Global total	1,000,000	2,300,000	1,600,000	4,900,000
% home markets	100%	100%	0%	67%

VA TECH WABAG Limited is part of the WABAG Group, which is principally based in India and Austria. VA TECH WABAG India Ltd was founded in 1996 and sold to ICICI Ventures of India in 2005 and in 2007 the shares of VA TECH WABAG Gmbh were sold by Siemens AG to VA TECH WABAG Limited. An IPO of the company's Indian arm was completed in 2011. The group has seven principal operating subsidiaries (one in India, four in Europe and two in North Africa) and is involved in a broad range of water and wastewater engineering work. Since 2002, this has involved a number of operating projects as well.

VA TECH WABAG, Profit & loss account, 2010-2014

Y/E 31/03 (INRmillion)	2011	2012	2013	2014	2015
Revenues	12,329	14,382	16,190	22,390	24,350
Operating profit	1,210	1,300	1,540	1,885	2,095
Net profit	526	738	903	1,134	1,101
EPS (INR)	10.62	13.35	17.04	21.31	20.39

Contracts

Year	Location	Contract & length	People served & service
2006	Chennai	14 years DBO	400,000 Sewage treatment

The wastewater treatment works serves Perungudi in Chennai, for the Chennai Metropolitan Water Supply & Sewerage Board, Tamil Nadhu. The 110,000m^3 per day facility has a peak capacity of 275,000m^3 per day. The O&M phase starts in 2012-13 and runs for seven years, valued at INR5billion.

2015	Varanasi	2+10 DBO	700,000 Sewage treatment

140,000 m^3 per day INR 2.20 billion project for construction and operation at Dinapur, Varanasi. Part of the Ganga Action Plan.

2014	Bangalore	2+7 DBO	450,000 Sewage treatment

A 90,000 m^3 per day facility serving Bellandur Amanikere, Karnataka with a contract value of INR 2.50 billion for construction and for operation for seven years.

2012	Ulhasnagar	30 year DFBO	1 million, water

Ulhasnagar Municipal Corporation has commissioned Konark Water Infra Projects Pvt. Ltd., a VA TECH WABAG Ltd. and Konark Infrastructure Ltd. joint venture, DFBO for the Ulhasnagar drinking water treatment plant. For WABAG, the order is worth roughly EUR 50 million (INR 3.3 billion). With a capacity of 195,000 m^3/d, the new plant will furnish over a million people with clean drinking water. Start-up will commence at the end of 2012 and subsequently the joint venture will be responsible for the operative management of the plant for a period of thirty years.

2012	Delhi	2+10 DBO	450,000 Sewage treatment

91,000 m3 day WWTW, 24 months build and 10 years O&M. INR 2.5 billion including EPC of INR 1.7 billion and INR 0.8 billion for O&M. Papankalan Phase-II for Delhi.

2012	Bangalore	2+7 DBO	300,000 Sewage treatment

60 MLD facility. INR 1.94 billion for construction and INR 23 million for operation for seven years.

Prior to this, O&M for five WWTWs for BWSSB – Kadabesanahalli, Nagasandra, KR Puram, V Valley and K&C Valley

and treating 488 MLD waste water. Approximately 2.5 million people.

Turkey

Contracts

Year	Location	Contract & length	People served and service
2012	Adana	O&M	1.6 million, W & WW

The two WWTWs with a total capacity of 370,000m^3 per day were built by WABAG in 2003 and 2006 and operated by the company until 2009. A new O&M contract was assigned by ASKI, the municipal operator to VA TECH WABAG in 2012 and extended to drinking water in 2013, covering 900,000 m^3 per day.

Sources:

VA TECH WABAG, company web site

VA TECH WABAG, Annual Reports, 2008-2015

VA TECH WABAG, company project database

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B D Narang (Chairman)

Rajiv D Mittal (MD & CEO)

Subramanian Varadarajan (Finance Director)

Indonesia

Acuatico

Population served by service and country 2014 data Acquatico	Water Only	Sewerage Only	Water & Sewerage	Total
Indonesia	3,750,000	0	0	3,750,000
Global total	3,750,000	0	0	3,750,000
% home markets	100%	0%	0%	100%

Acuatico Pte Ltd is a joint venture between PT Recapital Advisors (private equity, part of Renaissance Capital Asia) and PT Glendale Partners (infrastructure project management). It is an investment holding company for water infrastructure assets and is based in Singapore. In 2006, they acquired 95% of the equity of PT Thames PAM Jaya from Thames Water and the concession company was subsequently renamed PT Aetra Air Jakarta.

In August 2008, PT Acuatico gained a 25 year water provision concession for the city of Tangerang. The venture PT Aetra Air Tangerang (75% Acuatico / 25% PT Capitalinc Investment Tbk) will start in 2009 and will require a total investment of IDR 520.7 billion, 30% from the venture and 70% from banks. The minimum target for customers towards the end of the concession period is 72,000.

Contracts

Year	Location	Contract & length	People served & service
1997	East Jakarta	25 year BOT	3.75 million water

The project is being funded 30% by equity and 70% by debt. Revenues for PT Aetra Air Jakarta are being driven upwards as more customers are connected. 2.5million were served in 1998. The East Zone's population is forecast to rise from 4.6million to 5.8million by 2020. As of June 2013, investment since 1998 had totalled IDR 1,672,000 billion. Under the original concession NRW was meant to fall to 33% by 2006 but the systems had not been properly assessed at the start of the project.

Aetra Air Jakarta, operating data, 1998-2012

	1998	2012
Volume sold (million m^3)	104	150
NRW	57%	45%
Connections	278,000	393,000

In Vietnam the company is developing a water network to the south west of Hanoi delivering 300,000-1,200,000m^3 of water a day to that part of the city. The project started in 2010.

Sources:

Acuatico, corporate web site

Acuatico, company presentations, 2011-2012

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Mohamed Selim (CEO, Acuatico**)**

Japan

Mitsubishi

Population served by service and country 2015 data Mitsubishi	Water Only	Sewerage Only	Water & Sewerage	Total
Japan	0	42,000	1,174,000	1,216,000
New Zealand	0	1,665	0	1,665
Australia	734,000	39,400	403,350	1,176,750
Total - home markets	0	42,000	1,174,000	1,216,000
Total - international	734,000	41,065	403,350	1,178,415
Global total	734,000	83,065	1,577,350	2,394,415
% home markets	0%	51%	74%	51%

Mitsubishi Corporation is Japan's largest Soga Sosha (general trading company) with an international presence in some 200 countries around the world. In 1998, the company acquired a 7% stake in Manila Water (see Company Entry). Mitsubishi is one of the leading Japanese O&M water service operators through its 50% ownership of Japan Water Corporation, which manages short term, renewable operation and maintenance contracts serving 14 municipalities and managing 250 water facilities. Mitsubishi has been involved in water treatment and desalination projects in Singapore, Pakistan, Colombia and Saudi Arabia. In February 2010 the company established a partnership with Japan's JGC Corporation and Ebara Corporation (the Ebara Partnership) for developing international market opportunities

Mitsubishi, Profit & loss account, 2011-2015

Y/E 31/03 (JPYbillion)	2011	2012	2013	2014	2015
Revenues	5,207	5,566	6,010	7,635	7,669
Operating profit	316	278	149	198	212
Net profit	465	452	323	361	401
EPS (JPY)	282	274	196	219	246

Japan - Swing

Swing is a joint venture with Ebara and JGC Corporation which was spun out of Ebara in 2010.

Contracts

Year	Contract	Contract & length	People served & service
2012	Hiroshima	Partnership	1,174,000 water & WW treatment

A joint venture (Mizumirai Hiroshima Corporation, 65% Hiroshima Prefecture and 35% Swing) was announced and signed in 2012, going into operation in 2013 as Japan's first water PPP.

2009	Kurobe City	15 Years BTO	42,000 wastewater treatment

Kurobe City is in Toyama Prefecture. Contract for a 24,300 m3 / day WWTW started in 2009 and entered into service in 2011, and will run to 2026. JPY 3,600 million.

Australia & New Zealand - TRILITY

In May 2010 Mitsubishi (59%), Innovation Network Corporation of Japan (INCJ, 30%), JGC Corporation (10%) and Manila Water (1%) acquired United Utilities Australia Pty Limited (UUA) from United Utilities for AUD225million, AUD176million in cash and AUD49million in assumed debt. Since its inception in 1991, UUA has gained 14 long term contracts, serving a total of 3million people. These operations were renamed TRILITY Pty Ltd in March 2011.

In May 2015, TRILITY acquired Water Infrastructure Group (WIG) from Pentair. WIG was originally developed by Earth Tech and retained after the Aecom takeover in 2008 and was sold to Pentair in 2012. WIG's activities have been brought under the TRILIY banner.

Contracts

Year	Location	Contract & length	People served & service
2004	Cranbourne	25 year BOT	wastewater

The AUD38million, 30,000m^3 per day facility is designed to provide recycled water for a number of horticultural and agricultural businesses in the east Melbourne area.

2003	Echuca & Rochester	25 year BOT	wastewater

The 25 year contract is to design, build, and finance, own and operate a water reclamation project for Victoria's Coliban Water. The project will generate revenues in excess of USD80million, serving two agricultural communities in the state. It involved the development of an integrated advanced sewage treatment system for the two towns for water recovery for irrigation use on farmland. Construction of the two wastewater treatment plants cost AUD40million and they entered service in 2004.

1998	Virginia Plains	20 year management	wastewater

The 20 year management project is for the provision of 15million m^3 of high grade irrigation water each year for 400 clients. This project uses 10% of Adelaide's wastewater. The original project cost AUD 19 million and was extended in 2009 through an AUD 6.6 million project.

2013	Agnes Water	10 Years DBO	2,000 WW & desalination

For the towns of Agnes Water and 1770, a USD36 million project for a 1.5 Ml/day desalination plant and a 0.6 Ml/day WWTW. The desalination plant can be expanded to 7.5 Ml/day is needed and 0.5 Ml/day is also available from boreholes.

2011	Mundaring	35 Years BOT	100,000 water treatment

Mundaring is near Perth, Western Australia. The facility will serve 33,000 customers working in the Kalgoorlie Boulder goldfield area and will have an initial capacity of 165,000m^3 per day. The AUD300million facility will enter service in 2013 and will be operated by TRILITY and Acciona Agua until 2048.

2009	Adelaide	20 years O&M	Desalination

A joint venture with Acciona Agua (Acciona, Spain), with TRILITY's involvement starting after the AUD1.83billion facility entered service in December 2010. The facility has an average capacity of 150,000m^3 per day, with a peak capacity of 300,000m^3 per day. The joint venture seeks to gain similar desalination contracts in Australia.

2009	Berri Barmera	25 years DBO	12,000 water reuse

The AUD14million project involves effluent from 4,000 septic tanks and four wastewater treatment plants and the provision of treated wastewater for four irrigation sites in the Riverland area.

2009	Waikerie	15 years DBO	2,400 wastewater recycling

An AUD3.6million 40,000m^3 per day project for Loxton Waikerie District Council, including water recycling.

2008	North Queensland	20 years DBO	180,000 water

An AUD140million contract for two 40,000m^3 per day water treatment works and an upgrade of the existing facility in Townsville. UUA is already involved in an industrial water project with BHP Billiton in the area. The population of Townsville has been rising by approximately 5,000 a year.

2008	Bustard Bay	10 + 5 + 15 years O&M	1,350 water & wastewater

The communities of Seventeen Seventy township and Agnes Water in Miriam Vale Shire in Queensland. A RO desalination plant and a wastewater treatment and recovery facility form the centre of an AUD36million plan to lower water usage in the area. UUA has a ten year contract with five and 15 year renewal clauses.

2008	SE Queensland	2 + 5 years O&M	Bulk water

LinkWater, the authority responsible for the bulk transfer of potable water in SE Queensland signed an AUD50million five year O&M agreement with UUA and Transfield in April 2008. UUA and Transfield Services will assist LinkWater to operate and maintain new water grid pipeline assets currently under construction, along with more than 200km of existing mains and associated works such as pumping stations and potable water reserves. The contract was re-negotiated in March 2010.

2004	Fleurieu Peninsula	20 year BOT	15,000 wastewater

An AUD32million wastewater treatment plant for Victor Harbour in South Australia, designed to handle an average flow of 5Ml per day. The facility entered service in mid-2005. Victor Harbour is a tourist resort on the Fleurieu Peninsula, with a resident population of 5,000 and an average population of 15,000 rising to 30,000 at peak periods.

2003	Onkaparinga	25 year DBO	10,000 wastewater

The AUD4million 1,300m^3 per day facility treats wastewater from the city's sewerage and septic tanks from the city

with the reused water irrigating vineyards in the McLaren Vale and Willunga regions.

2003	Coliban	10 + 5 year O&M	400,000 water & wastewater

Campaspe Asset Management is responsible for O&M for 130,000 customers in 49 towns in northern and central Victoria. This includes 19 water and 13 wastewater treatment plants. The contract was not renewed in 2013, but was regained when TRILITY acquired WIG.

1993	Melbourne	25 year BOOT	70,000 water

This was the first BOOT project in the Australian Water industry, involving the renovation of Yan Yean reservoir, the oldest in Victoria, particularly during summer months when demand is high. A new direct filtration plant has replaced existing basic treatment facilities and now has a capacity of 155,000m^3 per day. It can reach a population of over 300,000 and supply 100,000 of these people at any one time. After AUD25million in spending, the refurbished facility entered service in 1994.

1995	Sydney	25 year BOOT	230,000 water

The Build, Own, Operate, and Transfer (BOOT) contract was awarded to UUA and Transfield in 1992 and the Macarthur Water Treatment Plant entered service in 1995. It involved the construction of a new water treatment works costing AUD123million. The plant provides a population of 230,000 people with up to 265Ml per day of water. After 25 years, Sydney Water can either buy the facility or renegotiate another operations contract.

1996	Adelaide	25 year BOOT	154,000 water

UU won the Adelaide BOOT contract for water treatment in South Australia's Riverland region in 1996. The AUD115million BOOT for 10 water treatment plants serves over 150,000 people in 90 communities. The consortium is made up of UU (50%) and AMP (Australia, 50%). Construction was from 1997-99, and the facility entered into service in September 1999.

In May 2000, UU Australia signed an AUD23million DBO contract with Queensland Nickel for a wastewater treatment plant in Yabulu designed to recover nickel from process water. The contract was re-negotiated in 2005 and has a new ten year term. In September 2000, UU announced that it is seeking to develop an underground lake discovered by Anaconda Nickel Ltd of Perth in the Western Desert. The lake is estimated to hold 2,000billion L of water. It is located in the Officer Basin, 400km from the mining area of Kalgoorlie. The water is suitable as industrial water or could be treated for human consumption.

New Zealand

Contracts

Year	Location	Contract & length	People served and service
2005	Mangawhai	15+5 year BOT	1,665 wastewater

Mangawhai Township is a beach resort north of Auckland. WIG operates the USD20million Mangawhai EcoCare scheme for 15 years in partnership with the Kaipara District Council.

Chile

In 2011, Mitsubishi set up Cleanairtech Sudamerica (CAP, Chile 51%, and Mitsubishi 49%) to supply desalinated water from a plant in Copiapo to the Cerro Negro Norte Iron Ore Mine in the Atacama Desert. The pipeline will cost USD180million to construct and CS is operating it for 20 years after it entered service in 2013.

Sources:

Mitsubishi Corporation, Annual Reports, 2011-2015

TRILITY, company web site

Ebara, company web site

United Utilities, Australian & NZ contract presentations, 2009

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Yorihiko Kojima (Chairman)

Ken Kobayashi (President & CEO)

Ryoichi Ueda (CFO)

Francois Gouws (MD, TRILITY)

Malaysia

Goldis

Population served by service and country 2014 data Goldis	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	400,000	200,000	600,000
Global total	0	400,000	200,000	600,000
% home markets	0%	0%	0%	0%

Goldis is a holding company for a group of private equity projects ranging from property development to organic fish farming. The company was founded in 2000 as a merger of two holding companies and floated on the KLSE in May 2002. Crest Spring (Shanghai) Co Ltd is a subsidiary of Gold China Sdn Bhd, which is a subsidiary of Goldis Berhad and is the holding company for its Chinese water and wastewater treatment operations. The company believed that it could gain six or seven water contracts by early 2007 and aims to serve 4million households in China. To date, five contracts have been gained. Goldis is also seeking contracts in Thailand, Indonesia and Abu Dhabi. The water activities made a maiden operating profit of MYR3.9million in 2010.

Goldis Bhd, Profit & loss account, 2010-2014

Y/E 31/01 (MYRmillion)	2011	2012	2013	2013 [1]	2014 [1]
Turnover – Water	6.8	43.9	52.8	63.9	76.9
Group turnover	264.2	356.7	1,268.8	1,114.9	1,289.0
Pre-tax profits	32.9	304.0	415.9	408.4	450.2
Net profits	26.5	288.3	262.0	304.8	347.4
Earnings per share (MYR)	0.04	0.47	0.16	0.17	0.17

[1] YE 31 December

In June 2005, Goldwater gained a contract with Tieling City (Liaoning Province) for a 100,000m^3 per day sewage treatment plant and a linked 50,000m^3 per day water treatment and recovery plant. The construction work cost MYR75million, with the cost of the concession contract being MYR125million.

In March 2006, Goldis via its 81% held subsidiary Jiangsu Gold Water Co. Ltd acquired 77.5% of Ganyu Xin Cheng Sewage Treatment Co Ltd for MYR7.75 million (MYR3.62million. This covers two contracts:

[1] A 23 year operating concession for a 20,000m^3 per day sewage treatment plant in Dajijia, Western District of Yantai Economic and Technical Development Zone, Yantai, Shandong Province. The Dajijia BOT entered service in 2008.

[2] A 24 year concession for a 20,000m^3 per day sewage treatment plant in Ganyu County, Lianyungang City, Jiangsu Province. The Ganyu entered service in 2007.

In 2009, the company gained a 25 year BOT contract for a sewage treatment plant serving Zhou Cheng Industrial Park, Shandong.

In September 2013, a 23 year BOT contract was signed for the Yantai Xin Cheng Wastewater treatment Co. This facility has a capacity of 20,000 m^3 per day.

Source:

Goldis, Annual Reports, 2005-2014

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Tan Lei Cheng (Chairman & CEO, Goldis)

Mickey Ng Koon Yee (Chairman, Gold Water)

Gary How Kim Kong (CFO, Gold Water)

Malaysia

Metropolitan Utilities

Population served by service and country 2014 data Metropolitan Utilities	Water Only	Sewerage Only	Water & Sewerage	Total
Malaysia	600,000	0	0	600,000
Global total	600,000	0	0	600,000
% home markets	100%	0%	0%	100%

Metropolitan Utilities Sdn Bhd (MUC) was founded in 1987. In 1989, MUC gained a 20 year concession for bulk water provision, treatment and supply to Lembaga Air Perak, the state Government of Perak's water authority. Under the concession, MUC supplies water to Ipoh, the state capital, and the regions of Ulu Kinta, Sungai Terap and Tanjung Tualang. In 1996, the concession was extended to 2024.

MUC was acquired by Intan Utilities Berhad's and in 2007 Vista Meranti Sdn Bhd, a wholly-owned unit of HQZ Credit Sdn Bhd, raised its interest in Intan Utilities from 57.7% to 98.70% in January 2007 and delisted the company. MUC now operates as a private company.

The concession serves 600,000 people. Profits for the water activities in 2002 were MYR25.2million, falling to MYR16.4million in 2003. The fall in revenues and profits reflects the end of the construction contract for a new pipeline serving the state.

The Sultan Idris Shah (SIS II) water treatment plant has its capacity upgraded from 91,000m^3 per day to 276,000m^3 per day under the Ipoh concession.

The Ulu Kinta water treatment plant has its capacity increased from 91,000m^3 per day to 136,000m^3 per day.

Sources:

Metropolitan Utilities, company web site

Intan Utilities, Annual Report, 2005

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Malaysia

Kumpulan Perangsang Selangor Berhad

Population served by service and country 2014 data KPS	Water Only	Sewerage Only	Water & Sewerage	Total
Malaysia	800,000	0	0	800,000
Global total	800,000	0	0	800,000
% home markets	100%	0%	0%	100%

Kumpulan Perangsang Selangor Berhad (KPS) was incorporated in 1975 as part of the state of Selangor's Kumpulan Darul Ehsan Berhad (KDEB). KDEB is designed to encourage private sector investment and participation in developing the state's infrastructure and services. After a partial divestment from KDEB, KPS was listed on the Kuala Lumpur Stock Exchange on 22 July 2003 and remains 60.1% held by KDEB. In recent years, the company has concentrated upon property development, highways and water concessions.

SYBAS started in January 2005, distributing water to 6million people and industrial and commercial clients in the Klang Valley. Puncak Niaga holds the other 70% (see Company Entry)**.** A controlling 55% stake in ABASS was acquired in April 2006.

In July 2003, Selangor awarded KPS a MYR2.5billion water treatment project under the Langat Two Water Scheme. This involves the transfer and treatment of water from Pahang state to Selangor in four equal stages of 545,000m^3 per day, which has been completed.

Current structure of water activities in Selangor

Concessionaire	Syarikat Pengeluar Air Selangor Holdings Bhd, (SPLASH)
Activity	Water treatment (2,000,000m^3 per day)
Shareholders	KPS (30%), Gamuda (40%), TSWA (30%)

Concessionaire	Konsortium ABASS Sdn Bhd
Activity	Water treatment (545,000m^3 per day) 30 year concession awarded in 2001
Shareholders	KPS (91%)

Concessionaire	Puncak Niaga
Activity	Water treatment (1,905,000m^3 per day)
Shareholders	Puncak Niaga Holdings Bhd (see company entry)

Concessionaire	SYBASS
Activity	Water distribution
Shareholders	KPS (15%), KDEB (15%), Puncak Niaga Holdings (70%)

Selangor's proposed consolidation

The Selangor Government has been seeking to consolidate the various concessions under KDEB from 2009. This is in part due to a 37% tariff increase in 2009 by SYABAS under its concession agreement. This will involve KDEB buying out the various stakes in these concessions that it does not currently hold at a cost in the region of MYR12billion. As of the end of 2014, this was still in progress.

Kumpulan Perangsang Selangor, Profit & loss account, 2010-2014

FY 31/12 (MYRmillion)	2010	2011	2012	2013	2014
Sales - Water	121.0	171.2	186.0	207.1	220.8
Net sales	406.6	422.2	348.2	316.0	314.0
Operating income	93.9	135.0	64.8	345.0	75.6
Pre-tax profit	64.9	67.6	75.4	285.8	130.3
Net income	43.5	46.9	59.5	265.3	115.6
Earnings per share (Sen)	9.2	9.8	12.5	53.2	23.2

Sources:

Kumpulan Perangsang Selangor, Annual Reports, 2012-2014
Kumpulan Perangsang Selangor, company web site

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Encik Suhaimi bin Kamaralzaman (CEO)

Encik Haikel Bin Simail (CFO)

Malaysia

PBA Holdings BHD

Population served by service and country 2014 data PBA	Water Only	Sewerage Only	Water & Sewerage	Total
Malaysia	1,450,000	0	0	1,450,000
China	1,100,000	0	0	1,100,000
Total - home markets	1,450,000	0	0	1,450,000
Total - international	1,100,000	0	0	1,100,000
Global total	2,550,000	0	0	2,550,000
% home markets	57%	0%	0%	57%

Perbadanan Bekalan Air Pulau Pinang Sdn Bhd (PBA), a subsidiary of PBA Holdings BHD, is a water supply company operating in raw water abstraction, water treatment and supply. In 1999 the Penang Water Authority was corporatised as PBA. PBA operates a 30 year water concession in Northern Penang, Malaysia. The company was floated on the Kuala Lumpur Stock Exchange in April 2002, when 45% of PBA's equity was sold by the State Government, raising MYR194million (USD51million). In 2011 MYR655million in loans to the state were settled as part of a 45 lease agreement.

Perbadanan Bekalan Air Pulau Pinang Sdn Bhd, Profit & loss account, 2010-2014

Y/E 31/12 (MYRmillion)	2010	2011	2012	2013	2014
Sales – Water	189.6	225.8	232.6	236.4	246.6
Sales – Bulk water	7.6	9.5	11.2	14.6	13.8
Sales	198.5	236.3	244.6	251.7	261.0
Profit before tax	30.8	42.4	25.6	27.5	23.7
Net income	26.2	45.7	29.0	27.9	24.8
Earnings per share (Sen)	7.9	13.8	8.8	8.4	7.5

Malaysia

The state has six dams with a total water storage capacity of 45.8 million m^3. Currently, PBA has a total design capacity to supply about 1.497 million m^3 of treated water per day from its 10 treatment plants to meet the average supply demand of 995,060m^3 and consumption of 813,420m^3. The network is in relatively good order, with non-revenue water falling from 23.9% in 2003 to 16.9% in 2007 but rising to 18.4% by 2011 and 18.3 in 2014, compared with the national average of 36.4% in 2011. Water consumption grew from 195.8 million m^3 in 1999 to 283.2 million m^3 in 2011 and 296.9 million m^3 in 2014. There were 561,811 customers at the end of 2014, with 100% urban and 99.7% rural coverage in Penang, equivalent to 1.65 million people. This includes 484,118 domestic and 707693 trade customers. There were 338,523 customers in 1999.

China

Contracts

Year	Location	Contract & length	People served and service
2003	Yi Chun City	30 year BOT	1,100,000 water

The BOT was awarded to PBA's Pinang Water Ltd. PWL is 26% held by PBA, along with the Ranhill Utilities (37%) and YLI Holdings Bhd (37%). Yi Chun is in Jiangxi Province, near Shanghai. The project involves increasing water production from 10,000 m^3 per day to 30,000 m^3 per day in 2011 with a further increase to 50,000 m^3 per day in 2014. Revenues were MYR 6.8 million in 2014 against MYR 5.6 million in 2013.

Sources:

Perbadanan Bekalan Air Pulau Pinang, Annual Reports, 2006-2014

Perbadanan Bekalan Air Pulau Pinang, company web site

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Dr Mary Ann Harris (CFO)

Malaysia

Ranhill Energy and Resources BHD

Population served by service and country 2014 data Ranhill	Water Only	Sewerage Only	Water & Sewerage	Total
Malaysia	1,900,000	0	0	1,900,000
China	125,000	250,000	0	375,000
Total - home markets	1,900,000	0	0	1,900,000
Total - international	125,000	250,000	0	375,000
Global total	2,025,000	250,000	0	2,275,000
% home markets	94%	0%	0%	84%

Ranhill Bhd bought back its Ranhill Utilities Bhd subsidiary in October 2004. SAJ Holding Sdn Bhd (SAJH), the state of Johor Water Company was set up to operate the state's water supply services in 1994. In 2000, SAJH was awarded a 30 year concession to operate these services. SAJH was then reversed into Ranhill Holdings, which was in turn 60% held by Ranhill. After the reconsolidation, Ranhill Water Services was incorporated in March 2005 to cover Ranhill's water operations.

The company was taken private in 2010. Ranhill Utilities had revenues of USD2236million in 2010, with USD26million coming from Ranhill Water Technologies, its international consulting and BOT project arm. The company was restructured and renamed Ranhill Energy and Resources in April 2013, when a Market Listing was considered.

Malaysia

SAJH has 43 water treatment plants and a 9,000km distribution network. Water provided meets WHO and Ministry of Health standards. SAJH served 3.4 million people in 2005 and had 902,375 domestic, industrial and institutional customers at the end of 2007 compared with 787,894 in 2005. Non-revenue water was 32.5% in 2006 and 31.5% in 2007 rising to 32.2% in 2009, with the aim of reducing this to 20% by 2010. In reality, NRW was 30.3% in 2010. SAJH had revenues of MYR 799.2 million in 2012, with 944,006 customers.

China

Operations in China and Thailand are carried out through Ranhill's 70% owned Ranhill KWI. In July 2003, RKWI gained a 30 year BOT to build and operate a 100,000m^3 per day water treatment plant for Yichun City in Jiangxi Province, China in two equal phases. RKWI holds 26% of the operating company, which will invest MYR37million into the project. Ranhill KWI gained two 30,000m^3 per day wastewater treatment BOT contracts in 2007; one serving the Hefei Chemical Industry Park and the other serving Xiao Lan. The Yingkou project is for the Yingkou Industrial Park in Liaoning.

Contracts

Year	Location	Contract & length	People served & service
2006	Yichun City, Jiangxi	29 year BOT	50,000m^3 per day water treatment
2007	Xiaolan, Jiangxi	29 year BOT	30,000m^3 per day wastewater
2012	Xiaolan II, Jiangxi	29 year BOT	50,000 m^3 day water
2011	Xinxiang, Henan	29 year BOT	50,000 m^3 day, WW
2007	Hefei, Anhui	25 year BOT	30,000m^3 per day wastewater
2009	Yingkou, Lianoning	29 year BOT	30,000m^3 per day wastewater

PN acquired Global Environmental Solutions' Xinnuo Water (Binzhou) Ltd which was transferred to Sino Water (80% held by PN) in July 2008. The company is based in Yangxin County, Shandong and specialises in waste water treatment. Sino Water is planning to spend MYR250million on seven projects in China (including in Jiaxing, Da Shi Qiao, Tai Zhou Development Zone and Nanyang City) and a proposed TOOT for a 300,000m^3 per day wastewater treatment plant serving Jiaxing Province, all of which by 2013 will generate revenues of MYR100million per annum.

Thailand

Contracts

Year	Location	Contract & length	People served and service
2000	Amata City	15 year O&M	9,600m^3 per day wastewater
2000	Amata City	15 year O&M	10,500m^3 per day water
2000	Amata Nakom	15 year O&M	36,000m^3 per day water
2005	Amata Nakom	20 year BOT	10,600m^3 per day wastewater
2005	Amata Nakom	20 year BOT	20,000m^3 per day water
2006	Amata Nakom	20 year BOT	Recycled water

In Thailand, Ranhill KWI has been operating three wastewater and potable water treatment plants since 2000, serving Amata City Industrial Estate, through a 20 year BOT. Ranhill KWI received a Letter of Award in May 2005 for a second 20 year BOT for a 10.6Ml per day water and a 9.6MI per day wastewater and water recycling plant in Amata Industrial Estate (Phase 6). This will include a reverse osmosis facility and will be run by Anorak Water Treatment Facilities Co Ltd (AnuRAK), a special purpose vehicle.

In India, the company has a joint venture with JUSCO serving Haldia (see JUSCO entry).

Sources:

Ranhill Utilities, Annual Reports, 2002-2009

Ranhill Energy and Resources, Share Prospectus, 2013

Ranhill Energy and Resources, company web site

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Tan Sri Hamdan Mohammad (Chairman)

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Malaysia

Salcon Engineering Berhad

Population served by service and country 2014 data Salcon	Water Only	Sewerage Only	Water & Sewerage	Total
Vietnam	400,000	0	0	400,000
Global total	400,000	0	0	400,000
% home markets	0%	0%	0%	0%

Salcon Engineering Berhad (SEB) was set up as a subsidiary of Kumpulan Emas Berhad (KEB) in 2002, building upon KEB's experience in the palm oil industry and engineering services for processing palm oil and treating process effluents and for providing water for these facilities. KEB has been involved in 450 water and wastewater engineering projects in Malaysia, Thailand, Vietnam and China since 1974. SEB was listed on the KLSE in August 2003 via a reverse takeover of Seng Hup Corporation Bhd.

SEB concentrates on water and wastewater plant design, engineering, installing and O&M, along with related projects for the palm oil, timber and agricultural sectors. The Water & Environmental Division accounts for more than 50% of the company's turnover and profits. Water and wastewater engineering projects recently gained include Langat 2 (2014, Salcon's revenues will be MYR 358 million) and the Langat central sewage treatment plant contract in 2014, which is worth MYR 470 million.

Salcon Engineering, Profit & loss account, 2010-2014

Y/E 31/12 (MYRmillion)	2010	2011	2012	2013	2014
Turnover	351.8	314.0	182.1	164.6	194.5
Pre-tax profit	24.7	9.7	-1.4	-30.8	5.7
Net profit	35.5	25.3	31.5	57.6	36.9
EPS (Sen)	5.72	3.09	2.21	4.50	0.71

Salcon's portfolio of concessions in China was sold to Beijing Enterprises Water Group between 2013 and 2015.

Vietnam

Contracts

Year	Location	Contract & length	People served and service
1999	Ho Chi Minh City	20 year O&M	400,000 water

In Vietnam, SEB is part of the Malaysian consortium involved in the USD35.8million, 100,000m³ per day, Binh An Water Supply Scheme for the Thuan An District of Hi Chi Minh City. The O&M element runs for 20 years from 1999. Salcon's 40% owned Emas Utilities holds 90% of Binh An Water, the concession company. The concession generated revenues of MYR 4.0 million in 2014.

Sources:

Salcon Engineering, Annual Reports, 2005-2014

Salcon Engineering, company web site

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Dato Seri (Dr) Goh Eng Toon (Chairman)

Malaysia

Taliworks Corporation

Population served by service and country 2014 data Taliworks	Water Only	Sewerage Only	Water & Sewerage	Total
Malaysia	**2,045,000**	**0**	**0**	**2,045,000**
China	**0**	**1,700,000**	**0**	**1,700,000**
Total - home markets	2,045,000	0	0	2,045,000
Total - international	0	1,700,000	0	1,700,000
Global total	2,045,000	1,700,000	0	3,745,000
% home markets	100%	0%	0%	55%

Taliworks Corporation (TC) has been involved in the management, operation and maintenance of water treatment plants and the supply of treated water since Malaysia's first privatisation in 1987. It supplies 1,008,200 m^3 per day of water to the state of Selangor, the federal territory, and Langkawi Island, serving 2 million people through the operation of six water treatment plants.

TC's Malaysian water companies are as follows:

[1] Sungai Harmoni (100% held): Sungai Selangor Phase 1. One WTW, 1,049,000m^3 per day capacity, expires 2030. Output in 2011 was 778,000m^3 per day, compared with 733,000m^3 per day in 2007. Overall sales were 958,000 m^3 per day in 2014 and 934,000 m^3 per day in 2013.

[2] Taliworks Langkawi (100% held): Five WTWs in Langkawi Island & Perlis, 89,500 m^3 per day capacity; granted in 1995 and expires 2020. This includes 20,650 customer accounts. Sales were 45,000 m^3 per day in 2011 compared with 42,000 m^3 per day in 2007. Sales were 50,200 m^3 per day in 2014.

Taliworks Corporation, Profit & loss account, 2010-2014

Y/E 31/12 (MYR)	2010	2011	2012	2013	2014
Water treatment	135.8	123.3	141.5	149.9	175.8
Total turnover	169.3	168.1	253.3	281.8	353.9
Pre-tax profit	44.1	48.4	61.0	39.1	317.2
Net profit	29.5	36.4	42.8	25.1	303.2
Earnings per share (Sen)	7.4	8.2	9.9	6.4	69.0

China

Contracts

Year	Location	Contract & length	People served & service
2011	Ningdong	30 year BOT	Industrial wastewater

The 70% held 20,000m^3 per day facility serving the Ningdong Energy Chemical Base Meihua Industrial Park in Ningxia Province will enter service at the end of 2012.

2011	Yinchuan	30 year TOT	1,500,000 wastewater

2011	Yinchuan	30 year TOT	Water recovery

Taliworks (Yinchuan) Wastewater Treatment Co (100% held by the company) operates four WWTWs with a capacity of 300,000m^3 per day and two water recovery units with a capacity of 52,000m^3 per day. The total contract value is CNY810million.

Actual treatment in 2012 was 310 Ml/day

A contract signed in 2014 will see capacity expand to 480,000m^3 per day by 2017 at a cost of CNY 900 million.

119.85 million m^3 of effluent was treated in 2014 against 121.26 million m^3 in 2013. This works out at

328,000 m^3 per day, which is substantially above the current design capacity.

2010	Yinchuan	30 year BOT	Industrial wastewater

In January 2010 the company acquired a 70% stake in Eco3 Technology and Engineering Pte Ltd, an industrial wastewater plant operator. In October 2009, Eco3 entered into a 30 year BOT agreement with Yinchuan City Ningdong Energy Chemical Industrial Zone Management Committee, for the construction and management of the Linhe integrated industrial park wastewater and recycled water treatment plant in Ningxia province. The proposed CNY70million plant has a wastewater treatment capacity of 50,000m^3 per day for Zone A, with the first phase (20,000m^3 per day) entering service in 2012.

2003	Guanghan	30 year BOT	200,000 wastewater

Guanghan San Xin Dui is a 50,000m^3 per day wastewater treatment works in Sichuan Province, which is operated by Puresino (Guanghan) Water, a 56% held associate of Taliworks. The facility entered service in 2007 and ran at 61% of design capacity in 2009, a 13% increase on 2008. Usage was at 49% of capacity in 2014 due to rehabilitation work being carried out.

Sources:

Taliworks Corporation, Annual Reports, 2006-2014

Taliworks Corporation, company web site

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Encik Suhaimi bin Kamaralzaman (Chairman)

Y Bng Dato Lim Chee Meng (Deputy Chairman)

Tuan Haji Abdul Rahman Bin Haji Siraj (CEO)

Lim Chee Meng (Director)

Malaysia

YTL Corporation Bhd

Population served by service and country 2014 data YTL	Water Only	Sewerage Only	Water & Sewerage	Total
England & Wales	0	1,406,000	1,268,000	2,674,000
Global total	0	1,406,000	1,268,000	2,674,000
% home markets	0%	0%	0%	0%

YTL Corporation Bhd (YTL) has interests in power generation, construction contracting, cement manufacture, property development and hotels, and resorts and leisure. YTL Power International (61% held by YTL) is one of the largest independent power producers in South East Asia and has investments in regulated utilities in Australia.

YTL Corporation Bhd, Profit & loss account, 2010-2014

Y/E 30/06 (MYRmillion)	2010	2011	2012	2013	2014
Water & sewerage turnover	2,456	2,295	2,399	2,507	2,896
Total turnover	16,505	18,355	20,196	20,033	19,269
Pre-tax profit	2,278	2,352	2,450	2,299	2,812
Net profit	844	1,035	1,181	1,267	1,555
Earnings per share (Sen)	9.5	11.5	12.3	12.2	15.0

YTL acquired Wessex Water Plc (WW) for GBP1, 240million in May 2002 when WW was sold by Enron. This is the first case of a company based in the developing economies acquiring a water and sewerage company from the developed world. In July 1998 Enron agreed terms with WW for a recommended cash offer for WW. The offer valued WW at GBP1.7billion: GBP1.36billion for WW's share capital and WW's net borrowings, which were GBP325million on March 31 1998.

It is understood that YTL has been examining the potential for developing projects in Asia.

Wessex Water Services Ltd, profit and loss account for appointed businesses, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water turnover	154.8	167.3	176.5	192.2	198.7
Sewerage turnover	285.5	295.1	310.1	324.7	334.2
Turnover	441.9	467.5	492.1	524.9	540.3
Operating profit	212.1	219.0	224.0	241.5	248.4
Pre-tax profit	149.9	137.5	138.5	160.4	171.8

Wessex Water supplies water to 1.30 million people and sewerage services to 2.60 million people in south west England. Leakage was eased from 73million L per day since 2004-07 to 72 million L per day in 2008 and 69 million L per day in 2012-15, which is seen as 5 million L per day below the economic level. There were 535,000 water and 1,101,000 sewerage household accounts in 2015.

Sources:

YTL Corporation, Annual Reports, 2010-2014

Wessex Water, regulatory accounts, 2011-2015

Enron, Listing Document, 1999

Azurix, Odder Document, 1998

Contact Details

Name: Wessex Water Services Ltd,

Address: Claverton Down Road, Bath BA2 7WW.

Web: www.wessexwater.co.uk

Colin Skellet (CEO)

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Y Bhg Tan Dato Seri (Dr) Yeoh Tiong Lay (Chairman)

Tan Dato Seri (Dr) Francis Yeoh Sock Ping (MD)

Bhg Dato Yeoh Seok Kian (Deputy MD)

Philippines

Philippine H2O Ventures

Population served by service and country 2014 data Philippine H2O	Water Only	Sewerage Only	Water & Sewerage	Total
Philippines	235,000	0	0	235,000
Global total	235,000	0	0	235,000
% home markets	100%	0%	0%	100%

Calapan Ventures Inc. was floated on the Manila Stock Exchange in November 2011. Calapan Ventures is based in Quezon City in the Philippines and operates a number of water networks in the city. The IPO raised PHP95million, of which PHP90million is to be used in developing and extending its activities. Calapan Ventures acquired Calapan Waterworks Corporation and Tabuk Water Corporation in 2009. A 25 year concession covering Agoo and Tubao municipalities was gained in 2012. In 2014 the company was renamed Philippine H2O Ventures.

Profit & loss account, 2010-2014

F/Y 31/12 (PHPmillion)	2010	2011	2012	2013	2014
Water services	90.6	122.7	130.4	150.1	188.3
Net sales	118.0	148.0	149.8	165.8	188.6
Operating profit	22.3	34.3	37.7	35.0	50.9
Net profit	30.6	40.3	34.5	21.8	31.3
EPS (PHP)	0.25	0.33	0.21	0.13	0.19

Calapan

Calapan Waterworks Corporation was founded in 1991 to serve the city of Calapan. It had 10,940 service connections in 2014 (10,307 household and 633 commercial) compared with 8,613 service connections in 2011 and 5,171 in 1997. The company serves all of the city's 25,317 households, including direct connections for 32 (17 urban and 15 rural) of the city's 62 Barangays. The city had 124,000 people in 2010. A 25 year franchise to run the city's water and sewerage operations was granted in 2003. NRW was 50-52% before 2003 and in 2012-14 has been between 25-27%.

Tabuk

Tabuk Water Corporation served 3,616 households in eight of the city's 42 Barangays in 2014, having started by serving 500 households in 2006. The company's system can serve 9,000 connections and there are 17,280 households in the area. Tabuk City had a population of 104,000 people in 2010. Calapan Water took over the operations for the city in 2006 on a 15 year franchise in 2006.

Agoo and Tubao

A 25 year MOU between the company's 85% held Metro Agoo Waterworks and the municipalities of Agoo and Tubao was signed in December 2012 and the contract went into service in 2013. There were 60,000 people in Agoo and 27,000 people in Tubao in 2010, living in approximately 20,000 households.

Sources:

Calapan Ventures, Listing Document, 2011

Calapan Ventures, Annual Reports, 2011-2013

Philippine H2O Ventures, Annual Report, 2014

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Jolly Ting (Chairman, CEO)

Nanette Ongcarranceja (President)

Ortrud Ting Yao (CFO)

Singapore

Ciena Enterprises Limited

Population served by service and country 2014 data Ciena Enterprises	Water Only	Sewerage Only	Water & Sewerage	Total
China	1,500,000	2,325,000	350,000	4,175,000
Global total	1,500,000	2,325,000	350,000	4,175,000
% home markets	0%	0%	0%	0%

Asia Environment Holdings (AEH) was listed on the Singapore Stock Exchange in November 2003. AEH operates in China under the Penyao trade name and since its foundation in 1984 has progressively moved from water engineering to turnkey contracting to BOT contracts. More than 300 projects have been completed to date. Since 2001, 15 BOT and TOT contract awards in China have been identified, including water provision contracts for 1.65million people and wastewater treatment contracts covering 2.625million people as well as a series of industrial wastewater treatment contracts. AEH encountered financial difficulties in 2010 with a significant deficit in net current assets by the end of the year. In November 2011, the company was bought out by Ciena Enterprises Limited, a privately held company based in the British Virgin Islands owned by Wang Hongchun, previously AEH's CEO.

Both Ciena Enterprises and Asia Environment Holdings continue to trade. It has been assumed that the company has been concentrating on its activities as of the time it was taken private and has not gained any new contracts.

Asia Environment Holdings, Project status, 31-12-2010

No updated data is available post the 2010 annual report. 13 out of 16 projects were completed by the end of 2010, 14 of which are noted in the annual report. This represented a processing capacity of 685,000m^3 per day, with 175,000m^3 ready to enter service at the time along with minority interests involving a further 345,000m^3 of capacity.

Contract location	Status	Capacity (m^3/day)
Xining	Operating	135,000
Jingdezhen - XGZ	Operating	80,000
Fenhu	Operating	25,000
Lishui	Operating	40,000
Xiuning	Operating	20,000
Wangcheng	Operating	40,000
Nanchang	Operating	200,000
Nantong	Commissioning	200,000
Jiangning	Operating	80,000
Danyang	Commissioning	140,000
Yueyang – NJG	Operating	170,000
Yueyang – EC	Commissioning	50,000
Jingdezhen – HTI	Operating	40,000
Zhoukou	Commissioning	120,000

Contracts

Year	Location	Contract & length	People served & service
2009	Zhoukou	30 year TOT	250,000 water

The contract involves operating the existing 50,000m^3 per day water treatment plant serving Zhoukou City in Henan Province and constructing an extension to the plant adding 70,000m^3 per day to its treatment capacity. The Zhiukou Penyao Water Supply Co is 100% held by AEH and has a registered capital of USD9.8million.

2009	Yueyang	25 year BOT	350,000 water & wastewater

The contract involves operating the existing 100,000m3 per day water treatment plant serving Yueyang City in Henan Province and constructing an extension to the plant adding 70,000m3 per day to its treatment capacity. A 50,000m3 per day wastewater treatment plant is to be constructed, serving an estimated 250,000 people. The Yueyang Penyao Water Supply Co is 100% held by AEH.

2009	Jingdezhen	30 year BOT	Industrial wastewater

This involves developing an industrial wastewater treatment plant serving the Jingdezhen High-Tech Industrial Park in Jiangxi Province in two equal 40,000m^3 per day phases. It will be run by a wholly owned company, Jingdezhen

Dapeng Water Treatment Pte Ltd.

2007	Jingdezhen	20 year BOT	400,000 wastewater

Jingdezhen City is in Jiangxi Province. The project involves the construction of a wastewater treatment plant with a total capacity of 80,000m^3 per day. The total investment of the project is estimated at CNY78million and AEH holds 20% of the project company.

2009	Xiuning	30 year BOT	100,000 wastewater

In 2009, AEH's Xiuning Water acquired 60% of the equity of Huangshan Xiuning Fuda Wastewater Treatment Pte Ltd, with Shanghai Fuda Lefumen Environmental Engineering holding the remaining 40%. Construction of a 20,000m^3 per day wastewater treatment plant serving Xiuning County, Huangshan City in Anhui was completed in 2009.

2008	Danyang	30 year BOT	500,000 water

In July 2008, AEH entered into a Preliminary Agreement with Danyang Municipal Government regarding a BOT project involving a group of six wastewater treatment plants in Fangxian, Daoshu, Erling, Xinqiao, Houxiang and Shitu towns in Danyang City, Jiangsu Province. This involves the construction and operation of six wastewater treatment plants and the installation of connecting pipes of approximately 48km long. The total planned capacity of the wastewater treatment plants is 140,000m^3 per day, with a Phase 1 capacity of 55,000m^3 per day.

2008	Xining	30 year BOT	650,000 wastewater

In May 2008, AEH's Xining Penyao Wastewater Treatment gained a concession to acquire, expand and operate a wastewater treatment plant in Xining City, Qinghai Province. This involves an existing wastewater treatment plant with a capacity of 85,000m^3 per day in 2009 and expanding its treatment capacity to 135,000m^3 per day. The investment value of the project is approximately CNY238million.

2008	Anqing	30 year BOT	Industrial wastewater

A contract for the Anqing Economic Development Zone for Anqing, Anhui province for a 30 year concession involving the construction of a 10,000m^3 per day wastewater treatment plant. In 2009, it was announced that the concession was to be terminated. Conditions have yet to be finalised.

2007	Lishui	28.5 year BOT	200,000 wastewater

In November 2007, AEH's 100% held Lishui Water Investment Ltd gained a concession to build and operate a wastewater treatment plant in Lishui county, Nanjing city, Jiangsu Province for a wastewater treatment plant with total capacity of 40,000m^3 per day.

2007	Wangcheng County	27 year BOT	125,000 wastewater

AEH's 100% held Jiangsu Penyao Environmental Engineering Contract Co. has entered into a BOT with Wangcheng County Government to build and operate a wastewater treatment plant in Wangcheng County, Hunan Province. The wastewater treatment plant with total capacity of 40,000m^3 per day entered service in 2009 with a total investment of the project of CNY57million.

2007	Shanghai	26 year BOT	Industrial wastewater

In April 2007 an AEH associate (20% held) gained a BOT with the Shanghai Jinshan Zone Industrial Park II to build and operate a wastewater treatment plant in the Jinshan Industrial Park II. This involves the construction of a wastewater treatment plant with total capacity of 50,000m^3 per day, of which the Phase 1 capacity is 25,000m^3 per day. The total investment for the first phase of the project is estimated at CNY100million.

2007	Suzhou	20 year BOT	Industrial wastewater

A BOT for a wastewater treatment facility with a total capacity of 50,000m^3 per day and the laying of a wastewater piping network within the Fenhu Economic Development Zone. The first phase, costing CNY95million involves a 25,000m^3 per day wastewater treatment plant and laying of the wastewater piping network, completed in 2009. AEH holds 16% of the contract company's equity.

2006	Harbin	20 year BOT	Industrial water & wastewater

In October 2006, a CNY185million contract for the Harbin Binxi Economic Development Zone was signed. When complete, the plant will have capacity to treat 60,000m^3 per day of water and to treat 50,000m^3 per day of wastewater discharged by the Harbin Binxi Economic Development Zone. Phase I of the project is estimated to be around CNY190million for half the capacity for both facilities.

2006	Zhangzhu	25 year TOT	100,000 wastewater

AEH's Yixing Penyao Water Company gained the TOT in September 2006 for Zhangzhu Town, Yixing City, Jiangzu

Province, and the People's Republic of China. This involves the acquisition of a wastewater treatment plant for CNY16million with a treatment capacity of 10,000m^3 per day and operating the plant for a 25 years concession period. The total revenue to be derived over the concession period amounts to CNY114.6million. AEH has the right to develop the 2nd and 3rd phase of the wastewater treatment plant, each phase expanding the treatment capacity by 10,000m^3 per day. The Company intends to fund the acquisition from its internal resources and bank borrowings.

2005	Pizhou	25 year BOT - suspended	250,000 water

In September 2005, AEH gained a CNY82million 25 year BOT contract for building a 100,000m^3 per day water treatment works serving Pizhou City in Jiangsu Province. There has been a dispute between the consortium and the municipality over construction costs, which went into an arbitration procedure in 2009. In November 2005, a joint venture was set up between AEH (25%), Dayen (50%, see company entry) and Lionguard (25%, Richfull Holdings of Hong Kong, an infrastructure investment company) for the project.

2004	Nanchang	25 year BOT	750,000 wastewater

The Nanchang wastewater treatment BOT was signed in 2004. It covers the construction of a 200,000m^3 per day wastewater treatment plant, with a 20 year operations contract. Construction was 62% complete by the end of 2005 and the facility is entering service during 2006 with a total investment of CNY171million. AEH holds 12.88% of the operating company. The 200,000m^3 per day facility entered service in November 2007. The contract will generate revenues of CNY625million. AEH's Nanchang Water Holdings Private Limited acquired the outstanding 49% of Nanchang Penyao Water Supply Co. in November 2007.

2004	Nantong	25 year BOT	550,000 water

In July 2004, AEH signed a CNY398million deal to build a water treatment plant in Nantong City in Jiangsu Province. The 25 year BOT project will treat and supply 200,000m^3 of water daily to the city via a 70km pipeline. AEH have an option to construct two more phases to provide extra capacity of 400,000m^3 of water per day. In 2009 Nantong Water, AEH's associate company has held 78% of Nantong Penyaoi, the contract company.

Sources:

Asia Environment Holdings, Annual Reports, 2003-2010

Asia Environment Holdings, Listing Document, 2003

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Wang Hongchun (Sole Director)

Singapore

Boustead Singapore LTD

Population served by service and country 2014 data Boustead	Water Only	Sewerage Only	Water & Sewerage	Total
Indonesia	450,000	0	0	450,000
China	100,000	0	0	100,000
Total - home markets	0	0	0	0
Total - international	550,000	0	0	550,000
Global total	550,000	0	0	550,000
% home markets	0%	0%	0%	0%

Boustead Singapore is an investment company specialising in a range of engineering applications, information technology and investment services and dates back to 1828. Engineering activities include process control systems. Water engineering activities are carried out through Salcon Limited (not related to Salcon Bhd., see Malaysia company entry), of which Boustead acquired 63% in 2003, increasing this to 100% in 2006. Salcon Limited has to date completed 800 water and wastewater treatment projects in 57 countries, mainly in Asia and the Middle East.

Boustead Singapore, Profit & loss account, 2011-2015

Y/E 31/03 (SGDmillion)	2011	2012	2013	2014	2015
Group turnover	560.6	408.7	513.2	513.7	556.4
Operating profits	73.6	71.9	97.4	90.6	89.0
Net profits	52.2	55.6	81.4	70.7	63.3
Earnings per share (Cents)	10.3	11.0	16.2	13.9	12.3

Indonesia

In July 2004 Boustead signed a Heads of Agreement with the Sultan of Yogyakarta, for the Government of Yogyakarta Province, Indonesia for a 25 year DBOT for the supply of treated water to the city of Yogyakarta and its sub districts of Sleman and Bantul with a total population of 2.2million people. Currently, just 19.8% of the Province is provided with potable water. With the completion of the whole project, it is expected that 60 to 70% of the population will be supplied.

The project is to be carried out in three phases. Phase 1 & 2 with a combined capacity of 300,000m^3 per day cost USD55million to develop and were completed at the end of 2009. Approval for Boustead's 51% investment in PT Citra Tirta Mataram was received in July 2005. The Engineering, Procurement and Construction (EPC) contract for the whole project will be carried out by Boustead's Water and Environmental Division, which includes Salcon Limited. The EPC portion of the contract is expected to generate material income for Boustead's Water and Environmental Division.

China

In July 2005, Boustead was awarded a CNY137million contract for the construction of a 40,000m^3 per day desalination facility serving Tianjin. The facility entered service in 2006, and Boustead is operating it for an unspecified period.

Sources:

Boustead Singapore, Annual Reports, 2004-2014

Boustead Singapore, company web site

Contact Details

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Wong Fong Fui (Chairman & CEO)

Loh Kai Keong (CFO)

Saiman Ernawan (Deputy Chairman)

Singapore

Darco Water Technologies PTE

Population served by service and country 2014 data Darco	Water Only	Sewerage Only	Water & Sewerage	Total
Indonesia	150,000	0	0	150,000
Taiwan	0	75,000	0	75,000
China	90,000	0	0	90,000
Total - home markets	0	0	0	0
Total - international	240,000	75,000	0	315,000
Global total	240,000	75,000	0	315,000
% home markets	0%	0%	0%	0%

Darco Water Technologies Pte (DWT) was listed on the Singapore Stock Exchange in July 2002 in order to improve corporate visibility when tendering for water contracts. The company was set up in 1999 by a group of individuals who had previously operated in the industrial water treatment sector. Target markets are Singapore, Malaysia, China, Taiwan, India, Indonesia and the Philippines.

DWT, Profit & loss account, 2010-2014

Y/E 31/12 (SGDmillion)	2010	2011	2012	2013	2014
Water engineering turnover	42.19	36.83	25.78	14.55	13.39
Water management turnover	18.13	24.62	9.49	8.11	10.95
Group turnover	67.71	62.89	41.39	30.54	31.92
Operating profits	2.49	5.86	-1.15	-6.49	1.14
Net profits	0.38	3.46	-6.92	-8.84	0.06
Earnings per share (Cents)	0.14	1.25	-1.58	-2.96	0.02

In 2012, Darco sold 60% of its holding in Darco Environmental, which managed two projects in China to Salcon of Malaysia. These activities were subsequently sold to Beijing Enterprises water Group. In 2012, the company gained a new BOT contract in China

China

Contracts

Year	Location	Contract & length	People served & service
2012	Deqing	25 years BOT	90,000 water

Deqing is in Zhejiang Province. The contract covers the development of two new water treatment plants for USD30 million, taking over some of the city's older facilities. These plants have a capacity of 60,000 and 100,000 m^3 per day. A second phase is planned, to increase the capacity by a further 160,000m^3 per day.

Indonesia

Contracts

Year	Location	Contract & length	People served and service
2007	Bangka Island	20 year O&M	150,000 water

In October 2007, PT Darco Indonesia signed an agreement with Bangka Island for the Engineering Procurement & Construction (EPC), Operation & Maintenance (O&M) of a water treatment purification facility in Pangkalpinang City, Bangka Island, Indonesia, amounting to approximately IDR775billion (SGD130.8million). PT Darco shall receive IDR89.5billion (SGD15.1million) to upgrade the existing water treatment plant capacity from 12,000m^3 per day to a capacity of 36,000m^3 per day within 18 months, followed by a 20 year O&M contract, where PTDI shall receive 70% share of the revenue. The O&M contract sought to generate total recurring revenues of approximately IDR980.5billion (SGD165.4million) for the partnership.

In May 2003, DWT paid USD3million to acquire a 10% stake in PT Air Bintan Biru (PTABB), with an option to increase this stake to 25%. PTABB was founded in September 2002 to develop water resources and concessions in Riau province of Indonesia and seeks to supply water from the province to Singapore under a 25 year supply agreement. In

early 2004 Darco Environmental (Philippines) Inc. secured a six year BOO contract for the supply of ultra-pure water to SunPower Philippines Manufacturing Ltd., a company engaged in the manufacture of solar cells.

Taiwan

Contracts

Year	Location	Contract & length	People served and service
2009	Taoyuan	35 year BOT	75,000 wastewater

A 15,000m^3 per day wastewater treatment for the Taoyuan County Government is to be developed in three phases: Phase 1 (7,500m^3 per day, 2009-11) and Phases 2 & 3 (3,750m^3 per day each, to 2016). Darco's 51% held company is to invest SGD79million in the project which is forecast to generate SGD298million in revenues.

2005	Hsin Chu	25 year BOT	150,000 wastewater

During 2005, DWT, in partnership with Taiwan's Leader Construction Co Ltd., gained the TWD1.66billion (SGD83.78million) turnkey contract awarded by the Interior Ministry of Taiwan for the engineering design, construction and commissioning of a 30,000m^3 per day wastewater treatment plant serving Hsin Chu City's Ker-Ya Municipal Water Resources Recovery Centre. DWT will run a five year operation and maintenance contract, worth SGD8.75million. The complete facility will have a 190,000m^3 per day cubic peak flow capacity. The O&M commenced in 2008.

Sources:

Darco Water Technologies, Annual Reports, 2007-2014
Darco Water Technologies, company web site

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Kim Meng Thye (Chairman, CEO& Managing Director)

Kim Fah Thye (General Manager)

Steve Sze Lang Tan (CFO)

Singapore

Moya Asia Limited

Population served by service and country 2014 data Moya Asia	Water Only	Sewerage Only	Water & Sewerage	Total
Indonesia	1,800,000	0	0	1,800,000
Global total	1,800,000	0	0	1,800,000
% home markets	0%	0%	0%	0%

Moya Asia Limited was previously called Moya Dayen Limited. The company started its involvement with the sector through water contracts in China, but these were sold off in 2011. Moya Asia is concentrating on developing BOT water contracts in Indonesia and South East Asia.

Moya Asia acquired 51% of Dayen Environmental Limited in 2010 and the new company was called Moya Dayen Limited. Water treatment activities accounted for 81% of group activities in 2011, along with 16% by wastewater treatment activities. The company has also been involved in water engineering projects in Singapore and Cambodia.

Engineering, procurement and construction activities are carried out in Cambodia and Singapore while BOT projects take place in Indonesia. The Cambodian EPC activities were sold in 2015.

Moya Asia Limited, Profit & loss account, 2010-2014

Y/E 31/12 (SGDmillion)	2010	2011	2012	2013	2014
EPC	18.44	38.30	30.20	3.70	2.04
BOT	0.00	0.00	12.88	21.04	9.14
Total turnover	18.44	38.30	43.10	24.74	11.18
Operating profits	-2.51	4.85	-1.34	0.44	-0.14
Net income	-1.81	4.01	-1.50	-4.67	-1.19
Earnings per share (SGD)	-0.35	0.62	-0.22	-0.54	-0.14

Indonesia

Three BOT projects were gained between 2011 and 2013. The final construction work is anticipated to be completed between 2018 and 2020. In each case a 25 year operations contract takes effect when the water supply starts.

Contracts

Year	Location	Contract & length	People served and service
2011	Bekasi Regency	25 year BOT	500,000 water treatment

PT Moya Bekasi is 95% held by PT Moya Indonesia. The first phase of the project involves upgrading the extant 43,200m^3 per day water treatment works and developing a second facility which will supply 17,280m^3 of water per day between 2012 and 2014. The second phase will see overall treatment capacity rise from 60,480m^3 per day in 2014 to 187,000m^3 per day by 2020 at a total cost of USD 20million. The Bekasi regency has a total population of 2million.

2012	Tangerang	25 year BOT	1million water treatment

PT Moya Indonesia gained a water treatment BOT in February 2012 with Perusahaan Daerah Air Minum Tirta Benteng Kota Tangerang serving the Tangerang City Area. The BOT Project will cover three zones, with a total production capacity of 172,800m^3 per day by 2017, with a total investment of USD110-120million, but there have been delays since 2013. PT Moya Tangerang is 100% held. As of 2015, 10% of the construction work had been completed. Tangerang had a population of 1.8 million in 2010.

2013	Tangerang	25 year BOT	300,000 water treatment

PT Moya Indonesia was awarded a USD20 million contract to develop a water treatment and supply system for PDAM, the utility serving Makassar city. PT Moya Makassar is 100% held. The system will supply a total of 52,000 m^3 per day in two equal phases. The city had a total population of 1.34 million in 2010.

Sources:

Moya Asia, Annual Reports, 2010-2015
Dayen, Annual Reports, 2006-2007

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Low Chai Chong (Chairman)

Simon A Melhem (CEO & Managing Director)

Chee Sien Daniel Oh (CFO)

Thailand

TTW / Thai Tap

Population served by service and country 2014 data TTW	Water Only	Sewerage Only	Water & Sewerage	Total
Thailand	1,800,000	0	0	1,800,000
Myanmar	200,000	0	0	200,000
Total - home markets	1,800,000	0	0	1,800,000
Total - international	200,000	0	0	200,000
Global total	2,000,000	0	0	2,000,000
% home markets	90%	0%	0%	90%

Thai Tap holds two water concessions in Thailand, Thai Tap Water (TTW), formed in 2000 and entering service in 2001 and Pathum Thani Water, a concession dating back to 1995. The contracts were originally developed between Thames Water (UK) and CH Karnchang (Thailand) until the former company pulled out of its international activities. CH Karnchang increased its stake in TTW from 29.1% to 90.2% during 2005 after buying Thames out of the joint venture. In 2006, 35% of TTW was sold to Mitsui Water Holdings (Thailand) Limited and 5% to Bangkok Expressway PCL, retaining 48% of the company. In May 2008, 25% of TTW was floated on the Bangkok stock exchange. Currently, CH Karnchang holds 19.0% of the company, Mitsui 26.0% and Bangkok Expressway PCL 19.7%. In 2014, the company changed its name to TTW.

In 2009, the company was awarded a 30 year BOT for water and wastewater services for the Bangpa-In Industrial Estate, a contract worth THB1.4billion.

TTW, profit & loss account, 2010-2014

Y/E 31/12 (THBmillion)	2010	2011	2012	2013	2014
Water sales – TTW	2,932	2,988	3,219	3,409	3,617
Water sales – Pathum Thani	1,378	1,473	1,619	1,667	1,656
Water sales – total	4,310	4,546	4,838	5,076	5,272
Group Revenues	4,395	4,592	5,273	5,790	5,622
Operating profit	2,679	2,811	3,289	3,706	3,693
Net profit	2,063	2,113	2,338	2,574	2,974
Earnings per share (THB)	0.52	0.53	0.59	0.65	0.75

TTW, annual water sales, 2004-2014 (million m^3)

	Thai Tap	Pathum Thani	Total
2004	89.1	N/A	89.1
2005	100.1	N/A	100.1
2006	107.3	N/A	107.3
2007	114.6	92.8	207.4
2008	115.3	107.5	222.8
2009	117.2	108.7	225.9
2010	132.7	116.8	249.5
2011	132.7	121.0	253.7
2012	141.1	128.3	269.4
2013	136.1	137.1	273.2
2014	138.5	133.5	272.0

Contracts

Year	Location	Contract & length	People served and service
1995	Northern Bangkok	25+14 year BOOT	800,000 water

The contract was awarded to Pathum Thani Water Supply Co., Ltd a joint venture between Thames Water and CH Karnchang. The contract in Pathum Thani (a northern area of Bangkok) has performed to expectations, with the THB5billion (USD152million), 288,000m^3 per day water treatment plant entering service in October 1998. Karnchang

coordinated a THB4, 072million long-term debt facility with two Thai banks in 1998. The Provincial Water Authority will be responsible for collecting customer payments. The contract can be extended by up to 20 years. In 2007, CH Karchang sold its remaining shares in Pathum Thani to TTW. TTW holds 98% of Pathum Thani's equity, with the PWA holding the other 2%. The operating contract runs to 2023. It is estimated that the concession currently covers 1,200,000 people.

A second water treatment works is to enter service in Krathumban district in 2015-16 with an initial capacity of 100,000 m^3 per day and an eventual capacity of 400,000m^3 per day.

2001	West Bangkok	30 year BOT	400,000 water

A THB9,639million (USD240million) contract originally signed between Thames Water and CH Karnchang of Thailand and the Provincial Water Authority (PWA) is to develop a 320,000m^3 per day distribution system, which serves 400,000 people and industrial customers in Bangkok's Nakorn Pathom and Samut Sakhon districts. From 2004, the minimum take-up was 200,000m^3 per day, rising to 300,000m^3 per day in 2008. CH Karnchang coordinated a THB7, 200million long-term debt facility with three Thai banks in 1998. That Tap holds 98% of the concession's equity. The operating contract runs to 2034. It is estimated that the concession currently covers 600,000 people.

TTW, customer breakdown (by volume) in 2013

	Thai Tap	Pathum Thani
Industrial	50%	28%
Commercial	26%	19%
Domestic	24%	53%

A third contract dates to 1982. This is a 30 year water provision contract to the Bang-Pa Industrial Estate in Phra Nakonh Si Ayuutthaya province. 7.7 million m^3 of water was supplied in 2014, 33.9 million m^3 since its inception.

Myanmar / Burma

Contracts

Year	Location	Contract & length	People served and service
2014	Mawlamyine	BOO	200,000 water

TTW is developing a THB 320 billion water supply contract for the city of Mawlamyine. The facility will have an initial capacity of 30,000m^3 per day, expandable to 40,000m^3 per day. Mawlamyine is the fourth largest city in Burma with a population of 325,000 in 2010. TTW will hold 70% of the project equity.

Sources:

Thai Tap, Annual Reports, 2008-2013

TTW, Annual Report, 2014

Thames Water, investor presentations, 1995-2000

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Thailand

Eastern Water Resources Development & Management PLC

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Eastern Water	Only	Only	Sewerage	
Thailand	925,000	0	0	925,000
Global total	925,000	0	0	925,000
% home markets	100%	0%	0%	100%

The Eastern Water Resources Development and Management Public Company Limited (EASTW) was set up in 1992 as the sole supplier of water to the eastern seaboard of Thailand. The company was wholly owned by the Provincial Waterworks Authority of Thailand (PWA). In 1997, after an increase in its capital, it was partly floated on the Stock Exchange of Thailand. EASTW is developing water supply services to the provinces of Chonburi, Sakaew, Rayong, Chachoengsao, Chanthaburi and Prachinburi, all located in the most industrialised area of Thailand. Currently the water infrastructure in these provinces is unable to meet the demands of industrialisation. 40% of the company's shares are held by the PWA, 19% by Electricity Generating Plc and 5% by the Industrial Estate Authority of Thailand.

Diversification to date has been led by the Universal Utilities Company Limited (UUC), which is developing BOT and O&M contracts in other districts of Thailand. UUC has gained ten contracts to date. These involve managing the water treatment works and distribution system, reducing water losses and increasing water production capacity over the concession's life.

Eastern Water (raw water)

Water resources have been developed in three stages in recent years. In 2005 the production capacity rose from 171.7m^3 per annum to 191.3m^3 per annum in (Rayong River) and to 243.1m^3 per annum in 2007 (Bangpakong) and to 339.1m^3 per annum in 2008 with the opening of the Prasae and Klongyai reservoirs. Further projects are anticipated in 2013 to meet increased demand by then. Water distribution capacity has risen in three phases: from 328million m^3 per annum to 343million m^3 per annum in 2004; to 423million m^3 per annum in 2005; and to 473million m^3 per annum in 2007. After a bulk water pipeline project in 2012 (105million m^3 pa) and smaller projects, capacity was 619 m^3 per annum in 2014. Further capacity increased will come from two current projects: Tamba reservoir (58% complete as of 31st January 2015), Prasae-Nongplali pipeline (46% complete as of 31st January 2015) and both projects are expected to enter service during 2016.

The company has been expanding its activities from its base in Rayong (62% of 2014 revenues), with 9% of revenues in Piuak-Borwin, 5% in Chachoengaso and 25% in Chonburi. .

Universal Utilities (tap water)

Chachoengsao Water Supply Company Limited (CWS, 99% held by EASTW) supplies 51,600m^3 of drinking water per day to 18,000 households in the Chachoengsao Waterworks Office in Chacheongsao under a 25 year agreement running from 2002.

The Bangpakong Water Supply Company Limited (BWS, 99% held by EASTW) supplies 43,200m^3 of drinking water per day to the Bangpakong Waterworks Office in Chacheongsao under a 25 year concession from 2003.

The Nakornsawan Water Supply Company Limited (NWS, 84% held by EASTW) supplies 9,600m^3 of drinking water per day to the Nakorn Sawan Ork Waterworks Office in Nokornsawan under a 25 year agreement running from 2003.

The 30 year O&M contract for Sattahip Waterworks was awarded to UUC by the PWA in 2000. 11,000 households are covered. It has a 31,200m^3 per day capacity and under the contract, UUC expanded its capacity to 38,400m^3 per day and the water distribution network and has installed a THB14.5million Supervisory Control and Data Acquisition (SCADA) and Geographic Information System (GIS). It was further expanded to 56,400m^3 per day in 2014 to meet increased demand.

UUC has a 6 year O&M contract with Egcom Tara Co., Ltd. in 2004 to operate the Ratchaburi and Samut Songkhram Waterworks, serving the area of Muang District and Dumnern Saduak District in Ratchaburi and Muang District, Samut Songkhram for a community of over 25,000 households.

A 15 year BOT to UUC for the Koh Si Chang island municipality's waterworks was signed in August 2000. The THB55million reverse osmosis desalination plant produces 250m^3 of water per day for 1,600 households since 2006. This was repurchased by the municipality in 2013.

A 15 year contract for UUC for a reverse osmosis desalination plant with a capacity of 3,000m^3 of water per day started in 2005 and expanded in 2007 to Koh Samui PWA.

A reverse osmosis desalination plant with a capacity of 250m^3 of water per day for the island municipality of Koh Lan, serving 4,000 households.

A 25 year BOT agreed in 2006 for Rayong Waterworks, supplying 44,000 households in the Muang and Baankai districts.

The Jaopraya Surasakmontree Municipality and Bo Win Sub District Administrative Organization agreed a 25 year BOT in 2004 with UUC for distributing water to 9,000 households with an initial production capacity of 2,400m^3 per day, rising to 2,880m^3 per day.

A 24,000m^3 per day 20 year contract for water supply to the PWA's Chonburi waterworks was signed in June 2009. In 2014, the facility was expended to 40,800m^3 per day.

Two contracts have been signed private companies for the purchase of raw water. The first in 2007 is for 10million m^3 per annum for at least 10 years and the second, signed in 2009 covers the sale of raw water over 10 years rising from 6million m^3 per annum to 10million m^3 per annum.

In December 2011, Universal Utilities entered into a 25 year operations and management agreement with the sub-district Administrative Organisation of Nong Khaem for operating the waterworks system.

In June 2012, East Water set up Samed Utilities, a 55:45 joint venture with the Rayong Provincial Administrative Organization for drinking water services to Samed Island.

A 30 year water purchase agreement with Huaro district, Phitasonulok was signed in 2014 with a dedicated water treatment plant entering service at the end of 2014.

Wastewater management is at an earlier stage, with an O&M contract for the Hadyai Municipal Wastewater Treatment Plant.

Eastern Water, Profit & loss account, 2010-2014

Y/E 30/09 (THBmillion)	2010	2011	2012	2013	2014
Raw Water	2,117.5	2,261.0	2,612.2	2,694.3	2,768.4
Tap Water	716.2	765.9	841.6	876.4	988.7
Group turnover	3,107.5	3,310.0	3,726.0	3,816.1	4,035.8
Operating profits	1,320.7	1,511.2	1,694.7	1,778.6	1,794.9
Net income	912.1	1,008.2	1,240.2	1,312.9	1,344.5
Earnings per share (THB)	0.55	0.61	0.75	0.79	0.80

Million m^3 per annum	2010	2011	2012	2013	2014
Raw water sales	233	248	263	257	257
Tap water sales	59	63	67	68	76

In 2014, the Provincial Water Authority accounted for 22.1% of water sold, along with 30.7% going to the Industrial Estate Authority of Thailand (Government), the Hemaraj Industrial Estate 18.9%, private industrial customers 6.3%, household consumers 9.2% and private sector industrial estates 12.8%.

In 2000, Electricity Generating Pcl (Egco) sold a 15% stake in Egcom Tara to East Water for USD2.1million. Egco is the leading Thai private sector power generation company. In July 1999, Egco acquired 70% of Egcom Tara from Require Construction Co for THB398million (USD11million). Egcom Tara has a 30 year THB690million BOT contract for water supply in Ratchaburi and Samut Songham provinces. EASTW has set up a partnership with VE and Aquathai Co of Thailand to bid for a THB800million water supply BOT for the central area of Lampang province. This consortium was the only group to pass PWA screening for the contract. EASTW is currently negotiating with Egcom to acquire a majority stake in the venture. Egcom Tara also has a 10 year contract to supply tap water in Sattahip for the Provincial Waterworks Authority, a business that could generate long-term income to the company. EASTW is seeking to increase its stake in Egcom Tara to 50%.

Sources:

Eastern Water, Annual Reports, 2002-2014

Eastern Water, company web site

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EUROPE MENA

Austria

Energie AG

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Energie	Only	Only	Sewerage	
Austria	170,000	0	0	170,000
Czech Republic	116,000	0	694,000	810,000
Germany	15,000	0	0	15,000
Slovenia	51,000	0	0	51,000
Total - home markets	170,000	0	0	170,000
Total - international	182,000	0	694,000	876,000
Global total	352,000	0	694,000	1,046,000
% home markets	48%	0%	0%	16%

Energie Oberösterreich AG is the regional power utility serving Upper Austria. After a private placement in 2008, it is 51% held by the regional government, with 49% held by a number of financial and corporate investors in Austria. In December 2003, Energie's Energie AG Bohemia acquired AWG's remaining water interests in the Czech Republic for EUR115million. Energie is concentrating on developing its water activities in Austria and the Czech Republic, along with one contract in Germany.

All of Energie's water and wastewater interests in Austria were merged into Energie AG Wasser in 2006. At the end of 2008 Energie served 716,000 people with drinking water and provided wastewater services for 376,137 people in Austria and the Czech Republic.

Energie, Profit & loss account, 2010-2014

Y/E 30/09 (EURmillion)	2010	2011	2012	2013	2014
Revenues	1,978.8	2,219.9	2,123.8	1,816.0	1,826.8
Operating profits	128.9	125.6	115.2	55.9	105.6
Net profits	64.6	87.1	81.6	20.1	68.8
Water – people served	955,000	1,047,000	1,048,000	1,049,000	1,046,000
Wastewater – people served	663,000	695,000	696,000	693,000	694,000
Water – potable (million m³)	51.7	53.6	53.3	52.2	51.4
Water – waste (million m³)	43.0	44.4	44.0	43.7	43.8
Water – sales	118.3	133.1	130.7	130.1	124.5
Water – operating profit	5.1	7.3	8.5	9.5	9.3

In Austria, Energie AG Wasser holds two companies: OOE Landeswasserversorgungsunternehmen AG (LWU, 98% share) and WDL Wasserdienstleistung GmbH (WDL, 35% share). LWU and WDL supply water to 170,000 people in 47 towns. From May 2007, a water transfer project to Burghausen in Bavaria (Germany) is supplying 15,000 people with up to 1.5million m³ of drinking water per year.

Energie, populations served

Country	Water	Sewerage	Total
Austria	170,000	0	**150,000**
Germany	15,000	0	**15,000**
Czech Republic	814,000	698,000	**793,000**
Slovenia	51,000	0	**51,000**
Grand Total	**1,050,000**	**698,000**	**1,050,000**

Slovenia

Contracts

Year	Location	Contract & length	People served and service
2009	Varinger	Concession	80,000, water

Energie acquired 76% of Varinger VK in 2009.

Czech Republic

Contracts

Year	Location	Contract & length	People served and service
2010	Rychnov & Kneznou	Concession	53,000, water & sewerage

66% of Aqua Servis was acquired in 2010. Revenues in 2009 were EUR 6.3 million via 31 contracts.

2000	Beroun	Asset ownership	80,000, water & sewerage

AWG acquired 58.3% of Severomoravske Berounske Vodovy (VaK Beroun) in 2000 and Energie currently holds 59.2% of the entity. SBV owns 30% of the asset owning entity. Beroun is adjacent to Prague. The company had revenues of EUR6.0million in 2006, providing 3.1million m^3 of drinking water and treating 4.2million m^3 of wastewater. Water is provided to 64,000 people and sewerage for 44,000.

2005	Kolln	Concession	51,000, water & sewerage

100% of VODOS Kolln was acquired in 2005 and the company was integrated into Energie during 2006. Water is provided to 51,000 people and sewerage for 34,000, with revenues of EUR5.1million in 2006. In 2014, the concession was renewed for a further 10 years.

2005	Chrudim	Concession	80,000, water & sewerage

95% of VS Chrudim was acquired in 2005 and the company was integrated into Energie during 2006. Water is provided to 80,000 people and sewerage for 45,000, with revenues of EUR4.7million in 2006.

1995	South Bohemia	Concession	330,000 water and sewerage

Vodovy a Kanalizace Jizni Cechy (VAKJC) is based in Ceske Budejovice and serves 340 municipalities, 306,000 people with water and 232,000 with sewerage through 287 contracts. VAKJC was privatised in 1994 and AWG of the UK built up a 95.2% stake over the next five years and Energie currently holds 98.2% of the entity. VAKJC had revenues of EUR38.1million in 2006, providing 36million m^3 of water. A further 120,000 are served through bulk water supplies.

Acquisition of 1.JVS from Veolia Environnement

1999	Ceske Budejovice	10+10-year concession	200,000 water & sewerage
1999	3 towns	10+10-year concession	20,000 water & sewerage

The Ceske contract is operated by 1.JVS, a joint venture originally between VE and SAUR, which VE subsequently took full control of. The original concession was granted a 10-year extension in 2000 to 2018. Revenues in 2008 were EUR31million. The Vodosopol Klatovy concession is incorporated within 1.JVS and was acquired in December 1999, along with the privatisation award for the towns of Susice (12,000), Stary Plznec (6,000) and Stod (6,000). In August 2008, VE sold its stake in the company to Energie.

In 2010, 1.JVS and VAKJC were merged into a 100% held company, CEVAK.

Sources:

Energie, company presentation, 2002

Energie, Annual Reports, 2004-2014

SAUR, company press releases

Veolia Environnement, company press releases

AWG, investor presentations

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Leo Windtner (CEO, Chairman, Board of Management)

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Austria

EVN AG

Population served by service and country 2014 & 2015 data EVN	Water Only	Sewerage Only	Water & Sewerage	Total
Austria	502,500	9,000	0	511,500
Hungary	0	0	10,000	10,000
Germany	0	84,000	21,000	105,000
Slovenia	0	24,500	0	24,500
Croatia	0	760,000	0	760,000
Montenegro	0	115,000	15,000	130,000
Cyprus	60,000	270,000	100,000	430,000
Turkey	0	2,000,000	0	2,000,000
Total - home markets	502,500	9,000	0	511,500
Total - international	60,000	3,253,500	146,000	3,459,500
Global total	562,500	3,262,500	146,000	3,971,000
% home markets	89%	0%	0%	13%

Energie-Versorgung Niederösterreich (EVN) is the regional power utility serving the province of Lower Austria. 51% of its equity is owned by the state government. In January 2001, EVN acquired Nösiwag from the state government for EUR87million. The company has 16 supply areas and 75 reservoirs, with a storage volume of 197,000m³, as well as a 1,450km supply network. With the acquisition of WTE Wassertechnik (WTE) in 2003, ENV now provides water and wastewater services to 1.2million people in six countries. EVN Wasser's 2003/04 revenues were EUR19.4million, against EUR98.9million for WTE. The fall in EVN Wasser's revenues was due to a wetter summer than in 2003.

EVN, water sales, 2010-2014

Y/E 30/09 (million m^3)	**2010**	**2011**	**2012**	**2013**	**2014**
EVN Water sales	26.1	25.3	28.7	26.1	27.4

By June 2011 EVN Wasser provided water services to 658 municipalities, or some 517,000 inhabitants, or around one-third of the Lower Austrian population. 131 industrial customers are also supplied. Nösiwag is the second largest Austrian water supplier behind the Vienna waterworks. EVN aims to expand EVN Wasser across Lower Austria (water supply), along with a planned entry into the end customer market. It is also anticipated that the sewerage and wastewater treatment markets will be addressed. In the longer term, other markets in Austria and internationally will be sought. In June 2002, EVN acquired 50% of Wiental-Sammelkanal (WISAK), which operates WWTWs in Wiental, Ludweis-Aigen, Großmugl and Niederhollabrunn in lower Austria.

From October 2005, EVN has provided the operation of water services to 11,000 people in Gerasdorf, along with 1,760 people in Großmugl in 2006. In 2014, the management of the Lower Austrian community of Göllersdorf (3,500 people) was awarded to EVN, which raised the number of end customers who are directly supplied by EVN with drinking water to 87,000. EVN has one contract outside Austria; DTV Rt. (51% held with Resonáor Kft of Hungary), providing water and wastewater services for 3,100 households (c10, 000 people) in six municipalities in the Dunavarsány region of Hungary. Since the original contract was signed in 2001, two more municipalities have joined and negotiations are underway with a further six.

EVN, Profit & loss account, 2010-2014

Y/E 30/09 (EURmillion)	**2010**	**2011**	**2012**	**2013**	**2014**
Revenues	2,752.1	2,729.2	2,846.5	2,105.9	1,974.8
Net profits	207.0	192.3	194.9	109.3	-299.0
Earnings per share (EUR)	1.27	1.08	1.09	0.61	-1.68

Acquisition of WTE

In July 2003, EVN acquired WTE Wassertechnik (WTE) from Berlinwasser. WTE has built wastewater treatment plants in Germany, Austria and Denmark along with Poland, Bosnia, Croatia, Lithuania, Russia, Slovenia and the Ukraine. By 2014, 107 water and sewage treatment plants had been constructed, with 12 under construction, serving 18.2 million people for wastewater and 1.2 million for water. 16 are currently managed by WTE with a total PE of 246,650 in Germany and 2,770,600 internationally. The 20 year Alterberg WWTW contract in Germany expired in 2013.

WTE had 2013-14 revenues of EUR23.9 million, including EUR8.9 million (EUR6.3 million in 2012-13) from operating contracts, with a bet profit of EUR0.05 million. WTE seeks to operate a BOOT model for construction contracts, handing over the facilities to a local partner after its construction. The Altenburg project was handed over on its completion in 2013, along with two WWTW contracts in Russia; Moscow's South Butowo and Zelenograd contracts were completed at their respective expiry dates of 2011 and 2013.

Austria

Contracts

Year	Location	Contract & length	People served & service
2004	Zistersdorf	3+25-year BOT	9,000, wastewater

During 2004, WTE Austria took over the operation of a wastewater treatment plant and sewerage system in Zistersdorf, Lower Austria. The plant was refurbished at a cost of EUR12million and is designed to serve around 9,000 inhabitants. This work will be completed by the beginning of 2007.

Germany

Contracts

Year	Location	Contract & length	People served & service
2000	Hecklingen	30-year BOOT	24,000, sewage treatment

A 48,000 PE municipal wastewater treatment facility and 250km of allied sewerage systems constructed over six years for EUR93million.

2002	Windeck	25-year BOOT	21,000, water & sewerage

Windeck is in North Rhine Westphalia. The contract involves managing and operating the municipality's water and sewerage services, including the construction of 100km of sewerage systems and 21km of water mains a new WWTW. The operational contract started in January 2003 and the construction phase was completed in 2005 with EUR37million spent on capital projects.

1993	Altenburg	10+10-year BOOT	60,000, sewerage

The city's WWTW was constructed in two phases between 1993 and 1995, with a BOOT contract running to 2003. This contract was renewed for another 10 years in 2003.

2003	Langnese-Iglo	14+7-year O&M	Industrial wastewater

Langnese-Iglo GmbH in Heppenheim operates Europe's largest ice cream facility. The WWTW handles 1,600m^3 of effluent per day, reducing its COD loading by 91%.

Croatia

Contracts

Year	Location	Contract & length	People served and service
2005	Vodice	23-year DFBOT	10,000 sewage treatment

Vodice is on Croatia's Adriatic coast. WTE is the municipality's private partner for a 51km sewerage system and a wastewater treatment plant for 20,000 PE.

2000	Zagreb	28-year BOT	0.75million sewage treatment

This is the largest sewage treatment concession award in central and Eastern Europe to date, involving EUR265million in capital spending. The project scope includes design, construction and operation of the wastewater

treatment plant and the administration facilities, construction of the main collecting pipeline (9.8km) and coverage of main drainage canal (5.5km). The concession company, Zagrebacke otpadne vode d.o.o (ZOV), is formed by RWE Aqua (48.5%), WTE Wassertechnik GmbH (48.5%) and the City of Zagreb (3%). Construction began in July 2002 and was completed between April 2004 (mechanical treatment) and October 2006 (biological treatment) with a final PE of 1.5million, with the capacity to serve 1.2million people. During 2007, an energy recovery system was developed.

Slovenia

Contracts

Year	Location	Contract & length	People served & service
2011	Šentjernej	35-year BOT	3,500 sewage treatment

The EUR2.5 million facility entered service in 2013. The town's sewerage system will be upgraded and extended in 2014-16.

2006	Bled	25-year BOT	16,000 sewage treatment

The WTE developed plant entered operation in October 2006 and WTE has been awarded a 25-year operations contract.

2006	Laško	25-year BOT	5,000 sewage treatment

This plant has a pre-treatment facility for brewery wastewater.

1998	Kranjska Gora	15-year concession	3,500 sewage treatment

This is a tourist area, which accommodated 258,000 visitors in 1999. The concession covers the complete sewerage system, including a new WWTW. In 2002, BOT contracts for sewerage were gained for the municipalities of Komenda and Bled.

Montenegro

Contracts

Year	Location	Contract & length	People served & service
2009	Budva	4+30-year DBFO	130,000 wastewater

This EUR 65 million facility has a 135,000 PE and entered service in October 2014. It will be expanded to a 215,000 PE.

2008	Budva	2+10-year DBFO	15,000 water desalination

The desalination plant built by WTE desalinizacija morske vode d.o.o. entered service in 2008. The facility is designed to serve a peak population of 45,000 during the tourist season.

Cyprus

Contracts

Year	Location	Contract & length	People served & service
2010	Nicosia	2+10 year DBO	270,000, sewage treatment

The contract is for a facility serving North and South Nicosia cost EUR 25 million to construct and generate revenues of EUR 20 million and entered into service in 2014. A 30,000m³ per day membrane bioreactor is being used so that the treated effluent can be used for irrigation.

2009	Limassol	2+20-year DBFO	160,000 water desalination

This is for a 40,000m³ per day desalination plant serving Limassol with an extension option to 60,000m³ per day. Water will be provided for less than EUR0.80 per m³.

2008	Limassol	2+20-year DBFO	100,000 sewage treatment

A WWTW serving the city was developed and operated by WTE.

Turkey

Contracts

Year	Location	Contract & length	People served & service
2007	Istanbul	2+7-year DBO	2.0million sewage treatment

The Istanbul Metropolitan City Water and Sewerage Directorate awarded the EUR108million wastewater treatment facility contract to WTE in April 2007, which was completed at the end of 2009.

Sources:

EVN, company announcements

EVN, Annual Reports, 2000-2014

WTE, company web site

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Estonia

Tallinna Vesi AS

Population served by service and country 2014 data Tallinna Vesi	Water Only	Sewerage Only	Water & Sewerage	Total
Estonia	0	0	430,000	430,000
Global total	0	0	430,000	430,000
% home markets	0%	0%	100%	100%

United Utilities led a consortium that was awarded the contract for managing Tallinn's water and wastewater networks in 2000, in a contract at the time worth USD700million. UU and International Water bid EEK1, 338million (USD75.6million) for a 50.4% stake in AS Tallinna Vesi. The city of Tallinn also holds a single Golden Share. The 2005 IPO of Tallinna Vesi saw UU's stake fall from 38% to 26.5% which has subsequently been increased to 35.3%. UU continues to play an active role in supporting the company. The city's public water supply was first recorded in 1337 and an extant wheel well serving the city dates from 1375. In contrast, the first water treatment plant at Ülemiste was built in 1927, which along with a second plant built at the site in 1970 provides 90% of the city's water. After a rate rise of 6.5% above inflation in January 2008, there are 2% above RPI increases for 2009 and 2010. In 2010, it was announced that rates would be frozen. As of 2015, the company is involved in legal and arbitration processes over this.

Tallinna Vesi AS, profit & loss account, 2010-2014

FY 31/12 (EUR million)	2010	2011	2012	2013	2014
Water – Private	-	-	13.1	13.0	13.3
Wastewater – Private	-	-	10.7	10.6	10.9
Water – Commercial	-	-	10.2	10.6	10.7
Wastewater – Commercial	-	-	8.5	8.5	8.4
Water – Outside	-	-	1.0	1.1	1.2
Wastewater – Outside	-	-	3.5	3.2	3.4
Total revenues	49.7	51.2	52.9	53.1	53.2
Operating profit	27.5	28.9	28.8	24.8	24.8
Pre-tax profit	24.9	25.8	26.8	24.5	24.5
Net Income	16.4	21.5	22.6	19.9	17.9

Tallinna Vesi, operating data, 2010-2014

FY 31/12	2010	2011	2012	2013	2014
Water use (L/cap/day)	95	94	94	93	95
Water quality compliance	99.6%	99.7%	99.6%	99.7%	99.8%
Leakage	21.4%	17.7%	15.9%	17.0%	16.1%
Wastewater treated (million m^3)	49.5	43.8	56.9	-	43.1

Tallinna Vesi has 22,000 customer connections serving 400,000 people including apartment blocks where all people are served through a common metered connection. 68% of customers are domestic customers, 20% apartment associations and 12% are commercial customers. Expansion has taken place through gaining new service areas near Tallinn. In August 2008, the company signed a 30-year O&M contract with the city of Maardu (21,000). Services were also extended to Harku and Saue (9,000 in total). Tallinna Vesi serves 21,000 people for water and 35,000 for sewerage through these contracts, with the potential of reaching 70,000 by 2015.

Sources:

Tallinna Vesi, Annual Reports, 2008-2014

Tallinna Vesi, company web site

United Utilities, analyst presentations

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E.ON

E.ON was founded in June 2000 through the merger of VEBA and VIAG, two German regional power utilities. It is the world's largest privately held power utility. EO.N's water activities are grouped under E.ON Aqua, part of E.ON Energie AG. E.ON's 80.5% holding in Gelsenwasser (See separate entry) was sold to the municipalities of Dortmund and Bochum in August 2003 for EUR835million, at a profit of EUR418million, on the order of the German Cartel Commission as a result of its acquisition of Rhurgas due to Gelsenwasser's natural gas activities.

E.ON, profit and loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Turnover	92,863	112,954	132,093	119,688	111,556
Operating profit	11,199	-757	4,598	4,983	-676
Net profit	5,853	-2,219	2,189	2,091	-3,160
Earnings per share (EUR)	3.07	-1.16	1.15	1.10	-1.64
Dividends per share (EUR)	1.50	1.00	1.10	0.60	0.50

E.ON Aqua has a broad portfolio of water investments, generally at or below the 50.0% equity holding level and therefore not consolidated. 28 water and wastewater entities were held by the company at the end of 2003, along with a significant number of municipal Stadwerkes. This is a tentative list of water and wastewater companies held in 2010:

Entity	Location	Stake
Abwasserbeseitigung Nortorf-Land GmbH	Nortorf	49.0
Abwasserentsorgung Albersdorf GmbH	Albersdorf	49.0
Abwasserentsorgung Amt Achterwehr GmbH	Achterwehr	49.0
Abwasserentsorgung Bargteheide GmbH	Bargteheide	29.0
Abwasserentsorgung Berkenthin GmbH	Berkenthin	44.0
Abwasserentsorgung Bleckede GmbH	Bleckede	49.0
Abwasserentsorgung Brunsbüttel GmbH (ABG)	Brunsbüttel	49.0
Abwasserentsorgung Burg GmbH	Burg	44.0
Abwasserentsorgung Friedrichskoog GmbH	Friedrichskoog	49.0
Abwasserentsorgung Kappeln GmbH	Kappeln	49.0
Abwasserentsorgung Kropp GmbH	Kropp	49.0
Abwasserentsorgung Marne-Land GmbH	Diekhusen-Fahrstedt	49.0
Abwasserentsorgung Schladen GmbH	Schladen	49.0
Abwasserentsorgung Schöppenstedt GmbH	Schöppenstedt	49.0
Abwasserentsorgung St. Michaelisdonn, Averlak, Dingen, GmbH	St. Michaelisdonn	25.1
Abwasserentsorgung Tellingstedt GmbH	Tellingstedt	35.0
Abwasserentsorgung Uetersen GmbH	Uetersen	49.0
Abwassergesellschaft Bardowick mbH & Co.KG	Bardowick	49.0
Abwassergesellschaft Bardowick Verwaltungs-GmbH	Bardowick	49.0
Abwassergesellschaft Ilmenau mbH	Melbeck	49.0
Abwasserwirtschaft Fichtelberg GmbH	Fichtelberg	25.0
Abwasserwirtschaft Kunstadt GmbH	Burgkunstadt	30.0
Energie und Wasser Potsdam GmbH	Potsdam	35.0
Energie und Wasser Wahlstedt/Bad Segeberg GmbH & Co. KG	Bad Segeberg	50.1
Harzwasserwerke GmbH	Hildesheim	20.8
Holsteiner Wasser GmbH	Neumünster	50.0
Oebisfelder Wasser und Abwasser GmbH	Oebisfelde	49.0
Städtische Werke Magdeburg GmbH	Magdeburg	26.7
Wasser GmbH Salzhemmendorf	Salzhemmendorf	49.0
Wasser- und Abwassergesellschaft Vienenburg mbH	Vienenburg	49.0
Wasserkraftnutzung im Landkreis Gifhorn GmbH	Müden/Aller	50.0
Wasserversorgung Sarstedt GmbH	Sarstedt	49.0
Wasserwerk Gifhorn Beteiligungs-GmbH	Gifhorn	49.8
Wasserwerk Gifhorn GmbH & Co KG	Gifhorn	49.8
Wasserwerks-Betriebsgemeinschaft Klein Heidorn GbR	Neustadt a. Rbge.	50.0
Wasserwirtschafts- und Betriebsgesellschaft Grafenwöhr GmbH	Grafenwöhr	49.0

Entity	Location	Stake
WAZV-Abwasserentsorgung GmbH	Nentershausen	49.0

E.ON Aqua has had a very low key existence since the Gelsenwasser divestiture. Turnover is likely to be in the region of EUR50-100million.

Sources:

E.ON, Annual Reports, 2002-2014

Bloomberg

Rhenhag Reinische Energie, Annual Reports, 1999-2002

Thuega, Annual Reports, 1999-2002

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MVV AG

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
MVV	Only	Only	Sewerage	
Germany	485,000	0	445,000	930,000
Global total	485,000	0	445,000	930,000
% home markets	100%	0%	100%	100%

Mannheimer Versorgungs und Verkehrsgesellschaft mbH (MVV) was corporatised in 1974 and partially floated in 1998. The free float was increased from 12% to 25% through increasing the company's issued equity in 2005. 50% of MVV is now held by the municipality, 16% by Rhine Energie, 22.5% by EnBW Energie, 6% by GDF Suez and 5% as a free float. As well as water, MVV provides gas, energy, waste-to-energy, district heating and mass transit services. MVV provides water services to 375,000 people within the city of Mannheim and adjacent municipalities. 90% of revenues are accounted for by direct contracts with 30 municipalities, with the remaining 10% through sales to other water companies. Private and business customers accounted for 82% of 2007-08 revenues.

MVV, profit and loss account, 2010-2014

Y/E 31/09 (EURmillion)	2010	2011	2012	2013	2014
Water sales (million m^3)	54.2	53.7	52.9	47.4	47.1
Water turnover	100	111	107	97	100
Group turnover	3,359	3,600	3,895	4,044	3,793
Group operating profit	239	242	223	208	173
Group net income	95	125	98	101	92
Earnings per share (EUR)	1.44	1.63	1.21	1.29	1.29

Since 2000, 48.8% stakes in Energieversorgung Offenbach AG (Offenbach in the state of Hesse) and Stadtwerke Solingen GmbH (Solingen in North Rhine-Westphalia) have been acquired. In June 2003 Energieversorgung Offenbach gained a 25-year O&M contract for water and wastewater operations for the parish of Mainhausen in the border region between the states of Hesse and Bavaria. Stadtwerke Solingen was re-acquired by the City of Solingen in 2012.

MVV, breakdown of 2007-08 water revenues (EURmillion)

Contracts	Water revenues	%	Population served
Energie (Mannheim)	53	52%	375,000
Investments	49	48%	615,000

In April 2004, MVV Energie acquired 51% of Stadwerke Kiel from TXU Germany Ltd., a subsidiary the American electric power concern TXU. The company provides water and sewerage services to 320,000 people in the city, 26.8million m^3 pa for water (1999) and 23million m^3 pa for wastewater. Kiel is the capital of **Schleswig-Holstein.** Stadwerke Kiel generated revenues of EUR292million in 2002 for a range of utility services and net earnings of EUR23.5million. Revenues rose from EUR336million in 2004/05 to EUR370million in 2005-06 with operating profits of EUR35million.

The Stadwerke Ingolstadt Beteiligungen (48.4% holding) power and gas services contract, which covers 96,000 people in Bavaria, was extended to cover water provision during 2004. Stadwerke Buchen (25.1% holding) provides water services to 15,900 people in Buchen and there are plans to extend water services to surrounding municipalities. Including these activities, MVV now provides water and wastewater services to approximately 930,000 people in Germany.

Sources:

MVV, Annual Reports, 2006-2014

MVV, corporate web site

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Greece

Athens Water Supply and Sewerage Company SA

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
EYDAP	Only	Only	Sewerage	
Greece	800,000	0	3,500,000	4,300,000
Global total	800,000	0	3,500,000	4,300,000
% home markets	100%	0%	100%	100%

The Athens Water Supply and Sewerage Company SA (EYDAP) dates back to the Greek water Company (EEY) formed in 1926. EYDAP was partly floated in January 2000. 28.2% of the company's equity was sold at that time, with 1.4% being acquired by EYDAP's staff and the Greek Government retaining 61.0% of the company's shares and the Agricultural Bank of Greece a further 10.7%. In 2011 it was announced that a further stake sale would take place as part of the Government's austerity programme. EYDAP provides water to 4.3 million people and sewerage services to 3.5 million people in Athens and its suburbs via 2.1 million metered connections.

EYDAP, profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Revenues – water	243.7	236.5	237.4	225.8	220.0
Revenues – sewerage	115.1	112.1	110.1	103.0	95.7
Turnover	379.0	358.6	353.3	336.2	326.4
Operating profits	34.7	46.6	80.0	54.1	49.4
Net profit	11.3	26.1	51.6	78.2	41.9
Earnings per share (EUR)	0.11	0.24	0.48	0.73	0.39

EYDAP has a 20-year concession with the Government for the provision of water and sewerage services. The state retains responsibility for bulk water provision to the company and for its storm sewerage services.

EYDAP, water provided, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water billed (million m^3)	331.2	327.8	325.5	312.6	315.0
Water non-billed (million m^3)	97.7	92.3	97.0	100.1	97.6
Unaccounted for water	22.9%	22.1%	23.1%	24.4%	23.6%

Y/E 31/12	2012	2014
Water consumption		
Domestic	62.2%	59.7%
Commercial & Industrial	21.3%	20.4%
Municipal	6.1%	6.3%
Bulk supply	5.9%	6.7%
Others	4.5%	6.9%

In the final quarter of 2003, EYDAP acquired water systems serving two neighbouring municipalities. In each case EYDAP is to develop a sewerage network for the municipality. The municipal network of Nea Peramos was acquired in 2007 and that serving Agios Panteleimonas will be acquired in 2009. Networks at Keratea, Kryoneri, Agios Stefanos, Mandra, Halandri and Maroussi are under consideration. In July 2002, the company entered into a partnership with Veolia Water to discuss joint approaches for gaining water and wastewater contracts in the Mediterranean and Balkan regions. In April 2005, this venture was named Attika. To date, no contract awards have been noted.

Contracts

Year	Location	Contract & length	People served & service
2003	Aspropyrgos	EUR2.75million	31,000, water
2003	Elephsina	EUR1.80million	23,000, water

Sources:

EYDAP, Annual Reports, 1999-2014

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Evangelos Palaiologos (Deputy Chairman)

Greece

Thessaloniki Water & Sewerage

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
EYATH	Only	Only	Sewerage	
Greece	0	0	850,000	850,000
Global total	0	0	850,000	850,000
% home markets	0%	0%	100%	100%

The Thessaloniki Water Supply and Sewerage Co. (EYATH) serves 850,000 in the city of Thessaloniki, along with selling bulk water to surrounding municipalities. The company dates back to the Ottoman Water Company of Thessaloniki, which was formed in 1888. EYATH (ΕΥΑΘ) was formed in 1998 through the merger of the city's Water Supply Company (ΟΥΘ, established in 1939) and the Sewerage Company (ΟΑΘ, established in 1970). EYATH is situated in Central Macedonia, a part of Greece that has suffered from poor water levels. During the summer, average daily consumption is 280,000m^3, compared with an availability of 250,000m^3 and as a result, since 2002 a banded tariff structure has been introduced that allows for improved returns for the company, while rewarding households that use less water.

There were 510,000 customers in 2014. 250,000 m^3 of water supplied per day, 69% to households, and 7% to industry, 15% to local government and the public sector, 5% to commercial customers. 175,000 m^3 of sewage treated per day.

In July 2009, the Government announced that it is seeking to sell 23% of EYATH for EUR59million (based on the share price at the time) via an international tender and to retain a 51% stake in the company. Suez Environnement already holds 5% of the company. In 2011 it was announced that a further stake sale would take place as part of the Government's austerity programme. This has been reconsidered a number of times.

EYATH, profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water revenues	47.9	53.1	50.3	46.9	47.8
Sewerage revenues	23.2	38.0	23.6	25.4	25.9
Turnover	71.2	75.4	73.9	72.8	73.7
Operating profit	19.0	23.4	18.6	15.7	18.4
Net profit	12.4	20.6	17.7	13.1	13.4
Earnings per share (EUR)	0.342	0.567	0.488	0.360	0.370

26% of the company's shares were sold to investors in September 2001. The EUR17million raised from the listing was partly used to finance upgrading and modernisation of the water and sewerage network. EYATH remains under state control, with 60% of its capital spending funding coming from the EU's Cohesion Fund, 30% from the state and 10% being internally funded.

Sources:

EYATH, Annual Reports, 2001-2014
EYATH, analyst presentation, 2015

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Italy

A2A Spa

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
A2A Spa	Only	Only	Sewerage	
Italy	200,000	0	450,000	650,000
Global total	200,000	0	450,000	650,000
% home markets	100%	0%	100%	100%

A2A is a northern Italian energy utility. In 2008 it acquired ASM Brescia, with Milan holding 25% of the combined entity, Brescia holding 25%, Bergamo 2.0% and the remaining 48% being held by external investors. Azienda dei Servizi Municipalizzati (ASM) Brescia was founded in 1908 by the city's municipality, which sold 28% of its shares in July 2002. The remainder are held by the local commune and some related entities. Water supply services have been offered since 1933 and wastewater and sewerage since 1995. In 2001, ASM provided 51.3million m^3 of water to 513,000 people in 49 communes, while treating 36.3million m^3 of sewage effluent, the population equivalent of 434,000 people. In 2006, 86million m^3 of water was provided, 55million m^3 of sewerage collected and 54million m^3 of effluents treated. Much of the increase has been due to mergers in 2003 and 2004.

Since January 2011, A2A Ciclo Idrico manages all of the water activities inherited from ASM. Investments were EUR 23 million in 2010. Water is not seen as a strategic priority for the group at present. 90% of Apen SpA was acquired in 2009. Amongst other services, the entity's Varese Risorse provides water to 60,000 people in Varese.

In 2003, ASM acquired the water and wastewater activities of Valgas and ASVT, adding approximately 50,000 people to the number served at the time of its partial privatisation. In 2004, ASM merged with the Municipality of Bergamo's Bergamo Ambiente Servizi (BAS). The Bergamo activities were sold in 2011.

In 2010, water was supplied to 330,000 customers, with sewerage for 183,000 and wastewater treatment for 170,000. In Brescia and 73 other municipalities, there were 211,067 water customers in 2010, along with 167,270 for sewerage and 152,705 for sewage treatment. There were 63,634 customers for water provision in Varese and 33 other municipalities in the province.

A2A, profit and loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Customers served – water	327,452	277,014	278,336	285,530	280,092
Water distributed (million m^3)	70	69	69	63	60
Sewage treated (million m^3)	41	40	41	35	34
EBITDA - Water supply	17	13	9	13	20
Total turnover	6,041	6,130	6,480	5,604	4,984
Operating income	498	-423	260	62	-37
Net income	196	-919	271	75	-18
Earnings per share (EUR)	0.10	-0.14	0.08	0.02	-0.01

A2A also holds 21.9% of the new ACSM–AGAM entity (see company entry).

Sources:

A2A, Annual Reports, 2010-2014

A2A, Investor Guidebook, 2015

ASM Brescia, Annual Report, 2006

ASM Brescia, investor presentation, 2005

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Acsm-AGAM

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
ACSM-AGAM	Only	Only	Sewerage	
Italy	150,000	0	100,000	250,000
Global total	150,000	0	100,000	250,000
% home markets	100%	0%	100%	100%

ACSM Como (ACSM), the water and energy utility serving Como which has a population of 250,000 people, was partially privatised in November 1999. To date, the company has concentrated on developing its core activities, which had a flat turnover in 1999, but are offering an improved performance in the current year. A second share sale in November 2000 reduced the municipality's holding to 50.6% and subsequent sales in 2003 and 2006 reduced this to 40.5% with AEM holding 20.0% of ASCM and Edison a further 3.2%.

In December 2008, ACSM and Monza's AGAM (Ambiente Gas Acqua Monza) agreed to a merger. AGAM supplies water and wastewater services to 42 municipalities in the area (7 water only, 35 water & wastewater) providing 20million m^3 of water pa and treating 15million m^3 of wastewater pa. This went through in April 2009 and after the merger, A2A held 21.9% of the enlarged group (see company entry above), Monza 29.1%, Como 24.8% and external investors the remaining 24.2%. The water and sewerage activities are organised under ASCM-AGAM Reti Gas Acqua Srl.

In April 2003, ASCM entered into merger talks with Bergamo's municipally held BAS Bergamo Ambiente Servizi SpA. Bergamo is located near to Como and would add some EUR85million to ASCM's turnover. To date, these talks have not progressed.

ACSM-AGAM, profit and loss account, 2010-2014

YE 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water – investments	2.8	3.0	3.2	3.3	3.4
Water – volume distributed (million m^3)	25.3	25.3	25.6	24.9	23.6
Sewerage – volume collected (million m^3)	12.7	13.2	13.0	12.9	12.2
Water – customers	25,270	25,477	25,575	25,594	25,691
Sewerage – customers	9,038	9,153	9.155	9,195	9,207
Water – revenues	16.4	13.2	12.6	14.3	14.6
Sewerage – revenues	1.7	1.3	1.3	-	-
Water – operating profit	3.5	4.2	3.2	3.1	4.6
Group turnover	214.2	217.2	257.8	260.5	220.0
Operating profit	40.5	36.2	37.1	44.9	36.8
Net profit	19.6	5.7	7.8	7.4	5.5
Earnings Per Share (EUR)	0.11	0.6	0.8	0.10	0.07

ACSM has a total water treatment capacity of 16million m^3 pa. ACSM's ComoDepur is responsible for water treatment and sewage and sewage treatment is carried out by the Municipality of Como. ACSM is currently seeking to expand into these areas.

Sources:

ASCM-AGAM, company web site

ASCM-AGAM, Annual Reports, 2009-14

ASCM Como, Annual Reports, 2003-2008

ASCM Como, investor's roadshow presentation, 2000

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Italy

Gruppo Iren

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Gruppo IREN	Only	Only	Sewerage	
Italy	200,000	0	2,200,000	2,400,000
Global total	200,000	0	2,200,000	2,400,000
% home markets	100%	0%	100%	100%

In 2010, Iride and Enia merged to create Gruppo Iren SpA

Iren is 67.0% held by various municipalities and 33.0% held by institutional and private investors. In July 2009, Gruppo Iride was allowed to proceed with its planned merger with Enia Spa, an Italian energy utility which was completed in July 2010. Iride was formed in October 2006 in the wake of the merger between AEM Torino and Amga. Azienda Mediterranea Gas e Acqua (Amga) is the city of Genoa's gas and water utility. Amga was partly privatised in October 1996. Amga split off its local water division from the rest of its activities into Genova Acque, to ensure that it has the maximum flexibility to develop its activities outside Genoa once the municipality sees fit to sell off its majority holding. In 2003, Genova Acque was granted a five-year contract to manage the Genova ATO.

The merged entity has been named Iren Acqua Gas, covering the Reggio Emilia ATO and Parma ATO from Enia and the Genoa ATO from Iride, along with other contracts. The company directly managed 14,100 km of water distribution systems along with an 8,000 km sewerage network, serving 2.1 million people in 177 municipalities under these three contracts. After a bid in 2014, IREN's stake in Acque Potabili was increased from 31% to 44%.

Genova Acque and its neighbouring companies

Acquedotto Nicolay SpA (AN) and Acquedotto de Ferrari Galliera SpA (ADFG) have been responsible for water distribution to parts of the city of Genoa since 1853 and 1880 respectively, serving a total of 330,000 people. In 2000 ACEA (see company entry) bid for AFDG and AN. After gaining 67.0% of ADFG's shares, ADFG's management accepted the bid. Genova Acque held a further 27.62% of ADFG's equity. After gaining 53.15% of Acquedotto Nicolay's shares, the company's management accepted the bid. In 2000 Veolia acquired 20% of Genova Acque in return for its 28% and 34% stakes in Acquedotto de Ferrari Galliera and Acquedotto Nicolay respectively. ACEA sold its 67% stake in Acqua Italia, the holding company for its stakes in Acquedotto de Ferrari Galliera and Acquedotto Nicolay to Amga in July 2005 for EUR57million.

ADF and AN were reorganised as Mediterranea delle Acque. In August 2010, San Giacomo Srl, a subsidiary of Iren acquired 14.59% of Mediterranea delle Acque SpA in an open tender. Following this, San Giacomo Srl holds 96.8% of the company and the company was merged into San Giacomo.

ENI was involved in water through the acquisition of Italgas. Its principal subsidiaries are Acque Potabili, Acquedotto di Savona, Acquedotto Vesuviano, Eniacqua Campania, Metano Arcore and Napoletana Gas.

Out of the 67 municipalities in the Genoa ATO, Iren's subsidiaries control 58 for water, 66 for sewerage and all 67 for sewage treatment.

Iren SpA, profit and loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water distributed (million m^3)	188	181	179	149	147
Water – people served (000)	2,152	2,160	2,130	-	2,400
Water – revenues	434	432	438	426	464
Water – operating profit	38	36	40	49	76
Turnover	3,381	3,521	4,328	2,902	3,373
Operating profit	339	309	341	325	331
Net income	186	-111	153	69	89

Iren – principal contracts

Company	Population served	Location	Municipalities
Mediterranea dell Acqua	700,000	Genova	39
Idro-Tigullio	100,000	Genova	11
AM.TER	83,000	Genova	7
Mondo Acqua	560,000	Cueno	250
Azienda Servizi Ambientali	374,909	Tuscany	33
Iren Emila – Piacenza	260,000	Piacenza	48
Iren Emila – Parma	280,000	Parma	45
Iren Emila – Reggio Emilia	150,000	Reggio Emilia	18
Acque Potabili	240,000	Turin (mainly)	101

Acquisition of Acque Potabili

In 2010, Condotta di Acque Potabili (SAP) was 30.9% held by Metro Acque and 30.9% by Iren Acqua Gas. This joint stake was raised to 88% in 2014 after a bid for SAP's shares and the company was delisted. SAP was founded in 1852 for water provision to parts of the city of Turin. The company is involved purely in water distribution in parts of Alessandria, Aosta, Asti, Cueno, Mantova, Savona, Turin & Novara. In 2010, they had 240,379 customers, serving 101 communities for water and 8 for sewage, with 74.9 million m^3 of water delivered.

Acque Potabili has four operating subsidiaries: Acquedotto Monferrato (founded in 1930 and 100% held by SAP since 2002, operating in Turin), Acquedotto di Savona (founded in 1888 and 100% held by SAP since 1953, operating in Savona), Acque Potabili Crotone (100% held), Acque Potabili Siciliane (57%, operating in Palmero) and ABM Next (45% held, based in Bergamo).

Other activities in Italy

In 1999, Amga was part of the Suez led consortium that gained the 25-year water and sewerage concession for Arezzo and 36 surrounding communes. This was the first water concession awarded in Italy, reflecting the belated impact of the 1994 Galli Law. By 2004, Amga provided water and/or sewerage services for 915,000 people in the Genova ATO region.

In March 2000, Amga was awarded three potable water supply contracts in Sardinia for 62,000 people; Sulcis Iglesinete (11,000), Campidano (25,000) and Trexenta-Marmilia-Mandrolisai (26,000) The contract signed with Ente Acquedotti Siciliana SpA and AMAP involves 90 water treatment plants in Reggio Calabria, serving 300,000 people and 150 water treatment plants in the province of Cosenza, serving 500,000 people.

Amga acquired 35% of Atena SpA, the utility company serving Vercelli in January 2003. Atena serves a total of 100,000 people with water, sewerage, gas, power and waste management services and had a 2001 turnover of EUR52million. In January 2004 Amga acquired 27% of IdroCons Srl., a company working mostly in the Valle Scrivia area in analysis and monitoring of drinking water, water treatment and waste management. The main partners in the company are Azienda Consortile Intercomunale Bacino dello Scrivia (43%) and Idroterra (22%).

Iride Acqua's holdings and alliances in Italy (2010 data):

Contract	Entity (stake)	Inhabitants
ATO Genovese	IAG (100%)	880,000
Affiliated Cos – NW Italy		
ATO Alessandrino, Tortona	ASMT (45%)	418,231
ATO Astigiano-Monf	Asp (5%)	208,339
Sub Astigiano	Asp (5%)	71,276
ATO Vercellese	ATENA (40%)	45,132
ATO Cuneese	Mondoacque (39%)	556,330
ATO Savonese	Acq. di Savona	310,389
Sub Costiero-Levante	Acq. di Savona	128,271
ATO Imperiese	AMAT (48%)	205,238
Total		**1,424.478**
Affiliated Cos – Tuscany		
ATO Alto Valdarno	Nuove Acque (16%)	296,000
ATO Toscana Costa	ASA (39%)	326,000
Total		**622,000**
Total Inhabitants directly served		2,924,560
Alliance with Turin		

Contract	Entity (stake)	Inhabitants
ATO Torinese	SMAT	2,165,619
Total Inhabitants served with alliances		**5,090,179**

Sources:

Iren, Annual Reports, 2010-2014

Iride, Annual Report, 2006

AMGA, Annual reports, 2000-2005

Acque Potabili, Listing Document, 2005

Mediterranea dell Acqua, Annual report, 2005

Acquedotto Nicolay, news releases

Acquedotto de Ferrari Galliera, news releases

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Massimiliano Bianco (CEO)

Massimo Levrino (Finance Director)

Italy

Hera Spa

Population served by service and country 2014 data Gruppo Hera	Water Only	Sewerage Only	Water & Sewerage	Total
Italy	100,000	0	3,550,000	3,650,000
Global total	100,000	0	3,550,000	3,650,000
% home markets	100%	0%	100%	100%

Hera Spa operates in a number of municipalities in northern Italy; in Bologna, Ravenna-Lugo, Forli-Cesena, Rimini, Savignino, Imola-Faenza and Ferrara. The company was founded through the consolidation of 12 municipal entities in 2001. After a series of mergers, Hera now manages 7 ATO concessions in the provinces of Ravenna (8 municipalities), Ferrara (23 municipalities), Forlì-Cesena (26 municipalities), Rimini (26 municipalities), Modena, Bologna (46 municipalities) and Pesaro. 2.7million people in 171 municipalities are served by the company for water, sewerage, power, gas and waste management, rising to in excess of 3million in the summer. Hera aims to acquire local utilities in order to increase its size and improve operating efficiency over the next four years. Hera had its IPO in June 2003, with the commune of Bologna currently holding 20.3% of the company via Seabo Spa, along with Modena (15.0%), Romagna (21.0%), Ferrara (2.7%) and external investors holding the remaining 41.0%.

Hera SpA, profit and loss account, 2010-2014

EURmillion	2010	2011	2012	2013	2014
Water revenues	579.2	596.7	617.1	736.7	780.2
Water EBITDA	142.0	150.2	158.3	193.5	217.1
Group revenues	3,879	4,311	4,493	4,457	4,189
Operating profits	315	334	342	433	433
Net profits	117	105	119	165	165
Earnings per share (EUR)	0.10	0.09	0.10	0.12	0.11

The principal water concessions are secured until at least 2012. In 2004, a ten-year service provision contract extension to 2022 was granted, worth a total of EUR5billion in revenues.

Hera, water services, 2010-2014

	2010	2011	2012	2013	2014
Municipalities served – Water	168	-	-	-	237
Customers served – Water	1,173.0	1,184.2	1,188.7	1,441.9	1,444.6
Residential population (000)	-	-	-	-	3,651
Water sold (million m^3)	251	254	253	307	295
Sewerage (million m^3)	220	223	221	251	245
Wastewater treated (million m^3)	220	221	217	249	243

Hera believes that its combined losses of 25.5% (distribution losses and non-revenue water) is the lowest seen in Italy.

Acquisition of Agea

In August 2004, Hera acquired a further 51% of Agea having bought 49% of the company for EUR65million in 2003. Agea provides multi utility services in Ferrara province. Acosea owns the water assets through Acosea Reti and operates them through Acosea Spa. Acosea Impianti, a new company is to take over Acosea Reti and sell these assets to the Ferrara municipalities in 2005, while Acosea Spa will be integrated into Hera. Acosea generated water sales of EUR31million in 2004, selling 20.8million m^3 of water in 2003.

Acquisition of Aspes Multiservizi

In July 2006 Hera completed the acquisition of 49.8% of Aspes Multiservizi, the company responsible for water, energy and waste services in the Pesaro area of Italy. In 2005, water supplied to its 13 districts amounted to 16.6million m^3, with a consolidated turnover of EUR90million. 50.1% of Aspes Multiservizi is held by Pesaro and district municipalities. Aspes contributed EUR18.8million in revenues in 2006.

Acquisition of SAT

In October 2006, Hera acquired 46.5% of SAT Spa, with remaining 53.5% being held by the municipalities of Sassuolo, Formigine, Maranello, Fiorano and Serramazzoni. SAT operates in the waste management, gas distribution and integrated water supply service sectors, and in 2005 the company recorded a consolidated turnover of EUR62million.

Acquisition of Meta Modena

In June 2005, Hera and Meta Modena agreed to a merger, firstly by Hera acquiring 29% of Meta in November 2005 and subsequently through a full acquisition which was completed in January 2006.

Meta SpA serves the city and province of Modena in northern Italy and was originally owned by a consortium of 30 local municipalities. It was privatised in March 2003, through a new equity issue and a partial divestiture by 17 of the municipalities. 72% of its equity remains in municipal hands, with the commune of Modena holding 58% of the company. Meta serves 432,000 people with power, gas, water, heating and waste services. Water sold rose from 28.4million m^3 in 2002 to 29.8million m^3 in 2003 and 29.8million m^3 in 2004, serving 314,989 residents in 18 municipalities. Some 211,207 residents are also served by the sewerage system and sewage is treated for 327,074 residents. There are a total of 651,920 residents in the province of Modena, 48.3% served by Meta Modena for water, 32.45 for sewerage and 50.2% for sewage treatment. 55% of 2004 water revenues were for water distribution, 27% for wastewater treatment and 6% for sewerage.

Acquisition of Acegas-Aps

Acegas is the city of Trieste's municipal services company, providing electricity, and gas and water services. The Commune of Trieste reduced its holding from 99.99% to 54.92% after its IPO in February 2001. A merger with Pavoda's APS was completed in 2003.

In 2003, Acegas merged with APS the ATO Bacchiglione serving the province of Padova. The combined entity serves 0.5 million people in 144 municipalities and communes. In 2006, the enlarged company treated 94.5million m^3 of water and provided 60.4million m^3 of water to 226,000 customers, 470,184 people. Water services were taken on by APS's predecessor in 1891 and by 1929 in Acegas's case.

Acegas, 2010 data	Trieste	Padova	Total
Water – people supplied	230,920	301,201	532,121
Water – customers	109,551	142,706	252,257
Water – domestic customers	91,301	117,760	208,961
Water – other customers	18,250	25,046	43,296
Water supplied (million m^3)	50.5	44.1	94.7
Sewerage customers	99,665	120,983	220,648
Sewage treated (million m^3)	56.4	30.0	86.4

The total number of water customers was 252,400 in 2013. Overall domestic water volumes were 45.3 million m^3 in 2013, along with 28.5 million m^3 of sewerage and 31.5 million m^3 of sewage treated.

Sources:

Hera, Annual Reports, 2005-2014

Hera, company web site

Acegas, Annual Report, 2005

Meta, Annual Report, 2003

Hera, analyst presentations

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Stefano Venier (CEO)

Roberto Barilli (General Manager)

Kuwait

Utilities Development Company Holdings

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
UDC	Only	Only	Sewerage	
Kuwait	0	2,200,000	0	2,200,000
Global total	0	2,200,000	0	2,200,000
% home markets	0%	100%	0%	100%

The Utilities Development Company is 75% held by Mohamed Abdulmohsin Kharafi and Sons and 25% by Ionics (GE, USA). It is a privately held company set up to develop and operate the Sulaibiya wastewater treatment project. UDC was founded in 2002 in the wake of United Utilities (2001) leading a consortium to gain the original contract. With the project stage effectively completed, UU progressively reduced its involvement in this contract.

Utilities Development Co is responsible for the build-operate-transfer deal. The project is expected to be worth more than USD2billion over its 27.5-year operating life, based on a tariff of USD0.47 per m^3, with a treatment capacity for 425,000m^3 of effluent per day in its first phase, with a total design capacity for 600,000m^3 per day. The first phase will see 311,000m^3 per day of non-potable water recovered for agricultural and other applications such as aquifer recharge and industrial water. The facility is designed to treat two thirds of Kuwait's domestic effluent.

The project involved USD430million in Capex. The National Bank of Kuwait (NBK) arranged an USD377million loan and Kharafi and Ionics put up the rest of the funds on an 85% debt 15% equity basis. The facility's capacity implies that it may be intended to serve the entire population of 1.9million. Construction work was completed in May 2005, with the facility having entered service in December 2005.

Prior to Sulaibiya UDC was involved in constructing five wastewater treatment plants, ten sewerage systems, four storm water drainage systems and 12 water treatment works in South Africa, Lebanon, the UAE, Botswana, Saudi Arabia, Kuwait and Egypt and is now seeking other contracts, and in 2006 it bid for the Disi project in Jordan. No other contract gains have been noted to date.

Sources:

UDC, company web site

United Utilities, analyst presentations

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Morocco

Lydec

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Lydec	Only	Only	Sewerage	
Morocco	500,000	0	4,500,000	5,000,000
Global total	500,000	0	4,500,000	5,000,000
% home markets	100%	0%	100%	100%

In 1997, Lyonnaise des Eaux de Casablanca (Lydec) led by Suez (France) was awarded the 30-year Urban Community of Casablanca (UCC) concession contract. This covers water, sewerage and electricity and was extended in 2001 to cover waste management. During 1998, Lydec's water and sewerage activities accounted for USD100million in turnover (30% of the total) and 60% of investment, reflecting the need to upgrade and extend the city's water and sewerage services. By 2004, leaks generating 25million m^3 pa of water losses had been repaired, equivalent to the water needs of 800,000 people. A further 13 million m^3 pa of water losses were avoided in 2004-14. In 2009, capital spending on water services accounted for 27% of investments (MAD239 million) and sewerage 40% (MAD 362 million). Between 1997 and 2010, MAD2.34 billion was invested in water assets and MAD3.44 billion in sewerage assets, 59% of total capital spending.

Lydec, service development, 1907-2005

	1997	2002	2005
Water connections	440,000	590,000	710,000
Unaccounted for water	38.9%	27.7%	22.2%

In 2007, 145,000 low income households lacking adequate access to water and sanitation were identified. These were connected by 2010 at a cost of USD137million.

Most of the water (649million m^3 out of 814million m^3 in 1999) is bought from ONEP, the National Drinking Water Administration, for MAD3.95m^3 meaning that water for essential use is directly subsidised by LYDEC. As a result, 58% of customers pay less than MAD 43 per month. In 2005 LYDEC agreed to make 85,000 low income connections (850,000 people) by 2014, with 30,000 having been made by 2009. In addition Lydec is carrying out pilot projects for service extension through training staff to develop services for 10,600 households in two informal peri-urban settlements which lie outside its contract specification in 2004. This project will involve Lydec sub-contracting its services to small, local operators supported by USD21million in funding.

15% of LYDEC's equity was sold on the Casablanca Bourse on 18 July 2005, 80% of the shares being bought by local investors. Suez continues to hold 51% of LYDEC, with the remaining 34% being held by Moroccan institutions.

Lydec, profit and loss account, 2010-2014

Y/E 31/12 (MADmillion)	2010	2011	2012	2013	2014
Electricity - investment	296	290	321	507	489
Water - investment	358	297	333	342	435
Sewage - investment	562	691	914	1,310	1,261
Water - million m3	137	141	144	146	149
Sewage - million m3	128	133	136	138	141
Electricity - revenue	3,547	3,696	3,853	3,957	4,088
Water - revenue	1,048	1,086	1,115	1,130	1,172
Sewage - revenue	317	315	324	339	345
Total revenues	5,673	5,777	6,029	6,352	6,827
Operating profits	432	411	465	514	495
Net profits	256	231	274	296	283
Earnings per share (MAD)	32	29	34	37	35

Sources:

LYDEC, Annual Reports, 2005-2014

LYDEC Casablanca, Presentation to the Global Water Summit, 2010

Suez Environnement, analyst presentations

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Portugal

Mota-Engil Spa

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Mota-Engil	Only	Only	Sewerage	
Portugal	210,000	0	440,000	650,000
Ireland	130,000	0	0	130,000
Macau	0	580,000	0	580,000
Total - home markets	210,000	0	440,000	650,000
Total - international	130,000	580,000	0	710,000
Global total	340,000	580,000	440,000	1,360,000
% home markets	62%	0%	100%	48%

The two Portuguese engineering and construction companies Mota and Engil were merged in 2004. The company has a longstanding involvement in water and wastewater treatment infrastructure construction and has been Severn Trent's partner in the country since 1996. In 2004 Mota-Engil Ambiente e Serviços increased its stake in Indáqua's through purchasing Severn Trent Water International's 12.82% holding to gain an overall holding of 42.86%. Currently Mota-Engil holds 50.06% of Indáqua, with Soares da Costa holding 28.57% and Hidrante 21.55%. Indáqua revenues grew from EUR 8 million in 2007 to EUR 77 million in 2010, and the company serves 190,000 customers or 560,000 people in Portugal via six contracts.

In 2014, Indáqua served 216,000 customers (650,000 people) providing them with 20.5 million m^3 of water, against 203,000 water customers in 20910 and 190,000 in 2008, providing 24 million m^3 of water, along with serving 137,000 sewerage customers and handling 16 million m^3 of effluent.

Mota-Engil, profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Revenues	2,004.6	2,094.5	2,243.2	2,313.7	2,386.2
Operating profits	131.7	158.3	171.8	242.9	272.6
Pre-tax profits	88.3	89.6	111.0	135.2	122.7
Net profits	40.1	33.4	40.7	88.5	83.1

Contracts

Year	Location	Contract & length	People served & service
2014	Oliveira de Azeméis	30-year concession	71,000 water & wastewater
2008	S Joao de Maderia	25-year concession	21,500 water & wastewater

A 49% stake in Aguas de Sao Joao EM SA was acquired in 2008.

2005	Matosnihos	25-year concession	169,104 water & wastewater

Revenues of EUR204million are anticipated, along with capital investments of EUR83million.

2005	Vila do Conde	40-year concession	73,391 water & wastewater

55,000 for water and 52,000 for sewage.

1998	Santo Tirso	25-year concession	109,977 water

The concession entered into operation in 1998. At the outset, 28% of the population were connected with household water supplies. The contract currently covers 59,617 in Santo Tirso and 37,581 in Trofa. 4,000 people have been added since the concession started.

1999	Santo Maria de Feira	35-year concession	135,964 water

EUR76.5million of capital spending is planned for the concession, including EUR30million on wastewater services and treatment. M-E holds 98% of the company's equity after a further share acquisition in 2010. The original objective was to provide universal water and sewerage to the 12,000 without these services.

1996	Fafe	25-year concession	57,757 water

Mota-Engil Ambiente e Serviços holds 30% of Indáqua Industria e Gestao de Aguas SA. Drinking water provision expanded from 67% of the town's inhabitants to 95% by 2004. The contract originally served 50,000 people.

International activities

Mota-Engil is currently involved in construction projects in a number of countries and is looking to develop water concessions internationally. In 2010 it examined a range of acquisitions and concessions in Brazil and Peru. In Angola, Vista Water gained a technical assistance project for expanding access to potable water in rural areas.

Ireland

Contracts

Year	Location	Contract & length	People served and service
2011	Four locations	20 D&B + O&M	130,000 water

M-E's 70% held subsidiary Glan Agua was incorporated in 2010. In March 2010, it gained a EUR 55 million DBO contract for 24 water treatment plants including EUR 21 million for design and construction and a 20 year operating contract.

Contract details	Capacity	Population	D&B	O&M
	(m^3 / day)		EUR million	EUR million
Roscommon No 4	22,500	50,000	10.6	17.8
Tipperary	6,500	15,000	9.6	5
Galway No 2	22,700	50,000	16.7	16.1
Roscommon CWS	7,200	15,000	7	11.5

Macau

Contracts

Year	Location	Contract & length	People served and service
2011	Macau	5-year O&M	550,000 sewage

A contract to upgrade and operate Macau's ETAR sewage facility, which is worth EUR55 million.

Sources:

Mota-Engil, Annual reports, 2005-2014

Mota-Engil, company web site

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Qatar

Qatar Electricity & Water Co.

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
QEWC	Only	Only	Sewerage	
Qatar	1,700,000	0	0	1,700,000
Global total	1,700,000	0	0	1,700,000
% home markets	100%	0%	0%	100%

QEWC is 52% held by the Government and 48% by companies and individuals. In 2010, the company acquired 80% of AES Ras Laffan Operating Co, the company responsible for the management of the Ras Laffan projects. In 2014, QEWC was responsible for 79% of Qatar's water, some 258 MG/day.

QEWC, 2010-2014

Y/E 31/12 (QARmillion)	2010	2011	2012	2013	2014
Desalination revenues	966	1,094	1,120	1,165	1,211
Revenues	2,336	2,767	2,838	2,904	2,989
Net profits	1,215	1,291	1,432	1,384	1,530
Earnings per share (QAR)	11.05	11.74	13.02	12.58	13.91

Ras Girtas: The USD3.9billion facility entered service in 2011, increasing desalination capacity by 63MG/day or by 20% overall.

RAF 'C': 45% of Ras Girtas Power Holding Company, the JV Company was acquired in 2008.

RAF 'B': Commissioned in 1995 and 55% acquired by QEWC in 1999. The total capacity of the plant is 33Ml/day of Potable Water. It is operated under a PWPA under which the production is sold to the government for 20 years.

RAF 'A': Built in different phases between 1970 and 1993 and acquired by QEWC in 2003. The total capacity of the plant is 70MG/day of Potable Water. It operates under a PWPA under which the production is sold to the government for 12 years. This contract was renewed for two years in 2014. An extension contract (RAF A1) was signed in 2007 to desalinate 45MG/day. RAF A-2 (36 MG/day) is being developed at a cost of $R 504 million and will enter service in 2015. RAF A-3 (36 MG/day) will enter service in 2016.

Dukhan Desalination Plant: Commissioned in 1997, 55% of equity of the plant was acquired by QEWC in 2003 from Qatar Petroleum (QP). Dukhan Water Desalination is an independent water desalination plant located in the Eastern part of the country, 70km away from Doha. The total capacity of the plant is 2MG/day of potable water. The plant is operated under a WPA under which the production is sold to the government for 25 years.

Ras Laffan Power Company: QEWC holds 80% of Ras Laffan Power Company Limited having acquired a 55% stake in 2010. The plant is located at the Ras Laffan Industrial City. The total capacity of the plant is 40MG/day of Potable Water. The facility started its operation in the year 2003. The plant is operated under a PWPA under which the production is sold to the government for 25 years.

Q Power (Ras Laffan B): In September 2004, QEWC won the Ras Laffan B Project, the country's next power and water producing facility to be built in the Industrial City of Ras Laffan. A new joint venture company has been incorporated in the name of Q Power Q.S.C. where QEWC shares 55%, International Power PIc shares 40% and Chubu Electric Power Company shares 5%. The total project cost is estimated at USD900million which would be funded by 80% debt and 20% equity. This delivers 60MG/day of Potable Water to the country in different phases and was completed in March 2008.

Source:

Qatar Electricity & Water, Annual Reports, 2003-2014

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Issa Shaheen Al-Ghanim (Vice Chairman)
Jimmy Chung (Finance Manager)

Saudi Arabia

Saudi Arabian Amiantit Company

Population served by service and country				
2011 data	Water	Sewerage	Water &	Total
Amiantit	Only	Only	Sewerage	
Saudi Arabia	40,000	0	0	40,000
Romania	200,000	0	0	200,000
Montenegro	0	0	150,000	150,000
Russia	0	0	250,000	250,000
China	0	400,000	0	400,000
Total - home markets	40,000	0	0	40,000
Total - international	200,000	400,000	400,000	1,000,000
Global total	240,000	400,000	400,000	1,040,000
% home markets	17%	0%	0%	4%

The Saudi Arabian Amiantit Company (SAAC) was founded in Dammam, Saudi Arabia in 1968. It specialises in manufacturing piping products for water, liquids, oil and industrial applications. Water and wastewater operational contracts have been developed through its subsidiary AmiWater, which has acquired 100% of the equity of AquaMundo. Amiantit seeks to become one of the top ten leading companies in the world that provide drinking water and waste water services. AmiWater has three principal subsidiaries: AquaMundo GmbH (Germany), InfraMan GmbH (Austria) and OMC (Thailand). AmiWater believes that it serves approximately 5million people through medium and long-term contracts gained over the past decade.

Alalamiah Water Works and Services is a joint venture between Amiwater and Wesco of Saudi Arabia which provides process water to industrial and commercial customers. PWT Wasser und Abwassertechnik is a German process engineering company with 40 years' experience in the sector which is looking to develop operating contracts. It was acquired in 2004. Other water engineering and construction companies owned include Jos Hansen & Soehne and JR International Bau.

Saudi Arabian Amiantit, profit and loss account, 2010-2014

Y/E 31/12 (SARmillion)	2010	2011	2012	2013	2014
Water management	422.0	457.2	357.1	250.5	203.2
Revenues	3,077.5	3,562.6	3,454.8	3,130.7	2,725.8
Operating profits	392.7	324.3	263.3	227.5	171.5
Net profits	165.1	151.2	111.3	112.6	82.6
Earnings per share (SAR)	1.43	1.31	0.99	1.00	0.73

InfraMan

InfraMan GmbH, a subsidiary of the AmiWater Group is responsible for the provision of services in operation and management of water supply companies. InfraMan is based in Austria, providing management services for water supply, sanitation services, and hydropower.

Amiantit claims to serve 5million people globally, although details of the nature and status of other projects are not currently available. According to Amiantit in 2004, AmiWater is already operating or developing projects in Albania, Italy, Moldova, Russia, Kyrgyzstan and Thailand, along with projects that are under development in Azerbaijan, Indonesia, India, China, Romania, Ukraine, Peru and Guatemala

Projects noted by AmiWater in 2006

Country	Location	Population	Contract
Albania – AquaMundo	Four cities	450,000	Management
Albania – AquaMundo	Kavaja	70,000	Management
India – InfraMan	Navi Mumbai	1,200,000	Management
Uzbekistan – InfraMan	Bukhara	750,000	Management

Country	Location	Population	Contract
Moldova – InfraMan	Belts	200,000	JV
Kyrgyzstan – InfraMan	Osh	300,000	JV
Thailand	OMC / WOMC	900,000	Management
Italy – Flowrite Iberica	Sicilacque Spa	2,000,000	JV
Germany – PWT	N/A	175,000	O&M
Saudi Arabia	Yanbu & Hanakhia	40,000	DBOD

Completed projects include Kavaja (Albania, EUR17million management contract for five years, 2003-07), Bukhara and Samarkand (Uzbekistan, USD65million management contract, 2004-07), Gaza (Palestine, USD21million management contract, 2005-08) and Durres, Fier, Lezhe and Sarande (Albania, EUR22million management contract with Berlinwasser International, 2003-05).

Saudi Arabia

In February 2005, AmiWater formed Tawazea, a joint venture with Saudi Industrial Services (SISCO) for water service contracts in industrial cities in Saudi Arabia. Taweza was awarded a SAR3billion (USD800million) 30-year BOT contract for managing potable water supplies in industrial zones in Jeddah, Riyadh and Qassim in June 2007.

Russia

Two 25-year joint ventures were announced in 2003. In each case, InfraMan holds 51% of the project's equity and is responsible for managing the water and wastewater services.

Contracts

Year	Location	Contract & length	People served & service
2003	Balashicha	25-year, O&M	150,000 water & wastewater

Revenues for the contract will be USD20million. The town's population increases to 250,000 during the summer as a holiday destination.

2003	Dimitrovgrad	25-year, O&M	100,000 water & wastewater

This contract has a budget of USD10million and includes extending the water distribution system for an additional 12,000 people.

Romania

Contracts

Year	Location	Contract & length	People served and service
2003	Zetea	DBOT	200,000 bulk water

Amiantit is leading a consortium the Zetea water supply system management project, which is worth USD50million. It involves building a water intake from a lake, a water treatment plant, a 137km pipeline, and connections to the distribution tanks. The system will supply potable water to 200,000 people. Project implementation started in the spring of 2004 and the water supply system is expected to be completed by 2007. Amiantit already has ductile iron pipe manufacturing facilities in Romania, where the company produces its own raw material.

OMC

Operation Management Company Ltd (OMC) provides Operation and Maintenance services of water and wastewater treatment plants in the Kingdom of Thailand. OMC, through its subsidiary Wastewater Operation Management Company (WOMC), has formed a joint venture with the Waste Management Authority of Thailand (WMA) in order to operate and maintain wastewater treatment plants. A management contract serves 900,000 people.

AquaMundo

ABB Kraftswerkstechnik of Germany (ABB AG), GW Water Consultants (Bilfinger & Berger AG (Germany) and MVV Energie AG (MVV Germany, see company entry), formed the AquaMundo JV in May 2000. AquaMundo seeks to gain contracts in the planning, financing and operating of water and sewerage projects worldwide. In April 2003, ABB and Bilfinger & Berger sold their stakes to InfraMan. MVV sold its stake to InfraMan in January 2004.

Montenegro

Contracts

Year	Location	Contract & length	People served and service
2001	Montenegro	30-year concession	Water and sewerage

In the former republic of Yugoslavia, AquaMundo has gained a contract for the proposed privatisation of water provision services in the state of Montenegro, with investments of EUR33million required during the first five years. The contract covers the coastal municipalities of Herzeg Novi, Kotor, Tivat, Budva, Bar, Cetinje and most likely later Ulcinj Public Enterprise (PEW) for Water ÒCrnogorsko Primorje Ó, BudvaMonteAqua, a public-private water company in which AquaMundo has the largest shareholding, will manage the 30-year concession.

China

Contracts

Year	Location	Contract & length	People served and service
2002	Foshan	20-year concession	Sewage treatment

The AquaMundo (45%) and Foshan Waterworks (55%) JV is to develop and manage the 100,000m³ per day sewage treatment works for the city in Guangdong Province. EUR30.4million in capital expenditure will be required, 40% from equity and 60% from debt. The facility will become operational in 2003. It is estimated that the facility will serve 400,000 people.

Sources:

Saudi Arabian Amiantit, company web site

AquaMundo, company web site

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Volker Mitterhammer (Managing Director)

Saudi Arabia

First National Operation & Maintenance Co Ltd. - Nomac

Population served by service and country 2014 data NOMAC	Water Only	Sewerage Only	Water & Sewerage	Total
Saudi Arabia	3,420,000	0	0	3,420,000
Qatar	255,000	0	0	255,000
Total - home markets	3,420,000	0	0	3,420,000
Total - international	255,000	0	0	255,000
Global total	3,675,000	0	0	3,675,000
% home markets	93%	0%	0%	93%

NOMAC manages water and power projects in the Middle East and Africa. It is involved in operations and maintenance work at eight water projects in Saudi Arabia and Qatar. NOMAC is 65% held by ACWA Power International (Saudi Arabia) and 35% by Sogex Oman.

Saudi Arabia

Contracts

Year	Location	Contract & length	People served & service
2009	Shuaibah	Operation & maintenance	450,000, desalination

Operation of the 150,000 m^3 per day RO desalination plant that serves Jeddah (110 km to the North).

ACWA Power is the principal investor.

2011	Shuaibah	20 year BOO	2,000,000. desalination

An operations and management contract for the 880,000 m^3 per day water and power project. ACWA Power is the principal investor. This is the first IWPP in Saudi Arabia, costing USD2.45 billion to develop. Financial close was in 2006.

2010	Shuqaiq	20 year BOO	590,000, desalination

Shuqaiq 2 is a 212,000 m^3 per day IWPP, 40% owned by ACWA Power. It has three thermal distillation and one RO membrane units. The facility supplies water to the cities of Abha (485,000 people) and Jizan (105,000 people).

2015	Bowarege	Operation & maintenance	Industrial, Desalination

International Bearges Company for Water Desalination (Bowarege) owns this 52,000 m^3 per day reverse osmosis facility which has been anchored off Yanbu since 2011. NOMAC took over the O&M contract in 2015. ACWA Power is the lead investor.

2010	Jubail	Operation & maintenance	380,000, Desalination

The Jubail Water and Electricity Company own the 800,000 m^3 per day facility, which cost USD 3.36 billion to develop. It was the largest desalination facility in the world when built and supplies Jubail Industrial City (380,000 people). ACWA Power is the lead investor.

Qatar

Contracts

Year	Location	Contract & length	People served & service
2011	Barka	BOO	Desalination

The Barka 1 IWPP has a capacity of 91,000 m^3 per day.

2014	Barka	BOO	Desalination

The Barka 1 RO expansion 1 IWP provides an additional 45,000 m^3 per day. It is being financed by AWCA Power and Abengoa (Spain) will carry out the construction work.

2015	Barka	BOO	Desalination

The third phase of Barka, Barka 1 RO expansion 2 IWP provides a further 56,000 m^3 per day. As of 2012, Barka had 80,000 inhabitants. The facilities are designed to serve a total of 225,000 people.

Source:

NOMAC, company web site

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Spain

Aguas De Valencia SA

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Aguas de Valencia	Only	Only	Sewerage	
Spain	1,340,000	0	1,050,000	2,390,000
Angola	220,000	0	0	220,000
Colombia	0	0	550,000	550,000
Total - home markets	1,340,000	0	1,050,000	2,390,000
Total - international	220,000	0	550,000	770,000
Global total	1,560,000	0	1,600,000	3,160,000
% home markets	86%	0%	66%	76%

Aguas de Valencia SA (AgVal) was founded as Sociedad de Aguas Potables y Mejoras de Valencia, S. A. in 1890. Operations commenced in 1904 and in 1967 the operational mandate to supply the city of Valencia was renewed. AgVal controls 80% of the Emivasa contract company. The company was partially floated in 1976.

In 2014, Caxia Bank had to sell a 49% stake in AgVal to Formento Urbano, a local company controlled by AgVal's president. After a separate acquisition of 15% of AgCal from Suez, Caxia now holds 15% of AgVal, Suez Environnement holds 18% and Fomento Urbano de Castellon the other 67%. AgVal was delisted in 2008 and no longer publishes financial information.

The EMIVASA concession, serving Valencia has been secured to 2052. AgVal states that it covers 300 municipalities worldwide in 2015, serving 1,250,000 customers and 3,150,000 people for water and 2,700,000 for sewage.

The company serves a total of 2,390,000 people with water and 1,050,000 with sewerage in Spain. Further gains for a total of 60,000 people were made in 1995. The company originally served 407,000 for water in Valencia.

AgVal has also gained a concession contract in Colombia for Barrancabermeja (168,000 people in 2015) and Magdalena State for Santa Maria (385,000 people). A five year EUR3.5 million O&M contract serving 220,000 people in Malanje and 14 municipalities, Angola was gained in 2013.

Contracts gained in Argentina and Venezuela are understood to have expired.

Source:

Aguas de Valencia, company web site

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Francico Zorilla (President)

Spain

Grupo ACS, Actividades De Construccion Y Servicos SA

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Gruppo ACS	Only	Only	Sewerage	
Spain	925,000	950,000	0	1,875,000
Global total	925,000	950,000	0	1,875,000
% home markets	100%	100%	0%	100%

In October 2003 Grupo Dragados SA (GD) merged with ACS, Actividades de Construccion y Servidos SA (ACS) and its activities were subsumed within the enlarged group. Urbaser, the water and waste management services arm of Dragados is now the principal component of the Environmental Services Division, with water and wastewater contracts managed by its Socamex subsidiary.

Two contracts in Argentina (Missiones and Aguas del Gran Buenos Aries) were terminated in 2006.

Grupo ACS, profit and loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Urbaser – order book	9,164	8,462	8,752	8,443	8,456
Urbaser – revenues	1,436	1,498	1,513	1,524	1,652
Group turnover	15,380	28,472	38,396	35,178	34,881
Operating profit	1,021	1,374	-2,187	1,640	1,123
Net profit	1,313	962	-1,928	702	717
Net profit (EUR)	3.69	2.73	-6.26	2.21	2.26

Urbaser, along with FCC is one of Spain's leading waste management companies. It also has a number of major concessions, including the Huesnar water and sewage treatment works concession for Seville (1993) serving 220,000 people in 15 towns. The concession will generate ESP60billion over its 25-year life. In 1999, Urbaser gained a 30-year (extendable to 50 years) concession worth ESP25billion serving 150,000 people in the Spanish district of El Ferrol. Overall, Urbaser served 3,000,000 people for water and wastewater and 3,600,000 for wastewater in Spain during 2007.

Contracts gained in 2008 included wastewater treatment facilities serving Candeleda (Ávila) and Can Massuet Elfar in Dos Ríos (Barcelona) and plant expansion for Pajares de Compiledona, Valldemosa, Puig Punyent, Totana and Valdorros. Wastewater treatment management contracts were awarded by Tudela de Duero, Tordesillas and Barbastro, along with one for a drinking water treatment plant at Presoalba in La Bureba. A 22 year EUR 50 million contract serving part of Valencia was gained in 2010.

Water & sewerage activities in Spain, 2010

	Plants / contracts	People	m^3 per day
Distribution of drinking water	7	290,000	250,000
Industrial water services	142	5,600,000	1,175,000
Sewage treatment [1]	19	1,385,000	N/A
Water supply	14	910,000	229,000
Management of operations	20	900,000	N/A
Laboratory / monitoring services	8	1,423,000	N/A

[1] PE 1,385,000 equivalent to 950,000 people.

Water & sewerage activities in Spain, 2014

	Plants / contracts	People	m^3 per day
Distribution of drinking water	10	421,819	287,694
Industrial water services	207	5,922,619	1,337,369
Sewage treatment [1]	19	1,385,000	N/A
Water supply	15	505,319	312,834
Management of operations	20	900,000	N/A
Laboratory / monitoring services	7	1,659,605	N/A

Sources:

Dragados, Annual Reports, 2000-2002

Urbaser, company web site

ACS, Annual reports, 2003-2014

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Florentio Perez Rodriguez (Chairman and CEO)

Antonio Garcia Ferrer (Vice Chairman)

Jose Zornoza Soto (CFO)

Jose Maria Lopez Pinol (Chairman, Urbaser)

Spain

Sacyr Vallehermoso

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
SACYR	Only	Only	Sewerage	
Spain	695,000	0	225,000	920,000
Portugal	0	0	1,397,000	1,397,000
Brazil	103,000	0	329,000	432,000
Total - home markets	695,000	0	225,000	920,000
Total - international	103,000	0	1,726,000	1,829,000
Global total	798,000	0	1,951,000	2,749,000
% home markets	87%	0%	12%	33%

Sacyr is involved in construction, real estate, contracting and asset operating activities. Sociedad Anonima de Caminos y Readios was formed in 1986, changing its name to Sacyr in 1991 and acquired Vallehermoso in 2002. In Portugal, the company operates under Somague.

Sacyr, profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water revenues	294	257	362	237	146
Group revenues	4,820.4	3,820.2	3,613.7	2,672.3	2,900.7
Operating profits	571.6	214.9	-45.7	66.7	314.9
Pre-tax profits	188.3	-2,146.5	-1,365.6	-132.9	233.6
Net profits	204.4	-1,604.1	-977.5	-499.0	32.7

Valoriza Gestion (services), Sacyr's services division specialises in water contracts, waste management, renewable energy generation and multi service contracts. Water services accounted for revenues of EUR 298.6 million in 2010 and an order backlog of EUR 6,316 million. In 2008, water revenues were EUR234million and there was an order backlog of EUR5.9billion.

Spain – Aguas de Toledo

Contracts

Year	Location	Contract & length	People served and service
2003	Guadalajara	30-year concession	82,500, water

This is 60% held by ADT, with an order backlog of EUR 180 million.

2008	Almaden	20-year concession	6,300, water

A EUR28.5million project for the municipality in Ciudad Real, 100% held by ADT.

2008	S Vincente Barquera	15-year concession	4,650, wastewater

A 100% held concession serving the Municipality of San Vincente de la Barquera. The contract is extendable.

2007	Pioz	27-year concession	3,600, water

60% held by ADT, with a total contract value of EUR43million.

2003	Grand Canaria	40-year concession	398,000, water

Sacyr holds 33% of Emala, which serves Las Palmas and Santa Brígida. Revenues in 2006 were EUR52.2million with an order backlog of EUR1, 055 million.

2001	Tenerife	30-year concession	223,200, water & wastewater

Sacyr holds 97% of Emmasa, which provides water services (55,000m³ per day, 21,000m³ per day via a desalination plant) and sewage treatment (40,000m³ per day) to 220,000 people in Santa Cruz. Revenues in 2006 were EUR32million with a 2010 order backlog of EUR 1,577 million.

1999	Alcala de Henares	30-year concession	201,400, water

Sacyr holds 25% of Aquas de Alcala. Revenues in 2006 were EUR9.6million with an order backlog of EUR100million.

Portugal and Brazil - AGS

AGS controls 40% of the private sector's share of the Portuguese water market, serving 1.4million people and generating revenues of EUR21.6million in 2004 and EUR49million in 2006 with an order backlog of EUR 3,096 million in 2010. These are the Lusagua activities which were acquired from the government through AGS's Somague Ambiente.

Portugal

Contracts

Year	Location	Contract & length	People served & service
1997	Setubal	25-year concession	117,000, water & wastewater

Somague holds 40% of Aguas de Sado. Revenues in 2006 were EUR12.5million with 61,300 customers, 97% of whom have water and 90% have wastewater services. Total capital spending of EUR90.8million is foreseen for the concession with an order backlog of EUR130million.

1998	Vale do Ave	25-year concession	360,000, water & wastewater

Somague holds 40% of **TRATAVE (Tratamento de Águas Residuais do Ave, S.A.); the concession company for the** Vale do Ave (Municipalities of Guimarães, Santo Tirso and Vila Nova de Famalicão). 2006 revenues were EUR7.4million, with a contract capital spending of EUR17.5million. This is a management concession with an order backlog of EUR70million.

1999	Figueira da Foz	25-year concession	70,000, water & wastewater

Somague holds 40% of Aguas da Figueria. Revenues in 2006 were EUR7.7million with an order backlog of EUR159million and capital spending of EUR15.2million foreseen for the concession.

2000	Cascais	25-year concession	188,000, water & wastewater

Somague holds 43% of Aguas de Cascais. Revenues in 2006 were EUR31.4million with an order backlog of EUR411million and capital spending of EUR117.2million foreseen for the concession.

2001	Carrazeda de Ansiaes	30-year concession	9,000, water & wastewater

Somague holds 75% of Aguas de Carrazeda. Revenues in 2006 were EUR0.6million with an order backlog of EUR39million and total capital spending of EUR4.2million foreseen for the concession.

2001	Gondomar	25-year concession	194,000, water & wastewater

Somague holds 42.5% of Aguas de Gondomar. Revenues in 2006 were EUR16.8million with an order backlog of EUR242million and total capital spending of EUR71.3million foreseen for the concession.

2003	Alenquer	30-year concession	40,000, water & wastewater

Somague holds 40% of Aguas de Alenquer. Revenues in 2006 were EUR6.2million with an order backlog of EUR98million and total capital spending of EUR22.3million foreseen for the concession.

2004	Pacos de Ferreira	35-year concession	53,000, water & wastewater

Somague holds 90% of Aguas de Alenquer. Revenues in 2006 were EUR3.7million with an order backlog of EUR381million and total capital spending of EUR58.6million foreseen for the concession.

2004	Barcelos	30-year concession	155,000, water & wastewater

Somague holds 75% of Aguas de Barcelos. Revenues in 2006 were EUR8.2million with an order backlog of EUR748million and total capital spending of EUR91.7million foreseen for the concession.

2005	Marco de Canaveses	Concession	56,000, water & wastewater

Somague holds 51% of Aguas de Marco. Revenues in 2006 were EUR1.7million with an order backlog of EUR434million.

2005	Taviraverde	Concession	22,000, water & wastewater

Somague holds 32% of Tavira. Revenues in 2006 were EUR7million with an order backlog of EUR76million.

2005	Covilha	Concession	21,000, water & wastewater

Somague holds 51% of Aguas de Serra. Revenues in 2006 were EUR0.7million with an order backlog of EUR109million.

2005	Faro	35-year concession	57,000, water & wastewater

This is a public-private partnership contract, which also includes waste collection and street cleaning for the council. Somague holds 51% of Faro. Revenues in 2006 were EUR8.8million with an order backlog of EUR45million.

2008	Covilha	25-year concession	55,000, water & wastewater

AGS holds 49% of Aguas de Covilha, a concession worth EUR250million.

Brazil

AGS operates two concessions in San Paulo province.

Contracts

Year	Location	Contract & length	People served & service
1995	Mandaguahy	20-year concession	103,000, bulk water

Somague holds 85% of Aguas de Mandaguahy. Revenues in 2006 were EUR1.8million with a total capital spending of EUR5.5million foreseen for the concession and an order backlog of EUR31million.

1996	Machado & Baguacu	25-year concession	329,000, water & wastewater

Somague holds 54% of Aguas de SANEAR (Saneamento de Araçatuba, S.A.), a concession for sewerage, sewage treatment and disposal covering the Machado de Melo and Baguaçu bays. Revenues in 2006 were EUR2.7million with a total capital spending of EUR4.5million foreseen for the concession and an order backlog of EUR15million.

Desalination and wastewater treatment – Sadyt

Sociedad Anónima de Depuración y Tratamiento specialises in wastewater treatment and desalination engineering. It was set up in 1995 and recently has become involved in the operation of contracts. In 2003, services accounted for 20% of Sadyt's revenues. By 2005, this had increased to 36% of revenues. Desalination plants have been built (155,000m³ per day capacity) or are under construction in Spain and Algeria (250,000m³ per day, serving 1.25million people and due to enter service in 2007) and a third of these are also operated by the company. The two Algerian facilities will be operated with ACS and Abengoa of Spain. In 2008 Sadyt gained a 25-year DBO contract to develop a 150,000m³ per day desalination plant serving Perth (Australia). The construction element is worth EUR340million and the plant is designed so that its capacity can be doubled if needed.

Sources:

Sacyr, Annual Reports, 2000-2014

Sacyr, corporate web site

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Manuel Manrique Cecilla (Chairman & CEO)

Spain

Tecnicas Valencianas Del Agua

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
Tecvasa	Only	Only	Sewerage	
Colombia	0	0	3,150,000	3,150,000
Ecuador	0	0	100,000	100,000
Dominican Republic	1,553,000	0	0	1,553,000
Total - home markets	0	0	3,150,000	0
Total - international	1,553,000	0	0	4,803,000
Global total	1,553,000	0	3,150,000	4,803,000
% home markets	0%	0%	0%	0%

Technicas Valencianas Del Agua (Tecvasa) is a privately held venture company specialising in tendering for water projects. It is held by Anton Trust SL, Inversiones Americanas del Agua, SA Caja de Ahorros del Mediterráneo (G.I. CARTERA) SA, Red Control SL, Comercial Virosque SL (COMVIR), Válvulas Arco SL and G.T. Inversiones y Cartera 2001, SL. The venture was formed in 1999 and has stated that it currently serves a total of 8.5million people in Latin America. Tecvasa entered the Latin American market by forming an alliance with Colombia's Triple A. Tecvasa holds 49% of the Lassa JV (Sociedad Latinoamerica de Aguas y Servicos) and 49% of AAAS Servicos, the water operations division of Triple A (La Sociedad de Acquducto, Alcantarillado y Aseo de Barranquilla SA). The company is actively seeking contracts in Panama (LASSA, Latinoamericana De Aguas Y Servicios S.A.) and Chile (in association with Mendes Júnior y Asociados Chile SA).

Colombia

Contracts

Year	Location	Contract & length	People served and service
2001	Soledad	20-year concession	400,000, water & sewerage
1996	Barranquilla	37-year concession	1,359,700, urban services

The Santa Marta district concession (Metroagua SA) covers bulk water provision, sewerage and waste management services. Barranquilla (AAA Servicos SA) is the fourth largest city in Colombia. The concession encompasses domestic refuse collection (390,000tonnes pa) as well as water provision and sewerage services. Water and sewerage coverage are to rise from 78% and 68% respectively to 99% and 96% during the concession's life. In 2000, water supply coverage was 94% and sewerage coverage 80%. Until 1999, Agbar had a 43% holding in the concession company for these contracts. Agbar sold its stakes to Tecvasa and Triple A after disputes over water tariffs. The Soledad concession involves USD37million in capital spending on a network with 75% water and 65% sewerage coverage. Between 2001 and 2004, average delivery increased from 12 to 18 hours per day. Customers served increased from 42,300 to 72,300 (water) and 32,400 to 62,300 (sewerage).

Dominican Republic

Contracts

Year	Location	Contract & length	People served and service
2001	Santo Domingo	O&M, 20 years	700,000 water

AAA Dominicana SA has an O&M contract serving the western half of the city of Santo Domingo. The contract was awarded in 2001 and metering coverage rose from 1% to 35% by 2003, with customer connections rising from 116,420 to 142,228. The contract was renewed in 2006 with a value of EUR10.2million and runs to 2021, with Tecvasa holding 70% of the equity.

Smaller contracts identified

2004	Santiago	O&M, 17 years	650,000 water
2007	Puerto Plata	O&M, 20 years	220,000 water
2015	Bani	O&M, 10 years	150,000 water
2014	Puerto Plata	O&M, 15 years	62,000 water
2011	Moca	O&M, 10 years	181,000 water
2011	S Pedro de Marcois	O&M, 15 years	230,000 water
2010	Sousa	O&M, 15 years	50,000 water

Ecuador

Aguas de Samborondón (Amagua CEM) provides water and sewerage services to the city of Samborondón in Guayas province. The contract started in 2000.

Sources:

Technicas Valencianas Del Agua, company web site

AAA, company web site

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Ferrer Baltran Jose (President)

Virosque Verduy Carlos Francisco (Vice President)

Sweden

Läckeby Water Group

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Läckeby	Only	Only	Sewerage	
Norway	0	280,000	0	280,000
Global total	0	280,000	0	280,000
% home markets	0%	0%	0%	0%

Läckeby was founded in 1935 and is a privately held water engineering and services company which is 80% held by KF Invest AB, a subsidiary of the association of Swedish consumer associations and 20% by its management. Revenues were approximately USD 70 million in 2010 and EUR80 million in 2011.

Läckeby provides day-to-day servicing, renovation and maintenance work for municipal and industrial clients in Sweden. This includes the municipalities of Borgholm, Halmstad, Håbo, Kalmar, Kristianstad, Strängnäs, Trosa, Vetlanda and Värmdö, while industrial clients include NSR, Syvab, VA-Ingenjörerna, Veolia Water AB and WSP.

Läckeby acquired Purac from AWG in December 2003. Acquiring Purac represents the largest expansion in the company's history, bringing Purac's process engineering activities into the group. Purac is one of the leading process engineering companies in China and has gained a broad range of contracts in South East Asia, Scandinavia and Central & Eastern Europe. AWG used Purac as a technology platform for gaining international concession contracts. Bekkelaget Vann AS (the Oslo wastewater treatment works operations company) was sold to Läckeby Water AB by AWG in 2005.

Norway

Contracts

Year	Location	Contract & length	People served and service
2001	Oslo	15-year concession	280,000 sewerage

Purac was awarded a GBP40million design-and-build contract with Kaldnes and Selmer for the Bekkelaget sewage treatment works serving Oslo in 1998 with a PE of 350,000. The first phase entered into operation in 1999, with and construction was completed in 2001, and was serving 280,000 in 2008, up from 250,000 at the time of the contract award. In October 2001, AWI was awarded a 15-year operating concession for the facility with an optional five-year extension period. The 15-year contract is worth GBP100million. 40.7million m³ of sewage effluent was treated in 2007. The facility was upgraded in 2010 and it now produces biogas for vehicles and energy utilities. .

Sources:

Lackeby, company web site

AWG, analyst presentations

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Stefan Lambert (Chairman)
Martin Hagbyhn (Managing Director)

UAE – Dubai

Metito

Population served by service and country 2014 & 2015 data Metito	Water Only	Sewerage Only	Water & Sewerage	Total
Dubai	0	50,000	0	50,000
Bahrain	0	7,000	0	7,000
China	0	3,550,000	0	3,550,000
Rwanda	450,000	0	0	450,000
Total - home markets	0	50,000	0	50,000
Total - international	450,000	3,557,000	0	4,007,000
Global total	450,000	3,607,000	0	4,057,000
% home markets	0%	1%	0%	1%

Metito was founded in 1958 as a company specialising in water and pollution control engineering. In 2014, Mitsubishi Corp / MIH acquired a 38% stake in the company from Gulf Capital, a private equity house and provided a USD92 million capital injection for new projects. The other major shareholders are the IFC (3%), the Ghandour family (35%) and Gulf Capital (24%).

Metito Berlinwasser was founded in 2008 by Metito (60%) and Berlinwasser International (40%). The joint venture at the time anticipated spending USD1billion on projects by the end of 2011. Metito Utilities China Holding acquired Berlinwasser International's stake in Berlinwasser China Holdings in 2011. According to the company, the four contracts currently held have a total wastewater treatment capacity of 1.3million m^3 per day and serve 5.3million people.

Rwanda

Contracts

Year	Location	Contract & length	People served & service
2015	Kigali	27 year DBROT	450,000 bulk water

A 40,000m^3 per day groundwater treatment facility is to be built over two years, along with bulk water mains and three distribution reservoirs, supplying 40% of the city's water. The USD75 million project is the first sub-Saharan water concession outside South Africa. It is being supported by the IFC and will enter service in 2017.

Dubai

Contracts

Year	Location	Contract & length	People served & service
2006	DIP	30 year BOOT	50,000 sewerage

A 31,000m^3 per day sewage treatment plant serving domestic and light industrial customers at the Dubai Investments Park. This is the first BOOT contract in Dubai. Recovered water is used for irrigation.

Bahrain

Contracts

Year	Location	Contract & length	People served & service
2007	Riffa Views	30 year BOOT	7,000 sewerage

Riffa Views is a development of 1,000 villas and the facility has a 3,600m^3 per day capacity. Recovered water is used to irrigate the development's golf course.

Egypt

Contracts

Year	Location	Contract & length	People served & service
2002	Nabq	25 year Concession	Hotels, desalination

Nabq Bay in Sharm El Sheikh is a collection of hotel and residential developments. This is a full concession with Metito responsible for billing and tariff collection. The original unit had a 1,200m^3 per day capacity, which was expanded to 18,000m^3 per day in 2009. The 25 year contract contains a 99 year renewal option.

China

Contracts

Year	Location	Contract & length	People served and service

BWI's activities in China were grouped into Berlinwasser China Holdings in 2008. The 1997 20 year BOT for waterworks serving Xian was sold in 2003 after legislatory change prevented the fixed rate of returns in contracts run by international companies. BWI's 35% stake in Waterworks Xian South Co., Ltd, was sold to the majority shareholder, The Water Enterprise of Xian, China for USD11.2million.

2004	Hefei	23 year TOT	1.5million sewerage

The Wang XiaoYing 310,000m^3 per day facility was built by the municipality between 1998 and 2002 and BWI took over its operation in December 2004. Hefei Wang Xiao Ying Sewage Treatment Co. Ltd. is 80% held by BWI and 20% by East China Engineering Science & Technology Co. Ltd in a CNY491million contract. BWI invested EUR13.2million in the project and the contract generated a net profit of EUR1.6million in 2007.

2003	Nanchang	20 year BOT	2.0 million sewerage

The 330,000m^3 per day Qingshanhu facility entered service in October 2004, built at a cost of EUR30million and handles a third of the city's sewage. Nanchang QingShanHu Project Co. Ltd. is 80% held by BWI and 20% by Third Construction & Engineering Co. Ltd. BWI invested EUR7.9million in the project out of a total of EUR30million and the contract generated a net profit of EUR1.6million in 2007. In 2009, the facility was expanded to 510,000m^3 per day at a cost of CNY310million.

2009	Yuanping	30 year TOT	250,000 wastewater recovery

The contract involves managing a 50,000m^3 per day wastewater treatment plant and developing its wastewater recovery services. Yuanping is in Shanxi Province. The EUR18.9million project is between BWI, Sino-Dutch Water and the Shanxi Luneng Jinbei Aluminium Company.

2010	Panjin	30 year TOT	500,000 sewage

Panjin WWT Plant No 2 is a 100,000m^3 per day facility, which is operated by Metito.

Metito also has three industrial wastewater treatment projects: Changchun National High-Tech Industrial Development Zone (100,000 m^3 per day), Nanchong Chemical Industrial Park (17,000 m^3 per day) and Yushen Qingshui Industrial park (20,000 m^3 per day).

Sources:

Berlinwasser International, company presentations, 2007-2009

Berlinwasser International, company web site

Metito, company web site

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Mutaz Ghandour (Chairman & CEO)

Wafic Ghanem (Finance Director)

United Kingdom

Affinity Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Affinity Water	Only	Only	Sewerage	
England & Wales	3,588,000	0	0	3,588,000
Global total	3,588,000	0	0	3,588,000
% home markets	100%	0%	0%	100%

Rift Acquisitions is a joint venture between Infracapital Partners (Prudential, UK) BDIL and Horth Haven Infrastructure Partners (Morgan Stanley, USA), which acquired 90% of Veolia Environnement's UK asset owning water activities in June 2012 for GBP1.24billion. VE retains 10% of the company. In October 2012 the three companies were merged as Affinity Water.

Y/E 31/03/2012 (GBPmillion)	Population	Equity Holding	Turnover	Pre-tax Profit
Veolia Water Central	3,000,000	100.0%	254.81	49.01
Veolia Water East	154,000	99.1%	15.11	3.65
Veolia Water Southeast	163,220	78.7%	19.51	5.81

VE acquired five water only companies in the 1980s, merging three of them in 1994 and acquired another in 2000. They were renamed in 2009:

Veolia Water Central	Three Valleys Water
Veolia Water Southeast	Tendring Hundreds Water
Veolia Water East	Folkestone & Dover Water

Three Valleys Water Plc consists of the Colne Valley, Rickmansworth and Lee Valley Water companies, which were merged in 1994. Its origins go back to the Barnet District Gas and Water Company, founded in 1872, following the merger of various local water and gas companies including The East Barnet Gas & Water Company (founded in 1866) and renamed The Barnet Water Company in 1950 after Britain's gas services were nationalised. In 1960, Barnet Water Herts and Essex Water were merged as Lee Valley Water. In 1987, SAUR and Générale des Eaux (today Veolia Environnement) bought stakes in Lee Valley and the company was acquired outright by Générale des Eaux in 1988. The company grew again following a merger in October 2000 with VE's North Surrey Water, which was formed in 1973 from four founder companies. The company provides 858,000m^3 per day of water to parts of Bedfordshire, Berkshire, Buckinghamshire, Essex, Hertfordshire, Surrey, and the London Boroughs of Barnet, Brent, Ealing, Harrow, Hillingdon and Enfield. TVW reached a 41% level of metering by 2011.

Tendring Hundreds and Folkestone and Dover are characterised by high levels of domestic metering. 83% of the former company's domestic customers had meters in 2011, while the latter company aims to have 78% of customers metered by 2015 compared with 55% in 2007. The Folkestone Waterworks Company was formed in 1848, one of the first to take advantage of the Waterway Clauses Act of 1847, and merged with two other companies in 1953 and 1970.

Affinity Water, regulatory accounts, 2011-2015

Y/E 31/03 (GBPmillion)	2012	2013	2014	2015
Measured - household	72.5	95.5	102.9	102.3
Measured - non-household	39.0	46.6	55.3	56.6
Unmeasured - household	130.2	134.5	129.1	127.9
Unmeasured - non-household	2.2	2.8	2.7	2.6
Other water	2.6	3.3	2.9	4.1
Group turnover	253.0	255.0	291.4	291.4
Operating profit	65.0	77.2	84.4	93.3
Pre-tax profit	49.0	56.4	45.7	57.6
Post tax profit	35.9	43.5	44.4	32.9

During 2015-20, leakage will be reduced by 14% (27,000 m^3 per day) and 300,000 customer meters will be installed. Leakage was 183,000 m^3 per day in 2014-15.

Sources:

Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

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Simon Cocks (CEO)

Duncan Bates (CFO)

United Kingdom

Bristol Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Bristol Water	Only	Only	Sewerage	
England & Wales	1,160,000	0	0	1,160,000
Global total	1,160,000	0	0	1,160,000
% home markets	100%	0%	0%	100%

In December 2003 Bristol Water announced a refinancing to increase in the level of borrowings in the regulated water business and a return of GBP51million to shareholders. A second round of refinancing was completed in June 2005, returning a further GBP30million. Agbar made a GBP175million agreed bid for Bristol Water in April 2006, which was declared unconditional in May 2006. 70% of Aguas de Barcelona's interest in Bristol Water was sold to Capstone Infrastructure Corporation for USD206million in October 2011. Capstone is a Canadian based infrastructure holding company. In May 2012, Capstone sold 20% of its holding in Bristol Water to ITOCHU Corporation of Japan for USD68million. Capstone now holds 50% of the company, along with Suez Environnement (Agbar's owner) holding 30%.

The Bristol Waterworks Company (Bristol Water) was founded in 1846. Bristol Water supplies water to 1,160,000 people in the city of Bristol in western England and certain surrounding areas. Sewerage services are carried out by Wessex Water (YTL). Veolia Environnement's 24.7% holding was sold to the Ecofin Water & Power Opportunities Fund Plc in 2002 for GBP38million. In April 2001, Bristol Water and Wessex Water set up a joint venture to combine their customer services and billing operations.

In 2014, 45% of domestic customers had a water meter. The catchment area's population is forecast to reach 1.4 million by 2030. A new reservoir and leakage management projects are being developed to ensure security of future supplies. Leakage fell from 54,000 m^3 per day in 1998-09 to 44,000 m^3 per day in 2013-14.

Bristol Water, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Appointed business	97.5	105.3	112.3	121.8	131.0
Non-appointed business	2.7	2.3	1.5	1.6	1.4
Group turnover	100.2	107.6	113.8	123.4	132.4
Operating profit	18.6	24.5	26.9	27.3	33.1
Pre-tax profit	7.6	11.1	15.7	14.8	21.8
Post tax profit	6.8	7.2	13.4	17.4	14.2

Bristol Water was the only company to appeal against Ofwat's 2010-15 price limits. In August 2010, the Competition Commission announced that the company would be allowed to raise its bills by 17.1% above inflation during the 2010-15 period against the 9.1% set by Ofwat, allowing GBP9million in extra operating spending and GBP15million in extra capital spending. In 2011-12, capital spending totalled GBP60.4million, part of a GBP260million five year spending plan for 2010-15.

Sources:

Regulatory Accounts, 2011-2015

Annual report, 2015

Water UK, company operating statistics for 2014

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Keith Luderman (Chairman)

Luis Garcia (CEO)

Mick Axtell (CFO)

United Kingdom

Biwater Holdings Limited

Population served by service and country 2014 data Biwater	Water Only	Sewerage Only	Water & Sewerage	Total
Nicaragua	0	1,000,000	0	1,000,000
BVI	0	26,000	0	26,000
Sudan	2,000,000	0	0	2,000,000
Maldives	0	0	24,000	24,000
Total - home markets	0	0	0	0
Total - international	2,000,000	1,026,000	24,000	3,050,000
Global total	2,000,000	1,026,000	24,000	3,050,000
% home markets	0%	0%	0%	0%

Biwater was founded in 1968, providing water purification hardware to swimming pools. During the 1970s, Biwater moved into sewage treatment hardware and developed a number of export markets. In 1986, Biwater won a USD1 billion construction contract called the Malaysian Rural Water Supply Scheme which was followed by a 5 year maintenance contract. In 1989 it acquired the Bournemouth & West Hampshire Water Companies. Biwater is a privately owned company, specialising in water treatment and sewerage engineering.

Cascal was set up in 1998 for international concession contracts. In February 2008, Biwater sold 42% of Cascal NV on the New York Stock Exchange. In April 2010, SembCorp made a bid for Cascal's market listed equity. The bid was supported by Biwater and by July 2010, 92.3% of Cascal's shares were held by SembCorp. This included Bournemouth & West Hampshire Water. Biwater now has two subsidiaries – Biwater Services for framework agreements with water companies in the UK and Biwater International for work outside the UK. Framework contracts with Anglian, Severn Trent, Thames and Scottish Water will generate revenues of GBP500 million between 2010 and 2015.

Biwater's desalination facility project serving the British Virgin Islands was sold to Seven Seas Water in 2015.

Nicaragua

Contracts

Year	Location	Contract & length	People served & service
2006	Managua	3+5 year EPC & O&M	1,000,000 sewage treatment

A contract with ENCAL for an 182,000 m3 per day facility. The project is 100% held by Biwater. The contract was awarded in 2005 with construction starting in 2006 and the facility entered service in 2010. In 2014, the O&M contract was extended to cover the six pumping stations that serve the facility.

Maldives

Contracts

Year	Location	Contract & length	People served and service
2010	South Province	2+10 year DBO	26,000 desalination & sewage

The contract with Southern Utilities Limited covers Seenu and Gnaviyanu Atolls. It covers developing six RO desalination plants and four WWTWs and a sewerage system. Covering 4,500 households at present, the contract is forecast to serve 37,000 people in 2030.

British Virgin Islands

Contracts

Year	Location	Contract & length	People served and service
2010	Tortola	3+16 year BOOT	24,000, sewage

Two WWTWs have been constructed along with other wastewater infrastructure. Under the original desalination, water services and sewage contract, the water fee also includes all of the sewerage works.

Sudan

Contracts

Year	Location	Contract & length	People served and service
2008	Khartoum	3+10 year DBO	2.0 million, water provision

Biwater was awarded a EUR 88 million 200 ML/day water treatment works contract on the banks of the River Nile for Khartoum State Water Corporation entered service in 2008 and will be operated by Biwater with the management contract signed in December 2005. Funding for the facility has been provided by the Dutch Ministry of Foreign Affairs (USD58 million) and the Industrial Development Cooperation (IDC), a South African development bank. Biwater retains responsibility for the O&M work until the contract's business loans have been repaid. The first construction phase was completed in May 2010 and it entered service in April 2011.

Sources:

Biwater, The Perfect Water Company, 2015

Biwater, company web site

Cascal, IPO Document, 2008

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Sir Adrian White (Chairman)

Larry Magor (Chief Executive Officer)

Paul Stevens (CFO)

United Kingdom

Dee Valley Group Plc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Dee Valley	Only	Only	Sewerage	
England & Wales	266,000	0	0	266,000
Global total	266,000	0	0	266,000
% home markets	100%	0%	0%	100%

The Dee Valley Group (DVG) supplies water to Wrexham and parts of Clwyd in North Wales and Chester and parts of Cheshire in North West England, with sewerage services being provided by Dŵr Cymru (Glas Cymru) and North West Water (United Utilities Plc). Dee Valley Group was formed from the merger of the Wrexham Water and Chester Waterworks companies in 1994. 35% of the company's shares are held by AXA and 4% by Gartmore, two institutional investors. DVG is the last of the former Statutory Water Companies to retain its independence and a Stock Exchange listing.

The company reduced leakages from 11.3 Ml/day in 2004-05 to 10.0Ml/day in 2010-11, against its target of 10.2Ml/day. It was 9.71 ML/day in 2014-15. DVG has 112,000 domestic and 8,000 commercial customers, serving 266,000 people. 53% of domestic customers were metered in 2014. In 1990-92, DVG's household bill was 24% higher than the industry average. Since 2007, it has been 16-20% lower than the average.

The company diversified into gas supply (North Wales Energy) and pipeline maintenance (DVS Pipelines) along with an alliance with Norweb (United Utilities Plc) for marketing electricity distribution within the Dee Valley franchise area. In 2001, the company sold its energy businesses to Scottish and Southern Energy plc. The pipeline activities not directly connected with Dee Valley's operations were sold in 2002 and Dee Valley now concentrates on water supply services.

Dee Valley Group Plc, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Group turnover	21.35	22.10	22.81	23.79	24.60
Operating profit	7.78	7.23	7.26	8.57	7.45
Pre-tax profit	4.00	3.42	4.17	5.10	4.46
Post-tax profit	4.23	3.93	4.03	5.66	3.49

Sources:

Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

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John Schofield (Chairman)

Ian J A Plenderleith (CEO)

Andrew Bickerton (Finance Director)

United Kingdom

Glas Cymru Cyf (Dŵr Cymru Welsh Water)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Dŵr Cymru WW	Only	Only	Sewerage	
England & Wales	0	179,000	3,009,000	3,188,000
Global total	0	179,000	3,009,000	3,188,000
% home markets	-	100%	100%	100%

Glas Cymru was formed in response to an exceptional event. Hyder Plc was the holding company for Dŵr Cymru Welsh Water (DCWW, water and sewerage in Wales), Swalec (electricity and gas distribution in South Wales) and a number of related infrastructure service and investment activities. Despite its name (Hyder means 'confidence' in Welsh), the multi utility strategy came at a high price in terms of gearing, with debt rather than equity being used. As a result, by April 2000, the company expected gearing to rise above the levels stipulated in its debt covenants by the end of 2001 and there was inadequate investor support for a rights issue at the time.

In April 2000, Nomura International's St David's Capital made an agreed bid for Hyder at 260p per share. The bid was designed to make the company private and to secure its cash flows while ending dividend payments and selling off surplus assets. In June 2000, WPD, a US utility JV, made a hostile 300p per share bid based upon breaking Hyder up and divesting Dŵr Cymru or having its services operated by United Utilities. During August 2000 there were revised bids by Nomura at 320p, WPD at 340p and Nomura at 360p. The Stock Exchange ended the process by calling for sealed bids. WPD won with a 365p bid while Nomura retained their previous bid. The bid was completed on October 25 2000 when the Hyder name was withdrawn in favour of Dŵr Cymru.

Glas Cymru's management developed the concept of a bond financed company in 1999 and made formal offers with the support of Barclays Capital to buy DCWW from Hyder in 1999 and 2000. From the outset, the non-shareholder model was designed to lower DCWW's cost of capital through a single-purpose company designed to produce the highest quality debt rating. Glas Cymru was formally incorporated in April 2000 and became WPD's preferred bidder for DCWW in November 2000. Ofwat cleared the acquisition in January 2001 and the acquisition was finalised in May 2001. Glas Cymru is restricted to running DCWW. DCWW was acquired for GBP1.85billion against a Regulatory Asset Value of GBP2billion, and Glas Cymru raised GBP1.91billion in debt finance. The bond covenants were structured specifically to optimise the debt ratings, by minimising the risk attached to each bond issue.

Bonds in issue (GBPmillion)

Rating	2007	2009	2011	2015
A – A	800	902	907	1,974
B – A	578	637	775	0
C – BBB+	125	125	0	0

In 2001, the Class A bonds were AAA rated (Standard & Poor's and Fitch Ratings) but these fell to A as a result of problems affecting MBIA's credit rating fall from AAA to BBB+ in the wake of the 'credit crunch'. In contrast, between 2007 and 2008, the B debt was rerated from A- to A and the C debt from BBB to BBB+. All of the C debt was bought back in 2010.

The original bond issue was 70% oversubscribed, which allowed more than GBP50million pa in savings to be generated. Finance leases were subsequently raised to retire the higher coupon debt, which brought the average interest cost down from 7.0% in 2001 to 6.3% in 2005 while rising to 6.4% in 2010-11 due to a higher RPI as 63% of debt was index linked that year.

The original business plan envisaged the Regulatory Capital Value growing from GBP2, 201million in 2002 to GBP2, 732million by 2005, with net debt growing from GBP2, 028million to GBP2, 332million. The GBP400million gap between these figures forming the equivalent of shareholders' funds. By 2005, net debt was GBP2, 305million and with an RCV of GBP2, 843million, meaning that reserves were in fact GBP538million. Reserves are now GBP1, 001million, with a total net debt of GBP2, 625million against a RCV of GBP3, 626million. The long-term plan is to keep implied gearing below 70% against 93% in 2001 and 74% in 2007 and 67% in 2011. In 2015, gearing was 60%.

Since 2001, operating costs for Glas Cymru have risen by 1% against 4-31% in the other WaSCs. 67% of operating costs relate to outsourced contracts, 15% to taxation, 7% for receivables, 5% to Glas Cymru's costs and 5% on other costs.

Customer rebates worth GBP9 per household were made in 2003 and 2004. A GBP18 per customer rebate was made in 2006, along with a GBP20 rebate in 2007, a GBP21 rebate in 2008 and a GHBP22 rebate in 2009, meaning that DCWW's bills were 12% above the average for the sector in 2010 against 23% above average in 2001. In total these rebates have cost GBP150million. Discretionary spending of GBP50million on environmental and service quality enhancements during AMP3 was increased to GBP90million during AMP4.

During AMP6 as in AMP5, the company has to lower its controllable operating costs by 20%, which will mean that the tariff differential will continue to ease.

Dŵr Cymru Cyfyngedig, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water	300.8	309.7	317.9	325.1	341.1
Sewage	368.1	377.6	389.7	401.4	409.9
Non-appointed	7.7	7.7	8.8	10.0	0.0
Turnover	676.7	695.0	716.4	736.5	750.9
Operating profit	227.5	232.8	221.4	238.0	226.4
Pre-tax profit	63.2	41.1	80.5	75.7	75.5
Post-tax profit	127.2	47.0	35.2	88.3	59.1

Dŵr Cymru has performed well in terms of improving its environmental performance, service delivery and relationships with its customers and stakeholders. Between 2001 and 2005, the equivalent of 2.56million people were connected to sewage treatment works. The Green Sea/Môr Glas initiative involved allying the company's GBP650million coastal sewerage programme from 1995 to 2000 with GBP40million of targeted spending to ensure that all 71 designated bathing areas reach the EU guideline standard by 2000. In 2007, 79 out of the 80 designated bathing areas met the mandatory standard and all 81 passed in 2010, along with 46 Blue Flag awards and 47 Green Coast awards for 2011. Distribution losses have been reduced from 410Ml/day in 1996/97 to 209Ml/day in 2006-07 and 193Ml/day in 2009-10, against Ofwat's target of 225Ml/day for 2005 and 195Ml/day for 2010. In 2010-11, the hard winter meant leakage rose to 199 Ml/day against a 2015 target of 184 Ml/day, but it fell to 180 Ml/day in 2014-15.

Between November 2005 and January 2006, an outbreak of cryptosporidiosis in North Wales affected 231 people, making it the largest such water borne outbreak in Wales and the largest in the UK since 1989. As a result, 70,000 people were issued with a 'boil order' (only to drink boiled or bottled water) until the cryptosporidium could be eliminated from the system. Three quarters of those affected were supplied by the Llyn Cwellyn reservoir, although there were no elevated levels of cryptosporidium in the lake system. DCWW fitted a UV disinfection plant for the water treatment work fed by the lake and made a GBP25 ex gratia payment to each customer affected.

There were three further incidents in 2008-09. Cryptosporidium at Penybont (5,000 households had a boil water notice for three days) and Mynydd Llanedgai (45,000 households with a boil water notice for 20 days). The latter is being addressed through a GBP11million upgrade scheme. At Alwen, bacterial levels resulted in a two-day boil water notice for 70,000 customers. A GBP14million upgrade intended for AMP5 was brought forward as a result.

Sources:

Glas Cymru, Prospectus, 2001

Glas Cymru, Annual reports, 2002-2015

DWCC, Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

Contact Details

Name: Glas Cymru Cyfyngedig (Dŵr Cymru Welsh Water)

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Bob Ayling (Chairman)

Chris Jones (CEO)

Peter Bridgewater (FD)

United Kingdom

Pennon Group Plc (South West Water Plc)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
South West Water	Only	Only	Sewerage	
England & Wales	40,000	0	1,651,000	1,691,000
Global total	40,000	0	1,651,000	1,691,000
% home markets	100%	0%	100%	100%

Bournemouth Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Bournemouth Water	Only	Only	Sewerage	
England & Wales	438,000	0	0	438,000
Global total	438,000	0	0	438,000
% home markets	100%	0%	0%	100%

In 1998, South West Water Plc was renamed Pennon Group Plc. Pennon is based on the Old English for a long flag or pennant. The regulated activities are still called South West Water Limited, while Haul Waste, the waste management arm operates under Viridor Ltd (the Latin 'to make green').

South West Water Services Limited remains firmly fixed between the rock of occupying some of the poorest regions of Britain and the hard place of the demands placed on its sewerage infrastructure by its large number of designated bathing areas within its territory. South West Water supplies water and sewerage services to 0.76million domestic and commercial customers, including 1.65million people in the south west peninsula of England. This figure is boosted by up to 500,000 tourists every year given the region's popularity as a holiday destination. Over the past 10 years, the company has moved away from primary treatment and long sea outfalls, to secondary and more advanced sewage effluent treatment and 30 schemes currently include ultraviolet disinfection of effluents before discharge. 141 out of 143 designated bathing waters met the EU's mandatory standard in 2004, rising to 143 out of 144 in 2005 and all 144 in 2006, falling to 134 in 2008 due to exceptional weather conditions. Likewise, 81% of beaches achieved the guideline standard in 2004, 92% 2006, but 72% in 2008 before reviving to 90% in 2010 and 139 beaches passing at the mandatory level.

The area's rural nature is reflected by 3% of the population still obtaining their water from private springs and 12% using septic tanks. 66% of domestic customers were metered in 2009. 71% of customers were metered by 2011 with 14,198 free meters being installed in 2010-11.

A British rising block tariff?

In 2009, the company started a trial with 1,000 customers whereby metered water for essential use cost 27% less than normal and non-essential water attracts a premium rate. This three-year trial was approved by Ofwat and is the first case of a rising block tariff being used for domestic customers in the UK.

Pennon Group, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water - Turnover	448.8	474.0	498.6	520.0	522.2
Water - Operating profit	189.8	204.7	215.2	227.0	225.4
Water - Pre-tax profit	128.9	141.5	164.6	162.5	167.9
Group turnover	1,159.2	1,233.1	1,201.1	1,321.2	1,357.2
Operating profit	260.8	268.8	246.3	208.9	232.9
Group pre-tax profit	188.5	200.5	21.8	158.7	197.0
Post-tax profit	171.6	172.4	26.9	158.1	142.3
Earnings per share (pence)	48.1	48.1	7.4	38.8	32.3

Acquisition of Bournemouth Water

Biwater was the first company to acquire a UK statutory water company, East Worcester Water, in 1988. This company was sold to Severn Trent in 1993. Bournemouth Water (founded in 1863) and West Hampshire Water (founded in 1893) were both acquired in 1989 and merged in 1994. The company has 202,600 connections, serving a resident population of 438,000 which rises to 500,000 in the summer. After the acquisition of Biwater's Cascal by SembCorp it was renamed SembCorp Bournemouth Water.

Bournemouth Water Plc financial highlights, 2011-2015

YE 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water supply turnover	40.45	42.35	43.11	44.93	45.26
Non-regulated turnover	2.61	2.42	1.77	1.61	1.55
Group turnover	43.05	44.77	44.88	46.54	46.81
Operating profit	15.02	15.93	14.88	15.75	14.73
Pre-tax profit	9.07	9.56	9.74	10.49	9.84

Demand has eased from 169 ML/day in 1995-96 to 147 ML/day in 2011-12, in part due to metering with 61% of household accounts now being metered and 15% network leakage.

Meter penetration in 2007 reached 50% and 55% by 2009-10 following the installation of 26,860 meters. 18,500 further meters are to be installed by 2015. Leakage in 2009-10 was 21.8Ml/day against a 2010 target of 22.2Ml/day.

Sources:

Pennon Group, Annual reports, 1990-2015

South West Water, Regulatory Accounts, 2011-2015

Bournemouth Water, Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

Contact Details

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Sir John Parker (Chairman)

Susan Davy (Finance Director)

Chris Loughlin (CEO, South West Water Ltd.)

United Kingdom

Portsmouth Water (South Downs Ltd)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Portsmouth Water	Only	Only	Sewerage	
England & Wales	708,000	0	0	708,000
Global total	708,000	0	0	708,000
% home markets	100%	0%	0%	100%

South Downs Ltd owns Portsmouth Water Plc. Portsmouth Water supplies water to 642,000 people via 310,000 connections in 2014 in Portsmouth and parts of the Hampshire and West Sussex coast, with sewerage services being provided by Southern Water (First Aqua). The number of households in the service area is expected to rise to 340,000 by 2030. Portsmouth Water started operations 1857, building upon supply entities dating back to an Act of Parliament in 1740. The company merged with the Gosport Water Company in 1955 and acquired further entities serving Bognor Regis and Chichester in 1963.

Until December 2001, Portsmouth Water Plc was owned by Brockhampton Holdings Plc a listed company founded in 1989. In October 2001, a GBP71million management buyout by South Downs Ltd was announced. At the outset, South Downs Ltd was 15% held by Brockhampton Holdings' management, 40% by the South Downs Employee Benefit Trust and 40% by Drummond Capital, part of the Royal Bank of Scotland Group (RBS). In March 2002, RBS sold 31% of the company to Abbey National Treasury Services Plc. In February 2005, Abbey National Treasury Services Plc sold 36% of South Downs to the Secondary Market Infrastructure Fund UK LP. A GBP66million AAA rated bond issue was completed in June 2002, reducing the cost of financing to 3.635%.

Portsmouth Water Plc, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Turnover	35.52	36.67	36.28	37.11	38.27
Operating profit	6.11	6.51	6.33	5.89	5.95
Pre-tax profit	0.87	2.65	3.12	1.33	3.14
Net profit	0.69	3.67	3.64	3.66	2.34

A bulk supply contract with Southern Water came into effect in 2003-04. This contract provides Southern Water with up to 15million litres of water per day during periods of prolonged drought. A GBP1million lead reduction programme is upgrading four extant treatment plants, installing seven new treatment plants and dosing water to minimise its plumbsolvency. Full compliance with the proposed 10 mg/L standard for lead in drinking water was attained in 2003. Leakage has fallen by 40% between 1990 and 2005 to 29.9Ml/day and further to 29.2Ml/day in 2006-07 and was 29.6 Ml/day in 2010-11 and 29.5 Ml/day in 2013-14 after it had been found that earlier data has understated leakage by 6.6 Ml/day. 23% of household properties had a meter in 2014.

The company's average household charge of GBP80 in 2006-07 is the lowest in England & Wales. While it rose to GBP89 in 2008-09, this represented an 11.6% real fall in prices since 1995 against an 11% real increase for the sector as a whole. This trend has been maintained with the average 2015 bill being GBP91.

Sources:

Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

Contact Details

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Terrence Lazenby (Chairman)

Neville Smith (MD)

Nicholas John Sheeran (Finance Director)

United Kingdom

South East Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
South East Water	Only	Only	Sewerage	
England & Wales	902,000	0	0	902,000
Global total	902,000	0	0	902,000
% home markets	100%	0%	0%	100%

South East Water (SEW) was formed in 1996 when SAUR brought together its controlling interests in three statutory water companies operating in southern England: Mid Sussex Water, Eastbourne Water and West Kent Water. In 1999 Mid Southern Water, which was also owned by SAUR was integrated into SEW. All four companies had been acquired by SAUR Water Services UK between 1988 and 1990. In September 2003, SEW was sold to Australia's Macquarie Bank for GBP386million plus GBP40million in assumed debt. SEW's assets were then transferred to the Macquarie European Infrastructure Fund. In October 2006, Hastings Diversified Utilities Fund and Utilities Trust of Australia, funds that are both managed by Westpac, acquired South East Water for GBP665.4million in debt and equity. In December 2010, Hastings sold its stake to Caisse de depot et placement du Quebec which now holds 50% of the company with Westpac's Utilities Trust holding 50%.

In March 2001, Swan Capital Group Ltd. launched a management buyout of Mid Kent Holdings (MKH) backed by West LB. The GBP106million offer was declared unconditional in May 2001 and the company was subsequently delisted and MKH was renamed Swan Group. In February 2005, Utilities Trust of Australia and the Hastings Diversified Utilities Fund, funds managed by Westpac, acquired Swan Group for GBP243.1million.

The two companies are adjacent to each other and Westpac merged their activities, creating a company serving approximately 2.1million people. In May 2007, the Competition Commission agreed to this merger subject to a one-off transfer to their customers of GBP4million in 2008-09 and efficiency savings of GBP3.1million factored into the 2009 Periodic Review. The two companies were merged as South East Water in December 2007.

South East Water Ltd, Regulatory Accounts, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Unmeasured – Household	92.6	99.6	93.4	79.8	69.7
Unmeasured – Non household	2.4	2.0	2.0	1.8	1.6
Measured – Household	48.6	55.4	68.0	82.9	93.3
Measured – Household	36.4	33.9	35.9	39.7	40.5
Others	4.7	4.6	4.8	5.2	4.9
Turnover	190.6	200.1	207.9	213.6	214.7
Operating profit	93.6	99.1	101.5	96.2	92.8
Pre-tax profit	36.1	42.2	41.7	51.4	48.4
Net profit	41.4	43.0	39.1	59.6	40.1

8,205 meters were installed in 2010-11 at a cost of GBP 4.8 million. The company is planning to fit 375,000 water meters in the region between 2011 and 2020, raising the metered connection date from 43% to 70% by 2015 and 90% by 2020. The company believes that its 2010-11 leakage level of 95 Ml/day is at its economic level.

South East Water

SEW serves a total of 1.5million people, including 500,000 domestic and 45,000 commercial and industrial customers. Other activities include Pipeway, Dynamco (water engineering, consulting and testing) and Optimum Information Systems Limited.

In 2004-05, the company started a pilot desalination plant in Newhaven. This is designed to augment supplies during peak demand and will provide 9.5million L/day when fully operational from 2006. At the same time, GBP25million is being spent constructing a 29km transfer pipeline connecting the company's Darwell Reservoir to Southern Water's Bewl Reservoir. 13,500 meters were installed in six months during 2006-07, compared with an annual average of 3,500. In 2004, the company was refinanced, including raising GBP366million in debt via a 15-year floating rate and a 25-year fixed rate bond issue.

Mid Kent Water

Mid Kent Water was founded in 1898, supplying 12 parishes in the mid Kent region. It became a Plc through the formation of Mid Kent Holdings Plc in 1989. The company has 218,820 household and 23,800 business connections, serving 594,000 people in total. Mid Kent Water supplies water to Maidstone and parts of Kent in South East England, with sewerage services being carried out by Southern Water (First Aqua). A bitterly contested bid in 1996 by SAUR Water Services (Bouygues) and the then called General Utilities Plc (Veolia Environnement) was blocked by the Monopolies and Mergers Commission (MMC, now the Competition Commission) in January 1997. The two companies sought to acquire Mid Kent Water because of its relatively abundant water resources, which were adjacent to companies owned by them that have been facing long time water shortages.

Leakage fell from 44Ml/day in 1992 to 27Ml/day by 2007. There is a gradual shift towards measured water supplies, which accounted for 45% of water supply revenues in 2003-04 and 46% in 2004-05. During the summer of 2005, a hosepipe ban was brought into force due to resource depletion. The ban was only lifted in the summer of 2007.

Non–regulated activities held by the Swan Group include Halcrow Water Services (consulting), Eclipse (testing and analytical services), Inenco Group (utility consulting) and Waterlink Services (plumbing). Halcrow Water Services was formed in 1995 as a joint venture between the Halcrow Group and Mid Kent Water. The joint venture has carried out water projects in the UK (Scotland, Northern Ireland and southern England) leakage reduction projects in Venezuela and Cyprus and other projects in India, Ecuador, Poland and Indonesia.

Sources:

Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

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Gordon Maxwell (Chairman)

Paul Butler (Managing Director)

Joanne Stimpson (Finance Director)

United Kingdom

South Staffordshire Plc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
South Staffs Water	Only	Only	Sewerage	
England & Wales	1,303,000	0	0	1,303,000
Global total	1,303,000	0	0	1,303,000
% home markets	100%	0%	0%	100%

South Staffordshire provides water to the English West Midlands, including Walsall and West Bromwich. Sewerage services are provided by Severn Trent Plc. South Staffordshire Water Plc was founded in 1853, but only floated in 1991, making the company a late entrant to the stock market when compared with many of its peers. In April 2004, South Staffordshire Group was split into South Staffordshire Plc (regulated and non-regulated water activities) and Homeserve Plc (other non-regulated activities). In November 2004, the company was acquired by Arcapita Bank of Bahrain for GBP143million and was subsequently delisted. In October 2007, Arcapita sold the company to the Alinda Infrastructure Fund, a fund managed by Alinda Capital Partners of the USA. South Staffs was subsequently acquired by Kohlberg Kravis Roberts' Global Infrastructure Fund.

In 2011, South Staffs acquired Cambridge Water. South Staffs integrated Cambridge Water into its licence in 2013.

South Staffordshire Plc, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water - South Staffs	84.5	87.7	92.3	95.4	98.8
Water - Cambridge	-	-	-	22.6	23.5
Non appointed	3.3	3.4	2.4	3.6	4.6
Group turnover	87.8	91.1	94.7	122.5	126.9
Operating profit	20.5	22.2	24.6	34.0	35.7
Pre-tax profit	12.9	12.6	14.7	22.8	24.2
Post-tax profit	11.5	9.4	12.1	21.3	16.1

The company supplies 510,000 customers, with 56,500 being connected to metered supplies, along with 38,000 commercial customers. The company's average bill of GBP 126 in 2010-11 was 25% below the industry average, and the third lowest water bill in the UK private sector and the company has a policy of exceeding service and infrastructure targets set by Ofwat.

Cambridge Water Plc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Cambridge Water	Only	Only	Sewerage	
England & Wales	330,000	0	0	330,000
Global total	330,000	0	0	330,000
% home markets	100%	0%	0%	100%

The Cambridge University and Town Waterworks was founded in 1853 and was floated as Cambridge Water Plc in 1996. Cambridge Water supplies water to 330,000 people (133,000 customers) in the city of Cambridge and certain surrounding districts, with sewerage services being provided by Anglian Water Plc. The population in the service area has increased by 38,000 since 1995. The water and gas and electricity activities were spun off into separate companies and the latter activities were sold to Scottish and Southern Electricity in 2003 for GBP4million. 60% of customers have water meters in 2008, compared with 51% in 2002 and demand for metering is rising by 4% pa. In 2009, 90% of the population lived within district metered areas against 37% in 2006.

There were 1,300 new connections in 2008-09, 871 in 2009-10 and 1,197 in 2010-11. In addition, there were 1,320 free meters installed in 2008-09, 1,288 in 2009-10 and 1,197 in 2010-11. Leakage at 13.7 Ml/day in 2010-11 was in line with Ofwat's targets.

In April 2004, Cheung Kong Infrastructure of Hong Kong acquired Cambridge Water Plc of the UK from Spain's Union Fenosa for GBP51.4million. Union Fenosa had in turn acquired Cambridge Water for GBP57million in 1999. In August 2011, CKI sold Cambridge Water to HSBC as a precondition for acquiring Northumbrian Water Plc. HSBC has stated that it is holding Cambridge Water as a custodian-owner and no changes at the company are foreseen. In 2011, Cambridge Water was acquired by South Staffordshire Water. Cambridge now operates under South Staffordshire's licence.

Sources:

South Staffs Plc, Annual Reports, 2010-2015

South Staffs Water, Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

Cambridge Water, Annual Reports, 1991-1999

Cambridge Water, regulatory reports, 2003-2011

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Adrian Page (Chairman)

Phillip Newland (Managing Director)

Tim Orange (Group Finance Director)

United Kingdom

Southern Water Plc (First Aqua)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Southern Water	Only	Only	Sewerage	
England & Wales	0	2,019,000	2,438,000	4,457,000
Global total	0	2,019,000	2,438,000	4,457,000
% home markets	0%	100%	100%	100%

Southern Water provides water services to 2.5 million people (1,100,000 households) in south and south east England. The company provides sewerage services to a further 2.1 million people (1.9 million domestic and business connections in total) who are served by the following water only companies: Folkestone and Dover Water, Mid Kent Water, South East Water, Portsmouth Water, Bournemouth & West Hampshire Water Cholderton and District Water, (not covered in this book, 2,000 people served) and Sutton and East Surrey Water. Since 1989, the company has reduced distribution losses from 26% to 11%, saving 148Ml per day. Leakage in 2006-07 was 82Ml/day against Ofwat's target of 93Ml/day. The leakage target for 2010-11 was 83 Ml/day but the harsh winters in 2010 and 2011 means exceptional water losses were found, while 22,000 leaks were repaired in 2010-11 and leakage rose to 92 Ml/day. Leakage was 82 Ml/day in 2014-15. 33% of households were metered in 2007, rising to 41% in 2011. There were 906,313 meters in 2015, covering approximately 83% of the population. Household water consumption fell from 154 l/cap per day in 2010-11 to 135 l/cap per day in 2014-15.

Southern Water was acquired by Scottish Power in 1996 following a hostile take-over. Scottish Power sold Southern Water to the Royal Bank of Scotland's First Aqua consortium in April 2002 for GBP2, 050million, equivalent to SW's regulatory value. As part of this, Veolia Water UK (the UK water arm of VE) was granted an option to acquire 20% of Southern Water and in turn to launch a full bid for the company. After political pressure in the UK prevented VE's bid proceeding, VE consolidated a partial acquisition. First Aqua was acquired by Southern Water Investments in March 2003. In turn, Southern Water Capital (49% held by Royal Bank of Scotland and 51% by institutional investors) holds 75% of Southern Water Investments, with VE holding the other 25%. VE sold its holding to RBS in 2007 and in October 2007, the company was acquired from RBS for GBP4.195billion by Australia's Challenger Infrastructure Fund (27%), JP Morgan Asset Management (USA, 32%), UBS (Switzerland, 18%), Hermes (UK, 4%) and a group of seven Australian funds advised by Access Capital (Australia, 18%). The price represented a 27% premium to Southern Water's regulated asset value.

Southern Water Services Limited, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water turnover	161.7	178.9	194.7	200.2	198.7
Sewerage turnover	480.4	532.1	578.4	599.5	623.2
Total turnover	647.1	716.2	778.7	806.2	828.6
Operating profits	191.5	271.6	331.0	306.2	328.3
Pre-tax profits	12.1	84.9	179.1	139.5	203.9
Post-tax profits	32.0	79.9	156.9	169.8	167.2

In 2003, First Aqua was refinanced based upon three AAA wrapped bond issues (GBP838million) and three A- bonds (GBP623million) and one BBB bond (GBP250million). In 2009, the company had GBP 2,910 million in Class A debt, GBP250 in Class B debt and GBP386million in Artesian finance.

Sources:

Regulatory Accounts, 2011-2015

Analyst's presentations, 1990-1996

Water UK, company operating statistics for 2014

Contact Details

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Robert Jennings (Chairman)

Matthew Wright (CEO)

Michael Carmedy (CFO)

United Kingdom

Sutton & East Surrey Water Plc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Sutton & East Surrey	Only	Only	Sewerage	
England & Wales	670,000	0	0	670,000
Global total	670,000	0	0	670,000
% home markets	100%	0%	0%	100%

Sutton & East Surrey Water supplies water to Croydon, Sutton and East Surrey and parts of Kent and Sussex in South East England, with sewerage services being provided by Thames Water Plc. Sutton and East Surrey Water Plc was formed in 1996 through the merger of Sutton District Water Ltd and East Surrey Water Ltd. The company dates from 1862 when the Caterham Spring Water Company was founded. Caterham merged with Kenley Water Co. to form East Surrey Water in 1885. Sutton & Cheam Water Co was founded in 1863 and was taken over by Sutton District Water in 1871. East Surrey merged with Leatherhead & District Water in 1927, the Chelsham and Warlingham Water Company and the Limpsfield and Oxted Water Company in 1930 and the Dorking Water Co in 1959.

Aqueduct Capital a special purpose vehicle formed by Deutche Bank and owned by a group of Canadian public sector pension funds acquired Sutton & East Surrey in 2007. The company is now jointly owned by Sumitomo Corporation and Osaka Gas (Japan). The company was acquired by Sumitomo from Aqueduct for GBP165 million in 2013.

Sutton & East Surrey Holding Plc, profit and loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Water provision	51.76	55.85	57.50	60.70	60.80
Other activities	2.56	1.31	1.34	1.53	1.51
Group turnover	54.32	57.16	58.84	62.25	62.31
Operating profit	15.02	16.03	16.67	17.82	17.39
Pre-tax profit	4.17	4.49	6.92	7.32	8.45
Post-tax profit	3.32	2.93	5.12	7.21	5.80

Sutton & East Surry supplies water to 268,000 households and 17,000 businesses. 12,900 domestic properties were connected to water meters between 1998 and 2001. In recent years, the take up has been at 6,400 meters per annum; 8,280 in 2007-08 and 7,224 in 2008-09. A further 32,000 meters were installed between 2010 and 2015, meter penetration reaching 48% in 2015.

While Ofwat has stated that their economic level of leakage is 27.2Ml/day, in 2006-07, the company reduced it to 24.0Ml/day and has subsequently been kept at 24.5Ml/day since despite a 30% increase in leaks during the cold patch in December 2010. Leakage was 24.2 Ml/day in 2014-15.

The company's 'Tap into Savings' project with Waterwise covering 746 households resulted in an average water saving of 47 litres per property per day in 2010.

Sources:

Regulatory Accounts, 2011-2015

Water UK, company operating statistics for 2014

Contact Details

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Jeremy Pelczer (Chairman)

Anthony Ferrar (MD)

John Chadwick (Finance Director)

THE AMERICAS

Argentina

Aguas De Corrientes

Population served by service and country 2014 data Aguas de Corrientes	Water Only	Sewerage Only	Water & Sewerage	Total
Argentina	161,000	0	473,000	634,000
Global total	161,000	0	473,000	634,000
% home markets	100%	0%	100%	100%

Latinaguas was founded in 1990 and in 1991 it became the first company to gain a water concession in Argentina. Until 2009, the company was the largest privately held Latin American owned Water Company. Projects have also been carried out in Brazil, Peru, Nicaragua, Dominican Republic and Ecuador. Latinaguas is owned by the Chamas family, who specialise in construction work in north east Argentina. Four concessions serving 2.1million people were gained between 1999 and 2005. Two of which have been bought back by the state. In addition, 85% of the company's stake in Aguas de Tumbes was acquired by Aguas de Manizales of Colombia in 2011.

Aguas de Corrientes

This concession, gained in 1991 was the first water and wastewater concession awarded in Argentina. Aguas de Corrientes SA covers 145,500 customers in 10 cities (Saladas, Goya, Mercedes, Esquina, Paso de los Libres, Curuzú Cuatiá, Santo Tomé, Monte Caseros and Bella Vista) of the province of Corrientes. The company was the first water operator to gain the ISO9002 certification for customer service. Three districts Empedrado, Santa Lucía and Yapeyú were incorporated in 2006. This contract is now reported separately from the rest of Latin Aguas, but it remains under the control of the Chamas Group.

2004	Aguas de Corrientes
Water coverage	N/A
Customers	145,500
People served	634,233
Sewerage coverage	N/A
Customers	110,076
People served	473,329
Revenues (ARS million)	30.5

Source: Latin Aguas, corporate presentation, 2004

Aguas de Tumbes (private)

The Tumbes concession was awarded to Latin Aguas in October 2005. It covers 14 locations in the Tumbes area and has two water treatment works and 11 wastewater treatment works. 85% of the company's stake in Aguas de Tumbes was acquired by Aguas de Manizales of Colombia in 2011.

Aguas de Salta (state - Aguas del Norte)

The 30 year concession for water and wastewater services to Salta province was awarded to Aguas de Salta in 1998. It was bought back by the state in 2009.

Aguas de La Rioja (State)

The contract for the Province of La Rioja (population 280,198) was awarded to Aguas de La Rioja SA in 1999. The contract was bought back by the state in 2010.

Sources:

Latin Aguas, company web site

Aguas de Corrientes, web site

Contact details:

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Tel: +54 3783 423939

Web: www.aguasdecorrientes.com

www.aguasdemanizales.com.co

Dr. Jorge Chamas (President, Chamas)

Pablo Chamas (President, Aguas de Corrientes)

Brazil

Grupo Aguas Do Brasil

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
Aguas do Brasil	Only	Only	Sewerage	
Brazil	0	2,323,000	1,497,000	3,820,000
Global total	0	2,323,000	1,497,000	3,820,000
% home markets	0%	100%	100%	100%

Grupo Aguas do Brasil is owned by Queiroz Galvao Participacoes Concessoes SA and Cowan Construction SA. The company was founded in 1997. Aguas do Nova Friburgo (Resende) and Sanej (Jau) were acquired from Tyco International after its sale of Earth Tech to AECOM (USA, see company entry) in 2009. To date ten concessions have been gained, four in Sao Paulo (including Sanear, serving Aracatuba and Aguas de Esmeralda serving Ourinhos) and six in Rio de Janeiro.

Grupo Aguas do Brasil: Principal contracts

Year	Location	Contract & length	People served and service
2012	Paraty	30 year concession	26,000 water & wastewater

100% water coverage with the aim of 80% sewerage & sewage treatment after 10 years and full coverage after 20. BRL 130 million to be spent during the contract.

2009	Rio	30 year concession	1,700,000 wastewater

Foz Aguas 5 is a partnership between Aguas do Brasil and Foz do Brasil. It covers sewerage and sewage treatment for 21 districts in the West Zone of Rio de Janeiro. BRL 2.7 billion is to be spent expanding services from 1.7 to 3.0 million people over 30 years. Sewage treatment coverage will rise from 5% to 35% by 2017.

2009	Aracoiaba	25 year concession	27,000 water & wastewater

Aguas de Aracoiaba was awarded the concession serving Sao Paulo's Aracoiaba Sierra in December 2009. Water treatment capacity has been expanded by 50%, with water coverage rising from 83% in 2009 to 100% by 2010. The concession is now addressing sewerage and sewage treatment issues.

2008	Resende	30 year BOT	114,000 water & wastewater

Resende is in Rio de Janeiro. The concession was awarded in January 2008 and BRL136million is to be invested in the system over the contract, 60% in the first six years. The sewage treatment rate increased from 6% in 2008 to 54% in 2009 and is to reach 57% by the end of 2010. The water treatment capacity is being expanded 35% to 60,000m^3 per day. 46,033 water customers and 44.123 sewerage customers.

2000	Jau	25 year DBFO	131,000 wastewater

Jau is in Sao Paulo state. The Sanej contract is worth USD 80million. Sewage treatment rates reached 80% in 2008 and 100% in 2010.

1999	Goytacazes	45 year concession	427,000 water & wastewater

Campos dos Goytacazes is in Rio de Janeiro. BRL 120million was invested by Aguas do Paraiba in the first ten years, with a further BRL 100million budgeted for 2010-20. Wastewater treatment started in 2004. 95% of the population are connected to the water service and 65% to sewerage and sewage treatment, with the aim of 90% coverage by 2013.

1999	Niteroi	45 year concession	492,000 wastewater

BRL 250million is to be invested in expanding and upgrading the city's water and sewerage infrastructure, including four new wastewater treatment works to date. Niteroi is in Rio de Janeiro. Water and sewage collection and treatment rates have increased from 72% and 35% respectively in 1999 to 100% water coverage in 2003 and 90% sewerage and sewage treatment coverage in 2007. The contract has been extended to 45 years.

2009	Nova Friburgo	25 year concession	182,000 water & wastewater

Nova Friburgo is near Rio de Janeiro. Aguas de Nova Friburgo is responsible for constructing a new sewage treatment facility, expanding the existing water treatment plant, providing ongoing O&M services for plants and distribution and collection systems, installing water meters, and managing the utility billing program. USD 70million of investments will be made during the operating period. The first wastewater treatment plant, serving 50,000 people entered service in 2010. By 2012, all inhabitants received treated water. The contract can be extended for a further 25 years.

1998	Lakes Region	25 year concession	200,000 water & wastewater

Aguas de Juturnaiba serves the cities of Araruama, Saquarema and Silva Jardim in the Lakes Region of Rio de Janeiro. The proportion connected to water increased from 65% in 1998 to 95% by 2009, with 60% currently connected to sewerage and sewage treatment (0.7% in 2001) which is being increased to 70%.

2012	Votorantim	30 year concession	109,000 water & wastewater

Aguas de Votorantim will invest BRL 90 million in upgrading facilities and reducing 49% leakage losses. Wastewater treatment has risen from 62% to 92% of wastewater collected.

2015	Para de Minas	25 year concession	90,000 water & sewage

BRL 230 million to be invested, BRL 90 million in the first two years, when tariffs are being lowered.

2012	Manuas	32 year concession	40,000, water & wastewater

A contract being run with Solvi's Aguas de manuas, Manuas Ambiental is mainly for industrial services, but also covers 40,000 people.

1998	Petropolis	25 year concession	282,000 water & wastewater

Aguas do Imperador. Petropolis is in Rio de Janeiro and the Aguas do Imperador concession was the first to be gained by Aguas do Brasil, in January 1998. BRL 80million was invested between 1998 and 2009. 100,000 have been added to the water network and 150,000 to sewerage and sewage treatment and access to treated water has increased from 3% in 1998 to 100% by 2011.

Source:

Company web site

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Name: Grupo Aguas do Brasil

Web: www.aguasbr.com.br

Claudio Abduche (Director-General)

Antonio Mendes (Director)

Brazil

Aegea (Grupo Equipav SA)

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
AEGEA	Only	Only	Sewerage	
Brazil	81,000	338,000	2,354,000	2,773,000
Global total	81,000	338,000	2,354,000	2,773,000
% home markets	100%	100%	100%	100%

Equipav is a construction company that was founded in August 1960, in Campinas, in the State of São Paulo. The company has been involved in water construction projects since the outset, starting with the waste water system for the city of Flórida Paulista. The company has diversified into other areas including waste collection (Colepav, founded in 1993) and managing road concessions. Water and wastewater services are operated by AEGEA Saneamento which was founded in 2010.

Between 2012 and 2014, the World Bank's International Finance Company (IFC, 2012), Singapore Sovereign Wealth Fund (GIC, 2013) and the IFC Asset Management Company (2014) became external investors in AEGEA.

At the end of March 2015, AEGEA controlled 38 municipal concessions in six states serving 2.7 million people in 840,000 households. The concessions are supported by Engepav Servicos, which offers engineering and consulting services. The principal contract companies are:

Aguas de Sao Francisco do Sul

Aguas de Sao Francisco

Aguas do Mirante

Aguas de Matao

Pro Lagos (5 municipalities)

Aguas Gariroba

Aguas de Barra do Garcas

Nascentes do Xingu (26 municipalities)

In 2015, AEGEA was looking at a further 82 potential projects in 12 states, covering 26 million people.

AEGEA, Profit & Loss Account 2010-2014

Y/E 30/12	2010	2011	2012	2013	2014
Households (000)	603	649	935	1,031	1,247
Population served (000)	-	1,159	1,900	2,200	2,500
Municipalities served	-	6	25	29	35
Water (million m^3)	62.4	66.2	85.0	93.0	108.2
Sewage (million m^3)	24.7	26.9	46.4	64.7	71.9
Water supply services	-	-	-	420.4	480.3
Indirect water services	-	-	-	35.7	41.9
Sewerage services	-	-	-	99.1	164.8
Indirect sewage services	-	-	-	9.8	6.9
Service income (BRL million)	-	-	-	0.0	0.5
Construction income (BRL million)	-	-	-	209.1	370.5
Gross revenues(BRL million)	-	-	-	774.1	1,064.9
Net revenues(BRL million)	272.9	327.1	390.0	700.8	970.0
Operating income (BRL million)	119.8	138.3	182.7	184.9	238.8
Net profits(BRL million)	103.5	68.7	98.8	80.6	112.2

In October 2005, CIBE Saneamento (Equipav and Heber Participaçoes/Bertin) acquired Agbar's holding in Aguas Guariroba and 31% of Copel's holding. Copel continues to hold 10% and local investors 9%. CIBE's 81% holding in Aguas Guariroba was acquired for BRL 80million.

AEGEA: Principal contracts

Year	Location	Contract & length	People served & service
1998	Dos Lagos	25+18 year concession	384,000 water & sewerage

Prolagos serves five cities in the "Região dos Lagos" (Region of the Lakes) in the state of Rio de Janeiro: Cabo Frio, Búzios, São Pedro da Aldeia, Iguaba Grande e Arraial do Cabo. The concession was originally awarded to IPE Aguas de Portugal in 1998 and AG acquired Prolagos from IPE Aguas de Portugal in December 2007. BRL 300million was spent between 1998 and 2010 on the construction of wastewater treatment works and service extension. Water coverage has increased from 30% in 1998 to 91% by 2007, with 76% served by sewerage and sewage treatment in 2014. Since the beginning of its operations, the company has invested more than BRL 300 million (about USD 150 million) in sanitation, construction of water treatment and sewage networks and expansion of collection and distribution.

2000	Campo Grande	30+30 year concession	843,000 water & sewerage

Agbar's Interagua was awarded a water and sewerage contract for Campo Grande in July 2000, which started operations in October 2000 as Aguas Guariroba. Aguas Guariroba was subsequently acquired by AGEA. Total investment between 2000 and 2010 was BRL 517million. Turnover was EUR27.7million in 1999. The concession currently serves 99% of the population with water and 70% with sewerage (29% in 2005) with all collected sewerage being treated.

In April 2012, the company launched the "Esgoto 100%" program, with investments of BRL 636 million (about USD 318 million), which in 14 years, expect to universalize sewer service at the capital of Mato Grosso do Sul, collecting and treating 100% of sewer to 100% of the population.

2012	Piracicaba	30 year concession	338,000 sewerage

Aguas do Mirante. This USD 151million concession involved expanding coverage in the city from 98% to 100% along with 100% sewage treatment against 35% in 2012. Sewage treatment rose from 36% in 2012 to 68% in 2014. The city is in Sao Paulo state and the concession will be operated by ACEA Saneamento.

2015	Timon	30 year concession	163,000 water & sewerage

Awarded to the company's Aguas de Timon subsidiary.

2013	Barcarena	30 year concession	113,000 water & sewerage

Aguas de Sao Francisco will invest BRL 209 million over the concession's life.

2013	Matao	30 year concession	81,000 water & sewerage

BR 90 million to be invested by Aguas de Matao.

2012	Penha	30 year O&M	81,000 water

Nacional Aguas e Sanemento. A 50% stake acquisition in a service contract with the municipality of Penha. Covering 13,000 households. The contract is for 100% coverage and has a five year renewal option.

2014	Sao Francisco do Sul	35 year concession	47,000 water & sewerage

Aguas de Sao Francisco do Sul

2012	Mato Grosso	30 year concession	723,000 water & sewerage

AEGEA acquired a controlling interest in Nacentes do Xingu which held 17 concessions at the Mato Grosso State in 2012. Average concession term is 30 years. By 2014, 22 municipalities were covered in Mato Grosso, one in Para and one in Rondonia, including:

Águas de Sorriso is the concessionaire of water and sewerage services at the municipality since June 14, 2000. 66,696 inhabitants, and the water supply is available to 100%; Sewerage coverage is 17% of the residents.

Águas de Primavera do Leste is the concessionaire of sanitation services at the municipality since August 25, 2000. The water supply is available to 100% of the population through 14,238 connections; Sewage service is available to 50% of the population.

Águas de União do Sul is the concessionaire of sanitation services at the municipality since August 23, 2000. The water supply is available to 100% of the population, through the 900 connections.

Águas de Santa Carmen is the concessionaire of water services in the municipality since December 7, 2001. The water supply is available to 100% of the population, through 1,056 connections.

Águas de Peixoto de Azevedo is the concessionaire of sanitation services in the municipality since September 1, 2000. The water supply is available to 100% of the population.

Águas de Campo Verde is the concessionaire of sanitation services in the municipality since December 29, 2001. The water supply is available to 100% of the population, through 9,305 connections.

Águas de Vera is the concessionaire of sanitation services in the municipality since February 1, 2002. The water supply is available to 100% of the population, through 1,783 connections.

Águas de Marcelândia is the concessionaire of sanitation services in the municipality since June 30, 2003. The water supply is available for 96.91% of the population, through 2,700 connections.

Saneamento Pedra Preta is the concessionaire of sanitation services in the municipality since December 19, 2003. The water supply is available for 99.49% of the population, through 4,649 connections.

Águas de Carlinda is the concessionaire for water service in the municipality since February 1, 2004. The water supply is available to 100% of the population, through 1,500 connections.

Águas de Claudia is the concessionaire of sanitation services in the municipality since April 1, 2004. The water supply is available to 99.38% of the population, through 2,850 connections.

Águas de Poconé is the concessionaire of water supply in the municipality since June 19, 2004. The water service is available to 96.91% of the population, through 5,303 connections.

Saneamento de Jangada is the concessionaire of water and sewerage services in the municipality since July 1, 2004. The water supply is available to 95.71% of the population, through 1,127 connections.

Águas de São José do Rio Claro is the concessionaire of sanitation services in the municipality since October 16, 2006. The water supply is available to 97.63% of the population, through 3,987 connections.

Águas de Jauru is the concessionaire of sanitation services in the municipality since April 1, 2012. The water supply is available to 97% of the population through 2,000 connections.

Águas de Nortelândia is the concessionaire of sanitation services in the municipality since February 1, 2002. The water supply is available to 100% of the population, through 1,783 connections.

Águas de Porto Espiridião is the concessionaire of sanitation services in the municipality since December 21, 2012. The water supply covers 100% of the population, through 1,533 connections.

Sources:

AEGEA Annual Reports, 2011, 2012, 2013, 2014

AEGEA, CSR Report, 2013

AEGEA, Investor presentation, 2015

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Hamilton Amadeo (Chairman & CEO, AEGEA)

Flavio Martins Tarchi Crivellari (CFO, AEGEA)

Brazil

Riovivo Engenharia Ambiental LTDA

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Riovivo	Only	Only	Sewerage	
Brazil	0	200,000	0	200,000
Global total	0	200,000	0	200,000
% home markets	0%	100%	0%	100%

Riovivo Engenharia Ambiental LTDA was acquired by Cejen Engenharia in March 2008. The company was used as a vehicle to take over the joint venture Cejen (Fidem) ran with Anglian Water Group (AWG) of the UK.

In 1994 AWG's Anglian Water International set up Cejen-Anglian (37.5% held), a joint venture with Fidem owning and operating a deep shaft industrial effluent treatment work in the city of Brusque with a population equivalent capacity of 400,000. The facility serves 70,000 customers or approximately 200,000 people. Problems relating to the contract meant that a GBP 7million write down of assets/development costs was made in 1996/97. Nevertheless, the BOOT facility has been operational since 1996.

In July 2008 Riovivo acquired the shares of the treatment company from AWG and is now responsible for the treatment of effluents in the city of Brusque, in the Vale do Itajaí. Riovivo aims to make Brusque the first city in Brazil with 100% industrial and domestic sewage treatment. The plant has a capacity of 25,000m^3 per day and is currently receiving 10,000m^3 of wastewater a day. The company aims to take over the management of the city's sewerage system which is seen as being in a poor condition. After that, the company aims to expand its operations across the region of Vale do Rio Itajaí, an area with approximately 450,000 inhabitants.

Sources:

AWG investor presentations, 1994-96

AWG Annual Report, 1997

Riovivo company web site

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www.cejen.com

Ceciliano Ennes (President)

Brazil

Solvi

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Solvi	Only	Only	Sewerage	
Brazil	2,000,000	0	400,000	2,400,000
Global total	2,000,000	0	400,000	2,400,000
% home markets	100%	0%	100%	100%

Solvi is a Brazilian engineering firm which is active in waste management and water and wastewater service provision. It serves 85 municipalities in Brazil and five in Peru. Solvi has held 100% of Aguas do Amazonas since 2003 via a 30 year concession. The original contract to manage the water concession of the city of Manaus, the capital of Amazonia in Brazil was awarded to Suez in June 2000 after five postponements. Suez acquired 90% of Manaus Saneamento for EUR 111million, along with EUR 300million in capital spending commitments over the concession's life. In 2000, the concession generated revenues EUR 42million. Investments concentrated on improving drinking water services, expanding them to peri-urban areas and developing wastewater treatment services which reached 4% of the population in 2000 and 10% by 2003. Suez sold its stake to Solvi in 2003.

In 2013 an agreement was reached to extend the contract to the east and north parts of the city, adding 500,000 to Solvi's coverage. As of 2013, sewerage reached 60% of the population.

Solvi, Profit & Loss Account 2010-2014

Y/E 30/12	2010	2011	2012	2013	2014
Population served – water	1,730,416	1,751,350	1,876,589	1,800,000	2,400,000
Population served – sewerage	196,285	307,964	336,978	-	-
Water treated (million m^3)	219	222	249	-	-
Sewage treated (million m^3)	22	53	383	-	-
Water service coverage	98%	-	-	-	-
Sewerage service coverage	22%	-	-	-	-
New connections	36,093	-	-	-	-
Water revenues (BRL million)	230.0	-	-	-	351.8
Revenues (BRL million)	1,421.5	1,719.3	12,445.6	2,599.9	2,656.6
EBITDA (BRL million)	152.3	291.4	326.1	348.6	648.6
Net profits (BRL million)	14.5	180.6	273.3	212.8	479.6

Sources:

Solvi Annual Reports, 2012, 2013, 2014

Suez corporate releases and presentations, 2000-2003

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Carlos Villa (President)

Célia Francini (CEO)

Celso Pedroso (Finance Director)

Tadayuki Yoshimura (Technical Director)

Luiz Augusto Rosa Gomes (CEO, Solvi Saneamento)

Canada

Algonquin Power

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
Algonquin Power	Only	Only	Sewerage	
USA	437,000	124,000	0	561,000
Global total	437,000	124,000	0	561,000
% home markets	0%	0%	0%	0%

Algonquin Power & Utilities Corporation operates a portfolio of renewable energy utilities and regulated utility operations in North America. Liberty Utilities provides regulated water, natural gas and electricity utility services to 481,000 customers in ten states. In 2011, 60% of Liberty Utility's earnings came from water activities. This is anticipated to ease to 34% by 2016 due to the company's acquisition of natural gas activities in New Hampshire, Missouri, Iowa and Illinois.

Liberty Utilities had 95,000 customers in 2013. 78,000 connections pre Pine Buff, including 66,550 in Arizona for water and wastewater (31,750 for wastewater and 34,800 for water) and 11,500 in Texas (6,000 wastewater and 5,500 for water). The Pine Buff acquisition in 2013 added 17,000 customers in Arkansans and the White Hall acquisition in 2014 added a further 1,900 in the same state. In 2015, there will be a minimum of 171,000 connections due to the acquisition of Park water.

In February 2013 the company acquired United Water Arkansas, the Pine Bluff Water System from Suez Environment for USD28 million. The System is located in Pine Bluff, Arkansas and serves approximately 17,700 water distribution connections.

The White Hall Water System, a water and wastewater utility in White Hall, Arkansas was acquired in March 2014 for USD4.5 million. The System serves approximately 1,900 water distribution and 2,400 wastewater treatment customers.

In September 2014 Algonquin acquired Park Water from Western Water Holdings, part of Carlyle Infrastructure for USD327 million, including USD77 in debt. Its three utilities serve 243,000 people via 74,000 customer connections.

Park Water Co was founded in 1937 serving 128,000 people in parts of Los Angeles, California along with its subsidiaries Mountain Water in Missoula (Montana, founded in 1979, serving some 50,000 people) and Apple Valley Ranchos Water Company in Apple Valley (California, founded in 1945, serving 65,000 people). In 2011, it was acquired from the Wheeler family by Western Water Holdings LLC; a subsidiary of Carlyle Infrastructure Partners a USA based private equity company. It is understood that Park water was acquired for USD102million.

Park Water LA operates three water systems in southeast Los Angeles County. These are the Compton / Willowbrook (Compton West) Water System, the Lynwood (Compton East) Water System, and the Bellflower/Norwalk Water System. All the company's 28,000 meters will be converted at an automatic meter reading (AMR) system between 2004 and 2018. 21% of its water comes from groundwater, 77% is imported and 2% via recycling. The population of the company's service area is forecast to grow to 148,800 by 2035.

Algonquin Power – profit and loss account 2010-2014

Y/E 31/12 (CAD million)	2010	2011	2012	2013	2014
Wastewater revenues	20.9	23.0	18.3	24.3	26.1
Water revenues	16.5	21.3	19.0	31.3	32.6
Total turnover	180.4	276.6	348.8	675.3	943.6
Operating profits	23.8	33.6	66.8	154.9	206.5
Net income	18.0	23.4	14,5	20.3	75.7
Earnings per share (CAD)	0.19	0.20	0.11	0.26	0.37

Sources:

Algonquin Power, Annual Reports, 2012 & 2014

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Ken Moore (Chairman)

Ian Robertson (CEO)

David Bronicheski (CFO)

Canada

Aquatech Water Management Services Inc

Population served by service and country				
2003 data	Water	Sewerage	Water &	Total
Aquatech	Only	Only	Sewerage	
Canada	88,500	768,000	0	856,500
Global total	88,500	768,000	0	856,500
% home markets	100%	100%	0%	100%

Aquatech Water Management Services (AWMS, a separate entity from Aquatech International Corp of Pennsylvania, USA) was founded as Société d'Aménagement Urbain et Rural's (SAUR) Canadian subsidiary in 1981. SAUR sold the company to its management and private investors in 2002.

In 2000, Aquatech had water and wastewater revenues of CAD 7million. The company served 768,000 people for wastewater and 88,500 for water provision. Some 65% of the private water sector in Canada is controlled by the company. At the time, Aquatech operated 25 wastewater treatment works, with a capacity of 680,000m^3 per day, or a population equivalent (PE) of 2,266,666 along with 13 drinking water plants with a total capacity of 74,200m^3 per day.

The company has two principal operating subsidiaries:

- Aquacers (jointly operated with Simo Management and Gest Eau of Canada) has operated the sewerage and wastewater treatment services for Longueuil (230,000 people) since 1993. The contract was renewed in 2003.
- Gestion Eaux-Richlieu (jointly operated with P. Bailargeon Ltd of Canada) has operated the sewerage and wastewater treatment services of Saint-Jean-Sur-Richelieu (92,000 people) since 1998.

Contracts gained and retained since 2002 include:

Régie d'Assainissement de Boischatel (6,000 people, sewerage pumping and wastewater treatment)

City of Lévis (sewerage pumping and wastewater treatment for the city of Saint-Nicolas, 18,000 people)

Creg Quay Corporation (sewerage pumping and wastewater treatment)

Municipality of Compton (water, sewerage pumping and wastewater treatment, 3,000 people)

Sources:

SAUR, corporate web site

Aquatech, corporate web site

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Jean-Guy Cadorette (General Manager)

Jean Pierre Azzopardi (President)

Yves HF Bélanger (Director, Administration and Finance)

Canada

Epcor

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
EPCOR	Only	Only	Sewerage	
Canada	30,000	0	870,000	900,000
USA	288,000	0	173,000	461,000
Total - home markets	30,000	0	870,000	900,000
Total - international	288,000	0	173,000	461,000
Global total	318,000	0	1,043,000	1,361,000
% home markets	9%	0%	83%	66%

The Edmonton Electric Lighting and Power Company was founded in 1891 as a local electricity utility. It was taken over by the municipality in 1902. It opened its first water treatment plant in 1903. The company was renamed EPCOR Utilities Inc in 1996. In January 2012, EPCOR acquired Arizona American Water Company and New Mexico American Water Company from the American Water Works Company Inc. In June 2011, the company acquired Chaparral City Water Company from the American States Water Company.

Number of EPCOR customers in home market listed by Provence (2015)

	Water	Sewage	Contract
Alberta			
Edmonton	812,200	782,000	OO / BOO
Clanmore	18,000	18,000	10 Y O&M
Chestermere	15,000	15,000	10 Y O&M
Okotoks	24,500	24,500	20 Y DBO
Strathmore	12,800	12,800	20 Y O&M
Taber	8,000	8,000	20 Y DBO
Wood Buffalo	9,500	9,500	O&M
	900,000	869,800	
British Colombia			
French Creek	4,000	0	Owns
White Rock	20,000	0	Owns
	24,000	0	

Canada – Municipal activities

EPCOR serves 1million people in 70 communities in Western Canada through 20 water and 22 wastewater treatment works. These are all municipally owned and operated, reflecting the company's status in Canada. The first water treatment works was built at Rossdale in 1903, followed by three more in 1947, 1953 and 1967. The E.L. Smith water treatment plant serving Edmonton was opened in 1976. White Rock, a privately held water utility serving British Columbia was acquired in 2005 and the water and wastewater operations serving Suncor's oil sands operations were taken over in 2009.

Number of EPCOR customers in international market listed by State (2015)

Customers	**Water**	**Sewage**
Arizona		
Agua Fria	40,400	5,700
Anthem	8,800	8,600
Chaparral	13,600	0
Havasu	1,700	0
North Mohave	2,000	0
Mohave	16,000	1,450
Paradise Valley	23,200	22,100
Sun City	15,350	15,000

Customers	Water	Sewage
Tubac	600	0
	121,650	52,850
New Mexico		
Clovis	16,000	0
Edgewood	2,000	0
Thunder Mountain	800	0
	18,800	0

Acquisition of Chaparral City Water Company

Chaparral City Water Company (CCWC) was acquired by American States Water from MAXXAM Inc. for USD 31.2million, less outstanding debt in October 2000. The utility operates in the towns of Scottsdale and Fountain Hills City in Arizona.

Acquisition of American Waterworks' activities in New Mexico and Arizona

American Waterworks sold its activities in New Mexico and Arizona to EPCOR for USD 470million in January 2011, receiving full regulatory approval 12 months later. These activities serve 106,000 metered water customers along with wastewater services to 51,000 customers in 11 Arizona municipalities in Maricopa, Mohave and Santa Cruz counties. In New Mexico, water and wastewater services in the City of Clovis, as well as the greater Edgewood area near Albuquerque serving more than 17,000 customers were acquired.

Sources:

American Waterworks, press releases and Form 10K form 2011 and 2012

EPCOR, corporate web site

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Web: www.epcor.com

Hugh Bolton (Chairman)

David Stevens (President & CEO)

Joe Gysel (President, EPCOR Water USA)

Canada

Corix

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Corinx	Only	Only	Sewerage	
USA	1,530,000	0	70,000	1,600,000
Global total	1,530,000	0	70,000	1,600,000
% home markets	0%	0%	0%	0%

Corix is a privately owned company held by BC Investment Management and CAI Capital Management of Canada. The company is based in the USA and Canada and specialises in utility operations serving small and medium sized communities in North America. The company either owns or operates 220 water and wastewater utilities in the USA and Canada serving a total of 600,000 people. Its origin in the sector stems from the purchase of Terasen Water and Utility Services from Kinder Morgan in 2006 for CAD 125million. At the time, this company operated 90 water systems in 50 communities in Western Canada. These activities were subsequently renamed Corix Utilities. After the acquisitions made in 2012, Corix serves some 1.6million people.

Alaska

Corix Utilities owns and operates Fairbanks Sewer and Water, a grouping of six companies including Golden Heart Utilities and College Utilities that operates 8,500 customer accounts and a population of 55,000 in the greater Fairbanks area of Alaska.

Texas

In February 2012, Corix completed the purchase of 20 water systems from the Lower Colorado River Authority, a not for profit entity providing energy and water services to Texas. 17 systems are being transferred to Corix outright: Lake Buchanan Water System; Spicewood Beach Water System; Smithwick Mills Water System; Ridge Harbor Water System; Ridge Harbor Wastewater System; Paradise Point Water System; Sandy Harbor Water System; Quail Creek Water System; Camp Swift Wastewater System; McKinney Roughs Wastewater System; Alleyton Water System; Alleyton Wastewater System; Matagorda Dunes Water System and Matagorda Dunes Wastewater System. Three further systems may be acquired by their communities: Llano County (Tow Village) and Burnet County (Bonanza Beach) along with the Lometa Water System and Lometa Wastewater System.

Acquisition of Utilities Inc

Nuon of the Netherlands acquired Utilities Inc of Chicago in March 2002 for USD 275million, having announced the bid in the previous March and undergone regulatory clearance. In May 2005, Nuon announced that it was selling Utilities Inc to Hydro Star. The divestment reflects Nuon's strategy of focusing on the energy markets of North-West Europe. Hydro Star is a subsidiary of AIG Highstar Capital II, L.P, a private equity fund which invests in infrastructure related assets and businesses and is sponsored by AIG Global Investment Group (AIGGIG). AIGGIG member companies are subsidiaries of American International Group, Inc (AIG). The sale was completed in April 2006. Corix acquired Utilities Inc in 2012.

Utilities Inc was founded in 1965 and is the holding company for approximately 76 subsidiaries providing residential water and/or wastewater services to more than 290,000 customers (approximately 950,000 people) in 400 municipalities in Arizona (two companies), Florida (22 companies), Georgia (two companies), Illinois (24 companies), Indiana (three companies), Louisiana (two companies), Maryland (three companies), North Carolina (18 companies), Nevada (four companies), New Jersey (two companies), Pennsylvania (three companies), South Carolina (five companies), Tennessee (Tennessee Water Service), Virginia (two companies) and Kentucky (two companies). Ten subsidiaries were acquired during 2003, increasing the number of people served by 80,000. In 2002, Utilities Inc.'s revenues were USD 61million. In 2004, they had increased to USD 85million and were approximately USD 100million in 2008. 90% of the 2008 customer base was residential, with the rest mainly being light industrial. The 2007 acquisition of the Perkins Mountain Water Company in Arizona added 40,000 customers. In 2009, the acquisition of Sewerage District No. 6 in St. Tammany Parish, Louisiana was completed, adding 940 sewerage customers.

Utilities Inc: Customers by State, 2002 (Net of Ohio and Mississippi)

State	Customers
Arizona	5,450
Florida	81,000
Georgia	11,200
Illinois	17,400
Indiana	8,300
Kentucky	7,000
Louisiana	17,100
Maryland	7,000
New Jersey	1,100
Nevada	12,800
North Carolina	61,100
Pennsylvania	5,500
South Carolina	31,900
Tennessee	500

Sources:

Utilities Inc, corporate web site 2000-02

Nuon, press releases 2002 & 2005

Corix, corporate web site

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Brett Hodson (President & CEO)

Cayman Islands

Consolidated Water Co Ltd

Population served by service and country 2014 data Consolidated Water	Water Only	Sewerage Only	Water & Sewerage	Total
Cayman Islands	50,000	0	0	50,000
Bahamas	240,000	0	0	240,000
Belize	6,000	0	0	6,000
Indonesia	1,000	0	0	1,000
British Virgin Islands	20,000	0	0	20,000
Total - home markets	50,000	0	0	50,000
Total - international	267,000	0	0	267,000
Global total	317,000	0	0	317,000
% home markets	16%	0%	0%	16%

Consolidated Water Co. Ltd. Operates reverse osmosis desalination plants in Grand Cayman Island to the most populated areas of Grand Cayman and a public water utility in parts of the Cayman Islands under a 20 year exclusive license from the Government of the Cayman Islands awarded in 1979 and renewed in 1990, with renewal rights taken up in 2010.

SeaTec Belize Limited was acquired in 2000. SeaTec has operated a desalination plant on Ambergris Caye in Belize, since 1996. The population of Ambergris Caye was 20,000 in 2009. This company has been renamed Belize Water Ltd. (BW). BW serves some 4,500 people in Belize. In 2005, the Government of Belize acquired the facility, which CWCO continues to operate. In addition, CWCO has developed two desalination plants in the Bahamas that are providing water to leisure developments on those islands. The company is concentrating on projects on the two Bimini Islands, serving 1,600 people.

In February 2003, the CWCO acquired a series of operations in the British Virgin Islands, Barbados the Bahamas and the Cayman Islands. The USD25million package involves managing water treatment plants capable of desalinating 8million gallons of water per day. This also involved increasing the company's stake in the Waterfields Co Ltd desalination plant in Nassau, Bahamas from 26.2% to 38.9%. In 2003, the capacity of the British Virgin Island facility was expanded from 1.2 to 1.7million gallons per day. In the Cayman Islands, the West Bay plant was expanded from 720,000 gallons per day to 920,000 gallons per day in January 2008. The two major developments since 2007 have been the development of activities in the Bahamas and in Bali Indonesia. In the Bahamas 15.1million gallons per day is produced via two new plants including a major expansion of the Blue Hills facility which was completed in 2011. In Bali, a plant is providing water to the Nusa Dua tourist area and it was expanded to its current capacity in 2014.

CWCO Operations, 2014

Location	Plants	Capacity (million gallons per day)
Cayman Islands	8	10.2
Bahamas	3	15.2
Belize	1	0.6
Bali	1	0.8
British Virgin Islands	2	0.8
Total	**14**	**26.8**

Further bids to develop and operate facilities in Bermuda and Barbados are currently under appraisal. Total capacity was 24.3million gallons per day in 2009 compared with 19.8million in 2007.

CWCO Principal Facilities, 2014

Location	Plant	Operation	Capacity (m^3 per day)
Cayman Islands	Abel Castillo	Retail	8,300
Cayman Islands	West Bay	Retail	3,450
Cayman Islands	Britannia	Retail	2,700
Cayman Islands	Red Gate Road	Bulk	4,900
Cayman Islands	North Sound	Bulk	6,050
Cayman Islands	North Side	Bulk	9,100
Bahamas	South Bimini	Retail	450
Bahamas	Windsor	Bulk	11,750
Bahamas	Blue Hills	Bulk	45,450
Belize	Ambergris Caye	Bulk	2,100
Bali	Nusa Dua	Bulk	3,050
British Virgin Islands	Bar Bay	Bulk	2,700
British Virgin Islands	Jost Van Dyke	Bulk	225

Retail Water covers the desalination and water distribution operations in the Cayman Islands and Bahamas, Bulk Water the operations in Belize, the Cayman Islands, Bahamas and British Virgin Islands and Services, the company's engineering and management services.

Revenues fell in part during 2009 due to lower energy costs being passed on to the customers and due to projects moving from their construction to operational phases. Operations in Grand Cayman were affected during 2005 by Hurricane Ivan, which struck in September 2004.

Consolidated Water Co. Ltd., profit and loss account 2010-2014

Y/E 31/12 (USD million)	2010	2011	2012	2013	2014
Retail water sales	21.86	23.36	24.22	23.02	24.10
Bulk water sales	25.30	30.76	40.76	39.96	39.20
Services revenues	3.54	1.04	0.47	0.84	2.25
Turnover	50.71	55.15	65.45	63.82	65.56
Operating profits	5.28	5.37	6.93	7.66	6.46
Net profits	6.29	6.11	9.32	8.59	6.27
Earnings per Share (USD)	0.43	0.42	0.64	0.58	0.42

The management services contract in the Bahamas ended in 2011 and lower revenues from the OC-BVI investment both meant that services have become a small part of the company's operations.

Ownership and operation of the Baughers Bay (Tortola) facility in the British Virgin Islands was ceded in 2010 due a legal dispute with the Government over the fair value of the facility. The company is in litigation with the BVI over fees payable relating to the contract.

In 2010, the company acquired 50% of NSC Agua SA de CV, which seeks to develop a 100million gallon per day PR desalination plant in Rosarito, a resort in Baja California, Mexico for supplying water to the US border region. Full control of the joint venture was obtained in 2012 and the company aims to have the project in operation by 2016 if the necessary permissions can be gained. As of 2015, the permitting process was underway.

In May 2012, Consolidated Water acquired 50% of the New Provident Development Company (NPDC), which supplies 1,000 customers with treated groundwater in Lyford Cay and Old Fort Bay in the Bahamas. CWCO is paying USD 7million for the stake and will develop a new ultrafiltration and reverse osmosis treatment facility for the utility.

Source:

Consolidated Water, Annual reports and Form 10K, 2000-14

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Frederick W McTaggart (President & CEO)

David Sasnett (CFO)

Chile

Aguas Nuevas

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Aguas Neuvas	Only	Only	Sewerage	
Chile	15,000	0	1,560,000	1,575,000
Global total	15,000	0	1,560,000	1,575,000
% home markets	100%	0%	100%	100%

In June 2004, Aguas Nuevas gained ESSAT (Region I; Tarapacá region, Aguas del Altiplano), ESSAR (Region IX; Araucania region, Aguas Araucania) and ESMAG (Region XII; Magallanes region, Aguas Megallanes), the final three 30 year concessions for Chile's 12 water and wastewater regions. Regions I, IX and XII were the smallest and most rural of the country's 12 concession areas. The Solari family interests bid USD172million for the three concessions in 2004. In 2008, it sold its interests in the company to the Ontario Teachers' Pension Fund (Canada, 36.3%), Agbar (Spain, 42.7%), Group Santander (Spain, 8.6%) and a number of other entities. In November 2010, Marubeni of Japan (50%) and the Innovation Network Corporation (50%) of Japan acquired the company's entire share capital.

AGUAS NUEVAS profit and loss account 2010-2014

Y/E 31/12	2010	2011	2012	2013	2014
Connections – water	383,937	393,789	401,191	407,954	417,079
Connections – sanitation	365,873	376,046	383,502	390,452	399,830
Water sales (million m^3)	73.68	73.62	78.13	79.04	80.51
Turnover (CLP million)	66.00	72.63	81.04	89.35	103.94
Operating profit (CLP million)	8.07	15.31	16.10	11.77	7.25
Net profit (CLP million)	6.90	12.26	51.39	9.53	18.61

Comprehensive sewage treatment for wastewater collected is now in place across the three systems.

Development of water treatment and distribution coverage. 2000-2014

Y/E 31/12	2000	2005	2011	2014
Aguas de Altiplano (ESSAT)	87.9%	97.7%	99.9%	100.0%
Aguas Araucania (ESSAR)	4.7%	11.0%	99.8%	100.0%
Aguas Magallanes (ESMAG)	11.7%	89.1%	100.0%	100.0%

ESSAT, ESSAR and ESMAG: Company characteristics, 2014

Company	ESSAT	ESSAR	ESMAG
Region	I	IX	XII
Purchase price (USD million)	74.2	61.3	35.2
Population	505,000	910,000	160,000
Water customers	147,845	214,516	49,064
Sewerage customers	143,275	202,516	47,919
Sewage customers	143,275	202,516	47,919
Water sold (million m^3)	33.1	37.0	10.4
Water treatment works	5	27	3
Sewage treatment works	6	31	3
Wastewater treated	100%	100%	100%

Sources:

Aguas Neuvas, press release, 2006

Aguas Neuvas, Annual Reports, 2013-14

ESSAT, ESSAR and ESMAG Annual Reports for 2014

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Toshimitsu Oda (President)

Tetsuro Toyoda (Vice President)

Chile

Essbio

Population served by service and country 2014 data Essbio	Water Only	Sewerage Only	Water & Sewerage	Total
Chile	300,000	0	2,250,000	2,550,000
Global total	300,000	0	2,250,000	2,550,000
% home markets	100%	0%	100%	100%

Southern Cross is a private equity group focussing on South America. The Southern Cross Latin America Private Equity Fund LP was created in 1998 and the Southern Cross Latin America Private Equity Fund II LP which was closed in 2003. In February 2006 it acquired Thames Water's interests in Chile for approximately USD 300million. In 2007, Empresa de Servicios Sanitarios del Bio-Bio SA (ESSBIO) and Empresa de Servicios Sanitarios de El Libertador (ESSEL) were acquired by the Ontario Teacher's Pension Fund which now holds 90% the equity. CORFO, the Government's economic development agency, Corporación de Fomento de la Producción de Chile sold its remaining 5.0% stake in 2012.

The population served by ESSBIO has increased from 2,027,363 in 2000 to 2,312,290 by 2011. During this time, the number of water connections rose from 509,869 to 681,287 and for sewerage from 424,610 to 611,681. There were 751,275 water connections in 2014, equivalent to 2.55 million people.

ESSBIO, profit and loss account, 2010-14

Y/E 31/12 (CLP billion)	2010	2011	2012	2013	2014
Turnover	95.42	99.80	116.21	116.21	122.74
Operating profits	33.95	29.62	24.03	18.05	21.82
Net profits	17.71	11.98	12.94	3.95	17.21

Between 2000 and 2011 CLP 488.1billion has been invested on various projects, including CLP 56.1billion on water production, CLP 107billion on water distribution, CLP 90.6billion on sewerage and CLP 186.1billion on sewage treatment. The emphasis for investment between 2013 and 2015 will be on completing the repairing of distribution systems affected by the earthquake that hit the region in 2010.

ESSBIO, customer connections and service coverage in 2011

Region in 2011	Connections	Water	Sewerage	Sewage treatment
O'Higgins (VI)	194,821	99.3%	83.7%	83.7%
Bio Bio (VIII)	469,730	99.6%	92.0%	90.7%
Total	681,287	99.5%	89.5%	89.5%

ESSBIO has 68 wastewater treatment works, 23 in the O'Higgins region and 45 in Bio Bio. Wastewater treatment coverage rose from 42% in 1998 to 90% by 2011 as the capital works programme brought a series of new plants into operation.

ESSBIO, development of water distribution and wastewater treatment, 2005-2014

Million m^3	2005	2010	2011	2013	2014
Water distributed	183.0	207.3	207.6	220.8	227.0
Wastewater treated	128.3	139.2	152.5	155.7	167.4

392 rural systems served a total of 562,021 people in 2011. ESSEL and ESSBIO have been merged as ESSBIO or Bio Bio. ESSEL is now referred to as the O'Higgins region.

2000	ESSEL	Asset ownership	574,000 water & sewerage

Inversiones Andes Sur, the Thames Water/EDP joint venture, acquired ESSEL of Chile for USD 136million. The company serves 600,000 people in the city of Rancagua in Chile's Region VI. ESSEL had a 2001 turnover of USD19million. TW acquired 25.5% of ESSEL for USD67.6million in March 2000, and bought out EDP's share of the company for USD70.5million in December 2001.

2000	ESSBIO	Asset ownership	1,502,000 water & sewerage

Thames Water acquired 50.96% of ESSBIO for USD 336million between September and October 2000. Located in Concepción, 350 miles south of the capital, Santiago, ESSBIO serves 1.5million people in Chile's Region VIII, and had a 2001 turnover of USD 46.9million. Capital investment of USD 180million between 2000 and 2006 concentrated wastewater treatment in Concepcion (entered service in 2003, serving 500,000 people) and Los Angeles (140,000 people).

Sources:

Thames Water, analyst presentations and press releases, 2000

ESSBIO, Annual Reports, 2007, 2009 and 2014

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Guilermo Enrique Ascui Astorga (Finance Director)

Chile

Esval

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
ESVAL	Only	Only	Sewerage	
Chile	210,000	0	1,960,000	2,170,000
Global total	210,000	0	1,960,000	2,170,000
% home markets	100%	0%	100%	100%

ESVAL was the first Chilean water company to be privatised when AWG and Chile's Enersis acquired 45% of the company in 1998. In July 2001 AWG bought out Enersis's 72% stake in the Aguas Puerto joint venture for USD 131million, bringing its total investment in ESVAL's equity to GBP 142million. In October 2003, AWG's 44.7% stake in ESVAL was acquired by Consorcio Financiero for USD 82million. In May 2004, Aguas Puerto transferred its final 5.04% stake in ESVAL to investment fund administrator Moneda Asset Management. A residue of ESVAL is traded on the Santiago Stock Exchange. The company serves the city of Valparaiso and the adjacent coastal region. In November 2003, ESVAL's Aguas del Valle gained a 30 year concession to operate Essco through a USD 89.7million bid and Essco is wholly owned by ESVAL. In December 2007 the Ontario Teacher's Pension Fund acquired 69.8% of ESVAL from the holders, increasing their stake to 94% by 2010. In 2012, CORFO's 5% stake was sold to private investors.

ESVAL, company characteristics, 2014

	A de Valle	ESVAL	Total
Region	IV	V	
People served	623,241	1,550,086	**2,173,327**
Clients – water	208,534	587,558	**796,092**
Clients - wastewater	200,528	536,165	**736,423**
Coverage – water	99.7%	99.4%	**99.5%**
Coverage – sewerage	96.6%	93.1%	**94.1%**
Water sold (million m^3)	35.28	100.31	**135.59**
Wastewater collected (million m^3)	31.96	87.98	**119.93**

ESVAL, consolidated profit and loss account 2010-2014

Y/E 31/12 (CLPbillion)	2010	2011	2012	2013	2014
Revenues	109.55	118.57	130.93	135.40	146.63
Operating profit	39.85	41.62	29.45	23.83	13.88
Net profit	17.29	15.35	14.76	19.01	77.16

A de Valle generated revenues of CLP43.7billion in 2014 and net profits of CLP65 million. ESVAL generated revenues of CLP125.9 billion and a net profit of CLP1.4billion.

Sources:

AWG, analyst presentations, 1998

Esval, Annual Report 2014

Esval, corporate website

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Juan Ignacio Parot Becker (Vice President)

Chile

Nuevosur

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Nuevosur	Only	Only	Sewerage	
Chile	50,000	0	800,000	850,000
Global total	50,000	0	800,000	850,000
% home markets	100%	0%	100%	100%

The Aguas Nuevo Sur, Maule (ANSM) concession contract was purchased by Thames Water for USD171million in November 2001. ANSM is located in Region VII, serving a population of 588,643 and in 2000 generated revenues of USD21.4million. ESSAM is positioned between ESSEL in Rancagua and ESSBIO in Concepcion. In 2011, the company had 227,271 water connections and 216,117 sewerage connections and served 671,361 people. There are 274,116 people served by 266 rural water schemes. Approximately 850,000 people were served in 2014.

In February 2006 the Southern Cross Latin America Private Equity Fund acquired Thames Water's interests in Chile for approximately USD300million. In 2007, Southern Cross sold its interests in Nuevosur to the Ontario Teachers' Pension Fund, with now holds 90.1% of the company's equity.

Nuevosur, profit and loss account, 2010-2014

Y/E 31/12 (CLPbillion)	2010	2011	2012	2013	2014
Turnover	30.65	32.90	36.89	39.59	43.78
Operating profits	8.07	7.26	1.10	11.22	9.34
Net profits	1.84	0.98	3.67	9.28	8.73

Nuevosur, service development, 2010-2014

Million m^3	2010	2011	2012	2013	2014
Water treated	62.2	66.0	65.0	65.1	-
Wastewater treated	80.2	89.4	-	-	-
Water clients	216,492	224,560	232,768	243,641	255,148
Wastewater clients	205,624	216,117	-	-	-

The Curico WWTW increased treatment from 6% to 24% in 2002 and eight small facilities opened during 2003 increased the treatment rate to 35%. Sewage treatment in the region rose from 35% to 72% in 2004 with the Molina-Lontue wastewater treatment plant entering service and to 94% by 2009, when there were 27 wastewater treatment plants in operation.

In 2011, water coverage was 99.7% in the region, along with 94.5% sewerage and 94.5% sewage treatment. Water coverage was 99.96% in 2014, with 95.5% sewerage coverage, all of which was treated.

Sources:

Nuevosur, Annual Reports, 2007, 2008, 2009, 2013, 2014

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Julio Santivanez Nogales (General Manager)

Guilermo Enrique Ascui Astorga (Finance Director)

Colombia

Empresas Publicas De Mendelin / Aquasol Morelia

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
EPM	Only	Only	Sewerage	
Colombia	0	0	1,000,000	1,000,000
Mexico	0	3,500,000	0	3,500,000
Chile	0	0	560,000	560,000
Total - home markets	0	0	1,000,000	1,000,000
Total - international	0	3,500,000	560,000	4,060,000
Global total	0	3,500,000	1,560,000	5,060,000
% home markets	0%	0%	64%	20%

Empresas Públicas de Medellin (EPM) is controlled by the municipality of Medellin and provides the city's water and sewage services. The company has an active bond issuance programme and has been gaining private sector contracts in Colombia and the rest of Latin America. EPM is looking to expand water operations into Chile, Peru and Costa Rica.

Acquisition of Ticsa in Mexico

Empresas Públicas de Medellin acquired Mexico's Ticsa for USD113 million in 2013. Ticsa in turn holds 11 Mexican water and wastewater treatment companies. Ticsa is involved in 14 WWTWs in Mexico, 11 with a combined treatment capacity of 705,000 m^3 per day are in operation and three, with a combined capacity of 185,000 m^3 per day in development.

In December 2003, Ticsa's Aqua sol secured a 20 year, USD30million BOT concession for a 1,200L per second (103,500m^3 per day) agricultural water plant in Michoacán state capital Morelia. The facility will enter into service by the end of 2004. In January 2004, Aquasol secured an USD25million, 20 year BOT concession in Hidalgo State's capital Pachuca. The 400L per second (34,500m^3 per day) Pachuca plant will provide two levels of water quality: one for agricultural use and another for industrial customers.

Colombia

Outside Medellin, the company serves 1 million people for water and sewerage and 228,000 for sewage treatment. Its principal project is the construction of a WWTW serving Medellin and taking up 80% of the wastewater that flows into the Medellin River. The Bello WWTW will cost USD580 million to develop, the project being 45% completed by the end of 2014. It will enter service in 2016 and will have a 432,000 m^3 per day capacity.

Acquisition of ADASA in Chile

EPM acquired ADASA from Antofogasta for USD965 million in 2015. In November 2003, Antofagasta gained a 30 year concession to operate the water rights and facilities in the Antofagasta Region of Chile previously controlled by Empresa de Servicios Sanitarios de Antofagasta SA (ESSAN). It is now known as Aguas de Antofagasta SA (ADASA). Aguas de Antofagasta consists of two businesses, an unregulated business supplying mines and other industrial users and a regulated business supplying domestic customers. 65% of 2014 sales are from the regulated market and 35% to industrial customers. Industrial sales have benefited from sales of re-treated water in Calama to mines and industrial clients. ADASA has approximately 144,000 customers, covering 560,000 people.

Aguas de Antofagasta, profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Water sales (million m^3)	46.3	48.3	50.8	51.3	50.9
Turnover	92.4	114.9	133.4	135.9	124.9
Operating profit	50.5	56.1	65.1	57.2	61.5

Non-regulated services are being expanded with a 15 year supply contract for mining water to BHP Billiton's Spence project near El Tesoro running from July 2006 (2.3million m^3 in 2006 and from 2007 4.7 million m^3 per annum). In March 2009 ADASA acquired the Antofagasta desalination plant from Desalant SA for USD52.5million. ADASA continues to be the sole customer of the plant and is now in full control of the plant, which provided it with 30% of its water for its distribution business in 2014.

Sources:

EPM, Annual Report, 2014

EPM, corporate web site

Antofogasta, Annual Reports, 2010-2014

Contact Details

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United States of America

Alliance Water Resources

Population served by service and country				
2012 data	Water	Sewerage	Water &	Total
Alliance Water	Only	Only	Sewerage	
USA	62,000	36,500	166,000	264,500
Global total	62,000	36,500	166,000	264,500
% home markets	100%	100%	100%	100%

Alliance Water Resources (AWR) is a privately held company operating in Midwestern USA and employing 250 staff. The company was founded in 1976, and over the past 35 years, has operated in excess of 100 water and wastewater treatment facilities. It is the leading water services outsourcing company in Missouri. Currently, it serves approximately 264,500 people through a series of O&M contracts in the states of Missouri and Iowa, compared with 342,821 people in 2010 and 272,800 people in 2003.

Alliance Water Resources, activities by number of clients served, 2014

Commercial & industrial	10%
District	30%
Municipal	60%

Alliance Water Resources, activities by services provided to clients, 2014

Water treatment	55%
Water distribution	68%
Sewerage & wastewater treatment	82%
Water & wastewater	55%
Meter reading	55%
Complete services management	32%

Alliance Water Resources, contracts identified

Municipality	Services	People served
Bowling Green, MO	Water & wastewater (municipal, 1994-)	5,166
Cameron, MO	Wastewater (municipal, 1990-)	11,500
Cape Girardeau, MO	Water (municipal, 1992-)	37,500
Elsberry, MO	Water & wastewater (municipal, 2000-)	2,000
Lake Ozak, MO	Wastewater (municipal, 1999-)	10,000
Maquoketa, Iowa	Water & wastewater (municipal, 2001-)	6,100
Tipton, Iowa	Water & wastewater (municipal, 1999-)	3,155
Parkville, MO	Wastewater (municipal, 2002-)	4,000
Buchanan Co, MO	Water (district, 2001-)	2,500
Franklin Co, MO	Water & wastewater (district, 1994- & 2005-)	7,000
Henry Co, MO	Water (district, 1983- & 2002-)	13,000
Lincoln Co. MO	Water & wastewater (district, 1995-)	13,700
Platte Co. MO	Water (district, 2002-)	4,000
Ralls Co. MO	Water & wastewater (district, 2001-)	6,300
St Charles' Co, MO	Water & wastewater (district, 1980- & 1986-)	117,000
Bonne Terre, MO	Wastewater (municipal, 2005-)	6,400
Phelps Co, MO	Wastewater (district, 2006-)	1,200
Ste Geneviere, MO	Water (district, 2009-)	4,500
Nevada, MO	Water & wastewater (municipal, 2011-)	8,400
Versailles, MO	Wastewater (municipal, 2012-)	2,500
Russellville, MO	Water (municipal, 2012-)	750

Source:

Corporate web site

Contact Details

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Gary Anger (President & CEO)

United States of America

American States Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
American States Water	Only	Only	Sewerage	
USA	800,000	0	0	800,000
Global total	800,000	0	0	800,000
% home markets	100%	0%	0%	100%

American States Water (AWR) owns the Golden State Water Company (SCW), which was founded in 1929 and floated in 1931. It is a utility company engaged principally in the purchase, production, distribution and sale of water. SCW operates in three regions, serving 75 communities in 10 counties in the state of California and provides water services in 21 customer service areas. Approximately 73% of SCW's water customers are located in the greater metropolitan areas of Los Angeles and Orange County. SCW also provides electricity services to the City of Big Bear Lake and surrounding areas in San Bernardino County. SCW served 258,000 water customers (1 in 36 Californians) at the end of 2014. 52% of water requirements are met from company owned resources and the company's immediate priority is to secure its longer term supplies in compliance with Californian legislation which calls for a minimum of 20 years of guaranteed water supplies for all new developments in the state. These activities accounted for 80% of the company's revenues and 83% of their profits in 2011.

AWR is expanding through a series of local acquisitions in California and other states. In December 1999, AWR acquired Peerless Water, a company serving 1,900 customers in Bellflower, California, with regulatory clearance in 2001.

In October 2000, AWR acquired Chaparral City Water Company (CCWC) from MAXXAM Inc. for USD31.2million, less outstanding debt. CCWC provides water to 13,400 customers in the towns of Scottsdale and Fountain City in Arizona. CCWC was sold in 2011 for USD35.2million.

Water consumption has been decreased by 20% since 2008 in response to the California drought, including a 13% fall between 2014 and 2015.

AWR, profit and loss account, 2010-2014

Y/E 31/12 (million gallons)	2010	2011	2012	2013	2014
Sales					
Residential & commercial	44,057	43,220	44,786	45,308	43,539
Industrial	429	420	422	437	434
Other water	4,526	4,439	50,397	50,858	49,094
Customers					
Residential & commercial	247,607	247,838	247,648	249,051	250,035
Industrial	352	350	351	342	345
Other	7,603	7,747	7,685	7,709	7,811

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Water	290.78	299.81	305.90	320.13	326.67
Electricity	35.80	36.28	37.03	38.41	34.39
Contracted services	72.36	83.19	123.98	113.54	104.79
Group turnover	398.94	419.27	466.91	472.08	465.79
Net income	2.11	3.85	54.15	62.69	61.06
Earnings per share (USD)	0.11	0.20	1.41	1.61	1.57

The company's American States Utility Services (ASUS) was founded in 1998 and provides outsourcing, billing and meter reading services to a further 97,000 non-regulated customers in California and Arizona. This includes 33,000 customers in the city of Torrance, CA whose services were outsourced to ASUS in 2000. ASUS is also entering the water rights market having acquired 5,000acre-feet of perpetual rights in the Sacramento River in 2006.

In October 2004 ASUS started an own, operate and maintain contract for the water and wastewater systems at Ft. Bliss, located near the City of El Paso, Texas, through a wholly-owned subsidiary, Fort Bliss Water Services

Company. Revenues for the contract are estimated at more than USD196million over its 50 year period and are subject to periodic price re-determination adjustments and adjustments for changes in circumstances. A similar 50 year O&M contract for water and wastewater services for the Andrews Air Force Base in Maryland, and Fort Story, Fort Eustis and Fort Monroe and the wastewater system at Fort Lee in Virginia started in February 2006, which will generate USD238million in revenues. These services are provided by the company's Terrapin Utility Services Inc and Old Dominion Utility Services Inc. Contracts for water and wastewater services for Fort Jackson (South Carolina) and Fort Bragg, Pope Air Force Base and Camp MacKall (North Carolina) were gained in 2008. Further military contracts are being bid for between 2015 and 2020.

Sources:

ASW, Form 10K, 1998-2014

ASW, Annual Reports, 1998-2014

Contact Details

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Lloyd E. Ross (Chairman)

Robert J Sprowls (President/CEO)

Eva G Tang (Senior Vice President/CFO)

United States of America

Aqua America Inc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Aqua America	Only	Only	Sewerage	
USA	2,700,000	250,000	50,000	3,000,000
Global total	2,700,000	250,000	50,000	3,000,000
% home markets	100%	100%	100%	100%

Philadelphia Suburban Corporation (PSC) was incorporated in 1968 and is the second largest investor-owned water utility in the USA, with 940,000 customers and serving 3 million people. It changed its name to Aqua America (AA) in January 2004. AA owns the Philadelphia Suburban Water Company (PSW) and the Consumers Water Company (CWC). PSW supplies water to approximately 426,000 residential, commercial, industrial and public customers in a service territory of 481 square miles in the suburban area west and north of the City of Philadelphia, serving 1.4 million people excluding 6,000 customers served by an O&M contract. The company subsequently expanded into 13 other states, which were subsequently rationalised into a total of eight states. In 2014, 2.75 million people were served by 1,447 water systems and 250,000 served by 187 sewage systems.

AA, development of regulated customer base

Year	Customers
1992	244,788
1996	284,141
1999	548,937
2003	749,491
2006	926,823
2008	945,540
2010	962,970
2011	966,136
2012	968,357
2013	928,200
2014	940,119

AA, tuck-in acquisitions (USD million)

Year	Number	Consideration	Turnover added	Customers
1997	4	1.23	0.36	1,700
1998	5	25.38	4.69	9,007
1999	16	39.16	4.90	17,250
2000	18	11.84	2.63	14,418
2001	20	14.88	4.74	25,550
2002	25	11.66	2.92	9,175
2003	17	1.61	0.98	N/A
2004	27	3.84	1.23	N/A
2005	30	12.31	6.97	N/A
2006	27	11.85	9.63	N/A
2007	26	24.56	4.43	23,909
2008	9	16.66	N/A	9,941
2009	18	6.48	N/A	4,484
2010	23	8.63	N/A	8,458
2011	9	2.27	N/A	5,300
2012	16	19.09	N/A	N/A
2013	15	15.00	N/A	N/A
2014	16	10.53	N/A	N/A

USD270million has been spent on acquisitions between 1999 and 2003 and USD461million in cash and shares between 2003 and 2011. Since the start of 1995, PSW has acquired 264 local water systems and three wastewater utilities in areas adjacent to its current operations. These have added in excess of 130,000 customers to AA's original activities. In March 1999, PSC acquired the CWC for 13.01million shares, valuing the company at USD463million. CWC serves approximately 232,000 customers (700,000 people) in service territories covering parts of Pennsylvania, Ohio, Illinois, New Jersey and Maine.

Acquisitions noted in 2008 include Honesdale Consolidated Water Company (HCWC) which serves approximately 6,000 people in Honesdale Borough and Texas Township, Wayne County (USD6.7million in September), South Haven Sewer Works Inc., a wastewater company (USD9.7million in August), which serves 4,000 customers in South Haven in Porter County in northwest Indiana and a wastewater and local irrigation system (USD1.6million in May) serving 3,000 residents in the Fountain Lakes development in Estero, Lee County, Florida.

Agreed bids for AquaSource, Florida Water, Heater Utilities and New York Water Service

In July 2002, AA launched an agreed bid with DQE (a US based energy utility) to purchase AquaSource. The USD190.7million bid was completed in July. AquaSource has approximately 130,000 customers in 600 operating systems along with 40,000 O&M customers. Most of these customers are in Texas, Florida (21,000 customers), Virginia, Indiana, North Carolina, New Jersey and Missouri with a smaller number of customers in five other states. After arbitration, in 2004, the bid price was revised to USD178.4million.

In June 2004 AA acquired Allete's North Carolina-based water and wastewater systems, Heater Utilities, Inc., for USD48million in cash and USD28million in debt. Heater Utilities was formed in 1964 and had revenues of USD19.5million in 2003. Heater Utilities serves 50,000 customers, 45,000 for water and 5,000 for wastewater services through 245 water and 15 wastewater systems. In July 2004, AA completed the acquisition of 63 water and wastewater systems from Allete's Florida Water Services Corporation for a total of USD14.7million.

In January 2007 AA acquired New York Water Service Corporation for USD26.6million and USD23.0million in debt. New York Water Service Corporation provides water service to 44,792 customers in several water systems located in Nassau County, Long Island, New York.

The agreed bid for Pennichuck in May 2002 was terminated in February 2003 when a referendum in Nashua, New Hampshire sought to authorise the municipal acquisition of Pennichuck.

AA sold its Missouri activities (3,900 customers) to American Water Works in 2011 while at the same time acquiring the latter company's activities in Texas (5,300 customers) for USD6.2million.

AA's operations in Maine (15,855 customers) were sold to Connecticut Water Service in 2012 for USD35.7million.

AA sold its New York activities (51,000 customers) to American Water Works for USD65million in 2012 while at the same time acquiring the latter company's activities in Ohio (59,000 customers) for USD88million including USD16million in debt. In 2014, AA's activities in Allen County, Indiana were sold to the City of Fort Wayne for USD67.0 million.

A's activities in Florida were sold to various municipalities in five sales during in 2013, covering 38,000 customers, for a total of USD88.9 million.

AA, geographical split of turnover, 2014

YE 31/12	Total customers	Water customers	Wastewater customers	People served
Pennsylvania	434,500	420,000	14,500	1,400,000
Ohio	147,034	141,434	6,600	500,000
Illinois	64,166	57,582	6,584	192,000
Texas	61,000	48,000	13,000	175,000
New Jersey	57,185	51,489	5,696	165,000
Virginia	29,225	22,253	6,792	75,000
Indiana	25,400	900	24,500	77,000
North Carolina	90,599	74,775	15,824	271,800

AA, profit and loss account, 2010-2014

Y/E 31/12 (USD 000)	2010	2011	2012	2013	2014
Residential	386,899	403,311	441,240	457,404	458,627
Commercial	99,272	105,461	117,559	121,178	122,795
Industrial	20,561	21,407	24,822	25,263	27,369
Other water	62,635	64,769	70,693	57,446	60,860
Wastewater	62,156	62,780	68,225	73,062	76,472
Other revenues	10,871	10,585	10,416	10,174	9,934
Utility turnover	642,394	668,313	732,955	744,527	756,057
Consolidated revenues	653,812	680,677	750,685	7612,893	779,903
Net income	123,975	143,069	196,563	221,300	233,239
Earnings per share (USD)	0.72	0.83	1.13	1.26	1.32

AA customers (net of dispositions), 2010-2014

Metered customers	2010	2011	2012	2013	2014
Residential	708,040	711,664	766,121	771,660	779,665
Commercial	34,379	34,806	38,805	39,237	39,614
Industrial	1,225	1,212	1,373	1,368	1,357
Other	15,290	15,676	16,643	17,230	17,412
Wastewater	86,108	84,978	95,044	98,705	102,071
Total – regulated	845,042	848,336	917,986	928,200	940,119

Sources:

Conference presentations and analyst presentations

PSC / AA, form 10K, 1998-2014

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Nicholas DeBenedictis (Chairman/President/CEO)

David P. Smeltzer (Senior Vice President - Finance/CFO)

United States of America

Artesian Resources Corporation

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Artesian Water	Only	Only	Sewerage	
USA	300,000	0	0	300,000
Global total	300,000	0	0	300,000
% home markets	100%	0%	0%	100%

Artesian Resources Corporation (ARC) is the parent holding company of Artesian Water Company, Inc. (AWC). AWC was founded in 1927 as the successor to the Richardson Park Water Company, founded in 1905. In 1984, the company was renamed Artesian Resources Corporation and the utility assets were vested to a newly formed subsidiary, Artesian Water. In 2014, Artesian Water had 82,900 metered water customers (68,049 in 2002) and 729 metered wastewater customers (none before 2005) and served a population of approximately 300,000, representing approximately 31% of Delaware's total population. Artesian Water also has 38 customers in Pennsylvania, which are to be augmented by four developments serving 350 customers.

Since 1993, Artesian Water has added to its service territory by acquiring exclusive service areas in Delaware. This expansion, which has occurred in southern New Castle, Kent and Sussex Counties, has increased the exclusive service area in Delaware by approximately 40% since 1993. In 1998, ARC acquired the rights to provide water to two municipalities and neighbouring developments in Sussex County serving some 10,000 new customers from 2005. This area has accounted for 38% of ARC's customer growth since 1998. Facilities serving 4,400 customers in these areas are currently being developed. Artesian Water also entered into agreements in 1998 to supply water to two municipalities in New Castle County. In 2003, residents in Broad Run Ridge, Pennsylvania were connected to the Delaware system. The company has also identified a number of wastewater treatment opportunities.

Artesian Water, revenue by customer class, 2010-2014

Revenue by customer class	2010	2011	2012	2013	2014
Residential	54.0%	54.4%	55.4%	54.4%	53.6%
Commercial	20.6%	20.9%	21.5%	21.3%	21.3%
Industrial	0.2%	0.2%	0.1%	0.1%	0.1%
Government and other	12.6%	12.8%	13.1%	13.7%	14.2%
Other water revenues	4.5%	5.0%	4.5%	4.7%	5.0%
Non-utility operating revenues	8.1%	6.7%	5.4%	5.8%	5.8%
Number of customers	79,900	80,600	81,200	81,900	82,900

Artesian Water Maryland and Artesian Wastewater Maryland were established in 2007 to provide regulated water and wastewater services in the state. The company serves 1,500 customers in Cecil County and 280 in Port Deposit. Artesian Wastewater (AW) was created in 1996 as a non-regulated subsidiary to provide wastewater treatment services in Delaware. Services started in 2005 and the company had 729 customers in six communities in the state in 2009. Artesian Utility specialises in non-regulated operates two wastewater treatment plants serving 10,000 customers in Middletown entered service in 2002. These contracts have a 20 year term, which can be extended by an additional 20 years.

ARC, profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Turnover	64.89	65.07	70.65	69.07	72.47
Operating income	14.27	13.74	15.86	14.48	16.05
Net income	7.62	6.45	9.85	8.30	9.51
Earnings per share (USD)	1.00	0.83	1.14	0.95	1.07

Source:

Artesian, Form 10K, 1998-2014

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Dian C. Taylor (Chairman/President/CEO)

David B. Spacht (Vice President/CFO/Treasurer)

United States of America

California Water Service Co

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
California Water	Only	Only	Sewerage	
USA	2,000,000	0	0	2,000,000
Global total	2,000,000	0	0	2,000,000
% home markets	100%	0%	0%	100%

The California Water Service Company (CWSC) was formed in 1926, and was transformed into a holding company in 1997. The company is the largest investor-owned water company in California and the fourth largest in the USA, serving 2million people with water and wastewater and providing water meter reading for a further 175,000. Since 2000, customer gains have been running at 2,500-5,000 per annum. CWSC provides water and wastewater services to 499,500 residential, commercial and industrial customers in regulated contracts in California, New Mexico, Washington and Hawaii and 107,700 customers through unregulated water activities. Regulated customers generated revenues of USD1, 005 each in 2011 against USD692 in 2006. These regulated contracts are mainly in the San Francisco Bay, Sacramento Valley, Salinas Valley, San Joaquin Valley and Los Angeles.

California Water Service Co, customer base, 2014

	California	New Mexico	Washington	Hawaii	Total
Regulated	477,900	7,600	16,300	4,300	**502,100**

Rio Grande Utilities Corporation (Rio Grande) was acquired in 2001 (approval gained in 2002) for USD2.3million, with USD3.1million in assumed debt. Rio Grande has annual revenues of USD1.2million. In May 2000, CWSC merged with Dominguez Services Corporation (DSC), a water provision company serving 150,000 people in the Los Angeles area. DSC's main holding is the Dominguez Water Company (32,637 customers, 120,000 people in 18 communities in the Carson/Torrance area of Los Angeles County), along with 3 smaller subsidiaries; the Kern River Valley Water Company (1,271 customers), the Antelope Valley Water Company (4,096 customers) and Redwood Valley Water Company (6,912 customers). In addition, DSC Investments generates revenues from the transfer of water rights between third parties. DSC had revenues of USD28.5million in 1999. In May 2003, CWSC acquired Kaanapali Water Corporation, now renamed Hawaii Water, which provides water service to 1,500 customers on the island of Maui, including several large resorts and condominium complexes, 500 customers from the original acquisition and approximately 1,000 from acquisitions and developments on Maui and Big Island.

California Water Service Co., profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Residential	335.83	375.70	394.74	406.82	406.32
Business	90.99	100.05	106.67	111.53	111.44
Industrial	20.73	24.61	25.47	26.29	24.96
Public authorities	23.90	28.28	29.57	31.07	30.81
Other customers	11.67	-0.33	26.57	17.55	16.77
Group turnover	460.40	501.81	559.97	584.10	597.50
Net income	37.66	37.71	48.83	47.25	56.74
Earnings per share (USD)	0.90	0.90	1.17	1.02	1.19

In September 2008, Hawaii Water acquired Waikoloa Resort Utilities, Inc., Waikoloa Water Company, Inc., and Waikoloa Sanitary Sewer Company, Inc. (West Hawaii Utilities). West Hawaii Utilities serves 1,970 customers in homes, condominiums, hotels, golf courses, and shops at Waikoloa Beach Resort and in Waikoloa Village in Big Island.

Source:

California Water, Form 10K, 1998-2014

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www.calwatergroup.com

Peter C Nelson (Chairman)

Martin A. Kropelnicki (President/CEO)

United States of America

Connecticut Water Service Company

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Connecticut Water	Only	Only	Sewerage	
USA	350,000	0	0	350,000
Global total	350,000	0	0	350,000
% home markets	100%	0%	0%	100%

The Connecticut Water Service Company (CWS) was founded in 1956 as Suburban Water Service, Inc and has concentrated on acquiring and operating water companies through controlling stock ownership. The oldest system in CWS's franchise was formed in 1849. Since 1969, the company has been selling off its excess real estate holdings. In 1975, the company changed its name to Connecticut Water Service Inc., after acquiring all of the outstanding Common Stock of CWS. In 1999 CWS established Connecticut Water Utility Services (CWUS) to handle the non-regulated business activities previously transacted by CWS, its regulated subsidiary.

CWS, number of customers, 2010-2014

Y/E 31/12	2010	2011	2012	2013	2014
Residential	79,604	80,256	108.15	108.52	109.66
Commercial	5,692	5,679	8,539	8,502	8,586
Industrial	422	425	501	487	484
Public Authorities	609	600	892	889	943
Fire & Non-Metered	3,075	3,063	3,705	3,329	3,396
Total	89,402	90,023	121,791	212,768	123,071

CWS, development and distribution of services

Operating regions include 54 towns in Connecticut. The service areas have a total population of 300,000. In 1999 CWS acquired Gallup Water Service Inc., and Crystal Water Utilities Corporation. These two systems were merged as the Crystal Water Company of Danielson in 2005. In December 2001, the company made a USD6.3million agreed bid for Unionville Water, a Connecticut based company with 5,400 customers or 14,000 people at the time. USD27million was spent on capital spending in 2009

Between 2006 and 2009 seven utilities were acquired, serving 4,000 customers in total. In total, 40 acquisitions were completed between 2008 and 2011.

In January 2008, the company acquired Birmingham Utilities' Eastern Operations, which serve 2,200 customers (7,500 people) in 15 towns in the state for USD3.5million. The activities are expected to generate revenues of USD1.6million per annum. Two small acquisitions completed in 2007 (Avery Heights and the Hilldale Park Homeowner's Association) added a further 300 connections (1,000 people) to the company's activities in CT. In July 2008, the company acquired the Ellington Acres Company which serves 750 customers (2,300 people) in Ellington, CT. The acquisition cost USD1.495million and links to the 36,000 customers already served in the vicinity by the company

Aqua Maine was acquired at the start of 2012. This is the largest purchase in the company's history, with 16,000 customers (48,000 people) served in 17 towns. It had 2011 revenues of USD11.2million and a net profit of USD1.2million and will be renamed Maine Water. The Biddeford & Saco Water Company, serving 15,500 customers in Biddeford, Saco, Old Orchard Beach and Scarborough, Maine was also acquired in 2012.

Connecticut Water Service Co., profit and loss account, 2010- 2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Residential	42.10	43.66	50.78	55.40	57.10
Commercial	7.73	8.62	10.14	11.24	11.47
Industrial	1.76	1.82	3.08	3.12	2.98
Public Authorities	2.28	2.25	2.68	2.97	3.22
Fire & Non-Metered	11.43	11.89	15.59	17.34	17.76
Total turnover	66.41	69.40	83.84	91.48	94.02
Utility operating profits	14.58	16.41	20.41	22.85	26.00
Net income	9.76	11.30	13.64	18.27	21.32
Earnings per share (USD)	1.14	1.31	1.55	1.68	1.95

In February 2001, CWS acquired Barnstable Holding Company for USD6.5million. Barnstable owns the Barnstable Water Company, which serves 7,200 customers in Barnstable, Massachusetts. In 2005, the town of Barnstable acquired this system and allied real estate for USD11.0million under the terms of its original charter agreed in 1911.

The New England Water Utility Services, Inc. (NEWUS), provides water and wastewater related services to residential, commercial, industrial and municipal clients throughout Connecticut, Massachusetts, and Rhode Island. Services include: Contract operation of water and wastewater systems for other utilities, businesses, municipalities, and the University of Connecticut's Storrs Campus and emergency water delivery to hospitals, businesses and private well owners via tanker truck.

Source:

Connecticut Water Service, Form 10K, 1998-2014

Contact Details

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Eric W Thornburg (Chairman, President & CEO)

David C. Benoit (Vice President Finance/Treasurer)

United States of America

Global Water Resources

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Global Water	Only	Only	Sewerage	
USA	150,000	0	0	150,000
Global total	150,000	0	0	150,000
% home markets	100%	0%	0%	100%

Global Water Resources, Inc. (GWR) is a regulated water utility that provides water, wastewater and recycled water utility services. The company owns and operates 16 water and wastewater utilities in metropolitan Phoenix, Arizona. As of the end of 2014, the company had 43,568 connections in Arizona.

Global Water Resources profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Water services revenues	15.00	17.13	17.42	18.20	18.08
Wastewater & recycled water revenues	7.66	11.41	13.24	13.83	14.11
Total turnover	28.53	36.41	33.54	33.43	32.56
Utility operating profits	-75.81	3.57	0,99	2.02	54.79
Net income	-85.04	-3.31	-38.48	-6,04	64,93

The company opened a groundwater recharge facility in February 2007, which is permitted for 50,000acre-feet of recharge per year and has started operating at 25,000acre-feet per year. The facility is adjacent to the Central Arizona Project canal and the Hassayampa River. Colorado River water is extracted from the canal and introduced to the bed of the Hassayampa River where it recharges the underlying aquifer.

In June 2005 the company acquired Sonoran Utilities Services, LLC in the City of Maricopa, adjacent to the company's Santa Cruz Water Company and Palo Verde Utilities Company. The City of Maricopa has seen over 600 building permits requested each month, fitting in with GWR's plans to adding over 300 customers a month in the area. The Cave Creek Water Company, which operates utilities in the Phoenix area, was acquired in March 2005.

In July 2006 Global Water Resources acquired West Maricopa Combine, the parent company of Valencia Water Company in the City of Buckeye, Willow Valley Water Company near Bullhead City, Water Utility of Greater Buckeye near Buckeye, Water Utility of Greater Tonopah west of the Hassayampa River and Water Utility of Northern Scottsdale located in northeast Scottsdale. These companies serve an area of 80square miles, earmarked for 135,000 houses.

In October 2007 Global Water Resources acquired Balterra Sewer Corp., a wastewater provider for an area in unincorporated western Maricopa County known as Tonopah. The Water Utility of Greater Tonopah ("WUGT"), a Global Water affiliate, is currently the area's primary water supplier.

In September 2008, Global Water Resources announced that it had entered into a Memorandum of Understanding with the City of Eloy in Arizona for the provision of water, wastewater and recycled water infrastructure for the eastern portion of Eloy's planning area.

Sources:

Global Water Resources, Form 10K, 2012-2014

Global Water Resources, corporate web site

Global Water Resources, discussions with management, 2012-15

Contact Details

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William S Levine (Chairman)

Trevor Hill (President & CEO)

Cindy M Bowers (CFO)

United States of America

Han's Technologies Inc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Han's Technologies	Only	Only	Sewerage	
China	710,000	715,000	0	1,425,000
Global total	710,000	715,000	0	1,425,000
% home markets	0%	0%	0%	0%

Han's Technologies is a privately held California Based company, which has gained a series of BOT contracts in China through its Western Water subsidiary since 2004. The company was incorporated in 1996 and has been developing engineering projects in China since 1998, with a total treatment capacity of 230,000m^3 per day having been installed to date.

Han's Technologies, principal contracts

Year	Location	Contract & length	People served & service
2004	Bijie	BOT	80,000, water

A 75,000m^3 per day WTW and 30miles of piping was built between 2004 and 2006 to serve Qian-Xi, Bijie Prefecture in Guizhou. It entered service in September 2006.

2004	Na-yong	BOT	50,000, water

A 25,000m^3 per day WTW and 10miles of piping was built between 2004 and 2005 to serve the town in Guizhou. The BOT was later sold back to the Government.

2004	Zhi-jin	BOT	70,000, water

A 22,500m^3 per day WTW was built between 2004 and 2005 to serve the town in Guizhou. It entered service in 2005.

2005	He-zhang	BOT	50,000, water

A 15,000m^3 per day WTW was added to the extant WTW along with seven miles of piping to serve the city in Guizhou. It entered service in October 2007.

2005	Da-fang	BOT	80,000, water

A WTW, new piping and a dam are being built between 2005 and 2010 to overhaul the county in Guizhou's water services. They currently serve 25% of the population.

2005	Xitang	30 year BOT	300,000, wastewater

A 35,000m^3 per day WWTW entered service in July 2007, serving the town and industries in Guizhou. In 2009, it was expanded to 70,000m^3 per day.

2005	Zhenyuan	BOT	65,000, wastewater

The 12,500m^3 per day facility was the first WWTW BOT in Guizhou. It entered service in 2008.

2008	Yiliang	BOT	100,000, wastewater

A 20,000m^3 per day WWTW is to serve the Huaxing Water Town in Yiliang County, Kunming, and Yunan. Construction took place between 2008 and 2010.

2008	Ninghua	30 year BOT	150,000, wastewater

A 40,000m^3 per day WWTW is to be constructed in two phases to serve Ninghua County, Sanming Prefecture in Fujian Province. Construction started in August 2008 and continued to 2010.

2009	Zanyi	30 year BOT	100,000, wastewater

A 20,000m^3 per day WWTW is to serve Zanyi in Yunnan Province. It can be expanded to 50,000m^3 per day and construction of the initial plant took place between 2009 and 2010.

2004	Qianxi	BOT	80,000, water

A 9,500 m^3 per day BOT in the Bijie prefecture of Guizhou. It entered service in 2006.

Source:

Corporate web site

Contact Details

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James Li (CFO)

William Brekke (Senior Commercial Officer)

United States of America

Middlesex Water Company

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Middlesex Water	Only	Only	Sewerage	
USA	70,000	0	305,000	375,000
Global total	70,000	0	305,000	375,000
% home markets	100%	0%	100%	100%

Middlesex Water Company (MWC) is involved in wholesale and retail water supply for domestic, commercial, industrial and fire protection customers in New Jersey and Delaware, (with New Jersey being the main market). The company was incorporated in 1897 and operates water utility systems in central and southern New Jersey and in Delaware since 1992, as well as a wastewater utility in southern New Jersey. MWC has 107,000 regulated and non-regulated water customers and 20,100 wastewater customers and the company serves approximately 375,000 people with water and 70,000 people with sewerage. In 2009, the company expanded into Pennsylvania.

Middlesex Water Company, activities and subsidiaries

The Middlesex System in central New Jersey produced 69% of the MWC's 2005 revenues, providing water to 60,000 retail customers, primarily in eastern Middlesex County, New Jersey, a population of 219,000. 7% of the Middlesex System's water was purchased from E'Town Water. The remaining 23% was obtained through groundwater. There are nine further subsidiaries:

[1] Tidewater Utilities Inc. and Southern Shores; serving 40,000 retail customers in 300 separate community water systems in Kent, Sussex and New Castle Counties, Delaware, along with 4,700 water and wastewater customers served by White Marsh through 68 O&M contracts. Total customers in the state number 40,700 compared with 3,000 in 1992.

[2] Pinelands Water Company services 2,500 residential customers in Burlington County, New Jersey.

[3] Pinelands Wastewater Company services 2,400 primarily residential retail customers and, under contract, one municipal wastewater system in Burlington County, New Jersey with about 200 residential customers.

[4] Utility Service Affiliates Inc, along with MWC, started a 5 year contract with the City of South Amboy, New Jersey to operate and maintain the city's 2,600 customer water system in May 1995. The contract has been renewed to 2045.

[5] Utility Service Affiliates (Perth Amboy) Inc, along with MWC, signed an agreement in 1998 with the city of Perth Amboy to operate and maintain the City's water and wastewater systems for its 11,000 customers (45,000 people) for 20 years. USA-PA will be paid a fixed fee and a variable fee based on increased system billings.

[6] Bayview has 300 customers in Cumberland County, NJ. Bayview was incorporated into the Middlesex system at the start of 2006.

[7] Twin Lakes, acquired in November 2009 serves 120 customers in the township of Shohola, Pike County, Pennsylvania.

[8] Montague Water Company was acquired in March 2010, serving 2,000 people in Montague Township, north western New Jersey.

[9] The TESI System was acquired in 2011. It had seven wastewater treatment systems serving a total of 3,300 customers in Southern Delaware.

Agreements have also been developed in Maryland and North Carolina in 2008. A 20 year PPP with the village of Ridgewood for the operation of the wastewater treatment works will start by the end of 2012.

Middlesex Water Co., turnover by activity (%), 2010-2014

	2010	2011	2012	2013	2014
Residential	45.5%	46.0%	46.1%	46.6%	48.4%
Commercial	9.7%	10.0%	9.8%	9.9%	10.0%
Industrial	8.7%	9.2%	8.8%	7.6%	6.7%
Fire protection	9.7%	10.1%	9.5%	9.3%	9.3%
Contract sales	14.6%	13.1%	13.0%	12.4%	11.3%
Contract operations	9.7%	10.0%	11.1%	12.0%	11.5%

	2010	2011	2012	2013	2014
Other	2.1%	1.6%	1.7%	2.2%	2.8%

Middlesex Water Co., profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Turnover	102.74	102.07	110.4	114.8	117.1
Operating profits	26.60	24.20	27.65	30.97	34.39
Net income	14.33	13.45	14.40	16.63	18.45
Earnings per share (USD)	0.96	0.85	0.90	1.03	1.13

Sources:

Middlesex Water, Annual Reports and Form 10K, 1998-2014

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Dennis W Doll (Chairman, President & CEO)

A. Bruce O'Connor (Vice President/CFO)

Richard M Risoldi (Vice President/Chief Operating Officer)

United States of America

Oaktree Capital Management

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Oaktree Capital Mgt	Only	Only	Sewerage	
Israel	1,400,000	0	0	1,400,000
Global total	1,400,000	0	0	1,400,000
% home markets	0%	0%	0%	0%

Veolia Environnement (VE) gained a contract to develop Israel's first major reverse osmosis (RO) desalination facility in 2002. In 2014, VE announced that it was selling its Israeli water and waste management activities to Oaktree Capital Management. This deal was completed for EUR 220 million in April 2015. Oaktree Capital management is a US based fund that invests in less efficient markets and alternative investments.

Israel

Contracts

Year	Location	Contract & length	People served & service
2002	Ashkelon	25 year BOT	1.4 million water desalination

VID Investment Consortium, comprising VE (25%), IDE (50%) and Dankner (25%) of Israel gained the BOT contract. After buying out Dankner, VE held 50% of OTID, the construction company's equity, and 49.5% of ADOM, the operating company. The project cost USD 212 million, being funded by 23% equity and 77% debt.

The contract covers the construction and operation of the 320,000m^3 per day facility, the largest membrane sea water desalination plant in Israel. Total revenues will be EUR900million. The water provision price of USD0.527/m^3 was well below expectations due to new technologies purchased by VE and a relatively low cost of capital. The facility entered service in 2003 with full capacity in 2005. The facility delivered 120 million m^3 in 2010. In 2010 the facility was expanded to 396,000m^3 per day. Between 2005 and the start of 2015, the facility delivered 1 billion m^3 of water to Mekorot, the national water utility.

Sources:

Veolia Environnement, press releases, 2001-2014

Veolia Environnement. Conference presentations

Oaktree, corporate web site

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Howard Marks (Co-Chairman)

Bruce Karsh (Co-Chairman & CIO)

Jay Wintrob (CEO)

David Kirchheimer (CFO)

United States of America

Pentair

Population served by service and country 2014 data Pentair	Water Only	Sewerage Only	Water & Sewerage	Total
United Kingdom	850,000	63,000	0	913,000
Total - home markets	0	0	0	0
Total - international	850,000	63,000	0	913,000
Global total	850,000	63,000	0	913,000
% home markets	0%	0%	0%	0%

Tyco International Ltd acquired Earth Tech in 1996. Earth Tech had a turnover of approximately USD1.3billion in 2007. In 2008, Earth Tech was sold to Aecom Technology Corporation for USD510million. Aecom is involved in a number of infrastructure markets and 83% of its 2009 revenues derived from professional and technical services with 17% from management support services. It had its IPO in 2007. Tyco retained Earth Tech's water and wastewater contracts in Brazil and sold them to Grupo Aguas do Brasil (Brazil, see separate company entry). Aecom has discontinued the Earth Tech name. In 2012 Aecom's Flow Control division, including its water activities were sold to Pentair.

Pentair, profit and loss account, 2010-2014

Y/E 30/09 (USD million)	2010	2011	2012	2013	2014
Turnover	3,031	3,457	4,307	7,000	7,039
Operating income	313	100	-5	743	852
Net income	186	-8	-82	512	607
Earnings per Share (USD)	1.87	-0.08	-0.64	2.50	3.19

Prior to the sale, Earth Tech operated more than 200 water and wastewater treatment facilities in the United States, Canada, United Kingdom, Ireland, Hungary, China, Australia, New Zealand, Thailand, Venezuela, and Brazil. Earth Tech's water and wastewater treatment facilities served more than 10million people worldwide in 2007.

Aecom divested most of the water and wastewater operations. It sold the Mexican activities to Mitsui of Japan (see company entry) and the US water contract operations to United Water (see Suez Environnement company entry). The Chinese contracts were sold to Suez/New World in 2009 for EUR12million and the British and Irish interests are also expected to be sold at some point.

Water Infrastructure Group, Pentair's Australasian arm, was sold to Mitsubishi in 2015.

Pentair, populations served

Country	Water	Sewerage	Total
United Kingdom	850,000	63,000	**913,000**
Grand Total	850,000	64,665	**914,665**

Venezuela

Contracts

Year	Location	Contract & length	People served & service
2000	Jose	DBFO	industrial water & wastewater

Aguas Industriales de Jose (AIJ) is a joint venture between Earth Tech (75%) and PDVSA, Venezuela's national petroleum company (25%). AIJ is providing water and wastewater services to 12 petrochemical consortiums at the Jose Industrial Complex. Earth Tech will initially invested USD75million in the project. AIJ owns and operates a facility which treats and supplies industrial water at a rate of 112Ml/day. This facility has been upgraded to have a 260Ml/day capacity.

Hungary

Contracts

Year	Location	Contract & length	People served & service
2003	MOL	15 year industrial outsourcing	wastewater services

The contract with MOL (Magyar Olaj-és Gázipari Nyilvánosan működő Részvénytársaság), the Hungarian Oil & Gas Company involves expanding, upgrading and managing the 23,850m^3 per day wastewater treatment facilities at the Duna refinery in Szazhalombatta, near Budapest. Total construction costs were USD45million and Earth Tech has managed the wastewater assets and services at the refinery for 15 years from June 2005. The project has been financed with the support of the European Bank for Reconstruction and Development.

United Kingdom

Contracts

Year	Location	Contract & length	People served & service
2005	Project Alpha	25 year PFI	850,000 water treatment

Project Alpha, one of the two PFI projects for Northern Ireland concerns the building and upgrading of four water treatment works which will serve approximately half the population of Northern Ireland. It was awarded to Dalriada Water (Earth Tech 45%, Kelda 45% and Farrans 10%) and involved GBP110million of Capex between 2008 and 2009 and a treatment capacity of 0.4million m^3 per day.

2003	UK MoD	25 year PFI	water & wastewater services

Bray Utilities, consisting of Kelda (45%), Earth Tech (45%) and Kellogg Brown & Root (USA, 10%) gained Package A of Project Aquatrine, serving some 1,000 military sites in South West England, the Midlands and Wales. The contract is worth GBP1billion and operations commenced in December 2003.

2001	Newry	30 year BOT	63,000 sewage treatment

This contract is for a 30,750m^3 per day PFI sewage treatment plant in Northern Ireland.

Sources:

Earth Tech, corporate web site

AECOM, Form 10K, 2008-12

Pentair, Press releases, 2012

Pentair, Form 10K, 2014

Tyco, Form 10K, 1999-08

Contact Details

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Randall J Hogan (Chairman & CEO)

John L Stauch (CFO)

United States of America

Perc Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Perc Water	Only	Only	Sewerage	
USA	0	63,000	0	63,000
Global total	0	63,000	0	63,000
% home markets	0%	100%	0%	100%

Pacific Environmental Resources Corp (PERC) was founded in 1998 and has designed 60 water recycling facilities in the USA, including operating 20 of them, mainly in California and Arizona. The company is privately held. The company specialises in developing facilities for towns and cities that are expanding into new areas in arid zones.

PERC Water, principal contracts

Year	Location	Contract & length	People served & service
2002	Goodyear	DBO	Wastewater treatment

The Arizona facility treats 4.1 MGD of wastewater (16,400 households) which can be expanded to 8.2MGD (32,800 houses).

2003	Buckeye 1	DBO	Wastewater treatment
2006	Buckeye 2	DBO	Wastewater treatment

The first (Sundance) facility was expanded from 1.2MGD to 3.6MGD (14,400 homes) in 2009. The second (Tartesso) facility has an initial 1.2MGD capacity and can be expanded to 9.2MGD (36,800 households).

2005	Mountain House	DBO	Wastewater treatment

The 3.0MGD facility entered service in 2005, replacing the city's original facility – offering six times the capacity and using one tenth of the floor-space. The facility is the first chemical free WWTW in the USA. Serving 12,000 houses, it can be expanded to 5.4MGD or 21,600 houses.

2007	City of Surprise 2	DBO	Wastewater treatment
2008	City of Surprise 3	DBO	Wastewater treatment

A fast expanding city, the emphasis has been on meeting future demand as new zones are occupied. Zone 2 covers 4,800 households (1.2MGD) and can be expanded to serve 9,600 households (2.4MGD), while the Zone 3 facility has a treatment capacity of 1.8MGD (7,200 households) and can be expanded to 14,400 households (3.6MGD) in a second phase.

2008	Santa Paula	30 year DBO	32,000 wastewater treatment

The 4.2MGD facility entered service in 2010, replacing the Californian city's 1939 WWTW. The facility is designed to serve 50,000 people when needed.

2012	Adelanto	O&M	31,000 wastewater treatment

The city in California has been unable to develop its WWTW since planning started in 2007. PERC is taking over the facility, bringing it in line with state requirements and expanding its capacity to 4MGD by 2013.

Source:

PERC Water, corporate web site

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Johan Perslow (Chairman & CEO)

Brian D Cullen (President)

Karen T Sayles (Finance Director)

United States of America

SJW Corp

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
SJW	Only	Only	Sewerage	
USA	1,100,000	0	0	1,100,000
Global total	1,100,000	0	0	1,100,000
% home markets	100%	0%	0%	100%

SJW Corporation (SJW) was incorporated in California in 1985, serving what is now called Silicon Valley. It is a holding company with two wholly owned subsidiaries, San Jose Water Company and SJW Land Company. In addition, SJW also holds 1.10million shares in the California Water Service Group (CWSG). Altogether, 99% of revenues over the past 5 years have been generated by the water activities, while dividends from CWSG have contributed 7% of profits during the same period.

The San Jose Water Company was incorporated in 1931, succeeding a business founded in 1866. The Company provides water to 1.10 million people via 229,000 connections in an area of 138 square miles in the metropolitan San Jose area. Population growth within its service area has resulted in long term growth in its customer base. The company provides water services to customers in parts of Cupertino and San Jose and in Campbell, Monte Sereno, Saratoga, Los Gatos, and the surrounding areas in the County of Santa Clara in California.

In October 1997, SJWC commenced operation of the city of Cupertino municipal water system under terms of a 25 year lease. The system is adjacent to the existing San Jose Water Company service area and has 4,400 customers. SJWC made an USD6.8million lease payment to the city, which will be amortised over the lease term. The company is responsible for all aspects of system operation, including capital improvements.

SJW Corp, profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Water – Residential & commercial	195.43	216.75	234.28	245.60	251.91
Water – Industrial	1.03	1.09	1.11	1.21	1.51
Water – Public authorities	9.31	10.01	10.71	12.10	11.93
Water – Others	6.31	6.51	6.92	7.68	7.93
Group Turnover	215.64	238.96	261.55	276.87	319.67
Operating profit	38.08	54.39	55.30	53.41	92.88
Net income	24.41	20.88	22.32	22.38	51.81
Earnings per share (USD)	1.30	1.11	1.18	1.12	2.54

SJWTX Water Inc, a 97.5% owned subsidiary of SJW Corp was incorporated in the State of Texas in September 2005 for the purpose of acquiring the assets of Canyon Lake Water Supply Corporation (CLWSC), a Texas non-profit water supply corporation. CLWSC is a member-owned non-profit water utility headquartered in Canyon Lake, Texas and serves a population of approximately 36,000 with 10,000 connections in 243 square miles of western Comal County and southern Blanco County near San Antonio. CLWSC was acquired for USD3.2million along with the assumption of USD20million in corporate debt.

Sources:

SJW, Annual Reports and Form 10K, 1998-2014

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W. Richard Roth (President/CEO)

J P Lynch (CFO/Treasurer)

R S Yoo (Chief Operating Officer)

United States of America

Southwest Water Company

Population served by service and country				
2010 data	Water	Sewerage	Water &	Total
Southwest Water	Only	Only	Sewerage	
USA	415,000	0	15,000	430,000
Global total	415,000	0	15,000	430,000
% home markets	100%	0%	100%	100%

Southwest Water Company (SWC) was incorporated in California in 1954 and reincorporated in Delaware on June 30, 1988. The company provides water and wastewater services to some 2million people through 700 contracts for managing 460 water treatment plants and 200 wastewater treatment plants in 36 states, mainly California, New Mexico, Texas and Mississippi. The company was reorganised into four operating segments in 2008. Regulated activities cover 144 water systems including 19 acquisitions made between 2000 and 2009. In March 2010 JP Morgan Asset Management launched an agreed bid for the company. This follows problems relating to the company's accounting. The company is now privately held and all data since 2009 is approximate.

California utility operations

The Utility division the company's regulated water activities in California, New Mexico and Texas. Suburban Water Systems (SWS) operates in California, New Mexico Utilities Inc (NMUI) in New Mexico (sold in May 2009), and in Alabama, Mississippi and Oklahoma. SWS was founded in 1907 and serves 311,000 people (70,968 domestic customers) in Los Angeles and Orange County. The city of West Covina's water system was acquired in February 2000 for USD8.5million. This system has 7,000 connections and is near to SWS's existing activities. Customer growth is limited to acquisitions and growth within its existing franchise. In 2007, 73% of Suburban's turnover came from sales to domestic customers, 18% to industrial and commercial customers and 9% to other customers. The company has a further 250 water and wastewater connections in Oklahoma (500 connections).

Texas Utilities

Texas Utilities consists of the Windermere Utility Company and Hornsby Bend Utility Company (acquired for USD4million in October 2000, based in the suburbs of Austin, with 6,081 connections) and 87 water utilities and 12 wastewater utilities acquired from Tecon Water Holdings for USD66million in July 2004. The activities, now called Monarch Utilities currently serve approximately 21,000 water and 3,500 wastewater connections in Texas. A USD0.7million tuck-in acquisition in 2005 added 370 new water connections and 2,600 connections in 13 water systems in the San Antonio area were acquired in 2007 for USD5.8million. In total, 116,000 people are served in Texas through 123 water systems.

Sources:

SWW, Annual Reports and Form 10K, 1998-2009

Contact Details

Name: Southwest Water Company

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Tel: (281) 207 5800

Web: www.swwc.com

United States of America

York Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
York Water	Only	Only	Sewerage	
USA	145,000	0	0	145,000
Global total	145,000	0	0	145,000
% home markets	100%	0%	0%	100%

The York Water Company (YWC) has provided “that good York water” in York County, Pennsylvania, since 1816. The company’s water abstraction has a safe daily yield of 35million gallons, compared with an average daily consumption of 18.5million gallons in 2009, serving 187,000 people. In 1994, 136,000 people were served with 19.7million gallons of water per day. YWC’s service territory has been gradually expanded through the laying of new mains and contracts to sell water to adjoining boroughs. Three service extensions were completed in 2002 and two neighbouring townships (Conewago and Springfield) were connected during 2003.

The company has two impounding reservoirs. Lake Williams, the lower reservoir, covers 220acres and holds about 0.87billion gallons of water and Lake Redman, the upper reservoir, covers 290acres and holds about 1.36billion gallons of water. York Water has a filtration plant half a mile south of the city of York. The company’s Spring Gardens filtration unit has a capacity of 31million gallons per day and is capable of filtering 46million gallons per day during periods of peak demand. YWC installed a 15mile pipeline from Lake Redman to the Susquehanna River for USD23million in 2004, which boosted the system’s yield from 23million gallons per day to 35million gallons per day.

York Water, profit and loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	1013	2014
Number of customers	62,505	62,738	63,779	64,118	65,102
Residential turnover	24.48	25.69	26.11	26.80	29.08
Commercial & industrial turnover	11.44	11.82	12.11	12.30	13.27
Total turnover	39.01	40.63	41.47	42.38	45.90
Operating profit	19.77	19.88	20.57	20.76	20.08
Net profit	8.93	9.08	9.30	9.65	11.48
Earnings per share (USD)	0.71	0.71	0.72	0.75	0.89

During 2004 and 2005, an additional 351,679feet of mains were added to the network, more than double the average in the previous three years. A further 307,133feet of mains were added during 2006 and 2007. 492,466feet were added during 2008 and 2009. 1,110 customers were added to the network due to two tuck-in acquisitions made during 2005. In 2007, the Pennsylvania Public Utility Commission authorised an increase in the number of municipalities the company can serve from 42 to 46. The water system of the borough of Adamstown was acquired in January 2007, adding 400 customers and the acquisition of the Asbury Pointe and West Mannheim Township system, in 2008 respectively added 250 and 1,800 customers. In 2011 YW acquired the Asbury Point wastewater collection system, serving 240 households. The company also started sewerage billing on behalf of other systems in 2011.

Sources:

York Water, Annual Reports and Form 10K, 1998-2014

Contact Details

Name: York Water Company

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Jeffrey R Hines (President & CEO)

Kathleen M Milner (CFO)

Major Players – Table of Contents

MAJOR PLAYERS

France

Suez Environnement SA

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Suez Environnement	Only	Only	Sewerage	
France	0	500,000	12,000,000	12,500,000
Belgium	300,000	0	0	300,000
Czech Republic	0	0	2,205,000	2,205,000
Ireland	0	220,000	0	220,000
Italy	0	0	400,000	400,000
Russian Federation	1,000,000	0	0	1,000,000
Slovakia	0	0	150,000	150,000
Slovenia	0	190,000	0	190,000
Spain	7,000,000	2,500,000	5,500,000	15,000,000
Chile	200,000	0	6,600,000	6,800,000
Colombia	141,000	0	803,000	944,000
Cuba	40,000	50,000	1,182,000	1,272,000
Mexico	2,600,000	3,600,000	1,100,000	7,300,000
United States	2,620,000	2,500,000	220,000	5,340,000
Australia	4,200,000	120,000	2,350,000	6,670,000
New Zealand	0	160,000	0	160,000
China & Macao	17,700,000	4,330,000	60,000	22,090,000
India	22,800,000	1,020,000	0	23,820,000
Indonesia	5,700,000	0	0	5,700,000
South Korea	0	900,000	0	900,000
Taiwan	3,000,000	0	0	3,000,000
Jordan	0	3,500,000	0	3,500,000
Morocco	500,000	0	4,500,000	5,000,000
Algeria	1,500,000	0	3,500,000	5,000,000
Qatar	0	900,000	0	900,000
Oman	500,000	0	0	500,000
Saudi Arabia	3,500,000	0	3,000,000	6,500,000
Egypt	0	1,800,000	0	1,800,000
Cameroon	5,300,000	0	0	5,300,000
Total - home markets	0	500,000	12,000,000	12,500,000
Total - international	78,601,000	21,790,000	31,570,000	131,961,000
Global total	78,601,000	22,290,000	43,570,000	144,461,000
% home markets	0%	2%	28%	9%

Suez Environnement SA (SE) is the second largest water and wastewater company in France, but remains the world's leading international player in terms of the number of people served through its water and wastewater operations. The company has gained many of its contracts via contacts made through the water and sewerage engineering design and build projects carried out by its Degrémont subsidiary. Degrémont is currently operating in 40 countries and has worked in 70 countries over the past 30 years. Suez believes that 1 billion people receive drinking water from its treatment plants, including 20% of China's urban population. Since 2003, Suez has eased its expansion strategy.

Some contracts have been sold and other handed back, especially in developing economies. Suez is continuing to expand in Europe, North America, India and China. After the merger of Suez and Gas de France (GDF Suez) Suez sold 65% of Suez Environnement, its water and waste management activities in July 2008, 12% to a group of long term holders and 53% to private and institutional investors.

Suez Environnement - Profit & loss account, 2010-2014

Y/E 31/12 (EUR million)	2010	2011	2012	2013	2014
Turnover	13,869.3	14,829.6	15,101.6	14,322.9	14,324.1
EBITDA	2,339.4	2,512.9	2,450.0	2,534.2	2,643.6
Operating income	1,024.8	1,039.4	1,145.8	1,148.4	1,011.2
Net income	564.7	322.8	251.4	352.2	417.2
Earnings/share (EUR)	1.16	0.65	0.45	0.64	0.69
Dividends/share (EUR)	0.65	0.65	0.65	0.65	0.65

Source: SE, Reference Documents, 2010-2014

Société Lyonnaise des Eaux et de l'Eclairage (LDE) was founded in 1880, making it the third oldest private sector water company in France. Major contract gains at the outset included Cannes (1880), Barcelona (1881), Dunkirk (1902) and Casablanca (1914). La Lyonnaise was traditionally one of the smaller French multi-utility service and construction companies. This is the third time that the company has in essence been a water and waste management entity – Lyonnaise des Eaux (to 1990, then a merger with Dumez), Lyonnaise des Eaux (1993-97, then a merger with Suez) and Suez Environnement (2008 - onwards). The Dumez (France, construction) merger was to ensure that La Lyonnaise was too large for Bouygues to bid for and the merger with Compagnie Financiere Suez SA (Belgium, power and waste management) was to create a multi-utility at least equal to Veolia Environnment (VE), its traditional rival.

Suez Environnement - Highlights

1880:	Société Lyonnaise des Eaux et de l'Eclairage founded
1882:	Aguas de Barcelona founded
1914-46:	Activities in Morocco, Tunisia, Togo, Congo & New Caledonia
1939:	Degrémont founded
1947:	Electricity activities in France nationalised
1958:	300,000 subscribers in France
1972:	Acquisition of Degrémont
1980-90:	Enters Spain, UK & USA for water provision
1990:	Merger with Dumez SA
1991:	Acquisition of SDI
1996:	Acquisition of Northumbrian Water Plc for F7.4billion
1996:	Buys out Eau et Force SA
1997:	Merger with Compagnie Suez
1997:	Buys out Degrémont SA
1999:	Acquisition of Nalco and Calgon, buy back of Browning Ferris's stake in SITA
2000:	Lyonnaise des Eaux organised into three divisions
2001:	S-LDE renamed Suez, LDE renamed Ondeo
2002:	Creation of Environmental Division (Ondeo and SITA)
2003:	Partial divestment of Northumbrian, other contracts handed back, Calgon sold
2004:	Partial divestment of EMOS, Puerto Rico contract handed back, Nalco sold
2005:	Rest of Northumbrian sold
2006:	Contracts closed in Argentina, Brazilian activities sold
2007:	AISA contract ends in Bolivia, expansion in USA, ME & North Africa, India & China
2008:	Suez Environnement spun off from Suez, acquires Agbar & AgVal stake
2009:	Chongqing water partnership
2010:	Unwinding of Suez-Veolia joint contracts in France, full consolidation of Agbar
2011:	Adelaide contract win, sale of 70% of Bristol Water
2012: 2013: 2014: 2015:	Sale of Eurawasser and Budapest Formal decoupling with GDF Suez Contract gains in India All activities come under the Suez brand

Source: SE, Annual Reports & Reference Documents, 1990-2014

From 1914 to 1946, Société Lyonnaise des Eaux provided water services in Morocco, Tunisia, Togo, Congo and New Caledonia. These were nationalised in 1946. In 1972 the company sought to re-enter the international market through the acquisition of Degrémont. Contracts and acquisitions were gained in Spain, the UK and USA between 1980 and 1990, along with the acquisition of SDI in France in 1991. By 1993, the company served 40million people (25.5million

outside France). Since then, Suez has increased its international activities fourfold, through major contract gains, the 1996 acquisition of Northumbrian Water Plc, the acquisition of Aguas Andinas in Chile and acquisitions in the USA. In 2011, international activities accounted for 28% of group revenues. SE aims to increase this to 33%.

In 2008, Suez Environnement (SE) also attained overall ownership of Agbar (see company entry) jointly with Caxia Holding of Spain. This cements a relationship that started in 1991. In 2009, Suez started a bidding process for complete control of Agbar. By June 2010, SE held 75% of Agbar's equity and Agbar's shares have been delisted. This has been enhanced by SE acquiring SAUR's 33% holding in Aguas de Valencia.

Prior to the merger with Suez, Lyonnaise des Eaux had some 860 subsidiaries, reflecting the complexity of operating a utility via a large number of local contracts built up through contract awards and acquisitions. Compagnie Financiere Suez SA has been of more strategic importance with regard to power (Tractabel & Electrabel) and waste management (Watco) than the water markets. Some small contracts, supplying water to 300,000 people have been integrated into Suez's portfolio of international contracts. The table below outlines Suez's breakdown of the global population served and its main contract gains since 1984.

Suez Environnement - Breakdown of global population served and main contract gains since 1984

Year	Million	N	Contract gains and acquisitions
1984	33	0	France & Spain only
1985	34	1	Macao
1986	34	1	Natal (South Africa, O&M)
1987	34	2	Warsaw (USA)
1988	36	1	Essex & Suffolk Water Plc (UK)
1989	36	2	Montecatini Terme (Italy) & Taiping, (Malaysia)
1990	36	0	There were no contract gains this year
1991	36	4	Fiestole (Italy), Gibraltar & Edmonton (Canada)
1992	37	11	South Africa (O&M), USA, Italy, China & Malaysia
1993	47	10	South Africa (O&M), USA, Argentina, Mexico, Germany & Malaysia
1994	53	11	USA, Czech Republic, Mexico & Hungary
1995	55	9	Czech Republic, Hungary, China, Brazil & Colombia
1996	57	16	USA, Colombia, Northumbrian Water Plc (UK), Germany, Australia
1997	82	17	USA, Bolivia, Colombia, Argentina, Morocco, Hungary, Turkey, China, Indonesia & Philippines
1998	89	16	USA, Colombia, Uruguay, Germany, China, Indonesia & Australia
1999	100	16	USA, Mexico, Chile, Germany, Norway, Slovakia & Italy
2000	108	10+	United Water (USA), Chile, China, Cameroon, Brazil, Germany & Korea
2001	110	5+	Korea, China, Chile, Ireland
2002	131	25+	Taiwan, Canada, China, Mexico, Puerto Rico, Jordan, USA
2003	121	3+	Italy
2004	117	5+	Mexico, Russia, China
2005	115	5+	Australia, Morocco, Algeria
2006	110	4+	Saudi Arabia, China, Oman, Spain & USA
2007	112	7+	China, Aguas de Barcelona (Spain), Egypt, India & USA
2008	117	4+	Aguas de Valencia (Spain), Earth Tech (USA)
2009	117	5+	Melbourne (Australia)
2010	122	5+	Aguas de Barcelona (Spain), Earth Tech (China),
2011	123	2+	Adelaide (Australia)
2012	126	3+	Amman, Perth
2013	130	7+	India
2014	144	4+	India

Source: SE, press releases, Annual Reports & Reference Documents, 1990-2014

International water and wastewater services accounted for 30% of consolidated water services turnover in 1994 and 1995, rising to 65% by 2001. International activities contributed at least 75% of the water services' net earnings in recent years, but have fallen back since 2001 due to the Peso crisis and the divestment of various activities. In consequence, international activities accounted for 26% of water revenues in 2004. The post 2005 development plans call for 'highly selective' expansion outside its core markets, which are identified as Europe, the USA and China.

Overall, exit strategies have differed. The Halifax contract was handed back to the municipality and subsequently re-emerged in a different form, while in Puerto Rico and Atlanta the contract was terminated by mutual consent. The Vietnam contract ended after a perceived change in strategy by the Government. Suez sold its holding in Northumbrian Water (NWL) (Ondeo Services UK) in two stages in order to deconsolidate NWL's EUR3.1billion net debt and sold its activities in Brazil to a local investor. Bogota unilaterally ended the Saltire contract. Suez ended the La Paz/El Alto contract due to local political pressure, with the Buenos Aries and the Aguas de Santa Fe concessions

being handed back while the Córdoba concession was sold to a local investor. Despite various problems, the Jakarta contract continues to be operated by Suez.

Suez Environnement - water and sewage services, 2010-2014

Service	Measure	2010	2011	2012	2013	2014
Water supplied	Million m^3 pa	2,659	3,089	3,362	4,275	3,185
Wastewater treatment	Million m^3 pa ($2^o/3^o$)	2,998	3,189	3,316	3,981	4,641
Water coverage	Network Length (km)	187,403	240,621	251,292	250,905	248,891
Sewerage coverage	Network Length (km)	94,196	113,411	122,054	123,917	128,062
Water facilities [1]	Treatment works	1,193	1,209	1,177	1,154	1,154
Wastewater facilities	Treatment works	1,773	2,267	2,266	2,180	2,188
Water distribution	Technical efficiency	76%	72%	77%	76%	76%
Wastewater treatment	BOD removal	92%	91%	92%	91%	90%
Water reuse	Post treatment water	22%	23%	23%	20%	20%

[1] Redefined as full treatment facilities from 2010

Source: SE, CSR Reports, 2011-2014

Suez Environnement - segmental revenues, EBITDA and operating income, 2010-2014

Y/E 31/12 (EUR million)	2010	2011	2012	2013	2014
Revenues					
European Water Services	4,248	4,206	4,334.0	4,408.7	4,516.1
European Waste Services	5,863	6,417	6,584.2	6,505.4	6,367.2
International	3,744	4,197	4,252.6	3,409.9	3,447.4
Other	15	10	93.3	188.1	207.2
Intercompany	-152	-188	-172.5	-189.2	-214.0
Total	**13,869**	**14,830**	**14,829.6**	**14,332.9**	**14,324.1**
EBITDA					
European Water Services	1,035	1,213	1,182.7	1,227.5	1,245.0
European Waste Services	839	881	799.8	790.3	743.0
International	558	471	504.1	559.8	728.1
Other	-93	-51	-36.6	-43.4	-72.5
Total	**2,339**	**2,513**	**2,450.0**	**2,534.2**	**2,643.6**
Operating income					
European Water Services	485	608	581.9	566.8	574.0
European Waste Services	349	388	309.4	300.3	264.8
International	327	131	323.1	427.8	519.7
Other	-136	87	-68.6	-71.7	-103.8
Total	**1,025**	**1,039**	**1,145.8**	**1,223.2**	**1,254.7**

Source: SE, Reference Documents, 2010-2014

Suez Environnement - water activity contributions to group turnover, 2010-2014

Y/E 31/12 (EUR million)	2010	2011	2012	2013	2014
Degrémont	**1,520**	**1,584**	**1,400**	**1,100**	**1,100**
- Design & Build	72%	68%	52%	38%	39%
- Equipment	12%	14%	19%	22%	22%
- BOT contracts	16%	18%	29%	40%	39%
France	**1,825**	**2,100**	**2,200**	**2,036**	**2,200**
- Drinking water production	48%	46%	44%	44%	44%
- Wastewater collection & treatment	26%	26%	26%	26%	26%
- Other services	14%	16%	18%	18%	19%
- Distribution plant & networks	12%	12%	12%	12%	11%
Agbar	**1,931**	**1,900**	**2,000**	**2,100**	**2,200**
- Spain	82%	67%	64%	66%	71%
- Rest of the world	18%	33%	36%	34%	29%
USA	**620**	**887**	**718**	**594**	**564**
- Regulated	59%	56%	65%	67%	66%
- Unregulated	41%	44%	35%	33%	34%

[1] Revenue for water and waste management

[2] Revenue by geography (includes Degrémont)

Source: SE Reference Documents, 2010-2014

Suez Environnement - corporate breakdown of people served in 2014 (million)

	Water	Sewerage
SE – France	12.0	12.5
SE – Rest of Europe	-	-
Agbar – Spain	13.7	9.5
Total – Europe	-	-
SE – Rest of World	-	-
Agbar – Rest of World	9.0	6.5
Global Total	97.0	66.0

Source: SE Reference Document, 2014

Suez Environnement - Group revenues by region

(EUR billion)	2009	2013
Europe	9.8	10.3
Asia	0.4	0.7
Middle East & Africa	0.8	1.0
Oceania	0.4	1.0
Northern America	0.8	0.9
Latin America	0.3	0.8
Total	12.5	14.7

Source: SE Annual Report 2009 & Reference Document, 2013

Suez Environnement - Alliances and Joint Ventures (JV)

Ondeo-Lend-Lease Pty: Australian JV (with an unnamed third partner) formed in 1991. It is a marketing vehicle for gaining the bulk water supply contract for Greater Sydney in 1993. The JV has been extended into South East Asia.

Sino French Holdings: A 50/50 JV with Hong Kong's New World Development Corporation, a company that is also actively involved in waste management projects in Hong Kong. Sino French Holdings (SFH) is used for all of Suez's contracts in China and Macao. A series of cooperation and partnership agreements have subsequently been developed between SFH and local Chinese entities.

Bal-Ondeo: Suez operates in Mexico through Bal-Ondeo, a 50/50 JV with Peñoles (BAL Group).

Al Qudra Suez Services: A JV between the Al Qudra Group of the UAE and Suez signed in 2008.

Suez Environnement - Principal facilities in operation and continued ownership 2014

Region	Principal facilities	Capacity (m^3/d)
Australia		
Perth	Desalination Plant	155,000
Sydney (PWP)	Production of drinking water	3,000,000
Chile		
Santiago	Production of drinking water	2,900,000
Santiago	Wastewater treatment plants	1,300,000
China		
Baoding	Production of drinking water	260,000
Changshu	Production of drinking water	675,000
Chongqing	Production of drinking water	540,000
Chongqing	Tangjiatuo Wastewater treatment plant	300,000
Jiangsu Water (Agbar)	Wastewater treatment plant	300,000
Macao	Production of drinking water	330,000
Qingdao	Production of drinking water	726,000
Sanya	Production of drinking water	245,000
Shanghai SCIP	Demineralization	50,000
Shanghai SCIP	Production of water	200,000
Shanghai SCIP	Treatment of industrial wastewater	26,500
Tanggu	Production of drinking water	280,000
Tanzhou	Production of drinking water	150,000
Tianjin	Production of drinking water	500,000
Zhengzhou	Production of drinking water	300,000

Region	Principal facilities	Capacity (m^3/d)
Zhongshan	Production of drinking water	1,000,000
Colombia		
Cartagena	Production of drinking water	270,000
Egypt		
Gabal El Asfar	Wastewater treatment plant	625,000
Alexandria	Wastewater treatment plant	819,000
Spain		
Barcelona	Production of drinking water	933,000
Granada	Production of drinking water	285,000
Murcia-ESTE	Wastewater treatment plant	100,000
Santander	Wastewater treatment plant	159,000
Valladolid	Wastewater treatment plant	214,000
France		
Aubergenville	Production of drinking water	140,000
Bordeaux	Production of drinking water	316,000
Clos de Hilde	Wastewater treatment plant	100,000
Dijon	Production of drinking water	110,000
Dijon	Wastewater treatment plant	120,000
Grimonpont	Wastewater treatment plant	285,000
La Feyssine	Wastewater treatment plant	91,000
Le Pecq-Croissy	Production of drinking water	160,000
Louis Fargue	Wastewater treatment plant	210,000
Marseille (SERAM)	Wastewater treatment plant	325,000
Mont Valérien	Production of drinking water	115,000
Morsang	Production of drinking water	225,000
Mougis Sicasil	Production of drinking water	242,000
Nantes (Tougas)	Wastewater treatment plant	115,500
Nice (Haliotis)	Wastewater treatment plant	220,000
Strasbourg	Wastewater treatment plant	190,000
Valenton	Wastewater treatment plant	800,000
Viry Chatillon	Production of drinking water	120,000
India		
Bislapur	Production of drinking water	400,000
Chembarambakkam	Production of drinking water	530,000
Rhitala	Production of drinking water	182,000
Sonia Vihar	Production of drinking water	635,000
TK-Hali	Production of drinking water	400,000
Indonesia		
Jakarta	Production of drinking water	490,000
Morocco		
SEOER Casablanca	Production of drinking water	163,000
Mexico		
Ciudad Juarez Norte	Wastewater treatment plant	140,000
Ciudad Juarez Sur	Wastewater treatment plant	170,000
Culiacan	Wastewater treatment plant	145,000
Czech Republic		
Brno	Production of drinking water	245,000
Taiwan		
Kaohsiung	Production of drinking water	450,000
UK		
Bristol	Production of drinking water	552,000

Region	Principal facilities	Capacity (m^3/d)
USA		
Belmont	Wastewater treatment plant	455,000
Haworth	Production of drinking water	610,000
Idaho	Production of drinking water	340,000
Jackson	Wastewater treatment plant	175,000
Jersey City	Production of drinking water	303,000
New Rochelle	Production of drinking water	340,000
New York	Production of drinking water	219,000
Southport	Wastewater treatment plant	470,000
Springfield	Wastewater treatment plant	254,000

Source: SE, Reference Document 2014

Suez Environnement - global involvement and contracts

France

SE's Lyonnaise des Eaux France (LDEF) has been Veolia Environnement's (VE) chief competitor in France (and globally) more or less since 1880. By 1958, Suez had 300,000 subscribers in France. The 1972 acquisition of Degrémont SA saw the company move from straightforward service provision to a more broadly based design, build, operate and transfer contract approach. Suez acquired SDI in 1991, gaining 3% of the French water market or some 1.5 million people. By 2001, Suez provided 17 million people with water (including some 3 million in joint contracts with VE) and 9 million with sewerage services, where it has since remained. The sewerage market is growing at an appreciably faster rate than the water market.

Since the ending of Droit d 'entrée in 1995, Suez has not made appreciable progress in gaining new contracts in France.

SE believes that it currently serves 12 million people in France (19% of the French population) and provides sewerage and wastewater treatment for 13 million people (29% of the French population). The company manages a total of 2,300 contracts, managing 670 water treatment works delivering 970 million m^3 of water and 1,491 wastewater treatment works, handling 830 million m^3 of sewage. The average contract length in 2012 was 9 years, with an 85% contract renewal rate.

Nantaise des Eaux Services was acquired from Gelsenwasser in 2015. It had revenues of EUR38.1 million in 2014, supplying drinking water to 123,000 people and sewerage and wastewater treatment for 116,000 people.

Spain

Suez's main involvement in Spain is through Agbar, which is included at the end of this entry. In addition, Degrémont is active in developing desalination contracts in Spain and has built or gained orders for 34 plants to date.

Contracts

Year	Location	Contract & length	People served & service
2006	Barcelona	30 year concession	1,300,000, desalination
2007	Muxtamel	5 year DBO	200,000, desalination

The former is a EUR159million contract which will provide 200,000m^3 of water/day at a cost of EUR159million, entering service in 2009 and the latter is a EUR55million contract for two towns in Alicante, with an average production of 50,000m^3/day, rising to 80,000m^3/day in the tourist season. Degrémont anticipated operating plants desalinating at least 2million m^3/day of water worldwide by 2009.

In addition, SE acquired a 33% interest in Aguas de Valencia (AgVal) in October 2007. AgVal provides water management for 3million people of the Valencia region. SE purchased this minority interest from SAUR for EUR135million. The majority shareholder of AVSA remains Inversiones Financieras AgVal, a Spanish consortium formed by local shareholders, who hold the other 67% of the company. AgVal serves 1 million people in Valencia (a 50 year contract renewed in 2001) and has a further 174 water and sewerage contracts in Spain.

Belgium

Suez's Watco provides water to some 300,000 people in Belgium. Turnover rose from EUR29.6million in 1998 to EUR47.7million in 2000 before falling back to EUR40.5million in 2001.

Italy

Suez increased its stake in ACEA to 12.48% in 2014. The Aqua Toscane and Arezzo contracts are held by Suez and the others by ACEA (see separate entry).

Contracts

Year	Location	Contract & length	People served & service
1998	Aqua Toscane	30 year concession	50,000 water & sewerage

Suez holds 100% of Aqua Toscane, which concentrates on water provision for Fiestole (contract started in 1991), Montecatini Terme (1989) and Ponte Buggianes (1992), Florence in Tuscany.

1999	Arezzo	25 year concession	350,000 water & sewerage

In January 1999, a Suez-led consortium gained the first international tender award for a water and sewerage concession following the belated liberalisation of the market in the wake of the 1994 Galli law. Suez's consortium holds 46% of Nuove Acque, with 54% being held by public entities. The contract was formally signed in June 1999. The concession has a JV with the 37 communes involved.

Slovakia

Contracts

Year	Location	Contract & length	People served & service
1999	Trencin	20 year lease	150,000 water & wastewater

Suez's TVS was awarded the concession for 50 local authorities in October 1999. The contract requires EUR40million in Capex, including construction of a new sewage treatment works, with EUR5million pa in turnover at the outset. This is the first water services privatisation in the country.

Slovenia

Year	Location	Contract & length	People served & service
1997	Maribor	25 year concession	190,000 sewage treatment

In February 1997 Suez became the preferred bidder for the Maribor concession. EUR30million investment is needed and the concession project will generate a turnover of EUR8million. There is an EBRD loan attached to the project. The population equivalent for the plant is 200,000 (equivalent to EUR29/capita pa). Maribor is Slovenia's second largest city. Suez is the largest shareholder in the consortium (40% stake, including Degrémont as the constructor). Suez built a water treatment plant in Kopper in 1995. This was the first BOT wastewater treatment contract to be awarded in Central and Eastern Europe.

Czech Republic

Contracts

Year	Location	Contract & length	People served & service
1993	Brno (BVK)	25 year concession	420,000 water & sewerage
1994	Ostrava	30 year concession	330,000 water & sewerage
1996	South Moravia	25 year concession	350,000 water & sewerage

Suez holds 46% of BVK, the operating company in Brno. The concession was extended for a 25 year period in October 1999 (starting from 2000). The new concession involves upgrading the wastewater treatment plant to meet the EU's UWWTD criteria. The Bnro contract was extended for a further 10 years in 2015. The contract is set to generate revenues of EUR320 million over its operating life.

1994	Karlovy Vary	25 year concession	180,925 water & sewerage

Karlovy Vary is based in North Moravia. Suez holds 49.8% of VAK, the operating company's equity. Net profits increased from CZK26million in 2005 to CZK28million in 2006, with 15.205million m^3 of water provided in 2006, although water consumption fell from 101.7 to 99.6L/capita/day between 2005 and 2006.

1999	Ostrava area	15 year concession	750,000 water & sewerage

AWG and Suez acquired approximately 76% of the equity of Severomoravske Vodovody a Kanalizace AS (SmVaK) from the municipalities and small shareholders in the region during 1999. Suez currently holds 50.07% of SmVaK. Revenues rose 3.8% to CZK828million in 2006, with a 2% increase in pre-tax profits to CZK62.5million.

2000	Davle	N/A	37,000 water & sewerage
2001	Sumperk	Concession	120,000 water & wastewater

82% of Sumperska Provozni Vodohospoda Ska Spole Nost (SPVS) has been acquired by Ondeo Services. SPVS serves 40 towns and districts in the North East with a total turnover of EUR6million pa.

2013	Benešov	10 year O&M	17,000 water & sanitation

VHS Benešov (Ondeo Services CZ) has been awarded a 10-year EUR28 million water and sanitation management contract with the city of Benešov. This represents an extension of the 2000 contract.

Russian Federation

Contracts

Year	Location	Contract & length	People served & service
2004	Moscow	13 year BOOT	1 million, water treatment

EVN's WTE awarded the BOOT contract to Degrémont in June 2004. The 275,000m^3/day plant will provide potable water to South West Moscow from 2007 and is being operated by Degrémont and WTE until 2017. See company entry for EVN (Austria).

Germany

Eurawasser was sold to Remondis of Germany for EUR95 million in 2012.

Great Britain

Suez sold 72.5% of its 100% stake in Ondeo Services UK in May 2002 (see separate entry for Northumbrian Water). The remaining stake was sold to the Ontario Teacher's Pension Plan for EUR377 million in April 2005 for a capital gain of EUR260 million. 30% of Bristol Water is owned via Agbar.

Greece

Suez holds 5.46% of Thessalonica's Eyath (see company entry).

Morocco

Contracts

Year	Location	Contract & length	People served & service
1997	Casablanca	30 year management	3.8million water & sewerage

Lyonnaise des Eaux de Casablanca (LYDEC) manages the Urban Community of Casablanca contract, covering 4.0million people. This represents 25% of the Moroccan market, with a 1,000km^2 area and 23 urban communities covered. Ondeo Services will be responsible for water and sewerage and Elyo for electricity. 14% of LYDEC's equity was sold on the Casablanca Bourse on 18 July 2005, 80% of the shares being bought by local investors. Suez Environnement continues to hold 51% of LYDEC with Elyo's 20.75% stake being transferred to SE in 2007 and the remaining 35% being held by Moroccan institutions (see company entry).

The water contract is worth MAD5billion (USD517million) for the expansion and upgrading of water distribution and treatment. Between 1997 and 2007, the number of households connected to the water network rose from 440,000 to 700,000, serving 5.0 million people. The wastewater contract is worth MAD16billion (USD1.6billion)

2000	Oum Er Rbia	30 year concession	Bulk water provision

The bulk water supply concession for one third of Casablanca was awarded to Elyo and Ondeo Services. EUR30.5million will be spent on the rehabilitation and upgrading of bulk water supplies delivering 55million m^3 of water to the city, generating EUR305million over the concession's life.

Algeria

Contracts

Year	Location	Contract & length	People served & service
2005	Algiers	5+5 year O&M	3.8million, water & sewerage

The initial contract formally started in April 2006 and was worth EUR120million. This was extended for a further 5 years in 2011 with the second contract being worth EUR105 million and also covers Tipaza (600,000 people). The Algerian authorities are responsible for EUR200million pa in investment alongside the project for upgrading and extending the services of Société des Eaux et d'Assainissement d'Algers, with 24hrs per day service rising from 8% in

2006 to 71% in 2008 and 100% in 2011. Since 2006, 130,000 leaks have been repaired, 50,000 water connections replaced and 300,000 water meters installed. Sewerage has increased from 6% in 2006 to 53% by 2011.

Oman

Contracts

Year	Location	Contract & length	People served & service
2006	Oman	Water & power IWPP	500,000 water desalination

Barka 2 is the first private sector water and power facility in Oman. The 120,000m^3 per day facility contract was gained with Oman's National Trading Company and Mubadala.

Saudi Arabia

In June 2002, Suez signed a contract with the Kingdom of Saudi Arabia to oversee a EUR10billion 10 year investment programme for the development of water and wastewater in Mecca Province. Mecca Province has 7.5million inhabitants and three major urban areas: the Holy City, Jeddah and Taif. In Jeddah, the second largest city in the country (2.6million people) there is a chronic shortage of water resources and less than 20% of the city is equipped with a sewer system.

Contracts

Year	Location	Contract & length	People served & service
2008	Jeddah	7 year O&M	3.0million, water & wastewater

The 7 year USD61million contract started in September 2008, with the aim of bringing 24 hour water delivery, leakage reduction and to reduce sewage network overflows. The contract covers 5,300km of water distribution mains and 1,000km of sewerage networks.

2007	Jubail	23 year BOOT	3.5million, water desalination

In June 2007, financing was completed for the USD3.44billion required by the independent power and water project. 800,000m^3/day of water will be desalinated. The Suez led consortium (Suez, GE and Hyundai Heavy Industries) holds 60% of the project equity, with 40% being held by Saudi Government institutions.

Jordan

Contracts

Year	Location	Contract & length	People served & service
2002	Northern Jordan	25 year BOT	2.2million wastewater

The contract, announced in July 2002, is designed to bring new water resources into the north of the country. 60% of the USD154million capital spending will come from USAID as a grant. The Khirbet as-Samra treatment facility will replace an existing waste stabilisation pond treatment system, serving about 2.2million residents in Amman and surrounding towns. Construction started in December 2003 with the consortium operating the plant for 22 years after it went into service in August 2008. The facility will handle an average of 267,000m^3/day of wastewater and the contract will generate revenues of USD15million pa. Up to 100million m^3 pa of treated effluent will be made available for agricultural irrigation. Previously, there has been a management contract for water resources serving 2.5million people in the Greater Amman area which started in 2000 and was handed back to the Government on its completion in December 2006.

2012	Northern Jordan	25 year BOT	700,000 wastewater

The contract covers the expansion of the As Samra WWTW from 267,000 m3 per day to 365,000 m3 per day. It will cost EUR150million to develop and involves a three year construction phase and a 22 year operations phase. All the water will be reused for irrigation.

Egypt

Contracts

Year	Location	Contract & length	People served & service
2007	Cairo	DBO	1.8million wastewater

Degrémont has worked with the 1.5million m^3 per day Gabal El Asfar wastewater treatment plant serving 9million people in Cairo since 2002. In 2007, it was awarded a EUR34million DBO contract to extend the plant by 300,000m^3

per day to serve a further 1.8million people. Degrémont has been active in Egypt since 1948 and its water treatment works serve 70% of Cairo's 18million residents.

Qatar

Contracts

Year	Location	Contract & length	People served & service
2006	Lusail	10 year DBO	250,000 wastewater

Degrémont, along with Marubeni Corporation (Japan, pumping stations and conveyor/SCT) and Mushrif Trading and Construction Company (Qatar, civil engineering) will build a 60,000m^3/day WWTW serving 200,000 people in the city of Lusail under a EUR143million contract. It includes 10km of sewage transfer systems and will cost USD123million to construct and generate USD65million in management fees. The contract was awarded in April 2006 and the facility entered service in 2007.

2005/11	Doha	10 year DBO	650,000 wastewater

A joint venture between Degrémont and Marubeni was awarded a USD180million construction (50/50) and USD80million operation (70/30) contract for the 135,000m^3/day facility in December 2005 which entered service in 2010. A EUR65million expansion project was gained in 2011 raising the treatment capacity to 175,000m^3/day, serving an additional 150,000 people.

UAE

In March 2007, Suez signed a strategic partnership with Abu Dhabi's Al Qudra Holdings for bidding for water and waste management projects in the region.

Contracts

Year	Location	Contract & length	People served & service
2007	Dubai	10 year DBO	To 900,000 wastewater reuse

A USD800million DBO contract with Palm Utilities to design, build and operate a sewerage system and 220,000m^3 per day wastewater treatment and reuse facility serving the Jumeriah Golf Estates development in Dubai. This city is currently under development and has a planned population of 900,000. Palm Utilities holds a 30 year water services concession for the city from its developer. Degrémont will hold 54% of the project.

Cameroon

Contracts

Year	Location	Contract & length	People served & service
2000	SNEC	20 year concession	5.3million water provision

A 51% stake in SNEC (Société National d'Eau du Cameroon) was acquired in May 2000 as part of a concession award. The contract includes the upgrading and rehabilitation of water distribution systems in a number of towns and cities, including Douala and Yaounde, which account for 43% of Cameroon's population. Turnover is EUR24million pa, with total investments of EUR300million.

North America

United Water Resources (UWR) was founded in 1869 and was floated in 1986. In 1994 UWR merged with Suez's General Waterworks Company, giving Suez a 30% holding in UWR. Until it was acquired by Suez, it was the second largest listed water services company in the USA. Suez's USA arm, Lyonnaise American Holdings acquired the remaining 67% of UWR's equity that it did not hold in 2000 and its 50% holding in United Water Services (UWS) for EUR1, 108million. The Earth Tech acquisition in 2008, added 130 O&M contracts at the time, serving 1.0 million people.

The company currently serves at least 5.3 million people, over 3.8 million through its outsourcing activities with 84 contracts and 2.0 million via 20 regulated utilities in 6 states in the USA. In addition, United Water has gained a USD1.2 billion (EUR905 million) 20 year contract to operate, manage and maintain Nassau County's (state of New York) wastewater treatment plants, pumping stations and sewers. The contract covers 1.2 million people served via three treatment systems: Park Bay WWTW (532,000), Cedar Creek WWTW, 600,000) and Glen Cove (27,000).

UWR - regional breakdown of people served by regulated activities in 2014-15 (all for water)

System	Population
Delaware – Wilmington	109,000
Delaware – Bethel PA	5,800
Idaho - Boise	250,000
New Jersey – Bergen and Hudson	800,000
New Jersey – Hunterton	4,000
New Jersey – Sussex, Morris and Passaic	8,000
New Jersey – Toms River	125,000
New York – West Nyack	300,000
New York – Owego-Nichols	4,500
New York – New Rochelle & Rye	200,000
Pennsylvania - four systems	166,000
Rhode Island - South Kingstown	19,500
Total utility operations	**1,991,800**

Source: Suez North America company website

In February 2007, United Water acquired the Aquarion Water Company of New York for USD28million, serving some 7,500 people with water services and 20,000 with wastewater treatment in three towns in the State of New York. This is now called United Water Westchester. In addition, approximately 200,000 people are served by smaller owned activities in eight other states. New York South County, a regulated water supply company was acquired for USD3million in May 2004.

UWS - non-regulated activities

UWS was formed in 1997 through the merger of LDE/UWR and JMM-OSI. The Bechtel/United Utilities O&M outsourcing company US Water was acquired for USD40 million in 2002. US Water gained its first water and wastewater operating contract in 1982 with the New Jersey Highway Authority. These activities are concentrated in Illinois, North Carolina, Rhode Island and New Jersey. The 1994 wastewater treatment contract with Indianapolis serving 800,000 people was renewed in 2007 with the new contract running from 2008. In June 2007, UW acquired Aquarion Services (AOS), part of Kelda Group's Aquarion. AOS managed Aquarion's water outsourcing activities, covering 650,000 inhabitants in six States (Connecticut, Rhode Island, New Hampshire, Massachusetts, New York and California) through 82 subsidiaries and generating revenues of EUR24 million in 2006. Utility Service Group was acquired in 2008, which manages and maintains 4,000 water tanks for 2,000 municipalities in 4,000 states.

UWS - Main Contracts

Location (state)	Contract	Water	Sewerage	Combined
Allendale (NJ)	PPP	6,500	0	**6,500**
Banning (CA)	5 Year O&M, WWTW	0	27,000	**27,000**
Bayonne (NJ)	40 Years, PP, W & WW	63,000	63,000	**63,000**
Big Canoe (GA)	5 Year O&M, WTW & WWTW	6,000	372	**6,500**
Burbank (CA)	5+5 Year O&M, WWTW	0	100,000	**100,000**
Camden (NJ)	20 Year O&M, WTW & WWTW	50,000	50,000	**50,000**
E Providence (RI)	10 year O&M, WWTW	0	50,000	**50,000**
E Providence (RI)	O&M, WWTW	0	130,000	**130,000**
Gardner (MA)	20 Year PPP, WTW	20,000	20,000	**20,000**
Hoboken (NJ)	20 Year O&M, WTW	33,000	0	**33,000**
Holyoak (MA)	20 Year DBO, storm sewerage	0	40,000	**40,000**
Huber Heights (OH)	15+ Years, O&M, Water	40,000	0	**40,000**
Indianapolis (IA)	13 + 9 Year O&M, WWTW	0	800,000	**800,000**
Jackson (MS)	O&M, WWTW	0	260,000	**260,000**
Jaffrey (NH)	WWTW concession	0	5,600	**5,600**
Jersey City (NJ)	8 Year O&M, WTW	242,000	0	**242,000**
Kearney (NJ)	Water, O&M	40,000	0	**40,000**
Killingly (CT)	5 Year O&M, WWTW	0	16,000	**16,000**
Laurel (MS)	5 Year W&WW O&M	18,400	18,400	**18,400**
Mayodan (NC)	27+ Years, WWTW	0	2,500	**2,500**
Middletown (PA)	O&M, W & WW	9,400	9,400	**9,400**
Mount Kisco (NY)	8+ Years, Water O&M	10,000	0	**10,000**
Nassau County (NJ)	PPP	0	1,159,000	**1,159,000**
New Castle (NY)	10+ Years, WTW O&M	16,800	0	**16,800**

Location (state)	Contract	Water	Sewerage	Combined
Newport (RI)	10+ Years, WWTW	0	26,000	**26,000**
Orange (NJ)	Water, PPP	33,000	0	**33,000**
Pawtucket (RI)	Water, O&M	100,000	0	**100,000**
Portage (MI)	5+5 Year O&M, WTW	49,000	49,000	**49,000**
Pontiac (MI)	5 Year O&M	70,000	0	**70,000**
Rahway (NJ)	20 Year O&M WTW	26,500	0	**26,500**
South Huron (MI)	O&M, WWTW	0	90,000	**90,000**
Springfield (MA)	20 Year O&M, WWTW	0	275,000	**275,000**
Stonington (CT)	5 Year O&M, WTW	0	17,500	**17,500**
Wixom (MI)	W & WW PPP	10,000	10,000	**10,000**
Total		**843,600**	**3,218,772**	**3,842,700**

Source: Suez North America company website

Mexico

Suez operates in Mexico through Bal-Ondeo, a 50/50 JV with Peñoles (BAL Group). In July 2002, Ondeo acquired Azurix's Mexican operations through the JV for USD93million. The five contracts acquired bring Suez's population served in Mexico to 7.3million along with USD70million pa in revenues.

Contracts

Year	Location	Contract & length	People served & service
2004	San Luis Potosi	18 year BOT	400,000, sewage treatment

This contract has a total value of EUR263million, with a two year construction and 18 year operational phases. 57% of the 80,000m^3/day of wastewater is to have primary treatment and used as agricultural water, with the other 43% being subjected to tertiary treatment and used for cooling a power station. The contract was awarded to Degrémont, Sumitomo (Japan) and Prodin (Mexico) in June 2004.

1994	Mexico City	10&5 year O&M	2.6million water systems
1999	Mexico City	5&5 year O&M	2.0million water systems

In 1994, Industrias del Agua de la Cuidad de Mexico (IACMEX) was awarded a 10 year O&M contract for water metering, billing and collections and water mains maintenance for the central federal district of Mexico City. Azurix acquired a 49% holding in IACMEX from Severn Trent in 1999. In October 2004, these contracts were extended for a further five years, and generated EUR80million in revenues over this period. A further renewal was granted in 2009. The number of connections for both projects rose from 629,409 in 1994 to 1,018,000 by 2009, with 63,000 leaks being repaired between 1997 and 2004.

1999	Puebla	20 year concession	sewage treatment
2000	Culiacan	20 year concession	sewage treatment

Ondeo Degrémont operates six sewage BOTs in Mexico, including the above contracts. The Puebla concession announced in October 1999 is for a sewage treatment works capable of handling 360,000m^3 of effluents each day. The Culiacan facility is situated in Sinaloa state and has a capacity of 150,000m^3/day. There are two other municipal BOTs serving Juarez and Torreon, and two industrial BOTs based in Santa Cruz and Altamira.

Contracts

Year	Location	Contract & length	People served & service
1993	Cancun	30 year concession	757,000 water & sewerage

The Cancun resort area has a population of 430,000, which had grown to 757,000 by 2009 and is forecast to grow at 3% pa to 2015. There are currently 200,000 connections. 3million tourists visit the resort each year. Azurix acquired its stake in the in Desarollos Hidraulicos de Cancun (DHC-Aguakan) concession in 1999. Coverage for water has increased from 61% in 1994 to 100% by 2009, with an increase in sewerage from 30% to 90% and all wastewater treated during this time.

There are also 3 BOT contracts previously operated by Azurix:

1999	León	BOT	1.1million sewage treatment
1999	Torreón	18.5 year BOT	1.0million sewage handling
1999	Matamoros	BOT	Industrial sewage treatment

South America

With the exception of its investments in Chile, Suez completed its exit from water and waste management contracts in South America during 2004-07. All contracts are managed via Aguas de Barcelona, details of which are provided below.

China

Suez has a total of 31 major contracts for rehabilitating and expanding current water treatment works. Suez now serves approximately 24 million people in China via Sino-French Holdings (S-FH), which it operates jointly with New World Development Co. Ltd. of Hong Kong. Ondeo and SITA manage EUR866million pa of operations in China in 2009, up from EUR300million in 2000. In addition, Degrémont has completed 132 water and sewage treatment construction contracts in China, having been operating in China since 1975, and is responsible for 20% of China's water and wastewater treatment facilities.

In April 2008, SE and New World announced they were contemplating strengthening their relations with their local partner in Chongqing, through the acquisition of a 15% interest in Chongqing Water Group (CWG) for EUR140million. SE is already active in the city, which has a population of 32million. CWG operates 32 water treatment plants and 35 wastewater treatment plants in Chongqing by the end of 2007, serving approximately 8.4million residents. CWG aims to provide quality services to the entire Chongqing as well as to expand to surrounding provinces in Western China.

SE and New World acquired Earth Tech's Chinese contracts in 2009 for EUR12million. Agbar also has activities in China which has established in November 2007 a JV with the Chinese company Golden State Water, to supply drinking water and treat wastewater in the province of Jiangsu.

Contracts

Year	Location	Contract & length	People served & service
2013	Shuangliu	25 year partnership	150,000 wastewater treatment

Sino French Water Development Company Limited and Sichuan Dayi Water Company Limited's joint venture, Shuangliu Dayi Environmental Company Limited have agreed a 25-year strategic partnership, whereby Sino French Water will hold 65% of the units in the new company and will jointly manage and operate eight wastewater treatment plants located in rural areas in Shuangliu County with Shuangliu Dayi.

The partnership will also involve the construction, management and operation of the Shuangliu Maojiawan wastewater treatment plant, which will have an ultimate capacity of 250,000 m^3 per day. The plant will primarily serve industrial and commercial customers and the residents of the new Tianfu Urban Area, which is expanding rapidly. The projects as a whole are expected to generate revenues of around EUR156 million for the joint venture over the 25 year contract period.

2014	Yangzhou	30 years	4.5 million, sludge-drying

Yangzhou Sino French Environment Company Limited has a EUR234 million contract to operate the Yangzhou sludge-drying plant, EUR24 million attributable to Suez. The plant will enter service in 2015 with an initial treatment capacity of 300 metric tons/day, rising to 500 metric tons/day as city grows. Yangzhou is in Jiangsu province.

2013	Chongzhou	30 year DBO	600,000, wastewater treatment

SFH agreed a partnership with Sichuan Dayi Water Company Limited in 2012 and in 2013, acquired 65% of the later company's Chongzhou Dayi Water Purification Company Limited, which serves 600,000 people in Chongzho. Sichuan Sino French Water Environmental Services Company Limited a joint venture between Sichuan Dayi Water Company Limited (45%) and SFH (55%) was set up in 2014, Suez investing EUR13 million in its stake. This joint venture is to develop further contracts in the area.

2011	Wuhan	30 year DBO	Industrial water

The Wuhan Sino French Waste Water Treatment Co (S-FH (43%), Wuhan Chemical Industry Park (25%), Degrémont (22%) & Shanghai Chemical Industry Park (10%)) contract is for the development of a 60,000 m^3 per day industrial wastewater treatment unit for the Wuhan Chemical Industry Park. A 300,000 m^3 per day water treatment works will be constructed from 2013.

2009	Chongqing	40 year concession, S-FH	1.24million, water

Construction of the 200,000m^3 per day EUR42million first phase of the CNY1.5billion 600,000m^3 per day project started in 2009 and was completed in 2011. The contract was signed in September 2008. This is the first contract to derive from the April 2004 Chongqing Waster Group agreement and extends the company's coverage into the Yuelai district. The entire contract will be worth EUR3billion, with SE's share EUR750million covering 420,000 people at the

outset in an area where the population is forecast to rise to 1.24million by 2020. At the same time, a concession contract was signed with CWG for water and wastewater services to the city's Changshou Chemical Industry Park.

2006	Changshu	30 year concession, S-FH	1.8million, water

SFH will hold 49% of the equity of Changshu Water Supply Co. This covers the treatment and distribution of drinking water through three treatment plants with a total capacity of 675,000m^3/day, and 2,500km of piping networks. The contract will generate revenues of approximately EUR35million pa through its operational life.

2006	Chongqing	25 year concession, S-FH	1.0million, wastewater treatment

A 50/50 joint venture contract between S-FH and the Water Company of Chongqing was signed in September 2006 for funding, developing and operating a 300,000m^3/day wastewater treatment works serving the Jiang Bei and Yubei sectors of the city in Tangijatuo, building on Suez's water treatment contract signed in 2002 and the agreement drawn up in November 2005 whereby S-FH is investing EUR60million into a joint venture company for the city. EUR60million will be spent on constructing the facility. In 2007 a further contract was signed, raising the capacity of the facility to 400,000m^3/day from 2010.

2005	Tianjin	35 year O&M, S-FH	600,000 water

The CNY470million (EUR57million) water treatment plant is to serve part of the city of Tianjin. The Tianjin Tanggu Sino-French Water Supply (S-FH) is a 50/50 joint venture between the city and S-FH. The facility has a treatment capacity of 320,000m^3/day.

2010	Dalian	O&M	70,000, wastewater
2002	Shanghai	30 year concession	20,000 water
2009	Suzhou	30 year concession	610,000 wastewater

These contracts are primarily concerned with industrial services (see separate entry) but serve people living in the area. The Dalian Changxing Island Harbour Industrial Zone contract is 95% held by S-FH and 5% by Itochu.

2002	Chongqing	50 year concession	1,200,000 water
2002	Qingdao	25 year BOT	2,500,000 water

Two WTWs in Chongqing have been refurbished and expanded for a total cost of EUR150million and the two plants can handle 250,000m^3/day of water. Likewise, two WTWs in Qingdao are to be refurbished and expanded for a total cost of EUR430million. The two plants treat 726,000m^3/day of water following expansion work in 2009.

2002	Panjin	30 year BOT	350,000 bulk water
2001	Xinchang	30 year BOT	146,000 bulk water
2004	Sanya	30 year O&M	290,000 water

The Xinchang treatment works were expanded in 2004. The Sanya system in Hainan is 50% held by S-FH and 50% by the municipality's Hainan Tianya Water Industry Holding Co. The Sanya contract started in 2004.

2000	Zhengzhou	30 year BMO, S-FH	1,400,000, bulk water supply
2000	Baoding	20 year BMO, S-FH	900,000, bulk water supply

The contracts for Zhengzhou (Henan) and Baoding (Hebei) were announced in March 2000. They originally served a total of 1.7million people, with USD62million being spent on capital works for facilities delivering 400,000m^3/day and 200,000m^3/day respectively of water and generating a turnover of USD500million over the contracts' life.

1999	Changtu	30 year BMO, S-FH	0.3million bulk water supply
1999	Wanzhou	30 year BMO, S-FH	0.5million bulk water supply
1998	Zongshan	22 year BMO, S-FH	1.7million bulk water supply

The contracts for the provinces of Changtu (Chongqing) and Wanzhou (Liaoning) were formally awarded in April 2000, and involve a total of USD35million in capital spending. These contracts will generate USD400million in turnover during their lives. Zongshan is in Guangdong province. The town and surrounding areas has 1.5million people. The contract has seen the expansion the current capacity of the two extant plants from 0.7million m^3/day to 1.0million m^3/day. 66% of the Zongshan contract is held by Sino-French Holdings, with the remainder in municipal hands. Revenues are in the region of EUR15million pa. Degrémont carried out the engineering work and the extended facility entered service in 2006.

1997	Lianjiang	30 year O&M, S-FH	0.3million bulk water supply

Lianjiang is in Guangdong Province, with 1.3million inhabitants, 70% of whom are currently served with potable water. The project involves USD15million in Capex for the upgraded potable water treatment plant, which is being built by Degrémont.

1995	Chongqing	30 year BMO, S-FH	0.4million bulk water supply

A USD25million build and manage contract in Sichuan province, based upon enlarging a water treatment facility that now supplies 20% of the city's 2million population.

1994	Guangzhou	30 year BMO, S-FH	0.9million bulk water supply

The Guangzhou contract will account for 25% of the city's current needs.

1992	Tanzhou	35 year BOT, S-FH	200,000, bulk water supply
1994	Gaozhou	30 year BOT, S-FH	170,000 bulk water supply
1996	Nanchang, Jiangxi	28 year BOT, S-FH	160,000, bulk water supply

The Tanzhou WTW has a current capacity of 150,000m^3/day. Non-revenue water in Tanzhou has fallen from 40% in 1992 to 6% in 2009. The Nanchang treatment facility was expanded in 2008.

1999	Changli	30 year 'concession'	60,000 water & sewerage
2001	Guangzhou	20 year DBFO	400,000 sewage treatment
2003	Tianjin	20 year DBFO	1,500,000 water treatment

These contracts were previously operated by Earth Tech and acquired by Suez in 2009. The Changli concession covers engineering, project management, construction, and O&M of the county's water supply system. The JV Company, Qing Huang Dao Pacific Water Company, is responsible for billing customers in Changli. The Changli contract involves developing a water supply, treatment, and distribution system that will produce up to 60,000m^3 per day of water to serve a projected population of 150,000, plus a tourist population of 75,000 during peak periods at a cost of USD10million.

In December 2001, work started on the Xi Lang wastewater treatment plant in Guangzhou. The USD120million 20 year DBFO contract is a JV. The 2 phase project will treat 0.26million m^3 of effluent per day. The first phase will treat 0.13million m^3 of wastewater per day for 400,000 people and serve most of the city's Fang Cun District, the largest and fastest-growing district in Guangzhou. It entered service in 2003 and Earth Tech will manage and operate the system for 18 years. The second phase treats an additional 0.3million m^3 per day of wastewater.

A USD400million, 20 year DBFO project for the Jie Yuan Water Treatment Plant in Tianjin was awarded by the Tianjin Water Works Group Co to Earth Tech Jieuan Water Co Ltd in May 2002. The plant is capable of treating more than 500,000m^3 of water per day and will be comprehensively renovated and upgraded. The remaining 14 years of the contract will generate revenues of EUR77million, with SFH holding 52% of the project company's equity.

Macao

Contacts

Year	Location	Contract & length	People served & service
1985	Macao	25+20 year concession	540,000 water supply

This is a renewal of the SAAM contract awarded in 1988 for water provision to 540,000 people, including 140,000 customers. Suez/New World Holdings (NWH) holds 85% of the concession. 330,000m^3/day of water is provided. The contract was renewed for a further 20 years in 2009, with a EUR1billion total contract value.

Taiwan

Contracts

Year	Location	Contract & length	People served & service
2002	Kaohsiung	17 year BOT	3,000,000 water treatment

Taiwan Water Supply Corporation awarded a reconstruction and O&M contract to Ondeo Degrémont and Ecotek, a subsidiary of China Steel, for the overhaul and operation of a drinking water plant in Kaohsiung. The contract is worth EUR200million, of which Ondeo Degrémont's share is EUR90million or EUR6million pa over the 15 year O&M stage. The new facility will produce 450,000m^3/day of drinking water by March 2004.

Korea

Contracts

Year	Location	Contract & length	People served & service
2000	Yangju	24 year BOT	100,000 sewage treatment

Suez and Ondeo Degrémont (60%) and Hanwha (Korea, 40%) became the preferred bidder for a contract to design, build and manage three sewage plants for a total daily volume of 75,000m³ and an 85km collecting network in the county of Yangju, in the province of Kyonggi. The population currently stands at 100,000 habitants but is predicted to reach 400,000 inhabitants in 2016 due to urban development. Turnover will be of EUR185million over the duration of the contract.

2001	Pusan	18 year BOT	800,000 sewage treatment

The 135,000gal/day facility and 24km of collecting sewerage pipes will cost USD160million to build, with the contract generating USD490million over its lifetime. Ondeo holds 65% of the consortium, along with Samsung Engineering (20%) and Khumo Industrial (15%). Pusan has a total population of 4million.

India

Degrémont has been present in India since 1954 and has designed, built and operated 130 drinking water and wastewater treatment plants including water works in Mumbai (11million people), Bangalore (1.5million people) and Delhi (3.5million people). In 2007, a strategic partnership with Mahindra Infrastructure Developers Ltd was signed for developing new projects in India. The 1,900,000m³ per day Mumbai facility will be augmented by a 990,000m³ per day EUR59million facility serving 4million people to be built under a 4 year DBO contract signed in January 2008.

Contracts

Year	Location	Contract & length	People served & service
2014	Mumbai	5 year O&M	12.5 million water management

The Mumbai project is a five year contract worth EUR31 million aims to improve water distribution services to 12.5 million people, supplying water on a continual, all-week (24/7) basis under the Mumbai water distribution system improvement programme. It involves 300 staff and will focus on informal settlements.

2014	Pune	2.5 + 5 year DBO	2.5 million, water treatment

Pune Municipal Corporation has awarded Degrémont a contract to design, build, operate and maintain a drinking water plant for the 2.5 million people of the second largest city in the Indian state of Maharashtra. This EUR19 million contract consists of 30 months for building the drinking water plant and then for 5 years operation. Water is supplied from the Khadakwasla reservoir southwest of the city.

2014	Bangalore	2 + 7 year DBO	55,000 wastewater treatment

The Water Supply & Sewage Board of Bangalore has commissioned the design and operation of two wastewater treatment plants; in Chikkabanavara on the north-west outskirts of the city (5,000 m³ / day) and in Kadugodi, east of the city (6,000 m³ / day). After a 24 month construction phase, the plants will be operated for seven years. The contract is worth EUR 11 million.

2013	New Delhi	2 + 11 year DBO	350,000 wastewater treatment

A two year build and 11 year operate contract for a new WWTW at Delhi Gate Nalla with a capacity of 70,000 m³ per day. Total contract value is EUR 29 million. The treated wastewater will be reused as non-potable water by local industries and the Delhi Gate Nalla power plant.

2013	Bangalore	1.5 + 5 year DBO	200,000 wastewater treatment

The Bangalore Water Supply & Sewerage Board awarded Degrémont a DBO contract worth EUR12 million for a tertiary wastewater treatment plant with a capacity of 40,000 m³ per day at Raja Canal.

Building will take 15 months, followed by a five year operations contract.

2013	Bangalore	8 year management	400,000 leakage management

The Bangalore Water & Sewerage Board awarded Suez and SPMLI (India, see company entry) a contract to unaccounted-for-water in a 26.5 km² area covering 400,000 consumers. The contract consists of a three year network survey, rehabilitation & development phase followed by a five year maintenance, leakage control and UFW management phase. The project aims to reduce UFW from the current level of 42% to 16% in 5-8 years.

2012	New Delhi	12 year O&M	400,000 water management

A contract awarded by the Delhi Jal Board to Suez Environnement (74%) and SPMLI (26%) for improving water distribution services in the Malviya Nagar district. The 12 year, EUR 75 million will provide a continuous (24/7) water supply to 400,000 residents, who currently get 3-8 hours of water a day. NRW is to be reduced from 77% to 15%, water meters replaced and service extended to another 50,000 during the first two years.

2010	Bangalore	2+7 year DBO	3,000,000, water

A 600,000m^3 per day plant will be will be built to augment the city's 400,000m^3 per day facility. The design-build element of the EUR35million project is being supported by Japan's JICA. It will enter service in 2012.

2008	New Delhi	10 year DBO	600,000, wastewater treatment

A 136,500m^3 per day plant will be built in a 30 month period and operated for 10 years by Degrémont in a EUR27million contract. The treated effluent will be used for agricultural irrigation.

2007	Chennai	7 year O&M	4million, water treatment

Construction of the 530,000m^3/day of drinking water treatment plant for the Chennai Metro Water Supply and Sewerage Board **started in July 2005** a total cost of EUR25.2million, financed with EUR6.6million from a French State protocol and EUR18.7million from the Tamil Nadu Urban Finance and Infrastructure Development Corporation. This is India's largest water treatment works and the first to be fully operated by Suez. The operating contract runs from 2007-14.

Indonesia

Contracts

Year	Location	Contract & length	People served & service
1997	West Jakarta	25 year concession	2.9million water

The number living in West Jakarta increased from 3.5million to 4.5million by 2010. The initial investment period was extended from 5 to 10 years in 2000 so as to prevent price rises after a 24% tariff rise in 1999. 61% of residents are currently connected, it is predicted this will rise to 100% by 2022, with 80% paying. Jakarta's population is expected to rise from 9.5million to 12.5million by 2020, with the West Zone population rising to 6.7million.

Rate adjustment negotiations resulted in an addendum to the concession agreement on December 24, 2004, providing for an automatic half-yearly rate revision. PT PAM Lyonnaise Jaya was therefore able to obtain an 8.3% rate revision in January 2005 and another 9.5% revision in July 2005. In addition, PT PAM Lyonnaise Jaya's USD denominated debt was refinanced in July 2005 through an INR650billion bond issue of approximately USD67million, along with an IDR 455 billion (USD50million) loan arranged with the ADB in 2008.

Lyonnaise Jaya - Development of activities, 1998-14

	1998	2006	2008	2010	2013	2014
Connections	290,895	351,230	398,557	419,776	404,000	405,000
NRW	57%	48%	45.3%	42.3%	39.8%	39.6%
Service coverage	33.8%	55.4%	61.8%	64.7%	61%	61%
Sales (million m^3)	89.0	129.3	134.5	147.3	158.6	159.0

Source: SE Presentation to the Singapore International water Week, 2011, PAM Lyionnaise Jaya corporate web site

The number of people covered has increased from 1.6million to 3.2million by 2013, with the number of low income customers increasing eight fold. The network has been extended from 4,000km to 5,300km, with 25% of the original network being rehabilitated. Capital spending to 2014 has been IDR1, 980 billion. The current aim is to get the NRW to below 30%.

In July 2006, Suez sold 49% of its 100% stake in Pal Jaya retaining a 51% majority. PT Astratel Nusantra of Indonesia now owns 30% of PT PAM Lyonnaise Jaya's equity, with the remaining 19% being held by Citigroup Financial Products Inc.

The contract's status is currently subject to a court case with the city seeking to reacquire the concession company.

1997	Medan	25 year BOT	2.5million bulk water

This is a USD85million BOT for a drinking water supply plant for Medan. It is 85% held by Suez. There are currently 2.5million people in the city. The water supply for Phase 1 will be 170,000m^3/day by 2000, increasing to 260,000m^3/day. Turnover will be USD2billion over the contract's life, or USD80million pa. Medan's population is expected to grow to 8million+ by 2015 (currently, the city has a population of 2.5million). Suez has operated a water contract in the industrial zone of Cilegon, Java since 1993.

Australia

Contracts

Year	Location	Contract & length	People served & service
1993	Sydney	25 year BOO	3.0million water treatment
1996	Noosa	25 year BOT	45,000 wastewater

Australian Water Services (AWS) is a JV between Suez and Lend Lease Pty formed by Suez in 1991. The Sydney water provision BOT signed in 1993 saw the USD200million facility enter service in October 1996, providing water for 80% of the city. AWS has now entered the 25 year operating concession phase, operating the facility's 3,000Ml/day capacity. A BOT concession for Noosa, Queensland was gained in 1996. Water revenues for Suez in Australia in 2004 were EUR30million and water and waste management revenues in 2006 were EUR346million.

2006	Pimpama	25 year DBO	75,000 wastewater

Pimpama is a wastewater treatment plant for the town near Brisbane, with a capacity of 17,000m^3/day.

2011	Perth	10 year O&M	1.5 million water & sewerage

A contract awarded to Degrémont and Transfield covers operating and maintaining 19 WTWs, 14 WWTWs and two water recovery plants. Revenues will be EUR294million for the contract.

2005	Perth	25 year DBO	250,000 desalination

In April 2004, Perth's Western Australia Water Corporation chose Degrémont and Multiplex Engineering to design, build and operate Perth's first reverse osmosis desalination plant. The 25 year contract for a 140,000m^3/day facility represents total revenues of over EUR685million for Degrémont, EUR85million in construction work and EUR600million for operating revenues. The facility entered service in April 2007.

2009	Melbourne	27 year DBO	1.2 million desalination

The AquaSure consortium's serves one third of the city when in use. It was completed in 2014. The EUR2billion contract covers the construction of a 450,000m^3 per day facility with an 85km pipeline network. The operations contract runs for 27 years, generating revenues of EUR1.2billion for Suez. The plant will be designed for a future expansion to 600,000m^3 per day when needed. The facility is to be powered by a wind farm.

2011	Adelaide	15.5 year BOT	1.1 million water & sewerage

Degrémont (50%) and Transfield (50%) gained the EUR840million alliance contract after the original VE / Thames Water contract expired in 2011. This contract also has a six year extension option.

New Zealand

Activities in New Zealand are carried out under New Zealand Water Services, an affiliate of Australian Water Services. Other projects include building the Auckland wastewater treatment plant, serving 1.2million people from 2005.

Contracts

Year	Location	Contract & length	People served & service
2002	Hutt Valley	20 year DBO	160,000 wastewater

Aguas de Barcelona SA

Sociedad General de Aguas de Barcelona SA (Agbar) is now controlled by Suez Environnement following an agreed increase in Suez's stake in the company from 45.9% to 75.0% in 2010 and to 99.5% in 2014. Its results are fully consolidated within Suez's.

Agbar dates back to the Compagnie des Eaux de Barcelone founded in 1867 and incorporated in Paris as La Société Générale des Eaux de Barcelone, in 1881, before being acquired by Catalan investors and incorporated in its current form in Barcelona in 1919 for the provision of water and sewerage services in Barcelona.

Aguadom - Water and wastewater concessions in Spain

Aigües de Barcelona - The Barcelona water and wastewater concession

Aqualology - International activities and technology

Aguas Andinas - Asset owning utility in Chile

Spain

Excepting Barcelona, Agbar's water and sewerage contracts in Spain have an operating life ranging from 5 to 50 years. There were 1,156 concessions under management in 2009, rising to 1,191 in 2010. The average concession life is for 20 years.

In June 2010, Agbar launched a bid for Aguas de Sabadell (CASSA). At the time, Agbar held 11% of the company. CASSA provides water and sewerage services to 350,000 people in 40 municipalities across Catalonia and generated EUR40million in revenues in 2009.

Agbar sold 70% of its 100% stake in Bristol Water to Canada's Capstone Infrastructure Corporation for EUR152 million in 2011. See the company entry for Bristol Water.

Agbar - number of people supplied in Spain and internationally (2009-12 data)

Country	Water	Sewerage	Total
Spain	13,250,000	9,500,000	**13,250,000**
Chile	6,228,000	6,308,000	6,308,000
Colombia	927,000	803,000	927,000
Cuba	1,130,000	1,239,000	1,239,000
Mexico	725,000	704,000	725,000
Algeria	1,443,000	1,500,000	1,500,000
China	588,000	1,500,000	2,088,000
Total outside Spain	**11,041,000**	**12,054,000**	**12,787,000**
Global Total	**24,291,000**	**21,554,000**	**26,037,000**

Source: Aguas de Barcelona Annual Reports, 2009-12 and company web site

Since 2005, the company has reviewed its activities in Latin America and has withdrawn from Argentina, Uruguay and Brazil. The company remains committed to Chile and Cuba, but all other activities remain subject to review.

In 2015, Aqualogy stated that it was active in Mexico, Peru, Colombia, Brazil, Chile, Poland, the UK and Turkey as well as in Spain.

Chile

Agbar holds 50.1% of the equity of Aguas Andinas via Inversiones Aguas Metropolitanas Limitada (IAM) which holds

Contracts

Year	Location	Contract & length	People served & service
1999	Santiago	Privatisation of EMOS	6.0 million water & sewerage

All 44 districts of the city are to be covered, along with the long-term development of its wastewater services. Revenue growth is being driven by wastewater services expansion. Currently, 100% of the population is served with piped water and 99% by mains sewerage, while 100% of sewage effluents are treated.

Enersis sold Aguas Cordillera to EMOS for USD193million in June 2000.The second highest bidder was Biwater at USD179million. At the time, Aguas Cordillera provides water and sewerage services to 116,591 clients (315,000 people) in the Vitacura, Las Condes and Lo Barnechea districts of Santiago. Aguas Cordillera has been integrated within Aguas Andinas.

For full details, refer to the Aguas Andinas company entry.

Aguas Andinas - Profit & loss account, 2010-2014

Y/E 31/12 (CLPmillion)	2010	2011	2012	2013	2014
Water revenues	136,573	147,715	152,918	157,307	171,488
Sewerage revenues	148,169	166,504	174,838	184,299	202,001
Other – regulated	12,994	11,707	14,908	16,557	20,282
Other – non regulated	31,228	36,854	40,182	45,716	46,693
Turnover	328,964	362,768	382,886	403,879	440,734
Operating profits	149,786	173,230	186,713	183,827	207,412
Net income	103,850	111,479	121,270	116,676	119,422
EPS (CLP)	17.00	18.00	20.00	19.00	20.00

Source: Aguas Andinas, Annual Reports, 2010-2014

1995	Valdiva	Concession	120,000 water & sewerage

The concession was awarded to Aguas Décima SA. 120,000 people are served via 26,000 client contracts for water and 21,500 for sewerage. The first objective for the concession is to connect the outstanding 4,500 customers to the sewerage service.

2008	ESSAL	Acquisition	650,000 water and sewerage

Iberdrola's Iberener acquired 51% of Empresa de Servicios Sanitarios de Los Lagos SA (ESSAL) from the Chilean Government for USD94million in 1999. 35% of ESSAL is now held by the Government and 10% by its staff. ESSAL is one of Chile's smaller water companies, serving Region X in the south of the country. ESSAL serves 166,000 customers (650,000 people, against 500,000 in 1999) in the Region, which includes the cities of Osorno and Puerto Mont, with a population growth of 6% pa. USD240million in investments is called for, to increase the number of water connections within its operating area and to develop sewerage services and sewage treatment facilities, with the aim for universal sewerage and sewage treatment by 2005. Aguas Andinas acquired ESSAL's holding for CLP72.5billion in March 2008.

Uruguay

Agbar acquired 60% of Aguas de la Costa at the end of 1997. The company sold this stake back to the Government's OSE in 2006 for USD3.4million, part of which was in turn was acquired by two local companies STA Ingenieros (30%) and Benencio SA (10%).

Brazil

Agbar gained the concession to operate water and wastewater services for Campo Grande in 2001. In 2005, Agbar sold its 50% stake in Aguas Guariroba to a consortium formed by Bertin and Equipav (See company entry for Grupo Equipav SA), who also acquired 31% from Copel. Aguas sold its stake for BRL57million.

Colombia

Contracts

Year	Location	Contract & length	People served & service
1995	Cartagena	25 year concession	944,000 water & sewerage

Aguas de Cartanega SA ESP has been profitable since its onset. 44.8% of its shares are held by Agbar, 50% by Distrito Turistico y Cultura de Cartagena and 5.1% by local shareholders. Agbar's stake cost COP280million. In 2008 water coverage was 100% against 73% in 1995, with sewerage coverage at 83% against 61%, with the aim for 88% sewerage coverage by the end of 2009. Water services have been provided to 350,000 people since the concession started (93% urban poor) and sewerage services to 240,000 (90% urban poor). Aguas de Cartagena has 132,000 water customers and 102,000 sewerage customers. In 2006, Agbar agreed to continue running the concession after consultations with the city. During 2005, net profits eased by 8.9% to COP7.77billion, with a 6.0% increase in revenues to COP96.3billion.

Cuba

Interagua formed Aguas de La Habana, a JV with the Cuban Government in 1999, for two water management contracts currently serving 1,200,000 people, with an eventual coverage of 1,400,000 people. The contract serves La Havana and Varadero. Water supply systems were renovated for 298,000 people in 2001-02. In February 2000, Interagua was awarded a 25 year water management contract for Havana.

Service development in Varadero and Havana

Varadero	**1994**	**2006**
People served & service	95%	100%
Hours service/day	18	24
Number of connections	5,000	11,000
Havana	**2000**	**2006**
People served & service	95%	100%
Hours service/day	8	10
Number of connections	327,000	365,000

Source: Presentation by José María Tura, General Manager of Aguas de La Habana to Agbar conference "Five international examples of environmental management in the service of the citizens" on 19th June 2007.

Mexico

Contracts

Year	Location	Contract & length	People served & service
2001	Saltillo	25 year concession	711,188 water & sewerage

Agbar has gained 49% of Empresa Paramunicipal, the company responsible for the management of the drinking water supply and sewerage services in the city of Saltillo, in the state of Coahuila situated in northern Mexico. The remaining 51% is to be held by Sistema Municipal de Aguas de Saltillo (SIMAS). The city of Saltillo was founded in 1577. In 2004, water was supplied to the entire population (146,245 customers), with 92% served by sewerage. During 2005, the sewerage network will be completed. Turnover was EUR21million in 2001. EUR81.9million is to be invested during the contract. 7,000 customers were gained during 2007 and 7,277 during 2008.

Algeria

In November 2007 the Agbar gained a concession for water supply and treatment in the province of Orán for a term of five and a half years. Orán, located in the north east of Algeria on the Mediterranean coast, has a population of 1.5million inhabitants and after the capital, Algiers, is the second largest city in the country. Société des Eaux Oran, SPA, is 50% held by Agbar and 50% by the Government's Algérienne des Eaux y el Office National de l'Assainissement.

Country and contract presentaions, 2006-2009

Conference presentations, 2004-2011

Reference Documents, 2008-2014

Annual Reports, 1990-2014

CSR /Social & Environmental Reports, 2010-14

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Jean-Louis Chaussade (CEO)

France

Veolia Environnement SA

Population served by service and country 2014 data Veolia Environnement	Water Only	Sewerage Only	Water & Sewerage	Total
France	7,100,000	0	17,000,000	24,100,000
Armenia	200,000	0	1,000,000	1,200,000
Belgium	0	1,100,000	0	1,100,000
Bulgaria	0	0	1,500,000	1,500,000
Czech Republic	400,000	0	3,922,000	4,322,000
Denmark	83,000	0	0	83,000
Germany	420,000	300,000	789,000	1,509,000
Great Britain	0	990,000	0	990,000
Ireland	0	262,000	0	262,000
Hungary	0	1,954,000	268,000	2,222,000
Italy	600,000	0	714,000	1,314,000
Malta	0	0	290,000	290,000
Poland	10,000	0	375,000	385,000
Romania	250,000	500,000	1,800,000	2,550,000
Slovak Republic	0	0	950,000	950,000
Sweden	0	0	55,000	55,000
Canada	102,000	203,000	25,000	330,000
Colombia	2,000,000	0	380,000	2,380,000
Mexico	2,430,000	0	885,000	3,315,000
Ecuador	800,000	0	1,700,000	2,500,000
Venezuela	552,000	0	0	552,000
USA	7,500,000	6,250,000	250,000	14,000,000
Australia	2,190,000	62,000	570,000	2,822,000
New Zealand	0	188,000	191,000	379,000
China & Macao	23,190,000	8,450,000	12,510,000	44,150,000
India	4,648,000	500,000	0	5,148,000
Indonesia	100,000	0	0	100,000
South Korea	0	480,000	0	480,000
Japan	0	1,215,000	6,000	1,221,000
Gabon	1,200,000	0	0	1,200,000
Iraq	1,000,000	0	0	1,000,000
Lebanon	0	0	40,000	40,000
Niger	2,300,000	0	0	2,300,000
Oman	1,600,000	0	700,000	2,300,000
Qatar	0	0	500,000	500,000
Reunion	0	160,000	0	160,000
UAE	130,000	1,435,000	0	1,565,000
Total - home markets	7,100,000	0	17,000,000	24,100,000

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Veolia Environnement	Only	Only	Sewerage	
Total - international	51,705,000	24,049,000	29,420,000	105,174,000
Global total	58,805,000	24,049,000	46,420,000	129,274,000
% home markets	12%	0%	37%	19%

Compagnie Générale des Eaux was renamed Vivendi in May 1998, while retaining its former name for water and wastewater activities. In July 2000, Vivendi Universal sold 28% of its holding in Vivendi Environnement (VE) via a listing on the Paris Bourse and a further 9% in 2001. Vivendi has in turn been renamed Vivendi Universal (VU) and is concentrating upon the telecommunications and media sectors. Following VU's financial problems in 2002, the company sold a further 43% of VE's equity to a series of French institutions and as a result, VE's results (and debt) are no longer consolidated into VU's. VE has been renamed Veolia Environnement (VE) so as to further differentiate between the two companies. Water activities were grouped under Veolia Water. After a further sale in December 2004, VU's share of VE fell to 5.3% and was fully divested in 2006. In 2004, after a recapitalisation exercise, the Générale des Eaux name was revived to become the holding company for Veolia Water's French activities.

Veolia Environnement - Profit & loss account

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Turnover	27,852	22,482	23,239	22,820	23,880
Operating profit	1,776	526	661	469	414
Net profit	559	-488	404	-170	178
Earnings/share (EUR)	1.16	-0.98	0.79	-0.39	0.37
Dividend/share (EUR)	1.21	0.70	0.70	0.70	0.70

Source: VE, Refernce Documents, 2010-2014

From 2014, reporting has moved from business segments to geographical areas.

Générale des Eaux (GDE) was founded in 1853 and started the privatisation of France's water sector by winning a concession for water supply to Lyon in that year, subsequently to Nantes (1854), Nice (1864) and gaining the first of a series of concessions serving Paris in 1860. In 1884 GDE secured the first wastewater treatment concession, serving the Reims municipality and pioneering the use of ozone to sterilise water at Nice in 1909. VE is also a pioneer in the development of the international water market. Its subsidiary Compagnie des Eaux pour l'Etranger (CEE) was set up in 1879 for international water contracts. CEE took over the water supply concession for Venice in 1880 and further contracts were gained in Verona, Bergamo, La Spezia and Naples. The company set up Compagnie des Eaux de Constantinople for water supply to Istanbul in 1879, and in 1882, CEE gained the water supply concession for Lausanne in Switzerland and Oporto in Portugal. After the First World War, VE decided to restrict its contracts to France. As a result, contracts were either wound up or nationalised during the inter-war years.

VE developed its presence in water engineering through the acquisition of SADE in 1918 and Tuyaux Bonna in 1924. Since the 1930s, the French water sector has gradually been privatised with VE being the dominant player in the market. From 1967 onwards, VE has diversified, first into waste management, then energy and more recently into construction, property and media and telecommunications.

VE entered the Spanish water market in competition with FCC and Aguas de Barcelona. Professional Services Group of the USA was acquired in 1981 to address the American market and General Utilities Plc was set up in 1986 in anticipation of the privatisation of Britain's water services. Since 1992, the company has been gaining water and sewerage concessions on a global basis. By 1995, VE had 2,300 operating contracts serving 4,000 municipalities in France. VE reduced the number of subsidiaries in France from 40 to one. The company's domestic market strength has meant that until recently, it could take a more relaxed attitude towards the international water markets than Suez.

Veolia Environnement - Approximate breakdown of water revenues by region

EURmillion	2010	2011	2012	2013	2014
France	4,789	4,560	4,516	4,366	3,028
UK	626	812	346	312	-
Germany	1,435	1,519	896	1,008	-
Rest of Europe	1,710	1,842	1,792	1,735	-
USA	686	743	808	785	-
Middle East	492	281	313	250	-
Asia	1,331	1,573	1,110	884	-
Australia and New Zealand	262	239	199	167	-
Rest of the World	798	1,048	786	716	-
Total	**12,128**	**12,617**	**10,696**	**10,222**	**11,215**

Source: VE, Reference Documents, 2010-2014

2012 has been restated

Revenues from Proactiva (water and waste management in Latin America) were EUR434 million in 2014 and VE's share of its Chinese water concessions was EUR610 million in that year.

Veolia Environnement - Highlights

1853:	Compagnie Générale des Eaux (GDE) wins concession for water supply to Lyons
1854-69:	Concessions in Nantes, Nice, Paris & Paris suburbs
1880-82:	Water supply concessions to Venice and other cities
1884:	Wastewater treatment concession for Reims
1967:	Waste-to-energy projects
1972:	Water activities in Spain
1980:	Acquires CGEA (waste management and transport)
1981:	Acquires Professional Services Group of the USA
1986:	General Utilities Plc formed for UK operations
1987:	Licence for France's second cellular telecoms system
1987-88:	Acquires construction and property companies
1993:	Buys out Eau et Ozone
1995:	GDE's first loss – due to property & construction
1998:	Générale des Eaux renamed Vivendi
1999:	Acquires US Filter and Berliner Wasser, formation of Vivendi Water
2000:	Partial flotation of Vivendi Environnement (VE) from Veolia Universal
2002:	Deconsolidation of VE and VU
2003:	VE renamed Veolia Environnement, sale of Everpure
2004:	Sale of VE's stake in FCC, sale of US Filter & Culligan, VU's holding falls to 5%
2005:	Acquisition of companies in Italy and Germany
2006:	VU's last stake sold, Southern Water sold, United Water JV bought
2007:	Desalination contracts in Saudi Arabia, Oman and Australia
2008:	Strategic acquisitions in Japan
2009:	Unwinding the SE / VE contracts in France
2010:	Acquires UU's European activities, Hong Kong contract
2011:	Strategic review pondered
2012: 2013: 2014:	Sale of UK water activities, Nagpur Buy out of Proactiva from FCC, sale of Portuguese activities Sale of Berlinwasser and Israeli activities

Source: VE Reference Documents and Annual Reports, 1990-1024

Veolia Environnement - Water activities (excluding Proactiva)

VE: overall water and wastewater activities	2010	2011	2012	2013	2014
Treatment efficiency of wastewater treatment plants	93%	94%	95%	95%	95%
Efficiency of water systems – Worldwide	77%	73%	74%	74%	75%

Water efficiency in Europe in 2003 for its ongoing activities was 83% in 2003. The difference is accounted for by newly acquired concessions operating more run down water assets. Likewise, worldwide water efficiency in 2007 was 79% net of a new contract serving 1.5million with an efficiency of 15%.

	2010	2011	2012	2013	2014
Million people served – Water	100	103	101	94	96
Million people served – Wastewater	71	73	71	62	60
Water treatment works	5,089	5,056	4,676	4,532	4,455
Wastewater treatment works	3,377	3,513	3,514	3,442	3,338
Water withdrawn (million m^3)	-	10,139	9,494	10,610	9.789
Water distributed (million m^3)	9,800	9,610	8,962	8,725	9,100
Water consumed (million m^3)	-	5,875	5,816	5,944	5,968
Water losses (million m^3)	-	2,161	2,091	2,015	1,977
Wastewater collected (million m^3)	-	7,076	6,669	6,650	6,400
Wastewater treated (million m^3)	7,300	6,238	5,900	6,040	5,800
Wastewater reused (million m^3)	-	195	225	262	291

Source: VE: Environment, Sustainability and CSR Reports, 2010-2014

The number served in France has remained effectively constant in recent years, net of re-statements for cross shareholdings with Suez Environnement. The table also excludes VE's continuing activities in Spain.

Veolia Environnement - Industrial services

In 2014, VE identified 60% of revenues from new opportunities as coming from industrial clients with 40% from municipal clients. This is a breakdown of its current and forecast water and waste management revenues to its major industrial clients.

EUR billion	Revenues In 2014	Revenues by 2020	Market size by 2020
Oil & Gas	1.6	3.5	20.0
Mining	1.1	1.6	14.0
Food & Beverages	0.8	1.2	10.0
Dismantling	0.1	0.4	5.0
Circular Economy	2.5	3.8	30.0
Difficult Pollutants	0.8	1.4	20.0
Total	6.9	11.9	99.0

Source, VE, Reference Document, 2014

Veolia Environnement - Divestments and acquisitions since 2012

Buy out of Proactiva: FCC's 50% stake was acquired for EUR150 million in 2013, including EUR113 million debt.

Sale of UK water utilities: In 2012, VE sold its water only utilities to Rift Acquisitions for an enterprise value of GBP1.2 billion (EUR1.5 billion) and subsequently acquired 10% of the new entity for EUR44 million.

Sale of Berlinwasser: In 2013 VE sold its 24.95% stake in Berlinwasser back to the municipality for EUR636.3 million.

Sale of Aguas de Portugal: The sale of Aguas de Portugal to Beijing Enterprises Water Group for EUR91 million took place in 2013.

Sale of activities in Morocco: In 2013, VE agreed the sale of its Moroccan concessions to Actis. In the first half of 2014, the majority of the municipalities rejected the sale to the Actis Fund and announced their intention to buy back the associated concessions. Actis originally acquired 49% of Moroccan interests for an enterprise value of EUR247 million. VE is yet to receive formal notification from the municipalities of their intention to buy back the concessions.

Purchase of IFC's investment in Veolia Voda: In 2014, VE-CGE purchased the International Finance Corporation's (IFC) minority interest in Veolia Voda (9.52% of Veolia Voda's share capital) for EUR90.9 million. Following this transaction, the Group's stake in Veolia Voda is 91.64%.

Buy out of IFC's PROPARCO stake: In 2014, VE acquired the IFC's 13.89% stake in PROPARCO, with a further 5.56% stake being bought later in that year, meaning that VE now controls 100% of these activities. These acquisitions cost EUR34.8 million.

Sale of activities Israel: In 2014, VE announced the sale of its Israeli activities to Oaktree Capital Management, L.P. resulting in a reduction of net debt of around EUR200 million.

International alliances and JVs

OMSA: A JV in Mexico with ICA, serving 7.8million people in the country.

China: VE has a number of local partners in China. Major contracts have been gained with Citic Pacific and Beijing Capital Group.

EBRD investment: In 2007, the EBRD (European Bank for Reconstruction and Development) invested EUR90million to acquire 10% of Veolia Voda, which while active in C&EE is primarily VE's vehicle for the Russian Federation and the Ukraine. A further 6.88% was acquired by the EBRD in 2009 for EUR70million. In 2012 VE bought a 6.9% stake from the EBRD for EUR79 million and in 2014, VE-CGE purchased the International Finance Corporation's (IFC) minority interest in Veolia Voda (9.52% of Veolia Voda's share capital) for EUR90.9 million. Following this transaction, VE's stake in Veolia Voda is 91.64%.

IFC investment: In 2007, the International Finance Company (IFC) and France's Société de Promotion et de Participation pour la Coopération Economique (PROPARCO) acquired 19.45% in Veolia Water AMI, the holding company for VE's water activities in Africa, the Middle East and the Indian sub-continent. In 2014, VE acquired the IFC's 13.89% stake in PROPARCO, with a further 5.56% stake being bought later in that year, meaning that VE now controls 100% of these activities. These acquisitions cost EUR34.8 million.

Middle East & North Africa (MENA) joint venture: A JV between VE (51%) and Mubadala Development Company (49%) was formed in October 2008 to develop water & wastewater contracts in the MENA region. MDC is owned by the Government of the Emirate of Abu Dhabi and has a series of investments designed to diversity the Emirate's economy.

Veolia MIG Greece: A JV between Veolia and Marfin Investment of Greece for investing in projects in Greece and the Balkans was unveiled in December 2009.

Veolia Environnement - activities in France and internationally

France

Générale des Eaux started operating in France in 1853. By 1953, the company provided water to 8million people and by 1980 it provided water to 19.8million people and sewerage to 6.9million. In 2006, the figure was 24.5million water customers and 16.2million sewerage and sewage treatment customers. The numbers served has fallen from 26million and 17million respectively in 2004 due to joint contracts with Suez being broken up. Numbers served in 2010 were 24.6million for water and 16.7million for wastewater; serving 2,019 WTWs and 2,030 WWTWs Revenues from these contracts in 2009 were EUR614million. VE has retained the Générale des Eaux name for its operations in France, which currently has 4,000 contracts with 8,000 municipalities in France. The sewerage market is seen as growing at an appreciably faster rate than the water market, because of the low penetration of sewerage networks and sewage treatment in France in the wake of compliance work for the EU's Urban Waste Water Treatment Directive.

238 contracts were renewed in 2011, with combined revenues of EUR1, 010million. In addition, 37 new contracts were gained. The French water services are based on 523 operational units, 184 service operations and 35 operation centres.

Contracts in France	2012	2013	2014
Contracts gained	52	35	21
New PPP contracts	25	17	9

Source: VE, Reference Documents, 2012-2014

In March 2010 GDE sold to LDE: Société des Eaux du Nord, Société Nancéienne des Eaux, Société des Eaux de Versailles et de Saint Cloud, Société Martiniquaise des Eaux, Société Guyanaise des Eaux, Société Stéphanoise des Eaux, SERAM and Société Provençale des Eaux and acquired Compagnie Générale des Eaux of additional interests in Société des Eaux d'Arles, Société des Eaux de Marseille and parts of Société Industrielle du Littoral Méditerranéen and Bronzo Environnement.

There were two major contract gains in 2014. Grand Lyon awarded VE an eight year smart water management contract run with IBM worth EUR660 million, covering 1.3 million people, second largest system in France. 400,000

smart meters are to be installed for 100% coverage, along with 6,000 leak sensors, with the aim to save 33,000 m^3 of the 260,000 m^3 drinking water produced each day. A 15 year contract for Marseille has a total value of EUR1.7 billion and includes the roll-out of 183,000 smart meters.

Montpellier is to return to public operation from 2016.

Reunion

Contracts

Year	Location	Contract & length	People served & service
2010	Reunion North	20 year concession	160,000 sewage treatment

The French dependency awarded a concession to Veolia Water, along with OTV, Sogea, SBTPC (Vinci, Italy) and Egis Eau in May 2010. The concession will generate revenues of EUR270million for Veolia Water, EUR75million for the construction of a new WWTW and EUR195million for its operation. The facility will enter service in 2013.

Denmark

Along with one long standing contract for water provision to 60,000 people via VE's I Krüger AS, VE gained the first wastewater management contract in Denmark in February 2006.

Contracts

Year	Location	Contract & length	People served & service
2006	Allerød	8 year management	23,000 sewage treatment

The contract covers managing three WWTWs, the sewerage system and overhauling the municipality's sludge recycling system for agricultural application.

Spain: FCC

FCC is a Spanish construction and utility company, which dominates the municipal waste collection market. In October 1998, VE acquired 49% of B1998, the holding company for the Koplowitz sisters' interests in FCC, which in turn holds 56.5% of the company. In July 2004, Veolia sold its 49% stake in B1998 to a company controlled by Mrs. Esther Koplowitz. The transaction reduced Veolia Environnement's net indebtedness by EUR1.1billion, with a total cash payment to Veolia Environnement of EUR916million. Veolia Environnement acquired its stake in FCC from Vivendi in 2000 for a total consideration of EUR691million. VE has retained Gruppo General des Aguas (water and sewerage) which in 1997 served 3million people in Spain and had net sales of FRF1billion.

Contracts

Year	Contract	Contract & length	People served & service
2009	Madrid	4&2 years management	3million, wastewater

This contract is initially worth EUR16million and covers the management of Canal Isabel II's South wastewater treatment plant, which handles 560,000m^3 per day. A sludge digester ensures that the facility is self-sufficient for energy.

2007	Campo Dailas	17 year BOT	Desalination

In May 2007, VE gained a EUR128million (EUR78million to VE) desalination contract in southern Spain, with an 18 month construction and 15 year operation period.

Veolia Water in northern Central Europe (2007 figures)

Country	Revenues (EURm)	People - Water	People - Sewerage
Poland	6	3,400,000	4,000,000
Czech Republic	470	60,000	70,000
Slovene Republic	141	2,000,000	270,000
Slovak Republic	58	600,500	1,000,000
Total	676	6,060,000	5,340,000

Source: VE presentation, 2008

The Czech Republic

Veolia Voda (www.veoliavoda.cz) serves 3.7million people in 1,300 municipalities, along with 40 industrial water outsourcing contracts. Revenues in 2005 were CZK 11billion, rising to CZK14.4 billion in 2011.

Contracts

Year	Location	Contract & length	People served & service
2006	Prostejov	25 year management	70,000 water & sewerage

VE will manage the Prostejov Water Company's facilities in the Moravian Region and the contract will generate EUR139million.

2006	Slany	15 year management	21,000 water & sewerage

This contract is adjacent to the Kladno-Melnik contract area. Total revenues will be EUR30million.

2005	Hradec Karlove	30 year concession	149,000 water & sewerage

The contract covers 100,000 people in Hradec Kralove, Eastern Bohemia's regional capital and 50,000 in 100 other municipalities in the region. The contract will generate revenues of EUR525million. Kralovehradecka Provozni AS had revenues of CZK534million in 2006.

2004	Kladno-Melnik	20 year concession	331,000 water & sewerage

Revenues for the contract will be worth EUR600million. Stredoceské Vodárny AS generated revenues of CZK614million in 2006.

2004	Eastern Moravia	30 year concession	157,000 water & sewerage

In June 2004 Veolia signed a 30 year contract with Vodovody a Kanalizace Zlin (VAK Zlin) the water public authority for the eastern part of Moravia in the Czech Republic. The area includes 80 districts. The contract will generate total revenues of around EUR360million. Revenues in 2006 were CZK374million.

1999	V Klatovy	10 year concession	50,000 water & sewerage
1996	Pilsen	12 + 10 year concession	230,000 water & sewerage
1996	Sokolov	10 + 16 year concession	130,000 water & sewerage
1999	Aqua Pibram	10 + 10 year concession	80,600 water & sewerage

Vodarenska and Kanalizanci AS Plzen (VP) serves the city of Pilsen on a lease with O&M work. The contract is currently for water provision (230,000 people) plus wastewater (180,000 people), the latter through a new sewage treatment facility opened in 1997. Industrial and domestic customers pay an equal amount for water and prices are below that seen in most of the Czech Republic. During 1997, the contract was extended to cover a further 72,000 people in the northern part of Pilsen. Allied with the sewerage expansion, this boosted 1998 turnover to CZK700million which was steady at CZK737million in 2006. In 2000, the Pilsen contract was granted a 10 year extension to 2017. In 2004, VP extended its service areas in the two latter districts with the municipalities of Štenovice, Cizcice and Ejpovice.

The Aqua Pibram concession was gained in December 1999. Aqua Pibram was renamed 1.ScV AS after the merger with VAK Ricany u Prahy, s.r.o., which added 4,600 people. 1. ScV had revenues of CZK274million in 2006, while the Sokolov contract gained a 16 year extension. The Aqua Pibram concession contract was extended by 10 years in 2003, with revenues of EUR4million pa.

1998	Northern Bohemia	15 year concession (1995)	1,238,000 water & sewerage

Hyder's stake was sold for CZK795million (USD26.7million) to VE, giving the company 43.17% of Severomoravske Vodovy a Kanalizace Ostrava (ScVK), with Severoceske Vodarensky Svaz (SVS), formed by the client towns, holding a further 34.7%. At the start, 1.07million of the inhabitants were connected to the mains water supply and 0.87million to the sewerage network. ScVK's turnover to March 1999 was CZK1.1billion and rose to CZK5.53billion in 2006.

2000	Olomouc	20 year concession	140,000 water

This concession was awarded to Stredomoravaska Vodarenska AS (SMV) in March 2000. It is the first PSP contract in the region. Total net sales for the contract will be EUR200million. 2006 revenues were CZK395million.

2001	Prague	28 year concession	1,465,000 water & wastewater

VE and AWG paid EUR174million for a 66% stake in PVK, and VE subsequently bought out AWG's stake. In 2002, the remaining 34% of shares were acquired from the municipality. The 13 year concession will generate EUR60million in 2001 and EUR120million in subsequent years. The contract will concentrate on service quality improvement and upgrading water and sewage treatment to EU standards. The concession was extended to 28 years in 2002. Leakage was reduced from 47% in 2001 to 23% by 2006. Revenues in 2006 were CZK4.6billion.

Slovakia

These contracts, awarded in May 2006, are the first international water tenders in the Slovak Republic. Water and wastewater services will be provided to 950,000 people in 750 towns, villages and districts in Central and Northern Slovakia.

Contracts

Year	Location	Contract & length	People served & service
2006	Banska Bystrica	30 year concession	660,000 water & wastewater

This is a concession with the Banska Bystrica Water Company (StVS) which will generate revenues of EUR1.4billion over the contract. The town of Banska Bystrica has 85,000 people, with 660,000 in the region.

2006	Poprad	30 year concession	290,000 water & wastewater

Poprad Water Company (PVS) was awarded the concession, with annual revenues of EUR17million and a total contract value of EUR566million. There are 57,000 people in the town of Poprad, which is part of the Presov region in the North East of the country.

Hungary

Contracts

Year	Location	Contract & length	People served & service
2006	Erd Region	25 year concession	100,000 water & sewerage

Érd és Térsége Víziközmû Kft, a joint venture with the Budapest Water Company was set up in May 2006 for providing water and wastewater services to 100,000 people in the seven districts of Erd which lies to the south of Budapest. VE and Budapest Water will hold 26% of the operating company with the municipalities retaining 74%.

2004	Salgótarján	20 year O&M	44,000 sewerage

The Salgótarjáni Csatornamû Kft contract covers the operation of a sewage treatment works and sewerage system serving the towns of Salgótarján, Kazár, Mátraszele and Vizslás.

1994	Szeged	15 year concession	168,000 water & sewerage

The Szeged contract had a HUF1.16billion turnover (HUF40million) in 1995. The 15 year contract was awarded to VE's 100% held subsidiary Servitec, which holds 49% of Szegedi Vizmü, the holding company for the contract. Currently 60% of the city is connected to the sewerage network. The contract was gained after VE had been awarded a HUF200million water treatment plant construction contract in 1992. The company has been profitable since 1996 and water consumption has been reduced by targeting leakage, installing meters and a progressive pricing policy.

2006	Budapest	4+4 years, DBO	1.5million wastewater

In 2006 Degrémont and Veolia, along with Hídépíto and Alterra, two local civil works companies, gained a EUR290million contract to build (EUR249million) and operate for four years (EUR40million) a 350,000m^3/day wastewater treatment works (wet weather capacity 900,000m^3) at Csepel to serve 1.5million people in the Budapest area. The facility entered service in 2010 and will be operated by them until 2014.

1997		Budapest	25 year concession	1.9million, sewerage

The management company formed by VE (35%), BWI (35%) and EBRD (30%) took a 25.1% stake in Fövarosi Csatornásási Müvek Rt., Budapest's wastewater company. Secondary treatment capacity has increased from 220,000m^3/day in 2000 to 280,000m^3/day in 2004 (76% being used), with the number of customer connections rising from 137,813 to 162,753.

Poland

Contracts

Year	Location	Contract & length	People served & service
2006	Wozniki	10 year management	10,000 water

VE's PWIK Wozniky gained the contract for the town of Wozniky in Upper Silesia in February 2006.

2001	TGMS	25 year concession	75,000 water & sewerage

The contract to operate the Tarnowskie Gory and Miasteczko Slaskie water company was gained in December 2001. The company manages the municipal water and wastewater services for 75,000 people in the two towns. VE's initial 33.85% stake increased to 63.5% in 2003. The contract will generate total revenues of EUR125million.

Romania

Contracts

Year	Location	Contract & length	People served & service
2000	Ploiesti	25 year concession	250,000 water

The concession was awarded to Apa Nova Plotesti SRL (73% held by VE, 27% by the municipality) in April 2000. EUR26million will be spent on network upgrading and renewal over 15 years and EUR47million on treatment systems over 25 years, with a turnover of EUR8million pa.

2000	Bucharest	25 year concession	1.8million water and wastewater

The concession to modernise Bucharest's water supply was granted to Apa Nova Bucuresti ANB (84% held by VE, 16% by the municipality) in April 2000. EUR210million was invested in the first nine years of the concession out of an expected total of EUR1.05billion, with the proportion of households receiving a continual water supply rising from 39% to 91%. Annual revenues will be EUR80million pa. At the start of the contract, 1.8million people were served with water and 1.67million with wastewater.

2011	Bucharest	14 year concession	500,000 wastewater

In 2011, VE gained a EUR600million extension to the 2000 contract, managing the Caseta sewerage system and the Glina wastewater treatment works.

Poland

Contracts

Year	Location	Contract & length	People served & service
1999	Biesko Biala	12 year concession	385,000 water and wastewater

In November 1999, UUI and International Water entered into a strategic partnership with the municipality of Biesko Biala and acquired 33.2% of Aqua SA, the utility providing water and wastewater services to the city (200,000) and 12 municipalities in the surrounding area. The concession is being supported by the World Bank.

Bulgaria

Contracts

Year	Location	Contract & length	People served & service
1999	Sofia	25 year concession	1,400,000 water and wastewater

The upgraded Kubratovo WWTW has a design capacity of 500,000m^3 per day and a typical throughput of 400,000m^3 per day. In 2009-11, it was upgraded further at a cost of EUR33million to take in energy recovery and tertiary treatment. VW holds 77.1% of Sofiyska Voda AD.

The Russian Federation

Contracts

Year	Location	Contract & length	People served & service
2005	St Petersburg	5 year management	2 million water

Veolia Water's SPEP (Société Eau Pure, 51% GDE, 48% Vodokanal & 1% St Petersburg municipality) gained a five year management contract for the city's left bank water treatment works. This facility handles 1.2million m^3/day of water.

A partnership with Evraziysky and Eurasian Water Partnership for the development of water and wastewater projects in Russia was signed in October 2006, including acquiring 50% of EWP's equity. EWP currently has water and wastewater contracts serving Rostov-on-Don (Voda Rostova) and Omsk.

Armenia

Contracts

Year	Location	Contract & length	People served & service
2005	Yerevan	10 year management	1.2million water & wastewater

A EUR160million contract supported by USD 19million in World Bank funding. The initial emphasis will be in managing water leakage and service extension.

United Kingdom

Veolia Water's asset owning companies (Three Valleys, Tendring Hundreds and Folkestone & Dover) were sold to Morgan Stanley and M&G (part of Prudential) for GBP 1,236 million in June 2012. VE holds 10% of these companies.

Thames Water Services was acquired by Veolia Water UK for EUR115million (GBP78million) in August 2007, with an enterprise value of EUR233million. UK revenues of EUR160million (GBP109million) are anticipated for 2008 (with EUR80million revenues gained in the first half of 2008). The company has two principal contracts in Wales and Scotland.

Scotland

Contracts

Year	Location	Contract & length	People served & service
1998/99	Eastern Scotland	30 year PFI BOT	585,000 sewage treatment

Sterling Water (Veolia 100% following a buyout in 2009) gained the Eastern Scotland contract. The original Almond Valley and Seafield GBP50million scheme for the upgrading of five sewage treatment works serving Edinburgh and replacing sewage sludge disposal to sea with land based recycling has been extended to include the GBP20million Esk Valley scheme. These contracts are operated by Veolia Water UK. The People served & service will be 585,000 at the start, rising to 850,000 in an area covering 1million people at the outset and 1.2million at completion.

In April 2010, VE acquired UU's outsourcing contracts serving various utilities in England, Wales and Scotland.

1998	Fort William	28 year PFI BOT	14,000 sewage treatment
1998	Inverness	28 year PFI BOT	66,000 sewage treatment
1999	Tay	28 year PFI BOT	270,000 sewage treatment
2001	Moray Coast	28 year PFI BOT	55,000 sewage treatment

These contracts were awarded by the North of Scotland Water Authority to Catchment Ltd, with UU responsible for the operation of the sewage treatment works through Caledonian Water. The GBP45million Highland scheme has two facilities, at Fort William (PE of 20,000 for GBP10million) and Inverness (PE of 125,000 for GBP35million), which are both fully operational. The Tay scheme (33% held by UU) is for a single site serving Dundee and Angus and entered service in March 2002 at a total cost of GBP120million. The GBP76million scheme for the Moray Firth involves three sewage treatment works and 25km of sewerage for the Moray Firth.

Ireland

VE has 30 contracts in Ireland developing or managing water and wastewater plants serving 1million people in total.

Contracts

Year	Location	Contract & length	People served & service
2008	Wicklow WWTW	DBO	25,000 wastewater
2008	Tramore	DBO	15,000 wastewater
2008	Blessington	DBO	6,000 wastewater
2008	Dungarvan	DBO	18,000 wastewater

Year	Location	Contract & length	People served & service
2008	Wicklow sludge	DBO	45,000 wastewater
2008	Donegal	DBO	15,000 wastewater

The Dungarvan and Tramore WWTWs are in Co Waterford. The Blessington and Rathdrum WWTWs in Co Wicklow have a PE of 6000 and 3,500 respectively. The Wicklow contract is for a county based sludge treatment facility with a PR of 68,000. The Co Donegal contract covers three WWTWs; Donegal Town (12,000 PE), Ballyshannon (6,100 PE) and Rosnowlagh (4,000).

2008	Castlebar	22 year BOT	20,000 wastewater

The contract involves renovating and operating the WWTW to a PE of 35,000 (including 10,000 PE for industrial effluents) and will generate revenues of EUR26million.

2008	Mullingar	22 year BOT	28,000 wastewater

Total revenues for the contract will be EUR48million including renovating a 55,000 PE sewage works which will cost EUR25million and entered service in June 2010.

2006	Limerick	20 year BOT	90,000, wastewater

This is a EUR71million repair, enlargement and operation contract for the city's wastewater treatment plant, which increased its treatment capacity from 51,000m^3/day to 87,000m^3/day.

Germany

Contracts

Year	Location	Contract & length	People served & service
1995	Döbeln/Oschatz	20 year management	250,000 water & sewerage

Oewa (46% held by VE, a JV with Veba Kraftwerk Ruhr AG until 1998) gained a contract for Döbeln/Oschatz in Saxony with a turnover of DM17million, serving water to 240,000 people and sewerage for 250,000.

1999	Grimma	25 year concession	85,000 water & sewerage

The concession covers 19 communes in Saxony, 85,000 being served with piped water and 45,000 with sewerage. The contract is worth EUR153million over its life. Oewa Wasser und Abwasser GmbH mainly operates in Saxony-Anhalt, holding 25 contracts, including 6 gained via the 1994 acquisition of Awatech.

1999	Midewa	Acquisition	350,000 water & sewerage

In December 1999, activities in Saxony Anhalt were boosted by the acquisition of Midewa, which has a turnover of EUR56million pa. 350,000 are included for water services and 210,000 for sewerage. VE also has a 25 year O&M contract for sewerage services in the Hanover area, with a turnover of EUR15million pa.

2007	Thale	Concession	13,000 water and sewerage

VE acquired 49% of Stadwerke Thale in 2007.

2009	Springe	Concession	10,000 storm sewerage

VW acquired 33.5% of Stadwerke Springe in 2009.

2009	Pulheim	Concession	54,000 water and sewerage

VW acquired 49% of Stadwerke Pulheim in 2009.

2001	Görlitz	Acquisition (74.9%)	63,000 municipal services

Saxony's Stadwerke Görlitz had a EUR61million turnover in 2000. It also provides waste management, water, sewerage, energy and public transport services to the town. In 2009, the electricity, heat and gas contracts were renewed.

2003	Gera	10 year BOT	153,000 water & wastewater

The contract is with the municipality of Gera in Thuringia. Total revenues for the contract will be EUR130million.

2004	Braunschweig	16 year BOT	240,000 water

Veolia Environnement acquired 74.9% of Braunschweiger Versorgungs AG (BVAG) in December 2004 for EUR372.5million. The company manages water and wastewater services for the city in Lower Saxony. The company has generated revenues of EUR270-300million pa since 2005.

2005	Braunschweig	30 year O&M	280,000 wastewater

A subsequent contract, awarded in December 2005 covers the city's wastewater treatment plants run by Stadtentwässerung Braunschweig Gmbh and is worth EUR390million. The plant has a 350,000 PE.

2009	Burg	15 year O&M	24,000 water & wastewater

The contract with the regional Authority of Burg in Saxony-Anhalt is worth EUR20million.

Belgium

Contracts

Year	Location	Contract & length	People served and service
2001	Brussels	20 year DBFO	1.1million sewage treatment

Construction of the Brussels North STW started in 2003, and the facility entered service in the first half of 2008. The Aquiris contract is worth a total of EUR1billion over its life, including EUR290million in Capex and a fee of EUR49.6million pa for the Aquiris consortium. Treatment capacity is 119million m^3 pa.

Sweden

Contracts

Year	Location	Contract & length	People served & service
2001	Norrtalje	10 year 'concession'	55,000 water & wastewater

The turnover over the life of the contract will be EUR25million. This is the first water PPP in Sweden and was extended for 10 years in 2014. Veolia Vatten also operates the water and wastewater networks for the municipalities of Danderyd and Jarfalla, as well as pumping stations for Stockholms Lokaltrafik (SL).

Italy

Until 2005, VE was effectively engaged in managing a portfolio of operating contracts and strategic stakes. The 2005 acquisition of Enel Hydro has more than compensated for the decision to sell its stakes in the two Genovan water companies to Amga. It is understood that VE continues to hold 72% of Siemec, a company providing sewerage and sewage treatment to 700,000 people.

Acquisition of Enel Hydro

75% of Siciliacque, the entity running Sicily's water distribution system was sold to a VE and Enel joint venture in 2004 for EUR299million. The 40 year concession starts in 2004 and calls for investments of EUR1billion, including EUR300million in the first decade and reducing leakage from 30% to 12%.

Enel's water activities were sold to Veolia Environnement for EUR36million in May 2005. Enel Hydro SpA provides water to 6.1million people, mainly through Idrosicilia SpA which provides water management services in Sicily. VE acquired 100% of Enel Hydro in the deal, along with 20% of Idrosicilia and an option for Enel's remaining 40% stake in the latter company.

Contracts

Year	Location	Contract & length	People served & service
2001	Latina	30 year concession	600,000 water & wastewater

ATO de Latina covers southern Lazio's ATO-4, serving 38 communes. A consortium of VE (21.8%), Enel (23%) and Acquedotto Pugliese (23%) gained the concession in July 2001, after the tendering process had been held up by a dispute over the scoring system. The concession will be worth EUR2billion over its operating life. UFW needs to be decreased from 70% to 25-30% and major sewage treatment upgrades are also required. A further 500,000 tourists use the area.

Gruppo Camuzzi

Gruppo Camuzzi was founded in Milan in 1929. In October 2001, Mill Hill NV, the Dutch holding company of the Garilli family, sold 40% of its 100% holding in Gruppo Camuzzi to Enel for EUR434million. In March 2002, Enel bought the rest of Camuzzi for USD870million from Mill Hill NV. The company is principally engaged in gas services. In 1997, Camuzzi gained a 20 year concession contract for water and wastewater services for the town of Massa, serving 44,051 and 30,379 people respectively. Camuzzi's subsidiary Gazometri in total manages 5 concessions in Lombardy, Tuscany and Abruzzo and supplies 40,195 customers. 6% of the group turnover in 1999 was in environmental services.

China

VE's consolidated revenues in China (www.veoliawater.cn) were EUR350million in 2003. It is by some way the fastest growing market VE is involved in and is set to become VE's largest international water services market in the medium term. VE currently has 22 municipal and 6 industrial contracts, serving some 46 million people in China, including 27million via full service concessions.

VE, group share of the Chinese water concessions

EUR million	2012	2013	2014
Revenue	549.3	555.0	610.1
Operating income	57.1	47.9	30.8

Source, VE, Reference Documents, 2012-2014

Contracts

Year	Location	Contract & length	People served & service
2010	Hong Kong	3+15 year DBO	4million, sludge treatment

This facility is designed to handle the sludge produced by Hong Kong's 11 WWTWs. It will handle 800 tonnes of sludge per day at the start, rising to 2,000 tonnes per day. The facility is planned to enter service in early 2014 at a construction cost of EUR414million followed by operating costs of EUR20million per annum. It is 60% held by Veolia Environnement and 40% by Leighton Asia.

2008	Changle	30 year management	680,000, water

The contract will generate revenues of EUR294million.

2007	Haikou	30 year management	800,000 water & wastewater

The Haikou (Hainan) contract was awarded in June 2007, following the acquisition of 49% of the operating company. The contract will generate revenues of EUR776million including three water treatment works with a 390,000 m^3 per day capacity.

2007	Tianjin	30 year management	3million water

Veolia Environnement acquired 49% of the Tianjin Shibei Water Company Ltd from the Tianjin Water Works (Group) Company Ltd. The contract will generate revenues of EUR2.5billion. The project will cover the district of Shibei, the Northern part of Tianjin, and the Binhai district on the Eastern coast. It includes managing the Xinkaihe water production plant (1million m^3/day) and a 1,988km of mains and the 500,000m^3/day Jinbin water treatment works, currently under construction. In addition, the company will develop the water conveyance network to all the industrial areas in the Binhai area, situated along the coast of Bohai Bay. 2008 revenues were EUR19million.

2007	Lanzhou	30 year management	3.2million, water

This EUR1.6billion contract for the capital of Gansu Province was gained in January 2007. VE acquired 45% of the Lanzhou Water Supply Company. VE manages four water treatment plants with a total capacity of 2,190,000m^3/day and 640km of water mains.

2006	Liuzhou	30 year management	1.0million, water

The August 2006 contract sees VE taking 49% of Liuzhou Water Services and responsibility for managing all water distribution services, including 4 water treatment plants with a combined capacity of 540,000m^3/day. Revenues over the contract will be some EUR330million.

2005	Kunming	30 year BOT	3.5million, water

Signed in November 2005, this contract will generate EUR1, 100million in revenues. VE and Citic Pacific will hold 49% of Kunming Water Supply and manage its 1.615million m^3/day water treatment and distribution service. This contract generated EUR20million in revenues during the final seven months of 2006.

2005	Changzhou	30 year BOT	1,200,000 water management

Veolia Environnement and Citic Pacific acquired a 49% stake in the municipal company Changzhou Tap Water Group following an international tender. The contract is worth EUR800million and involves managing the company, including 5 water treatment plants (capacity 790,000m^3/day), a 1,750km distribution network and customer services.

2005	Handan	25 year BOT	800,000 wastewater

This contract involves the construction of a new wastewater treatment plant with a capacity of 100,000m^3/day and its operation for 25 years. The Veolia Water Systems contract will have total revenues of EUR62million.

2005	Urumqi	23 year BOT	1,200,000 wastewater

The contract serves the capital of the Xinjiang Uyghur Autonomous Region and involves upgrading and operating for a 23 year period of the city's wastewater treatment plant, in partnership with Beijing Capital Group (BCG). The plant's current capacity of 200,000m^3/day will increase to 400,000m^3/day by 2008. Total revenue for Veolia Water for the contract will be EUR260million.

2007	Shenzhen	50 year BOT	4,100,000 water & wastewater

In 2007, Shenzhen Water Group acquired five companies which manage water services in the districts of Longgang and Baoan.

2003	Shenzhen	50 year BOT	7,610,000 water & wastewater

This contract is being jointly operated with Beijing Capital Corporation (see company entry) and will generate revenues totalling EUR8.5billion. 45% of the contract company is held by VE and BCG and 55% by the Shenzhen municipalities. VE is investing EUR390million into the project. At the start of the project, 2.6million people were served. The contract contributed EUR103million to VE's 2008 consolidated revenues.

2004	Weinan	22 year BOT	300,000, water

This is a EUR190million rehabilitation and operation contract for bulk water services, providing 160,000m^3/day.

2004	Hohhot	30 year BOT	2.5million, water

The rehabilitation and operation of the Inner Mongolian capital's water production and treatment system (10 plants) has a capacity of 515,000m^3/day and will generate revenues of EUR600million.

2004	Beijing	20 year BOT	Wastewater

The Bei Yuan wastewater treatment plant is adjacent to the Olympic Village and the contract will generate total revenues of EUR20million.

2004	Zunyi	35 year concession	600,000 water

Zunyi is in Guizhou Province. This rehabilitation and operation contract is being carried out jointly with Citic Pacific (see company entry) and will generate total revenues of EUR210million.

2003	Qingdao	25 year BOT	1million wastewater

The contract (with China Everbright) covers the operation of two wastewater treatment works for the 2008 Beijing Olympiad. Revenues will total EUR110million. The capacity of the Maidao plant was increased from 80,000m^3/day to 140,000m^3/day in 2006.

2003	Beijing	20 year BOT	250,000 wastewater

Veolia Water and Kerry Utilities (part of PPB of Malaysia), signed a 20 year contract to operate the Lugouqiao wastewater treatment plant, located in the east of Beijing. Total revenues will be EUR50million. This is the first private sector WWTW contract for Beijing and will be financed through a World Bank loan to the Beijing municipality with VE and Kerry providing an additional EUR5million. The plant will cost EUR40million.

2002	Baoji	BOT, 23 year	500,000 bulk water supply

VE is to refurbish the city's two WTWs and to expand their capacity. Revenues over the life of the contract will be approximately EUR300million.

2002	Zhuhai	BOT, 30 year	1,200,000 wastewater

VE has refurbished one WWTW and constructed a second facility. Revenues over the life of the contract will be approximately EUR400million.

2002	Shanghai	50 years, O&M	2.2 million water services

In May 2002, VE gained the water O&M contract for the Pudong business district in Shanghai. This is the first outsourcing contract to give a foreign company the responsibility for providing a full service offering: embracing drinking water production, network distribution and customer services. Veolia Water has bought a 50% share in a new JV company, Shanghai Pudong Veolia Water Corporation, for an amount of EUR266million. At the start of operations, the contract supplied potable water to 535,000 domestic connections and 18,000 commercial and industrial customers with an average daily consumption of 1.2million m^3. An immediate priority has been reducing distribution losses from their 30% level. By 2014, the contract covered 4.2 million residents. The 50 year contract is expected to generate a turnover of over EUR10billion during the term due to the expected substantial growth of Pudong in the coming years. The business district is forecast in the long-term to be home to 5 million people.

1998	Chengdu	BOT, 18 year	2.66 million bulk water supply

The BOT contract was awarded to Chengdu Générale des Eaux-Marubeni Waterworks (CGDEM), a JV with Marubeni (60% VE, 40% Marubeni). This was the first wholly foreign owned BOT water supply project in China. The project for Sichuan's capital cost USD100million, USD90million going on the treatment plant which started operations in 2002. It supplies 460,000m^3/day of water. Construction took 30 months and includes 27km of pipelines. Chengdu has a total population of 10million, of whom 3.2million live in the central area.

1997	Tianjin	'Concession-type', 20 year	1.85million water treatment

This was awarded for upgrading the Lingzhuang water treatment works, which has a 500,000m^3/day capacity and is one of the Tianjin's largest facilities, providing water to one third of the 11million served by the municipality. The facility is to have its capacity increased by 250,000m^3/day in the medium term. The contract generates bulk water sales of USD15million pa, with an agreed Capex of USD30million for plant rehabilitation and the building of a new 13km piping network. CGE Tianjin Waterworks holds the concession, which is 55% held by a JV which is in turn 70% owned by VE and 45% held by the municipality's Tianjin Waterworks Co.

Kazakhstan

VE was awarded two contracts in March 2000: (1) A 30 year water management contract for the old capital Almaty (1,250,000 people) and (2) A USD40million contract for pipeline and pumping station renovations for the new capital Astana (300,000, to grow to 500,000). The Almaty contract never started due to delays by the Government causing VE to pull out. VE retains an industrial water services presence in the region.

Republic of Korea

Contracts

Year	Location	Contract & length	People served & service
2010	Dongbu	15 year management	Industrial water services

A EUR183million acquisition of Dongbu Corp's wastewater and process water facilities.

2004	Kumdan	23 year BOT	150,000, wastewater treatment

The Kumdan WWTW is located near Incheon. The facility will have a capacity of 40,000m^3/day and will generate consolidated revenues of EUR80million. The contract is jointly run by Hanwha Engineering & Construction Corporation & Doosan Construction & Engineering.

2001	Incheon	23 year BOT	330,000 sewage treatment

The Incheon contract (Samsung Veolia Incheon Wastewater Co., Ltd., VE 80%, and Samsung Engineering 20%) involves USD300million being spent on two sewage treatment works (Mansu, 70,000m^3/day and Songdo, 30,000m^3/day) with a total capacity of 100,000m^3/day. The two facilities entered service in April 2005.

Japan

VE has had a low key presence in Japan, being involved in short term wastewater maintenance contracts for some years. Major contracts have been gained since 2006, including two three year O&M wastewater treatment works in 2006 (Saitama, a district near Tokyo and for Hiroshima), which were renewed for a further 3 years in 2009, with total revenues of EUR21million. In April 2007, VE gained a three year O&M contract for a 283,000m^3/day wastewater treatment plant serving 500,000 people in Chiba, which will generate total revenues of EUR17.8million. In 2009, a second EUR35million three year wastewater outsourcing contract was gained for Chiba. In 2010, a four year meter reading contract for Osaka worth EUR44million was renewed.

In July 2007, Veolia Water Japan and J-Power (Japan's Electric Power Development Co) acquired Fresh Water Miike, a water management unit of Mitsui Mining Co. This company, now named Fresh Water Service Co provides water services for half of the households in Omuta, Fukuoka Prefecture and the neighbouring Arao in Kumamoto Prefecture. VE made four further acquisitions of water technology companies in Japan during the first half of 2008:

Company	Revenues	Revenue year
Nishihara Environment Technology	EUR38million	2007
Dai Nippon Eco Engineering	EUR8million	2008
Yamagata Kangyo Engineering	EUR4million	2007
Nichijo	EUR7million	2006

In 2014, VE served 3 million people in Japan, including four longer term contracts.

Contracts

Year	Location	Contract & length	People served & service
2012	Hakone	10 year O&M	6,200 water and sewerage

This is VE's first full service, longer term O&M contract, which is worth EUR14 million.

2006	Hiroshima	3+3+4 year O&M	649,000 wastewater

The contract has twice been renewed. The current contract is worth EUR26 million.

2012	Matsuyama	O&M	515,000 wastewater
2009	Kyoto	3+3+ year O&M	51,000 wastewater

Renewed in 2012.

India

Contracts

Year	Location	Contract & length	People served & service
2007	Nagpur	5 year O&M	100,000 water
2008	Nagpur	15 year DBO	650,000 water

Revenues for the 30 month construction and 15 year operations contract will be EUR24million, including construction. The 240,000m^3 per day water treatment plant contract was awarded in June 2008 and builds upon an earlier rehabilitation contract and a pilot services upgrading project designed to provide a continual water supply for 10,000 customers (100,000 people) in the city.

2012	Nagpur	25 year O&M	2.7 million, water

In 2012, VE set up Orange City Water, a joint venture with Vishvaraj Environment to deliver continual water supplies for the city. The contract includes a EUR60 million network upgrade and extension project, which will be 70% funded by the state and 30% by the operator. 350-450,000 households are to be connected and leakage reduced from 60% to 10-20%. Total revenues for the contract are forecast to be EUR387 million. The city's population is expected to rise to 5 million by 2040.

2012	Delhi	15 year O&M	1 million, water

A EUR282 million contract covering 1 million people In Nangloi, with EUR66 million to be spent on meter installation and network rehabilitation.

2012	Delhi	13 year DBO	0.5 million, wastewater

A 91,000 m^3 per day wastewater treatment plant contract worth EUR40 million, involving two year construction and 11 years operation.

2013	Karnataka	5-6 years O&M	177,000, water

Two contracts: Ilkal (110,000 people, including 28,000 living in informal settlements), a EUR4 million 5.5 year contract (18 months rehabilitation and 4 years O&M) which will be the first city wide area ion India with comprehensive pressurised water. Bijapur (67,000 people, 15,000 who live in informal settlements), covering 15% of the city, a six year contract worth EUR4.5 million involving 2 years rehabilitation and 4 years O&M.

2014	Delhi	15 year O&M	Water

A EUR31 million contract for upgrading and operating a water treatment and distribution system.

Indonesia

Contracts

Year	Location	Contract & length	People served & service
1997	Sidoarjo	25 year BOT	100,000 bulk water supply

This concession is for bulk water provision to PDAM Delta Tirta Sidoarjo, the local water entity. The concession holds 95% of the equity, along with Indonesia's PT Agumar Nusa and PT Hansa Letsari. The build and management concession will entail a capital investment of INR130billion, or a EUR4million investment by Veolia Water. The facility will have a 20,000m^3 day capacity, for 100,000 people.

Gabon

Contracts

Year	Location	Contract & length	People served & service
1997	SEEG	20 year concession	1.2million, utility services

VE won the tendering process to acquire a 51% stake in the Gabonese public utility Société d'Electricité et d'Eau du Gabon (SEEG), with 49% of SEEG held by local investors. This is a XAF700million concession for water production and electricity distribution to the three principal cities; Libreville (526,000 people served with water), Port-Gentil and Franceville, including XAF200million for water. Average tariffs fell by 17% at the start of the contract and have been held to less than the rate of inflation since then.

Water coverage	1993 coverage	2000 target	2000 actual
Libreville	49.3%	53.0%	61.3%
Franceville	38.6%	43.0%	58.0%
Port Gentil	37.7%	43.0%	49.5%

There were 100,385 customer connections in 2005, including 17,978 which have subsidised connections using less than 15m^3/month. By 2006, the connection rate had risen from 40% to 70%, with 192,000 people in worse off areas being connected to water and sewerage since 2002. In 2011, it was announced that VE was considering selling the concession.

Niger

Contracts

Year	Location	Contract & length	People served & service
2000	SEEN	11+10 years, management	1.6million, water

Supported by USD65million in funding by the World Bank's IDA, the French Development Agency and the West African Development Bank, this 10 year affermarge contract for Société d'Exploitation des Eaux du Niger (SEEN, 55% VE, 45% local investors) covers 52 urban centres and charges on average XOF208/m^3 (EUR0.3) for drinking water. Between 2001 and 2005, the number of connections rose from 58,000 to 79,433, including 11,688 new low cost connections. Niamey (600,000 people) was the initial target area, with 51 other districts being covered later. Bill

collection rates were 97% in 2004, reflecting a programme to optimise affordability for all clients, with 84% network efficiency and 97% water quality compliance in 2005. In 2011, the contract was renewed for a further 10 years, generating EUR290million in revenues. 2.3 million people were served in 2014, 87% coverage, including 58,000 subsidised connections

Lebanon

Contracts

Year	Location	Contract & length	People served & service
2009	Tyr Sour	5 year BO	40,000, wastewater

A EUR31million contract for the construction and operation of a wastewater treatment plant.

Qatar

Contracts

Year	Location	Contract & length	People served & service
2009	Doha	7&3 year O&M	500,000 wastewater treatment

The contract covers two WWTWs, Doha South (112,000m^3 per day) and Industrial Area (12,000m^3 per day) with an initial contract value of EUR44million, plus a EUR15million extension option. The facilities offer full water recovery for irrigation and agriculture.

Oman

Contracts

Year	Location	Contract & length	People served & service
2011	PAEW	5&2 year management	2,300,000 water management

VE is to provide co-management services for the Public Authority for Electricity and Water, which is responsible for water supply in eight of the sultanate's nine regions, covering 2.3million people or 70% of the total population. The contract is worth EUR31million.

2006	Muscat	5&3 year management	700,000 wastewater treatment

A five year management contract with a three year extension option was awarded by the Oman Wastewater Services Company in June 2006 to assist in the management of wastewater services in Muscat. OWSC is responsible for all wastewater services in Muscat under a 30 year concession agreement at the beginning of 2006 with the Government of Oman for the acquisition, development and operation of Muscat's wastewater collection and treatment system.

2007	Sûr	22 year BOO	350,000 water provision

In January 2007, VE gained a EUR434million 22 year contract to build, finance and operate an 80,200m^3/day RO desalination plant for the city of Sûr and the surrounding region of Sharqiyah. The facility will cost EUR111million to construct in partnership with Bahwan Engineering Co (VE 60%, Bahwan 40%). In 2015, a contract was signed to provide an additional 50,000m^3/day at the facility along with a 22 year contract extension, worth EUR356 million.

Saudi Arabia

In April 2008, Veolia Water AMI was awarded a six year EUR40million incentive-based management contract for improving aspects of the management of the 10,000km Riyadh water supply system and the 4,500km sewerage system. The former will involve reducing leakage from its current 50% level and the latter in improving the connection rate of the city, where currently 2.0million of the 4.5million inhabitants are connected to the system.

United Arab Emirates

Contracts

Year	Location	Contract & length	People served & service
2007	Fujairah	12 year O&M	130,000, desalination

Veolia Water was awarded a contract to operate and manage the reverse osmosis desalination plant at the F2 IWPP project in Qidfa, Fujairah in December 2007. There is a three year pre-operational phase prior to the facility entering service in 2010.

2007	Abu Dhabi & Al Ain	27 year BOT	1.2million, wastewater

A EUR461million contract (including construction), which was announced in July 2008. The Abu Dhabi (850,000 people in 2008) plant will have a 300,000m^3 per day capacity (1.25million PE) and the plant serving the emirate's second city, Al Ain (348,000 people in 2003) will treat 130,000m^3 per day (876,000 PE). Construction will take 3 years, with a 25 year operating contract on completion. The shareholding is similar to the Ajman concession. In addition, VE has a DBO contract (the 3 year operating phase generating revenues of EUR10million) to treat the water in the artificial lake by the Burj Dubai Tower which was also gained in 2008.

2006	Ajman	27 year Concession	235,000 wastewater treatment

The concession was awarded in February 2006 to Moalajah. This company is managing the concession and is 67% owned by VE and 33% by Besix of Belgium. The concession company is in turn 50% held by Besix, 20% by VE, 10% by Black & Veatch and 20% by the Ajman Government. A 90,000m^3/day facility was constructed from 2007-09, along with 230km of sewerage and the contract will generate EUR151million in revenues. This supersedes the Thames Water/Black & Veatch BOT, whereby a USD100million refinancing, using the first monoline credit facility in the Middle East formed part of Thames Water selling its 60% stake in the original 2003 concession to the new holders.

Iraq

Contracts

Year	Location	Contract & length	People served & service
2014	Basra	7 year DBO	1 million water desalination

2 years construction, 5 years operation of a 200,000 m^3 per day facility serving the city of 2.3 million people and worth EUR115 million.

Australia and New Zealand

United Water was set up in 1995 to bid for the Adelaide contract, as a vehicle for securing business for the state in other parts of Australasia. VE bought out Thames Water, its United Water joint venture partner in 2005. VE did not retain the Adelaide contract after its expiry in 2011, and the new contract was awarded to Suez Environnement.

Australia

VE (www.veoliawater.com.au) serves 4 million people in Australia and New Zealand via 23 contracts and 61 facilities. Industrial outsourcing contracts such as for Bayswater Power Station (New South Wales) are carried out by Veolia Water Solutions and Technologies (www.veoliawaterst.com.au).

2014	Hunter Water	10 year management	570,000, water & wastewater

A 10 years water and wastewater contract covering 25 water and sewage treatment plants worth EUR176 million (AUSD279 million).

2008	Sydney	20 year BOT	75,000, wastewater recovery

A EUR99million contract for the Rosehill and Camelia WWTWs located to the west of Sydney which entered service in 2011. 20,000m^3 of recycled water per day is to be provided to industrial customers. The facility entered service in 2011.

2006	Queensland – I	DBO	800,000, wastewater recovery

The first contract involves the recycling of wastewater from sites at Oxley, Wacol, Goodoa and Bundamba, Luggage Point and Gibson Island. The volume of water treated by microfiltration or ultrafiltration, reverse osmosis and UV, will be 232,000m^3/day. The water will be used by industrial customers. The facilities entered service in 2008.

2006	Queensland – II	10+5 year DBO	650,000 water

A 125,000m^3/day desalination plant supplies residents of the Gold Coast and the South Eastern Region of Queensland. The 10 year O&M phase can be extended by a further five years. The initial O&M phase will generate revenues of EUR210million.

2006	Ballarat North	15 year BOOT	30,000 wastewater

A EUR43million construction and operation contract for an 8,400m^3 per day wastewater treatment and reclamation plant to serve the city.

2004	Ballarat	20 year BOOT	5,000 water supply

An additional 20 year contract covering four local water works was gained in 2003 serving 5,000 people in the neighbouring towns of Beaufort, Blackwood, Clunes and Forest Hill.

2000	Ballarat	25 year BOOT	105,000 water supply

UW is responsible for the O&M element of the contract originally awarded to Thames Water. The contract is for two water treatment plants and generates revenues of AUD2.7million per annum.

Other contracts are operated through General Water Australia.

1996	Sydney	25 years, BOO	500,000 water treatment

The AUD180million treatment Wyuna Water project currently handles 370Ml/day and can be further upgraded to 534Ml/day. The Woronora plant (160Ml/day, upgradable to 210Ml/day) entered service in April 1997 and the Illawarra Plant (210Ml/day, upgradable to 314Ml/day) in December 1996.

2007	Sydney	23 years, DBO	500,000 water treatment

This is a reverse osmosis desalination plant with an initial capacity of 250,000m^3/day which can be expanded at a later date to 500,000m^3/day. The EUR540million contract includes a three year construction phase completed in 2010 followed by a 20 year operating phase.

1998	Noosa	15 years DBO	60,000 water treatment

This involves a holiday resort in Queensland with an off-season population of 44,000. The 45L/day facility entered service in December 1999. From 2011, it has been connected to the South East Queensland Water Grid, which is already operated by UW.

1999	Kyneton	DBO	11,000 wastewater treatment

A DBO contract with Victoria's Coli ban Water Authority. Industrial and municipal wastewater is treated and recovered for use on a neighbouring farm.

2002	Castlemaine	O&M	10,000 wastewater treatment

Victoria's Coliban Water Authority originally contracted VW to carry out an upgrade of its WWTW, which became an O&M contract.

2002	Coliban	25 years BOOT	130,000 water treatment

The Aquia 2000 project for Victoria's Coliban Water Authority consists of three WTWs serving Bendigo (126ML/day), Castlemaine (18Ml/day) and Kyneton (8Ml/day).

2001	NSW	20 years DBO	11,000, wastewater

A sewage treatment works for the townships of Gerringong and Gerroa, 120km south of Sydney. The facility entered service in August 2002 and the recovered water is used for farm irrigation.

2000	Mafra	10 year BOT	Water treatment

The USD10.6million contract is for an industrial water treatment facility in the state of Victoria.

New Zealand

Contracts

Year	Location	Contract & length	People served & service
2000	Franklin	O&M	61,000 water and wastewater

Franklin is 50km south east of Auckland. The project covers 13 WTWs (9,600m3 per day), five WWTWs (8,500m3 per day) and storage and distribution systems along with 12,800 water meter readings.

2002	Queenstown	O&M	32,500 water & wastewater

This is UW's first contract on South Island and covers four WWTWs and seven WTWs.

1997	Papakura	30 year BOT	47,000 water & sewerage

Papakura is an urban district of Auckland. The AUD120million contract was awarded to UW in 1997 and it generates revenues of AUD6.3million per annum.

2002	Waitomo	O&M	10,000 water & wastewater

Waitomo is in central west North Island. It covers four WTWs and two WWTWs.

2002	Ruapehu	10 year O&M	14,000 water & sewerage

In November 2002, UW started a 10 year O&M contract with the Ruapehu District Council, a rural region of approximately 14,000 residents (25,000 during the skiing season) located 320km south of Auckland. The contract covers rural water and wastewater treatment facilities, 117km of water pipes, 97km of wastewater pipes, 3,670 wastewater connections, 4,570 water connections and 38km of stormwater pipes.

2004	Thames-Coromandel	10 year O&M	27,000 water & sewerage

Thames-Coromandel District is in the North Island. It has a residential population of 25,000 rising to 150,000 during the summer. There are 14,650 water and 18,100 wastewater connections via 11 wastewater and 10 water schemes.

1995	Wellington	25 year DBO	188,000 sewerage

Two sewage treatment works have been constructed at a total cost of NZD149million (GBP50million), along with a sludge de-watering plant and a 1.8km long sea outfall at Moa Point. The construction phase ended in 1998, and. the facility is now in service, with a 21 year operating contract. United Water acquired Anglian Water International (NZ) in June 2004.

Latin America

Pro Activa Medio Ambiente

Venezuela

Contracts

Year	Location	Contract & length	People served & service
1997	Monagas	30 year concession	552,000 water

Proactiva Medio Ambiente Venezuela gained the Hidrocapital concession for the water supply and sewerage for the north east sector of Caracas in July 2002. The service area has 650,000 inhabitants. Forecast revenue is USD2million pa.

Colombia

Contracts

Year	Location	Contract & length	People served & service
1998	Bogotá	20 year BOT	2million water

This is the contract for upgrading and expanding the TIBITOC water treatment works in consortium with 2 local partners, with Proactiva holding 33% of the equity. The contract involves USD78million in investment, USD55million having been spent to date. Total contract revenues will be USD300million. The plant has a capacity 900,000m^3/day serving some 2million people.

1996	Tunja	20 year concession	151,000 water & wastewater
2000	Monteria	20 year concession	329,000 water & wastewater

The Monteria concession was gained by Proactiva Medio Ambiente in December 1999 and will generate COP29billion in revenues, with COP10.5billion in investments over the contract life. It serves 329,000 with water and 124,000 with sewerage. The Tunja concession serves 151,000 with water and 148,000 with sewerage. The Monteria contract was extended for a further 10 years in 2014 with forecast revenues of EUR185 million.

Ecuador

Contracts

Year	Location	Contract & length	People served & service
2001	Guayaquil	30 year concession	2.5 million water & wastewater

International Water (Edison/Bechtel) sold its 90% holding in International Water Services (Guayaquil) Interagua C. Ltda (ECAPAG) to Proactiva in December 2008. Edison wrote down EUR12million on the sale. The principal targets in 2001 were to reduce non-revenue water from 70% to 30% and to connect 300,000 people in informal settlements, especially in Isla Trinitaria, where by 2004 piped water was made available for a seventh of the cost of the water vendors. A cross subsidy rate scheme ensures that industrial clients subsidise in part the water that is used by residents. Access to water has increased from 1,260,000 in 2001 to 2,500,000 by 2014, with access to sewerage rising from 934,000 to 1,732,000 during this time, with a respective coverage of 93% and 70%.

International Water Services (Guayaquil) - contribution to Edison's profit & loss account

EURmillion	2004	2005	2006	2007
Revenues	27	31	34	29
EBITDA	4	8	10	7
Capital spending	N/A	N/A	8	13

Source: Edison, Annual Reports, 2005-2007

During the first five years of the concession, Interagua invested USD50million in extending services to the city, connecting 40,000 new clients to the city's mains water and 20,000 to sewerage systems. Between 2006 and 2011, the company will invest USD250million in new infrastructure, with the aim of providing water services to 95% of the city's residents and sewerage for 90%.

Mexico

VE's Proactiva JV operates two contracts serving a total of 3.1million people. Since 1993, Caasa serves 506,000 people in the city and more than 300,000 in the surrounding areas; 885,000 with water and 875,000 with sewerage. 24 hour per day coverage rose from 40% in 1989 to 85% in 2007. The 30 year concession was granted in October 1993 and is 90% held by Proactiva.

Contracts

Year	Location	Contract & length	People served & service
	Sapsa (Mexico City)	2.43million	Water management services (1993-2009)
	Caasa (Aguascalientes)	885,000	Water and waste water concession

USA

US Filter's (USF) involvement in public-private partnerships (PPPs) goes back to the first partnership for water services in the USA awarded in 1972. The management contract for Burlingame's (CA) wastewater treatment facilities remains in USF's hands. The Bethlehem Steel contract signed in 1950 was the first industrial outsourcing contract in the USA. Upon the purchase of US Filter by Veolia Environnement in 1999, US Filter and the former Professional Services Group of Aqua Alliance were merged to create North America's largest water and wastewater outsourcing company, in 2003 serving 14million people in 650 communities and thousands of companies across all industrial and commercial markets through 91 water and 185 wastewater treatment plants. According to Public Works Financing, US Filter has been the North American market leader in PPPs in recent years. Following the sale of the non-core activities, US Filter Operating Services has been renamed Veolia Water North America (VWNA). The 2002 Indianapolis contract covering 800,000 people was terminated in 2011 and sold by the city to Citizen's Energy Group with VW getting a USD 29million contract termination fee.

Contracts

Year	Location	Contract & length	People served & service
2012	New York	6 year management	9 million, water

A performance based management contract covering the city's water services.

2013	Rialto	30 year concession	100,000, water & wastewater

On January 31, 2013, the city of Rialto and its concession company Rialto Water Services (RWS) awarded Veolia Water North America, a contract to manage the city's water and wastewater systems. This 30-year contract should generate estimated cumulative revenue of USD300 million (approximately EUR226 million at the 2013 average exchange rate).

2011	California	10 year DBO	Water

A EUR51million contract for a water treatment works serving a petrochemical facility.

2011	Oklahoma	6 year management	Wastewater

A renewal for the city, worth EUR46million.

2011	Western Virginia	10 year DBO	Wastewater

A EUR37million contract for a wastewater treatment plant serving the mining industry.

2010	Buffalo	10 year management	Water

Serving the community in NY State, the contract is worth EUR38million.

2010	Fulton Country	5 year management	Wastewater

Serving the community in Georgia, the contract is worth EUR38million.

2009	Mapleton	15 year O&M	Water

The contract will generate revenues of USD29million.

2010	New London	17 year O&M	50,000, water & wastewater

New London is in Connecticut. The contract will manage the sewerage services for 14,000 customers and water services for 6,000 customers with total revenues of EUR37million. The original 2008 contract was due for renewal in 2017, but a new contract worth EUR53million was awarded in 2010.

2007	Milwaukee	10 year O&M	1.1million, wastewater

Awarded in December 2007, the EUR272million contract covers the management of the regional liquid waste management network of Milwaukee, Wisconsin and management of the production of Milorganite, fertiliser granules produced by the drying of residual mud from the waste water purification plant.

2007	Tampa Bay	16 year DBO	Water treatment

A USD158million contract to expand the regional water treatment plant in Florida from 272,500m^3 per day to 454,200m^3 per day, which will enter service in 2010. VE will operate the facility for 13 years from then.

2004	Richmond, CA	18 year O&M	wastewater treatment

The contract is worth EUR50million.

2004	Virgin Islands	20 year BOT	75,000 wastewater treatment

Two 18,000m^3/day wastewater treatment facilities are to be constructed at St. Croix and St Thomas. Both facilities were expected to enter service at the end of 2006, generating revenues of USD126million throughout their contracts. There is also a five year renewal option.

Canada

Veolia Water Canada (VW Canada) is a subsidiary of VWNA. Its activities draw from the USF operations and, since 1976, VW Canada has gained 22 municipal O&M contracts. With the exception of Moncton (New Brunswick) all identified contracts are in Ontario.

Contracts

Year	Location	Contract & length	People served & service
2006	Brockton	Five years, O&M	10,000, water & wastewater

The contract announced in July 2006 involves the management of three water treatment plants with a capacity of 2.29mg/day and one wastewater treatment plant with a capacity of 1.98 mg/day. Revenues will be USD0.47million pa.

1997	Haldimand/Norfolk	O&M	200,000, wastewater

The original contract in 1997 was for both counties. In 2004, separate contracts were drawn up for each county. The Norfolk contract covers three WWTWs with a capacity of 24mg/day and the Haldimand contract is for four WWTWs with a capacity of 16mg/day.

1999	Toronto	15 years, DBO	1,000,000, wastewater biosolids

The contract covers the biosolids dryer and pelletiser facility serving the city's 216mg/day Ashbridges Bay WWTW.

1998	Moncton	20 years, DBFO	100,000, water

This was the first major PPP contract gained in Canada. It was agreed in April 1998 and covers a 94,635m^3/day (25mg/day) water treatment facility. The CAD85million contract will save the city some CAD12million on anticipated capital costs.

Six other contracts have been identified:

Location	Date	Population	Service
Bayfield	N/A	2,000	Water
Georgian Downs	2001	1,000	Wastewater
Goderich	2000	15,000	Water & wastewater
Huron-Kinloss	2003	N/A	Water
Port Stanley	1997	2,500	Wastewater
Varna	2001	500	Water

Sources:

VE, CSR Reports, 2006-2104

VE, Annual Reports, 1990-2014

VE, Reference Documents, 2007-2014

VE, Corpoprate presentations, 2006-2006

VE corporate press releases and corporate web site

VE, analyst presentations and conference presentations, 1990-2015

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China

Beijing Enterprises Water Group Ltd

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
Beijing Enterprises	Only	Only	Sewerage	
China	27,355,000	48,930,000	0	76,285,000
Portugal	0	110,000	185,000	295,000
Singapore	450,000	0	0	450,000
Total - home markets	27,355,000	48,930,000	0	76,285,000
Total - international	450,000	110,000	185,000	745,000
Global total	27,805,000	49,040,000	185,000	77,030,000
% home markets	98%	100%	0%	99%

Beijing Enterprises Water Group Ltd (BEWG) is listed on the Hong Kong stock exchange as an investment holding company. The company is 58% held by Beijing Enterprises Holdings Limited. At the end of 2008 it had two water treatment plants in China (1.885million m^3 per day), directly provides 150,000m^3 per day of water along with 24 wastewater treatment plants with a capacity of 1,735,000m^3 per day. In March 2008, Beijing Enterprises Holdings acquired Shang Hua Holdings Limited, a company seeking to develop a portfolio of sewage treatment concessions and was renamed the entity BEWG.

The acquisition of ZKC Environmental Group in August 2008 added the first 20 contracts to the portfolio. Three more contracts were acquired with Shenzhen Hua Qiang was in September 2008, bringing an additional water processing capacity of 315,000 tonnes per day. Shenzhen Hua Qiang held 80%, 83.8% and 55% interests in Shenzhen Hua Qiang Feng Tai Investment Company Limited, Binzhou Hua Qiang Xi Hai Shui Wu Company Limited and Zhanhua Hua Qiang Shui Wu Huan Bao Company Limited respectively. Guigang Water was acquired in January 2009, which had a water processing capacity of 200,000tonnes per day. Guigang Water is principally engaged in the operations of water supply and treatment, and the provision of the related water supply services in Guigang City, Guangxi province. A sewage treatment plant, known as Guigang Chengxi Sewage Treatment Plant, is currently under construction by Guigang Water. At the end of 2009, BEWG had 54 plants in development or in operation, including 47 sewage treatment works, four water treatment works and three water reclamation plants. In 2011 additional contracts with a total water treatment capacity of 2.819million tonnes per day were gained. Individual projects serving an estimated total of 28.815million people have been identified.

BEWG - Joint ventures in Beijing

In August 2007, BEWG joint venture Beijing Anling Water Technology Company Limited (50% BEWG, 50% Golden State Environmental) acquired the right to finance, invest, design, construct, manage and operate the Beijing No. 10 Water Treatment Plant in Dingfuzhuang, Chaoyang District, Beijing for 23 years. This facility had previously been awarded to AWG in 2000, but had never reached financial closure. The Plant A plans to have total purified water output capacity of 500,000m^3 per day. Subject to the Government's final approval, the preliminary estimation of the total investment in the Plant A is approximately CNY1.5billion (approximately HKD1.5213billion). Other franchise projects include Beijing No. 9 Water Treatment Plant and Phase I of Weifang Water Treatment Plant.

BEWG - Profit & loss account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Sewage treatment & reclaimed water	591.6	994.7	1,425.0	2,140.9	3,249.9
Construction services	5,431.6	1,365.0	1,974.4	3,764.3	4,582.7
Water supply services	75.5	83.2	105.6	383.7	812.6
Technical & consultancy	249.4	211.6	222.4	117.6	280.1
Revenues	6,348.1	2,654.5	3,727.4	6,406.5	8,925.9
Operating profits	904.5	767.5	1,711.8	2,477.9	3,790.8
Net profits	512.5	600.7	750.5	1,084.3	1,794.4

Source: Beijing Enterprises, Annual Reports, 2010-2014

BEWG - Water and wastewater operations services

This is a list of all individual contracts and projects that have been identified. Prior to 2013, these were individually listed. The size of the operations now means that only the largest individual projects are noted.

In China 64 contracts have been noted, along with a further nine from the Salcon acquisition and 15 service concession agreements.

Year	Location	Type	People served
2015+	Beijing	30 year BOT	320,000 people, reclaimed water
2012+	Fuzhou, Fujian	25 year BOT	250,000 people WWTW
2008	Guangzhou, Guangdong	25 year BOT	500,000 people, WWTW
2009	Guangzhou, Guangdong	22 year BOT	500,000 people, WWTW
2010	Guangzhou, Guangdong	25 year BOT	1,000,000 people, WWTW
2004	Guangzhou, Guangdong	22 year BOT	250,000 people, WWTW
2011	Shenzhen, Guangdong	20 year TOT	2,000,000 people, WWTW
2003	Shenzhen, Guangdong	25 year BOT	1,000,000 people, WWTW
2010	Foshan, Guangdong	22 year BOT	250,000 people, WWTW
2013+	Zunyi, Guizhou	25 year BOT	250,000 people, WTW
2010	Qingzhen, Guizhou	25 year TOT	250,000 people, WWTW
2015+	Guiyang, Guizhou	30 year BOT	5,000,000 people, WTW
2009	Xiaohe, Guizhou	30 year BOT	400,000 people, WWTW
2007	Jinyang New District, Guizhou	20 year BOT	250,000 people, WWTW
2013+	Caofeidian, Hebei	30 year BOT	500,000 people, desalination
2012	Qi Qi Har, Heilongjiang	30 year BOT	500,000 people, WWTW
2013+	Shangqui, Henan	20 year BOT	400,000 people, reclaimed water
2010	Yongzhou, Hunan	30 year BOT	500,000 people, WWTW
2009	Yongzhou, Hunan	30 year BOT	200,000 people, WWTW
2009	Yongzhou, Hunan	30 year BOT	150,000 people, WWTW
2009	Yongzhou, Hunan	30 year BOT	100,000 people, WWTW
2010	Leiyang, Hunan	30 year BOT	600,000 people, WWTW
2004	Changsha, Hunan	20 year TOT	900,000 people, WWTW
2012+	Linxiang, Hunan	25 year BOT	250,000 people, WWTW
2012+	Linxiang, Hunan	25 year BOT	250,000 people, reclaimed water
2015+	Hengyang, Hunan	30 year BOT	500,000 people, WTW
2015+	Anshan, Liaoning	30 year BOT	500,000 people, WWTW
2009	Jinzhou, Liaoning	30 year TOT	500,000 people, WWTW
2010	Jinzhou, Liaoning	30 year TOT	500,000 people, WWTW
2010	Jinzhou, Liaoning	30 year TOT	500,000 people, WTW
2015+	Jinzhou, Liaoning	30 year TOT	500,000 people, WTW
2008	Jinan, Shandong	30 year TOT	50,000 people, WWTW
2010	Jinan, Shandong	30 year BOT	200,000 people, WWTW
2008	Changyang, Shandong	20 year BOT	200,000 people, WWTW
2008	Qingdao, Shandong	40 year BOT	200,000 people, WWTW
2006	Jiaonan, Shandong	20 year BOT	300,000 people, WWTW
2010	Jiaonan, Shandong	20 year BOT	200,000 people, WWTW
2004	Jiaozhou, Shandong	20 year BOT	250,000 people, WWTW
2011	Jiaozhou, Shandong	20 year BOT	250,000 people, WWTW
2011	Jiaozhou, Shandong	20 year BOT	Industrial WWTW
2007	Heze, Shandong	25 year TOT	400,000 people, WWTW
2006	Binzhou, Shandong	40 year BOT	200,000 people, WTW
2002	Jiangyou, Sichuan	30 year BOT	125,000 people, WWTW
2007	Jiangyou, Sichuan	30 year BOT	125,000 people, WWTW
2004	Shuangilu, Sichuan	20 year BOT	125,000 people, WWTW
2007	Huyang, Sichuan	30 year BOT	600,000 people, WWTW
2009	Longquanyi, Sichuan	30 year BOT	200,000 people, WWTW
2002	Mianyang, Sichuan	30 year TOT	500,000 people, WWTW
2012+	Mianyang, Sichuan	20 year BOT	50,000 people, WWTW
2012+	Mianyang, Sichuan	30 year BOT	1,000,000 people, WWTW
2009	Shuangliu, Sichuan	20 year BOT	200,000 people, WWTW
2015+	Guangan, Sichuan	30 year BOT	250,000 people, WWTW
2015+	Guangan, Sichuan	30 year BOT	250,000 people, WWTW

Year	Location	Type	People served
2011	Yi Bin, Sichuan	30 year TOT	250,000 people, WWTW
2009	Chengdu, Sichuan	25 year TOT	500,000 people, WWTW
2012	Anning, Yunnan	30 year TOT	250,000 people, WWTW
2009	Guizhou, Yunnan	30 year TOT	125,000 people, WWTW
2009	Guizhou, Yunnan	30 year BOT	150,000 people, WWTW
2015+	Kunming, Yunnan	20 year BOT	650,000 people, WWTW
2011	Yuxi, Yunnan	30 year TOT	500,000 people, WWTW
2006	Tiazhou, Zhejiang	27 year BOT	450,000 people, WWTW
2009	Tiazhou, Zhejiang	27 year BOT	400,000 people, WWTW
2009	Huang Yan, Zhejiang	30 year TOT	400,000 people, WWTW

BEWG - Service concession agreements

2009	Changping, Beijing	29 year BOT	180,000 people, WTW
2013+	Haidian, Beijing	30 year BOT	400,000 people, reclaimed W
2009	Zhongye, Fujian	25 year BOT	210,000 people, WTW
2008	Guigang, Guanxi	30 year BOT	400,000 people, WTW
2009	Guigang, Guanxi	30 year BOT	440,000 people, WWTW
2009	Hezhou, Guangxi	30 year BOT	120,000 people, WTW & WW
2013+	Nanning, Guangxi	30 year BOT	350,000 people, WTW
2009	Nansha, Guangzhou	22 year BOT	250,000 people, WWTW
2009	Qingzhen, Guizhou	30 year BOT	100,000 people, WTW
2009	Leiyang, Hunan	25 year BOT	40,000 people, WTW
2008	Zhanhua, Shandong	30 year BOT	75,000 people, WWTW
2009	Qingbaijiang, Chengdu, Sichuan	25 year TOT	500,000 people, WWTW
2010	Pengzhou, Sichuan	25 year BOT	600,000 people, WWTW
2012	Chengdu, Sichuan	25 year TOT	250,000 people, WWTW
2010	Shuangliu, Chengdu, Sichuan	20 year BOT	250,000 people, WWTW

Source: Beijing Enterprises, Annual Reports, 2008-2014

BEWG - Total processing capacity, 2012

Regions	Plants	Design capacity	Treated in year	Revenue
Sewage		(tonnes / day)	Million tonnes pa	HKD million
Western China	27	1,461,500	402.1	293.6
Southern China	27	1,965,000	541.1	564.9
Shandong	8	417,000	118.4	197.8
Eastern China	14	580,750	104.1	157.8
Northern China	11	740,000	104.1	202.7
Total	**87**	**5,164,250**	**1,277.9**	**1,425.0**
Water	21	2,130,000	333.1	105.6
Group total	**108**	**7,294,250**	**1,611.0**	**1,530.6**

Source: Beijing Enterprises, Annual Report, 2012

BEWG - Total processing capacity, 2014

Regions	Plants	Design capacity	Treated in year	Revenue
Sewage		(tonnes / day)	(tonnes / day)	HKD million
Southern China	46	3,013,700	2,650,000	1,000.3
Western China	40	1,482,000	1,401,000	562.5
Shandong	23	1,027,000	873,000	471.8
Eastern China	46	1,623,250	923,000	574.2
Northern China	22	796,000	643,000	454.7
China total	177	7,941,950	6,490,000	3,066.2
Overseas	24	55,200	59,000	183.7
Total	**201**	**7,997,150**	**6,549,000**	**3,249.9**
Water				
China	26	3,420,000	1,615,000	590.0
Overseas	13	36,000	33,000	222.6

Regions	Plants	Design capacity	Treated in year	Revenue
Total	39	3,456,000	1,648,000	812.6
Group total	**240**	**11,453,150**	**8,196,000**	**4,062.5**

Source: Beijing Enterprises, Annual Report, 2014

BEWG - Status of plants in operation and development in China at the end of 2012

	Sewage treatment	Water supply	Reclaimed water	Desalination	Total
Number of plants					
In operation	83	21	4	0	**108**
In development	37	9	0	1	**47**
Total	120	30	4	1	**155**
Capacity (tonnes / day)					
In operation	4,777,250	2,130,000	387,000	0	**7,294,250**
In development	1,813,500	1,224,200	112,500	50,000	**3,200,200**
Group total	6,590,750	3,354,200	499,500	50,000	**10,494,450**

Source: Beijing Enterprises, Annual Report, 2012

BEWG - Status of plants in operation and development in China at the end of 2013

	Sewage treatment	Water supply	Reclaimed water	Desalination	Total
Number of plants					
In operation	130	18	4	0	**152**
In development	73	20	0	1	**94**
Total	203	38	4	1	**246**
Capacity (tonnes / day)					
In operation	6,259,750	2,750,000	418,000	0	**9,427,750**
In development	3,900,200	3,089,200	182,500	50,000	**7,221,900**
Group total	10,159,950	5,839,200	600,500	50,000	**16,649,650**

Source: Beijing Enterprises, Annual Report, 2013

BEWG - Status of plants in operation and development in China at the end of 2014

	Sewage treatment	Water supply	Reclaimed water	Desalination	Total
Number of plants					
In operation	173	26	4	0	**203**
In development	53	27	1	1	**82**
Total	226	53	5	1	**285**
Capacity (tonnes / day)					
In operation	7,523,950	3,420,000	418,000	0	**11,361,950**
In development	4,132,000	3,923,200	282,500	50,000	**8,387,700**
Group total	11,655,950	7,343,000	700,500	50,000	**19,749,650**

Source: Beijing Enterprises, Annual Report, 2014

BEWG - Acquisitions in 2013

Beijing Construction Engineerng Group: The acquisition of 60% of Beijing Construction Engineering Group was announced in June 2013. It covered 26 wastewater treatment works in Beijing, Jiangsu and Zhejiang, with a treatment capacity of 937,000 tonnes / day along with one 100,000 t/day water reclamation facility under construction.

China Water Holdings and Crystal Water: Acquisition of China Water Holdings (20 project companies) and Crystal Water (16 project companies) was announced in July 2013. This covered 36 water projects in Shandong, Hebei, Shanxi, Jiangsu, Guizhou, Liaoning and Zhejiang. The combined long term capacity of the projects is 2,026,000 t/day, those in operation at the time having a 1,521,000 t/day design capacity, with 95,000 t/day under construction and the rest being at the design stage.

Salcon's Chinese activities: The acquisition of Salcon's Chinese interests for MR 518 million (USD158 million) took place in September 2013. It covers nine water contracts with 1,245,000 t/day total operational capacity, and 100,000 in preparation; 1,055,000 t/day for water and 90,000 t/day for sewage.

2004	Changle, Shandong	50 year BOT	250,000 people, WTW
2006	Changle, Shandong	30 year BOT	250,000 people, WTW
2008	Nanan, Fujian	30 year BOT	1,000,000 people, bulk water
2006	Haining, Zhejiang	30 year BOT	600,000 people, WTW
2005	Linyi, Shandong	30 year BOT	350,000 people, WTW
2002	Wukan Deqing, Zhejiang	25 year BOT	120,000 people, reclaimed water
2006	Qian Yuan Deqing, Zhejiang	25 year BOT	530,000 people, WTW
2010	Yizheng City, Jiangsu	30 year BOT	250,000 people, WTW
2006	Changle, Shandong	30 year BOT	200,000 people, WWTW

Source: Salcom, Annual Reports, 2005-2012

BEWG - Acquisition of Beijing Herocan in 2014

Beijing Herocan Environmental Engineering is the operating subsidiary of Standard Water, a Singapore based company established in 1996 to develop water and wastewater projects in the PRC. Standard Water is owned by Mirage Group, CNA Group (Singapore, 49.9%) and the Standard Chartered IL&FS Asia Infrastructure Growth Fund. Standard Water was sold to Themes Investment Partners for USD110 million in 2010 and it was in turn sold to BEWG for USD218 million in February 2014.

Beijing Herocan has been involved in engineering projects in the sector since 1998. In 2007-08, the company gained nine water and wastewater treatment BOT projects in China, serving an estimated 1.75million people. They are all wholly owned by the company.

In September 2009, CNA Group announced that Standard Water had raised a ten year CNY400million loan for the completion of 17 BOT projects in Shandong, Shaanxi, Zhejiang, Jiangsu and Hebei. Eight of the projects were in the operational phase and a further six at an advanced level of construction. Their combined capacity of 400,000m^3 per day is equivalent to 2million people served by wastewater systems.

According to Standard Water, 30 BOT/TOT/BT projects are in operation or in under development, involving an investment of RMB2billion and a combined capacity of 1.5 million m^3 per day. The 12 projects identified provide wastewater services for 2.3million people and water treatment for 50,000 people.

Contracts in operation

2007	Xinghua, Jiangsu	25 years BOT	50,000, WTW
2007	Guan County, Shandong	30 years BOT	200,000, WWTW
2007	Huzhou, Zhejiang	30 years BOT	150,000, WWTW
2007	Lijin County, Shandong	28 years BOT	150,000, WWTW
2007	Rizhao City, Shandong	25 years BOT	250,000, WWTW
2007	Shen County, Shandong	30 years BOT	200,000, WWTW
2007	Weinan, Shaanxi	30 years BOT	150,000, WWTW
2007	Xian, Shaanxi	30 years BOT	100,000, WWTW
2008	Zhaodong City, Heilongjiang	25 years BOT	500,000, WWTW
2010	Douyun, Guizhou	BOT	300,000, WWTW
2010	Dezhou, Shandong	BOT	200,000, WWTW
2010	Baozhou, Hebei	25 years BOT	100,000, WWTW

Source: Beijing Herocan, Annual Reports, 2007-2010

Smaller projects in 2013 and 2014

The split between projects in development and entering service will have changed between the announcements during 2013 and the year end and so are not comparable. Overall figures are therefore used for comparison here. Numbers are as stated by BEWG and do not necessarily add up.

	2012 Total	BCEG	CWH / Crystal	Salcon	Total for 2013 acquisitions
Treatment capacity (m/t/day)					
In operation	7.29	0.94	1.52	1.16	3.62
In development	3.20	1.00	0.51	0.10	1.61
Total	10.49	1.94	2.03	1.24	5.21
Projects					
In operation	108	26	-	8	-
In development	47	1	-	1	-
Total	155	27	36	9	58

Source: Beijing Enterprises, Annual Reports, 2012-2013

The table below outlines the overall yearly increase of projects (in number and capacity) net of the effect of the 2013 acquisitions.

	2012	New contracts	2013 Total	2014 Total	2013 Others	2014 Others
Treatment capacity (m/t/day)						
In operation	7.29	-	9.43	11.36	-	**-**
In development	3.20	-	7.22	8.39	-	**-**
Total	10.49	5.21	16.50	19.75	0.80	**3.25**
Projects						
In operation	108	-	152	203	-	**-**
In development	47	-	94	82	-	**-**
Total	155	72	246	285	19	**39**

Source: Beijing Enterprises, Annual Reports, 2012-2014

BEWG - Acquisition of Golden State

In January 2015, BEWG acquired 92.7% of Golden State Environmental Investment. The Golden State Holding Group Corporation was founded in California, USA and entered the Chinese municipal market in 1988. Originally the company exported water hardware to China, before becoming an engineering and consulting company and then an operations company. The company has been involved in over 100 water and wastewater projects in China. The Golden State Environmental Corporation was established in 2004 to develop privately operated facilities including operating 20 water and wastewater treatment plants and waste facilities. Prior to its acquisition, Golden State serves approximately 7.5million people in China, 2.0 million with Beijing Enterprises Water, 2.45 million via the Agbar joint venture and 1.0 million on its own projects.

BEWG - Joint ventures in Beijing

In August 2007, Beijing Anling Water Technology Company Limited (50% Beijing Enterprises Water Group, 50% Golden State) acquired the right to finance, invest, design, construct, manage and operate the Beijing No. 10 Water Treatment Plant in Dingfuzhuang, Chaoyang District, Beijing for 23 years. This facility had previously been awarded to Anglian Water Group (UK) in 2000, but had never reached financial closure. The Plant A plans to have total purified water output capacity of 500,000m^3 per day. Subject to the Government's final approval, the preliminary estimation of the total investment in the Plant A is approximately CNY1.5billion (approximately HKD1.5213billion). Construction started in 2012.

Golden State acquired AWG's (UK) interest in the 2002 Jiangsu Taizhou project in 2006 for GBP6million. This has a capacity of 200,000m^3 per day. According to AWG, the facility was designed to serve 630,000 people. The original contract signed with Tiazhou Municipal Water Company in Jiangsu Province in May 2002. Investment will total GBP4.4million in equity and GBP11.2million in local debt. The contract is for bulk water provision under a take or pay agreement, whereby a guaranteed volume of water is to be purchased, generating a turnover of GBP70million for the life of the contract.

BEWG - Joint venture with Agbar

Agbar (now Suez) operated a series of water supply and wastewater treatment projects in the province of Jiangsu, through a joint venture with Golden State. Fund raising in 2006 and 2007 involved USD190million of financing from four financiers including Agbar and Merrill Lynch. In December 2008, Agbar increased its holding in the Jiangshu Water Group from 49% to 72%.

The joint venture is responsible for four 30 year concessions: the management of a waste water treatment plant (with capacity of 300,000m^3 per day) in Nanjing; the construction and management of three potable water treatment plants (350,000m^3 per day in total) in Taizhou, raw water provision (200,000m^3 per day) in Taixing and the management of another potable water treatment plant (50,000m^3 per day) and the related distribution network in Xuyi. These facilities serve 1.25million people for water and 1.20million for wastewater.

These contracts are now carried out by Golden State.

Other projects

Year	Project	Contract	Size (m^3 per day)
2000	Beijing Development Area	BOT	50,000 wastewater
2002	Taicang East City, Jiangsu	BOT	40,000 wastewater
2004	Jiangsu Kunshan North Area	TOT	87,500 wastewater
2005	Qingdao Export Zone, Shandong	BOT	5,000 industrial wastewater
2006	Beijing Daxing Yufa	BOT	5,000 industrial wastewater
2006	Beijing Daxing Yufa	BOT	10,000 industrial water
2008	Jintan No 1	TOT	30,000 municipal wastewater
2008	Jintan No 2	TOT	20,000 industrial wastewater

Source: Source: Beijing Enterprises, Annual Reports and Announcements

BEWG - Projects held in 2013

Municipal Water

Beijing No.10 A-WTP

Maojiaping East Lake WTP, Zhejiang

Hangzhou Qingtai WTP, Zhejiang

Shaoxing Songliuling WTP, Zhejiang

Scheduling system of Ningbo Water Corp. Project, Zhejiang

Nantong Langshan WTP, Jiangsu

Chonghai WTP in Nantong, Jiangsu

Harbin Mopanshan Reservoir, Heilongjiang

Linyi Water Supply Project, Shandong

Dongguan No.6 WTP, Guangdong

Municipal Sewage

Municipal Taicangcheng East W&WWTP, Jiangsu

Wuxi Huishan W&WWTP, Jiangsu

Yangzhou Liuwei W&WWTP, Jiangsu

Zhangjiagang Jingang W&WWTP, Jiangsu

Nantong W&WWTP Reform Project, Jiangsu

Nanjing Jinzhou Northern W&WWTP, Jiangsu

Wuxi Safety Water Supply Project, Jiangsu

Shangyu Shangyuan Gate WTP, Jiangsu

Nanjing Eastern W&WWTP, Jiangsu

Nantong Lujing WTP, Jiangsu

Fenghua, Song'ao, Chunhu W&WWTP, Zhejiang

Cixi Northern W&WWTP, Zhejiang

Changxing Xinyuan W&WWTP, Zhejiang

Ninghai Shenzhen W&WWTP, Zhejiang

Printing W&WWTP of Shaoxing Water Treatment Development Co., Ltd., Zhejiang

Hefei Wangxiaoying W&WWTP, Anhui

Tanghai W&WWTP, Hebei

Suihua W&WWTP, Heilongjiang

Industrial Water & Sewage Projects

Beijing Economic Development Zone W&WWTP

Kunshan Huaqiao, Wusongjiang Western Industrial Park W&WWTP, Jiangsu

Huaian Development Zone W&WWTP, Jiangsu

Liaohe Petrochemical W&WWTP, Liaoning

Datang Duxin Coal Gas W&WWTP, Liaoning

CNOOC (Qingdao) Heavy Oil Processing Research Centre W&WWTP

CNOOC Boxi Oil W&WWTP

Shenhua Saline W&WWTP, Xinjiang

Xinye Energy W&WWTP, Xinjiang

Zhongmei Mengda New Energy W&WWTP, Inner Mongolia

Chongqing Wansheng Chemical W&WWTP

Kaiyang Chemical W&WWTP, Guizhou

Xinlianxin Chemical Fertilizer W&WWTP, Henan

Dongying BHG Petrochemical W&WWTP

BP Zhuhai, PTA2 W&WWTP, Guangdong

Source: Beijing Enterprises, Annual Report, 2013

BEWG - International activities

BEWG is the first Chinese company to hold contracts outside China. Two industrial effluent contracts were gained in Malaysia in 2013

Portugal

BEWG acquired VE's Portuguese activities in 2013 for EUR91 million. They generated EUR42 million of revenues in 2012. 271,000 people (121,000 customers) were served with sewerage and 209,000 (85,000 clients) for sewage treatment in 2011.

Contracts

Year	Location	Contract & length	People served & service
1995	Mafra	25 year concession	45,000 water & sewerage

This is VE's first contract in Portugal. The 25 year water provision concession has sales of FRF25million pa (45,000 people, 22,000 subscribers) and will be extended to wastewater. This award has been seen as somewhat contentious, because it has been alleged that this contract has been set up as a loss leader by VE with its water fee tender of EUR0.46/m³, compared with the current price of EUR0.65/m³ and Agbar's tender of EUR0.48/m³. The municipality intends to invest EUR200-250million on improved sewerage systems over the length of the contract.

In 2008, a 15 year wastewater services management contract was agreed with Mafra, worth EUR93million.

1995	Ourem	31 year concession	40,000 sewerage

The concession to serve Ourem (110km north of Lisbon, and 80km from Mafra) was gained in April 1995 (40,000 people, via 15,000 connections), with a turnover of EUR1.8million pa.

1996	Frielas	30 year concession	70,000 sewerage

In Frielas, a suburb of north Lisbon, VE is involved in the construction of a wastewater treatment plant. Construction started in March 1996 for a EUR43million facility. This was completed at the end of 1998 and serves the equivalent of 70,000 people through a concession contract.

2000	Valongo	30 year concession	80,000 water and wastewater

VE was awarded the concession in July 2000 with a turnover of EUR7million pa. Valongo is 20km east of Porto. This contract operates 2 wastewater treatment plants, 200km wastewater collectors and a 480km water network. Aguas de Valongo serves 31,000 subscribers.

2001	Paredes	35 year concession	60,000 water & wastewater

VE was awarded the concession in January 2001 with a turnover of EUR4million for 2002, rising to EUR7million pa. Paredes is 40km east of Porto. This contract operates one wastewater treatment plant, 80km wastewater collectors and a 100km water network. SBPAR serves 5,000 subscribers.

Singapore

Contracts

Year	Location	Contract & length	People served and service
2014	Singapore	25 year BOT	650,000 desalination

BESIN-UEN (BEWG 80%, Singapore United Engineers 20%) gained the second Changi desalination contract in 2014. The 228,000 m3 per day facility will enter service in 2016.

Sources:

Beijing Enterprises, Annual Reports, 2008-2014

Beijing Enterprises, Interim Reports, 2013-2014

Beijing Enterprises, acquisition announcements, 2010-2015

Beijing Enterprises, corporate web site

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Yongcheng Li (Chairman)

Xiaoyong Hu (CEO)

Eric Tung Woon Cheung (CFO)

Spain

FCC (Fomento De Construcciones Y Contratas SA)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
FCC Aqualia	Only	Only	Sewerage	
Spain	3,620,000	5,880,000	3,580,000	13,080,000
Italy	0	0	280,000	280,000
Portugal	0	0	131,000	131,000
Czech Republic	200,000	0	1,100,000	1,300,000
Algeria	600,000	0	0	600,000
UAE	0	300,000	0	300,000
Mexico	1,550,000	0	0	1,550,000
Ecuador	1,300,000	0	1,000,000	2,300,000
Egypt	0	1,000,000	0	1,000,000
China	0	2,000,000	0	2,000,000
Total - home markets	3,620,000	5,880,000	3,580,000	13,080,000
Total - international	3,650,000	3,300,000	2,511,000	9,461,000
Global total	7,270,000	9,180,000	6,091,000	22,541,000
% home markets	50%	64%	59%	58%

Fomento de Construcciones Y Contratas SA (FCC) is the result of the 1992 merger between Construcciones Y Contratas SA and Fomento de Obras y Construcciones SA (Focsa). Focsa was a Spanish construction company which had traditionally dominated Spain's urban waste collection and street cleaning sectors. Focsa was founded in 1900 and gained the Barcelona sewerage contract in 1911. FCC's water and sewerage operations are the second largest in Spain after Agbar. In 1999, Alicia Koplowitz sold her 28% stake in FCC to VE. While the original aim was for VE to take control of FCC, the company sold this stake back to Ms Koplowitz for EUR916million in July 2004. The stake sale does not affect the Proactiva joint venture. However, since 2004, FCC has sought new contracts in Latin America on its own, as demonstrated by the Queretaro contract gain in Mexico in 2007.

FOCSA purchased Seragua, a water management company in 1988 and since 2002, all of FCC's water and wastewater service activities have been grouped under Aqualia. During 2006 and 2007, FCC gained three major water contracts in Portugal, Italy and Mexico as well as acquiring one of the leading regional utilities in the Czech Republic. Further contract gains were made in Central & Eastern Europe, Portugal and Mexico in 2008 and in Egypt and Mexico in 2009. Aqualia aims to generate revenues of EUR1, 618million (pessimistic scenario) to EUR2, 223million (optimistic scenario) by 2020.

In 2013, the company served 23.46 million people globally through 66 facilities. 13 million were served in Spain in 850 municipalities, equivalent to a 36% market share. 92% of 2014 revenues were from water management and distribution and 8% from water infrastructure.

FCC - Profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Total turnover	11,755	11,908	7,429	6,727	1,855
Operating profit	778	401	147	654	176
Pre-tax profit	444	55	-261	-470	-896
Net attributable profit	296	301	-1,092	-436	-906

Source: FCC Annual Reports, 2010-2014

Aqualia - breakdown of water activities

Y/E 31/12	2010	2011	2012	2013	2014
Spain	695	668	724	772	772

Y/E 31/12	2010	2011	2012	2013	2014
Czech Republic	86	-	94	94	90
Italy & Portugal	43	-	45	49	51
Latin America	3	-	34	36	24
Middle East & ROW	51	-	5	17	17
Revenues	868	845	901	930	954
Operating profit	92	102	114	115	124

Source: FCC Annual Reports, 2010-2014

Aqualia is the second largest water and wastewater entity in Spain, serving 13 million people in 850 municipalities.

Aqualia - people served in Spain by region, June 2012

Region	People
East Zone - Catalonia & Balearics	1,500,000
North Zone - Basque Country, Galicia & NE Spain	4,000,000
Extremadura Zone	530,000
Central Zone - Central & Eastern Spain & the Canary Isles	4,650,000
South Zone - Southern Spain	2,400,000
Spain - total	13,080,000

Source: FCC, corporate presentation 2012

FCC – water received and wastewater treated

Million m^3	2011	2012	2013	2014
Water delivered	676.6	690.4	763.8	844.0
Wastewater treated	467.7	499.0	557.1	N/A

Source: FCC Annual Reports, 2012-2014

FCC - activities in Spain and internationally

Czech Republic

FCC acquired 98.7% of SmVaK from Penta Finance in 2006 for EUR248million. Penta Finance acquired AWG's 54.30% holding in Severomoravské Vodovody a Kanalizace Ostrava A.S. (SmVaK) in February 2004 for CZK1.75billion (GBP38million). AWG acquired this stake for GBP19million in 1999. In April 2004 Penta purchased a further 44.07% interest from Suez. 1.5% of the shares are held by Moravian municipalities. In August 2005, the company was given a Baa- short term international debt rating by CRA, the first time SmVaK has been rated. In June 2005 the company issued CZK 2billion in bonds in order to retire earlier debts, with CZK 0.25billion available for acquisitions in Moravia, Poland and Slovakia. According to Aqualia, SmVaK is a full privatisation, with the assets being both wholly owned and held indefinitely.

SmVaK - Profit & loss account, 2010-2014

Y/E 31/12 (CZKmillion)	2010	2011	2012	2013	2014
Water – in-house provision (million m^3)	43.95	43.65	45.25	43.45	42.30
Water – third party sales (million m^3)	23.02	20.98	22.25	21.53	22.34
Water – people served (all)	1,002,105	1,008,275	1,011,359	1,007,959	1,009,410
Sewerage – people served (Ostrava)	529,597	532,501	533,661	525,133	524,952
Water supply revenues	1,233	1,228	-	-	-
Wastewater treatment revenues	736	761	-	-	-
Revenues	2,092	2,109	2,194	2,213	2,217
Pre-tax profits	438	449	476	485	504
Net profits	352	362	385	389	411

Source: SmVaK, Annual Reports, 2010-2014

SmVaK provides water and sewerage services for the Severomoravske region, including serving the Frýdek – Místek, Karviná, Nový Jičín, and Opava regions, along with the cities of Ostrava, Hlučín, Studénka, and for other municipalities of Moravia and Silesia region; and under a contract, it also supplies water to 120,000 people in near-border areas of Poland. It owns 26 water treatment plants and operates 65 sewage treatment plants (7 primary & 58 secondary). Currently, 1.07million of the region's 1.20million inhabitants are connected to the mains water supply and 0.87million to the sewerage network. SmVaK is the second largest water and wastewater entity in the Czech market.

Shorter term contracts gained in 2011 include a SR140million leakage detection and management contract serving Riyadh, the Saudi Arabian capital (3,000,000 people) and the construction of a WWTW serving 100,000 people in Niksic (Montenegro).

United Arab Emirates

Contracts

Year	Location	Contract & length	People served & service
2011	Abu Dhabi	7 year O&M	300,000 wastewater

A EUR76million contract to manage the Emirate's wastewater handling and treatment systems. This covers 19 WWTWs, 68 pumping stations and 2,800 km of sewers.

Aqualia New Europe & Aqualia Capital

In 2009, Aqualia developed Aqualia New Europe a 51/49 joint venture with the European Bank of Reconstruction and Development (EBRD) to seek new concession contracts in Central & Eastern Europe. It has a total capital of EUR163million. Construction contracts have been gained in Montenegro (sewage treatment, Niki) and Romania (sewage treatment plants in Agnita, Zimnicea and Dumbraveni). A separate USD50million funding facility for developing projects in other regions is currently under consideration by the World Bank's IFC.

Portugal

Contracts

Year	Location	Contract & length	People served & service
2010	Cartaxo	30 year concession	28,000 water & wastewater

A EUR277million contract.

2010	Fundao	30 year concession	31,000 water & wastewater

A EUR190million contract.

2008	Elvas	30 year concession	25,000 water & wastewater

This EUR93million contract includes EUR7million in capital spending.

2008	Campo Major	30 year concession	7,000 water & wastewater
2011	Abrantes	Concession	40,000 water & wastewater

Italy

Contracts

Year	Location	Contract & length	People served & service
2006	Caltanissetta	30 year concession	275,000 water & wastewater

The water and wastewater management contract for 22 municipalities in the Caltanissetta province in Sicily involves capital spending of EUR247million (EUR85million from public funding) and is expected to generate revenues of EUR1.5billion. Caltanissetta's two largest towns are Gela (72,000) and Caltanissetta (61,000). Aqualia is the majority participant (51%), the other members being the Italian firms Galva (47%), CCC (1%), Gate (0.5%) and AIEM (0.5%).

Algeria

Contracts

Year	Location	Contract & length	People served & service
2008	Mostaganem	30 year BOO	200,000 water

A 200,000 m^3 per day facility, 49% held by Aqualia entering service in 2010.

2008	Cap Djinet	30 year concession	400,000 water

A 100,000 m^3 per day facility, 49% held by Aqualia, entering service in 2011.

Egypt

Contracts

Year	Location	Contract & length	People served & service
2009	Cairo	20 year DBFO	1,000,000 sewage treatment

A 50/50 joint venture with Orascom Construction Industries of Egypt gained the concession which was organised by IFC. The tertiary facility will handle 250,000m^3 of wastewater a day and will generate EUR360million in revenues.

Mexico

Contracts

Year	Location	Contract & length	People served & service
2009	El Realito	25 year DBFO	850,000 water

A EUR750million 86,400 m^3 per day project, which started in January 2010 and was awarded to FCC and Mexico's ICA.

2007	Queretaro	20 year concession	700,000 water

A EUR200million project that will deliver and treat bulk water at 129,600m^3 per day to the greater Queretaro area, generating revenues of EUR330million over the operational period. Aqualia holds 26% of the concession company.

China

Contracts

Year	Location	Contract & length	People served & service
2005	Bengbu	25 year BOT	2million wastewater

This is FCC's first international contract in Asia and its first since ending its relationship with Veolia. The contract is being operated as a joint venture between FCC's Aqualia and BCCA of China. Bengbu is in Anhui Province and has a population of some 2million people. EUR40million is to be spent upgrading and expanding the city's wastewater treatment works and the contract will generate revenues of EUR500million. Bengbu Treatment Plant Number 1 (100,000m^3 per day) will be managed for 25 years and expanded to 200,000m^3 per day and a second plant (Yantaizi, Treatment Plant Number 2) with a capacity of 200,000m^3 per day will be built and managed. FCC's SPA has been involved in providing equipment for six WWTW projects since 1999, including hardware for the first phase of Bengbu Number 1.

Sources:

FCC Annual Reports, 2010-2014

FCC Analyst Presentation, 2008

FCC, CSR Report, 2014

Aqualia CSR Reports, 2008-2010

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Esther Alcocer Koplowitz (Chairman)

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France

SAUR - BNP Paribas and Groupe BPCE

Population served by service and country 2013 data SAUR	Water Only	Sewerage Only	Water & Sewerage	Total
France	3,000,000	0	4,000,000	7,000,000
China	2,800,000	0	0	2,800,000
Armenia	0	0	900,000	900,000
French O'seas Territories	345,000	0	14,000	359,000
Saudi Arabia	2,150,000	0	250,000	2,400,000
Poland	100,000	0	550,000	650,000
Scotland	0	600,000	0	600,000
Spain	450,000	0	560,000	1,010,000
Total - home markets	3,000,000	0	4,000,000	7,000,000
Total - international	5,845,000	600,000	2,274,000	8,719,000
Global total	8,845,000	600,000	6,274,000	15,719,000
% home markets	34%	0%	64%	45%

Société d'Aménagement Urbain et Rural (SAUR) was founded in 1933, making it the last of the major French water companies. Bouygues (see separate entry) acquired SAUR in 1984. SAUR has been associated more with small towns and rural municipalities than either Suez Environnement (SE) or Veolia Environment (VE).

Bouygues sold SAUR (net of its Italian and African activities) to PAI Partners, the French private equity house in January 2005. In March 2007, PAI sold SAUR to Hime, a consortium comprising of Caisse des Dépôts et Consignations (38%), Séché Environnement (33%), AXA Private Equity (17%) and Cube Infrastructure Fund (12%) for EUR 1.47 billion. 40% of Hime was bought by BNP Paribas, Groupe BPCE and RBS in 2013 as part of a refinancing, with BNP and BPCE now its major shareholders.

SAUR - Profit & loss account, 2010-2014

Y/E 31/12 (EUR million)	2010	2011	2012	2013	2014
Net sales	1,577.0	1,646.9	1,700	1,700	1,590
EBITDA	188.2	187.6	N/A	N/A	N/A
Operating income	87.3	86.7	N/A	N/A	N/A
Net income	57.2	46.8	N/A	N/A	N/A

SAUR - water services revenues, 2010-2014

SAUR (EUR million)	2010	2011	2012	2013	2014
SAUR France	N/A	N/A	N/A	989	960
SAUR International	N/A	N/A	N/A	170	180
Stereau	N/A	N/A	N/A	160	130
Total	1,232.7	1,305.7	N/A	1,319	1,270
EBITDA	153.1	149.0	N/A	N/A	N/A
Operating income	77.2	75.0	N/A	N/A	N/A

International revenues in 2014 were: Poland EUR60 million, Saudi Arabia EUR50 million, Spain EUR50 million and other markets, EUR20 million.

SAUR - activities in France and internationally

France

In France, SAUR provides water and sewerage services to 7.0 million people via 3.2 million connections, serving 7,000 communities with water supply and sewerage services through 5,700 water and sewage treatment contracts via 1,800 water treatment works and 1,500 wastewater treatment works. Cise was acquired in 1997 and served approximately 3.0 million people, mainly for water alone. Septic tank maintenance is provided to some 1 million people in 2,000 communities.

UK – Scotia Water

Contracts

Year	Location	Contract & length	People served & service
1999	Dalmuir, Glasgow	25 year PFI BOT	600,000 sewage treatment

Scotia Water (SAUR UK/Stereau (SAUR), Innisfree, Taylor Woodrow, and Barr & Halcrow) constructed the replacement of Glasgow West's sewage treatment works which were built in 1904. The new Dalmuir facility offers increased effluent handling capacity and secondary treatment since 2003. Stereau was paid EUR 21 million for hardware and SAUR receives EUR 2.5 million pa for the operational life of the contract. A further GBP22 million in upgrading work was carried out in 2013-15.

Spain

SAUR's EMALSA and Gestagua provide water services to 1,010,000 people and sewerage to 560,000 people. EMALSA is a JV run between SAUR, Endesa of Spain and the Las Palmas municipality, which provides water via three desalination plants to a total of 450,000 people and sewerage and sewage treatment for 300,000 people. Gestagua provides water and wastewater services to 560,000 people in 70 municipalities. In 2007, the Fuengirola concession was extended for a further ten years, serving 50,000 people rising to a seasonal peak of 120,000 people. A 25 year contract serving 12,000 people worth EUR 8.25 million per annum in Toledo was gained in 2009.

Gdansk, Poland

SAUR Neptune Gdansk (SNG), a water and sewerage management JV with the municipality of Gdansk and Sopot, started in late 1992 and in its current form was renewed in 2010. The venture is charging PLN 3.95/m³ (USD 0.184) for drinking water and PLN 3.45/m³ (USD 0.162) for sewerage services to 470,000 people in the city and 505,000 people overall, rising to 600,000 by 2013. SAUR holds 50.99% of the company. Water quality has moved from 8% EU compliant in 1992 to 87% by 2000 and 100% compliance for delivered water by 2007, while distribution losses have fallen from approximately 25% in 1992 to 12% in 2007, service compliance rising from 8% in 1992 to 86% in 2002-07.

Armenia

Contracts

Year	Location	Contract & length	People served & service
2004	National	9+2 year O&M	750,000 water & sewerage

This contract for the Armenian Water and Sewerage Company was developed on the lines of the original Yerevan Water contract (see ACEA company entry), the management contract model is now being implemented. In 2004 SAUR Sevan Services was awarded a four year management contract, supported by a World Bank loan. The population served has increased from 750,000 in 2004 to 900,000 by 2013. Since 2008, a series of contract extensions have been signed, including a two year extension in 2013.

Saudi Arabia

Contracts

Year	Location	Contract & length	People served & service
2011	Jubail	8 year O&M	250,000 water & sewerage

A contract (SAUR 49%, Marafiq of Saudi Arabia 51%) serving the new town both for domestic and industrial services, including potable water and desalination, wastewater and seawater cooling of industrial installations. The contract was extended in 2014.

2010	Al-Macca	O&M	2,150,000 water

SAUR-Zamil was awarded a five year water contract by the National Water Company in 2010 for Mecca and Taif. During the Hajj, 5 million people are served.

West Indies and Reunion Island

Three contracts for the various French Overseas Territories.

	La Réunion	Martinique	Guadeloupe	Total
Water provision				
Connections	86,726	22,084	10,575	**119,385**
People served	260,000	68,100	31,100	**359,200**
Sewage treatment				
People served	13,500	2,618	2,425	**14,043**

China

Contracts

Year	Location	Contract & length	People served & service
1996	Harbin	28 year BOT and O&M	2,800,000 water provision

This is a 0.225million m^3/day water treatment plant construction plus management project, which is being operated jointly with the Harbin Water Company. Harbin has a total population of 2.8 million. In 1999, Harbin SAUR Water was the first company in the Chinese water sector to be awarded ISO 9000 certification by an international organisation.

Sources:

SAUR web site

SAUR Annual Report, 2001, 2007, 2013, 2014

SAUR, CSR Report, 2008

SAUR Gdansk, Annual Report 2007

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Italy

ACEA (Azienda Comnuale Energia E Ambiente Spa)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
ACEA	Only	Only	Sewerage	
Italy	0	0	8,310,000	8,310,000
Peru	800,000	0	0	800,000
Honduras	2,326,000	0	400,000	2,726,000
Total - home markets	0	0	8,310,000	8,310,000
Total - international	3,126,000	0	400,000	3,526,000
Global total	3,126,000	0	8,710,000	11,836,000
% home markets	0%	-	95%	70%

Azienda Comunale Energia e Ambiente (ACEA), the municipality serving electricity and water services to the city of Rome, was partially floated in February 1999. 51% of the equity is held by the municipality of Rome, 8.9% by Suez Environnement and the rest by a variety of private and institutional investors. A further share sale by the municipality may be considered. The company was founded in 1909 for electricity distribution, started water provision services as AGEA in 1937 and was renamed ACEA in 1945. ACEA is Italy's largest water and electricity utility. The company believes that it provides the best quality drinking water in Italy at one of the lowest prices for a major city in Europe.

ACEA - Profit & loss account

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Rome-Water billed (million m^3)	300	300	298	295	266
Other ATOs-Water billed (million m^3)	372	369	356	348	391
Water supplied (million m^3)	672	669	654	643	657
Wastewater treated (million m^3)	929	936	851	917	941
Turnover	3,605.7	3,538.0	3,612.7	3,289.0	3,088.3
Water EBITDA	296.4	323.7	349.0	280.8	292.2
Water turnover	690.9	753.3	830.2	624.1	653.8
Operating profit	317.9	222.6	293.8	303.2	390.4
Net profit	33.8	93.5	85.3	153.4	162.5

Source: ACEA, Annual Reports, 2010-2014 and Analyst Presentaions, 2011-2015

Water & wastewater volumes are for Italy only

The 2012-16 business plan anticipates capital spending of EUR579million in the water activities with the aim of expanding its population served in Italy from 8.3million (14.7% market share) to 8.7million (15.2% market share), with water delivered rising from 744million m^3 in 2010 to 774million m^3 by 2016, with the growth mainly taking place outside Rome.

ACEA - activities in Italy

Italy

Through a series of contract gains for ATOs, ACEA is now the leading water and wastewater company in Italy. Current year targets for building upon ACEA's presence in western Italy are ATO1 (Lucca), ATO2 (Perugia) and ATO3 (Rieti). ACEA is seeking to merge the Florence, Pisa and Siena-Grosseto ATOs into a single entity serving 3.3million people in Tuscany. In total, 8.542million people are currently served through seven ATOs, representing a 630,000 increase on the 2008 coverage.

ACEA- ATO activities in Italy, 2014

ATO	Company name	Stake	City	People served	Communes
L ATO 1	Acea ATO2	96%	Lazio-Centrale	3,655,000	94
L ATO 5	Acea ATO5	98%	Frostione	460,000	86
T ATO 6	Acquedotto del Fiora	40%	Siena-Grosetto	407,000	56
T ATO 2	Acque Blu Fiorentine	45%	Pisa	323,000	57
T ATO 3	Publiacqua	40%	Firenze	1,200,000	49
L ATO 3	Gori Acqua	99%	Sarnese Vesuviano	1,450,000	76
T ATO	Umbra Acque	40%	Umbria	507,000	38
Various	Crea Gestioni	100%	Lucca, Terni	-	-
T ATO 2	Acque Blu Arno	45%	Basso Valdarno	311,000	55
T ATO 4	Intesa Aretina	46%	Arezzo & Siena	-	37

ACEA- Revenue breakdown, 2010-2014

31/12 (EURmillion)	2010	2011	2012	2013	2014
ACEA Lazio ATO 2	427.66	438.07	502.62	471.50	504.01
Publiacqua	64.56	69.31	67.16	54.13	64.83
Gori	50.02	48.17	51.96	58.91	-
Acque	43.14	46.75	45.53	53.30	-
ACEA Lazio ATO5	42.13	43.35	53.07	54.13	-
Umbra Acque	23.56	24.31	24.63	27.49	-
Nuove Acqua	6.04	6.65	7.47	7.59	-
Gesesa	5.39	5.71	5.97	6.60	7.70
Fiora	0.00	29.50	30.65	35.74	-
Crea	4.83	3.64	3.36	3.79	3.84
Lunigiana		2.00	0.43	0.00	-
Revenues from Italy	667.33	717.49	792.84	806.72	580.37
Aguazul Bogota	18.53	30.81	31.74	-	-
Acea Dominicana	2.56	2.63	2.89	-	-
Consorcio Agua Azul	2.49	2.45	2.76	-	-
Overseas	23.57	35.89	37.38	10.41	7.71

Source: ACEA, Annual Reports, 2010-2014 and Analyst Presentaions, 2011-2015

Rome

In 1999, 2.8million people were served with water services and 2.2million with sewerage services. This currently stands at 3.37million people through ACEA ATO 2, a 30 year concession between ACEA (96%) and 111 councils (4%) in the ATO2 Lazio region that started in January 2003 and a series of additional contracts.

Expansion has been achieved through taking on services for neighbouring municipalities:

2003: Starting with the municipalities of Rome, Monterotondo, Tivoli, Guidonia-Montecelio, Grottaferrata, Ciampino and Fiumicino, the Simbrivio Consortium, was taken over, a system that supplies water on a wholesale basis to 45 municipalities and 2 consortia.

2004: The municipalities of Castel Madama, Mentana, Fonte Nuova, Marcellina, San Gregorio da Sassola, Ciciliano, Pisoniano, Rocca Santo Stefano, Montelanico and Albano Laziale, along with a wholesale water system from a consortium set up by the former Southern Italy Development Fund and previously managed by Lazio Regional Authority, which services Pomezia, Ardea and Lanuvio.

2005: The municipalities of Casape, Carpineto Romano, Sambuci, Affile, Arcinazzo Romano (excluding the CO.RE.CALT. Consortium) Gavignano, Gorga, Cervara di Roma, Subiaco, Castel Gandolfo, Vicovaro, Artena, Trevignano Romano and Santa Marinella.

2006: Doganella Consortium's aqueduct system serving the municipalities of Palestrina, Zagarolo, Colonna and San Cesareo and the system serving the municipalities of Bellegra, Roiate, San Vito Romano, Castel San Pietro Romano

and Gallicano. Waste water and sewerage services in the municipalities of Capranica Prenestina and Olevano Romano, where drinking water services are managed by another operator. Water services in the municipalities of Poli, Genazzano and Rocca di Cave from March 2007. Services in the municipalities of Fiano Romano, Jenne, Nemi (drinking water services only), Vejano, Segni, Saracinesco, Lariano, Lanuvio, Sacrofano, Tolfa, Allumiere, Pomezia (provisional management of sewerage and water treatment services), Sant'Oreste, Nazzano and Castelnuovo di Porto.

2007: Rocca di Cave, Poli and Genazzano (water, having already held their wastewater contracts) and Torrita Tiberina, Riano, Marino, Oriolo Romano and Ponzano Romano (water and wastewater).

2008: A water and wastewater contract for Cerveteri became operational in February 2008. Other municipal contracts gained were for San Polo dei Cavalieri, Trevi nel Lazio, Pugilo and Alti-piani di Arcinazzo.

2009: The Acquedotto del Peschiera Consortium was signed up with agreements from six of the municipalities (Torrita Tiberina, Nazzano, Filacciano, Ponzano Romano, Fiano Romano and San'Oreste) with two further municipalities (Cibitella san Paulo and Capena) pending. Integrated water services for Foemello were also signed up.

2010 to 2013: No acquisitions noted.

2014: Full service contracts for Capranica Prenestina, Olevano Romano, Canterano, Rocca Canterano, Gerano and Rocca di Papa were gained from Acque de Potabili.

To date, 75 of the 112 municipalities have opted for ACEA's services in the region. 19 use partial services, 13 no services and 5 small utilities are excluded from coverage, accounting for 3.66 million people.

Subsequent ATO awards

Contracts

Year	Location	Contract & length	People served & service
2003	Frosinone	ATO privatisation	480,000 water & wastewater

In April 2002, a consortium led by ACEA gained a 30 year concession for the Frosinone ATO 5. ACEA holds 65% of the consortium, with CREA being one of the secondary investors. The concession covers 460,000 people (188,000 customers). EUR361.5million will need to be invested during the concession's life. The concession entered into service in October 2003 and covers 86 municipalities. Water coverage is 97% and sewerage coverage is 57%.

Three ATOs were gained in Tuscany by a consortium led by ACEA and also featuring Ondeo. With ACEA and Ondeo controlling services for 2.7million out of the 3.5million people living in Tuscany, a rationalisation of these concessions is planned.

During 2009, ACEA plans to acquire the concessions for the municipalities of Formello, Morlupo, Trevi nel Lazio (sewerage and water treatment alone) and Sant'Angelo Romano, following on the acquisition of the Co.R.Ec.Alt. Consortium, the Acquedotto del Peschiera Consortium and the municipalities of Valmontone and Vallepietra in 2008. These did not progress during the year.

2002	Pisa	ATO privatisation	763,000 water & wastewater

A 45% stake in Acque SpA (AI) was acquired for EUR19.2million. AI is Tuscany's ATO-2 Basso Valdarno, serving 57 communes. The 20 year concession will generate EUR1.2billion in revenues.

2003	Siena/Grosetto	ATO privatisation	379,000 water & wastewater

A 40% equity stake in the Acquedotto de Fiora was acquired by the ACEA led consortium for EUR19.3million, with a concession life of 25 years. ATO-6 Ombrone covers 56 communes and required some EUR433million in capital spending.

2003	Florence	ATO privatisation	1,260,000 water & wastewater

The ACEA led consortium has acquired 40% of Publiacqua SpA, the holder of the 20 year concession to operate water and wastewater services for 50 communes in Tuscany's ATO-3 Medio Valdarno. Publiacqua had a turnover of EUR104million in 2002 and net profits of EUR8million. The consortium is contributing EUR60million towards the EUR150million capital increase, with the municipalities paying the remaining EUR90million. In conjunction with the privatisation, EUR300million of Publiacqua's revenues were securitised in order to pay for the capital increase and to retire mature debt. ACEA is currently in talks to acquire 40% of ASA SpA, Tuscany's ATO-5 Toscana Costa-Livorno. ASA provides water to 359,000 in the Livorno municipality.

2005	Sarnese Vesuviano	ATO privatisation	1,500,000 water & wastewater

A 30 year concession awarded to Campania-Gori SpA, serving 76 municipalities in parts of Naples. This was expanded from 700,000 people to 1,500,000 in the following three years.

Acquisition of SIGESA

ACEA acquired SIGESA (Società Italiana Gestione Servizio Ambientale) for EUR21.4million in June 2005 and the acquisition was consolidated on 1 January 2006. SIGESA was founded by Bouygues/SAUR in 1986 and acquired the water services activities of Fiat SpA in 1998 along with 71% of Crea in February 2000 (the remaining 29% being held by Italmobiliare SpA). The acquisition valued Crea at EUR67million. Crea supplies water to 13 regions. In 2003, SAUR acquired 26.5% of Umbria Acque the ATO serving 460,000 people in the city of Perugia. Other activities are in Lucca, Rieti and Benevento.

Population served (million)	Sigesa	Crea	Combined
Water	0.35	0.85	1.20
Wastewater	0.45	1.85	2.40

Turnover increased from EUR21million in 1999 to EUR48million in 2000 and EUR58million in 2001. Consolidated revenues were EUR30.7million in 2004 after the divestment of the gas activities. ACEA acquired SIGESA for EUR19million in July 2005, a purchase price of EUR2million and the assumption of EUR17million in liabilities.

ACEA - International activities

Honduras

Contracts

Year	Location	Contract & length	People served & service
2000	San Pedro	30 year concession	526,000 water & sewerage

The concession was awarded to Aguas de San Pedro in August 2000 and entered service in February 2001, with ACEA holding 31% of the consortium's equity. Water coverage rose from 84% to 93% between 1999 and 2003. USD135million of investment is planned during the life of the concession.

2003	Santo Domingo	4+ year O&M	2,200,000 water

The contract is with the municipality's CAASD. It will run for a minimum of 4 years and has been renewed. ACEA holds 100% of ACEA Dominicana.

Peru

Contracts

Year	Location	Contract & length	People served and service
2000	Cono Norte	27 year concession	800,000 water

ACEA (Consorcio Agua Azul SA, 45%) teamed with Impregilo SpA (40%), Fisia Utalimianti SpA (5%) and Castalia & Cosapi SA (10%) of Peru for the Cono Norte concession that was awarded to Agua Azul SA in January 2000. After two years constructing a new water treatment works for USD50million, the operating contract runs for 25 years. Cono Norte is part of the city of Rio Chillon. Its population is currently 750,000 but is expected to rise to 2,000,000 by the end of the concession. The concession involves the supply of 44million m^3 of water pa at PEN2.8million/month (USD0.8million) and involves USD80million in capital spending.

Sources:

ACEA, Annual Reports, 2005-2014

ACEA, Analyst Presentaions, 2011-2015

ACEA, Sustainability and Environmental Reports, 2013-2015

ACEA, corporate website

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Catia Tomasetti (Chairman)

Alberto Irace (CEO)

Franco Balsamo (CFO)

Singapore

Sembcorp Industries Ltd

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Sembcorp	Only	Only	Sewerage	
Philippines	0	0	189,000	189,000
Indonesia	1,160,000	0	0	1,160,000
Chile	0	380,000	132,000	512,000
Antigua	83,000	0	0	83,000
Panama	440,000	0	0	440,000
South Africa	0	0	452,000	452,000
China	2,331,000	0	0	2,331,000
Total - home markets	0	0	0	0
Total - international	4,014,000	380,000	773,000	5,167,000
Global total	4,014,000	380,000	773,000	5,167,000
% home markets	0%	0%	0%	0%

SembCorp Utilities (SU), a subsidiary of SembCorp Industries Ltd, provides multi-utility services for 35 industrial customers on Jurong Island in Singapore. These include demineralised water (32,600m^3 per day), cooling and refrigerated water (2.86million m^3 per day) and wastewater treatment via three dedicated facilities on an O&M basis. The company has two wholly owned utility subsidiaries in Singapore; SembCorp Utilities and Terminals (SUT) Sakra and SUT Seraya, which serve 27 corporate customers as well as other SembCorp subsidiaries in Singapore's Jurong Island.

In July 2010, following a bid announced in April 2010, SembCorp held 98% of Cascal NV's equity. This resulted in the company having two broadly distinct service arms: SembCorp (industrial water and wastewater services) and Cascal (municipal water and wastewater services).

SembCorp Industries - Profit & loss account, 2010-2014

Y/E 31/12 (SGDmillion)	2010	2011	2012	2013	2014
Utilities	3,993	4,893	5,615	5,095	4,850
Total turnover	8,764	9,047	10,189	10,798	10,895
Net profit	793	809	753	820	801
Earnings per share	44.44	45.32	42.17	45.70	44.31

Source: SembCorp Annual Reports, 2010-2014

SembCorp – Industrial water activities

SembCorp Utilities was established in 1999 to gain O&M and BOT contracts for municipal and industrial water and wastewater projects in the region. SembCorp Water's 18% stake in Cathay International Water was sold back to Cathay and Cathay International Overseas Holdings for USD44.8million in June 2003.

SembCorp - water and wastewater treatment capacity, 2014

Water			
M^3 per day	**Municipal**	**Industrial**	**Total**
Singapore	0	4,770,120	4,770,120
China	930,000	1,792,980	2,722,980
Indonesia	289,870	0	289,980
Philippines	94,250	0	94,250
Oman	0	60,000	60,000
UAE	0	591,800	591,800
South Africa	0	222,750	222,750
United Kingdom	270,000	174,000	444,000

Water			
M^3 per day	**Municipal**	**Industrial**	**Total**
The Caribbean	17,275	0	17,275
Chile	204,885	12,096	216,981
Panama	75,700	0	75,700
Total	**1,888,463**	**7,246,503**	**9,134,966**
Wastewater			
M^3 per day	**Municipal**	**Industrial**	**Total**
Singapore	0	17,568	17,568
China	0	157,200	157,200
Philippines	10,200	0	10,200
South Africa	63,350	0	63,350
Chile	125,442	0	118,000
Total	**198,992**	**180,768**	**379,760**

Source: SembCorp Annual Report, 2014

SembCorp – Activities in France and internationally

Cascal NV

Biwater was founded in 1968 and in the 1970s it moved into sewage treatment hardware and developed a number of export markets. In 1989 it acquired the Bournemouth & West Hampshire Water Companies. Biwater is a privately owned company, specialising in water treatment and sewerage engineering. Biwater Capital Plc was set up in 1998 for international concession contracts. The company has been seeking bids in most of the currently active international markets, with a balance between wastewater and water provision. In 2000, Biwater Capital was renamed Cascal as a 50/50 joint venture with Nuon of the Netherlands. June 2006 saw Biwater buy back the 50% stake in Cascal from Nuon NV. Nuon paid USD130million for its holding in the joint venture in March 2000. Biwater bought out Nuons's share in 2006 and in February 2008, Biwater sold 42% of Cascal NV on the New York Stock Exchange. In April 2010, SembCorp made a bid for Cascal's market listed equity. The bid was supported by Biwater and by July 2010, 92.3% of Cascal's shares were held by SembCorp. The stake cost SembCorp USD191.7million. SembCorp now holds 100% of Cascal. SembCorp sold Bournemouth Water to Pennon Group for GBP100.3 million in April 2015.

UK

SembCorp Utilities UK provides water services to industrial customers on the Wilton International facility on Teesside, including 120,000m^3 per day of raw water and 48,000m^3 per day of demineralised water. This was acquired for GBP106million and the company has invested GBP259million in the facility. The facility is adjacent to Northumbrian Water's GBP145million Bran Sands wastewater treatment complex.

Oman

Contracts

Year	Location	Contract & length	People served & service
2010	Salalah	15 year O&M	Desalination

A 69,000 m^3 per day facility as part of a USD1.1billion independent water and power project. SembCorp is providing the industrial water O&M services under a 12 year power and water purchase contract with the government.

Antigua

Contracts

Year	Location	Contract & length	People served & service
2009	Antigua	23 year BOT	83,000, desalination

Cascal Water Antigua (now SembCorp (Antigua) Water) was acquired in December 2009. SembCorp holds a 17,000 m^3 per day BOT awarded by the Antigua Public Utilities Authority in 2004. There are also two resort desalination BOTs covering 17,000 people in Bonaire and Curacao.

Philippines

Contracts

Year	Location	Contract & length	People served & service
1997	Subic Bay	30 year concession	189,000 water & sewerage

The Subic Water and Sewerage Company Inc. (Subicwater) is a JV (30% SembCorp) with local partners, serving Subic Bay Freeport and Olongapo City. Subicwater was established together with the Subic Bay Metropolitan Authority (SBMA) and the Ologapo City Government to undertake the project by means of a twenty five year concession contract (extended to 30 years in 2003), which is due to expire in 2027 and has a 25 year extension option.

Subicwater took over the operation and maintenance of the existing assets and is undertaking extensive refurbishment work, upgrading treatment works, pipework and rehabilitation and the extension of water distribution and sewerage networks. There are 32,000 water connections and 70Km of water mains and 50Km of sewerage networks.

Indonesia

Contracts

Year	Location	Contract & length	People served & service
1995	Batam Island	25 year concession	1,100,000 water provision

The Batam Industrial Development Authority (BIDA) awarded Cascal and its 50/50 local joint venture partners, Bangun Cipta Kontraktor (BCK) and Syabata Cemerlang a 25 year concession contract in 1995 to operate, manage and develop the water facilities on the island of Batam. The partners set up a local company, Adhya Tirta Batam (ATB) to fulfil their concession obligations. Cascal and BCK acquired Syabata Cemerlang in November 2002 and now have equal shares in ATB.

Batam Island has enjoyed exceptionally high investment and growth ever since it was designated a special development zone by the Indonesian Government. Non-revenue water has been reduced from 49% in 1995 to 23% in 2010.

Due to the high growth, water demand grew by 10% in 2002-03, with 69,000 customer connections. In 2003-04, connections rose by a further 18% to 81,000 and to 122,000 by 2007, with the volume of water delivered rising by 16% during the year. Adhya Tirta Batam served 1,100,000 people in 2012, compared with 150,000 at the outset. Coverage was 35% in 1995, against 98% by 2010, with all customers metered and supplied with WHO compliant water. In May 2008, PT Adhya Tirta Batam undertook to construct a new water treatment plant in Duriangkang, along with approval for a 20% tariff increase. The new construction is the third stage in the development of an integrated potable water system and follows the completion of earlier modules built in 2001 and 2004. The new treatment plant brought the total treatment capacity to 302,400 m^3 per day in 2009.

2008	Telang Kelapa	20 year concession	60,000 water provision

SembCorp holds 40% of PT Adhya Titra Sriwijaya, which has a concession for water provision to Sukarme, an industrial, commercial and residential area near to Palembang, with a total population of 160,000. The facility treats 11,200 m^3 of water per day.

Singapore

Contracts

Year	Location	Contract & length	People served & service
2008	Changi	25 year BOT	Industrial water

SembCorp NEWater Pte Ltd (100% SembCorp) gained a 25 year NEWater agreement with PUB in February 2008, to design, build, own and operate Singapore's largest NEWater plant at Changi and supply PUB with 228,000m^3 of NEWater a day from 2010. The first year price for NEWater is SGD0.29966 per m^3. The first phase entered service in June 2009 and full operations started in 2010.

China

A BOT for a wastewater facility for the Nanjing Chemical Industrial Park (NCIP) in Jiangsu Province was awarded to SembCorp in 2003. SembCorp has a 95% stake in Nanjing SembCorp Suiyu, along with Nanjing Chemical Industrial Park Company (5%). The total cost of their project has been SGD101million. The first phase had an initial capacity of 12,500m^3 per day from 2005 with an expansion to 30,000m^3 per day from 2007. In September 2005, SembCorp acquired a 100,000m^3 per day water treatment plant BOT serving the park. In 2015, a 120,000 m^3 per day expansion will be completed.

In June 2005, SembCorp established an 80/20 joint venture to acquire, expand, own and operate a 35,000m^3 per day integrated industrial wastewater treatment and industrial water recycling plant in the ZhangJiaGang Free Trade Zone in Jiangsu Province, China. The project has cost SGD65million and serves 100 industrial customers. In 2009 a 15,000m^3 per day industrial effluent plant was opened, the first in China capable of receiving this wastewater without pre-treatment. In 2014, a contract was signed to expand a facility at the Lianyungang Lingang Chemical Industrial Park (80% held) to 20,000m^3 per day in 2015.

A joint venture contract to build, own and operate an industrial wastewater treatment plant in Tianjin Lingang Industrial Area (TLIA) was announced in 2007. SembCorp Utilities holds 90% of the joint venture company, SembCorp TLIA Wastewater Treatment Company. The CNY70million facility will treat industrial wastewater from chemical industries in TLIA and have a capacity of 10,000m^3 per day. In 2009 the facility underwent an expansion to 20,000m^3 per day at a cost of CNY86million.

In July 2008, SembCorp gained a 30 year (plus 20 year option) to own, manage & operate three water treatment works in the Shenyang Economic & Technological Development Zone in Liaoning Province, with a design capacity

A 80% owned joint venture serving the Qinzhou Economic Development Zone in Guangxi Province was awarded a 50 year BOT contract to operate a 15,000m^3 per day industrial wastewater treatment plant in 2010 and entered service in 2011. A potable water provision contract (80% held) for the Shenyang Economic and Technological Development Area has 600 industrial customers and 20,000 municipal customers. The project cost is SGD68million.

The Changzi Total Water Management Plant (100% held) is currently under construction and is expected to be completed in 2016, with a capacity of 1,300,000m^3 per day.

The China Water Company (CWC)

The China Water Company (CWC) was originally founded by AIDC, a company majority held by the Australian Federal Government. Thames Water Aqua International GmbH acquired 48.8% of CWC for USD20million, plus a USD50million capital injection in 2001. In November 2006, Cascal acquired 87% of the China Water Company Limited from Thames Water, Sime Darby (Hong Kong) and two minority shareholders. China Water has offices in Hong Kong and Shanghai and it owns majority stakes in four water service companies in China which are based in Xinmin and Qitaihe (in the North), Yanjiao (near Beijing) and Fuzhou (in the South East). The water service companies are all joint ventures with local water companies or development zones. SembCorp acquired the remaining 13% of CWC shares in 2010 for USD 12.8million.

Contracts

Year	Location	Contract & length	People served & service
2008	Zhumadian	30 year concession	400,000 water provision

In June 2008 China Water acquired 50% of Zhumadian China Water Company, a joint venture in Zhumadian City, Henan Province (Zhumadian Bangye Water Group holding the remaining 49%). The JV invested USD25million towards the completion of a new 220,000 m^3 per day water treatment works which entered service in 2009 and USD16million on allied distribution infrastructure.

2008	Yancheng	30 year concession	1,000,000 water provision

In April 2008 Cascal acquired a 48% percent stake in Yancheng China Water Company. The new joint venture company, Yancheng China Water Company, which partners Cascal with the Municipality of Yancheng, formally commenced operations in May 2008. The facility treats 315,000 m^3 of water per day.

2004	Fuzhou	30 year concession	120,000 water provision

The Fuzhou CWC Water Company Limited (70% CWC) contract is a 30 year concession which started in December 2004. Fuzhou CWC operates the water supply assets of the Fuzhou Economic & Technological Development Zone (FETDZ) Water Supply Company in Fujian. Construction of the 125,000m^3/day WTW ran from 2004-2006.

2001	Qitaihe	30 year BOOT	220,000 water provision

The CWC Qitaihe (Heilongjiang, 89% CWC) project is for the construction and operation of water treatment works handling 100,000m^3/day. Construction took place in 2001-2003.

2001	Yanjiao	25 year BOOT	350,000 water provision

The CWC Yanjiao (Hebei) contract (92% CWC) covers water treatment works in the High Tech Development Zone handling a total of 80,000m^3/day, which were built between 2001 and 2003.

2000	Xinmin	25 year BOOT	114,000 water provision

The CWC Xinmin (Liaoning, 89% CWC) water infrastructure project covers one 30,000m^3/day water treatment work, built in 2000-2001.

2000	Shenyang	30 year BOOT	127,000 water provision

Shenyang SembCorp Water Co is 80% held by CWC. The facility treats 160,000 m^3 of water per day for municipal, industrial and commercial customers.

Chile

The Calama project (wastewater concession serving 150,000 people) was sold to ESSAN, the incumbent private utility in 2006. All contracts are 100% held.

Contracts

Year	Location	Contract & length	People served & service
1994	Santiago	Perpetual	132,000 water & wastewater

Cascal acquired Servicos de Agua Potable Barechea SA (SAPBSA) and Aguas Chacabuco SA, two companies operating outside Santiago, with concessions serving medium to high quality residential and industrial areas in the North and East of the city. These have been grouped together as SembCorp Aguas Santiago SA and started supplying water in 1996. A water treatment works for the Pan de Azucar concession area was constructed in 2004. The company owns USD50million in water rights. Servicomunal and Servilampa were acquired by Cascal in June 2008. The businesses operate perpetually held, regulated water and wastewater concessions serving 23,000 customers in Colina, to the north of Santiago. Revenues of USD6-8million pa are anticipated.

2002	Noranda	22 years	Industry

The USD6million SembCorp Aguas del Norte project provides 10,300 m^3 per day of treated wastewater to Xstrata in La Negra, Chile some 45km from Antofagasta. In 2009 the company negotiated an extension with Xtansa, increasing its supply volume by 30%.

1994	Antofagasta	30 year concession	380,000 water & wastewater

SembCorp Aguas del Norte is the first WWTW PSP project in Chile. The Antofagasta Region II facility has a 92,400 m^3 capacity and serves one of the driest parts of the world which has only 3.3mm of rainfall pa. The facility treats waste from the population and recycles the water, selling it on to industry and farms.

Panama

Contracts

Year	Location	Contract & length	People served & service
2002	Laguna Alta	30 years, BOOT	440,000 water

This is Panama's first BOOT water project involving the construction of a 76Ml/day potable water treatment plant for Aguas de Panama. The contract serves people in the La Chorrera, Arraijan and Capira areas, west of the Panama Canal. The project was first signed in 2000, and construction started in 2003 with the IFC providing USD15million of the project's USD25million funding. The facility entered service in 2004. Cascal acquired the contract in 2006. The

government announced in 2008 that it was seeking for an early termination of the contract and in August 2008 Cascal sought leave to the Supreme Court to protect its interests. As of 2012, it is controlled by SembCorp.

South Africa

Contracts

Year	Location	Contract & length	People served & service
1999	Nelspruit	30 year concession	390,000, water & sewage

In 2009, Cascal purchased the 10% of the Greater Nelspruit Utility Co that it did not previously own. The ZAR300million Silulumanzi concession covers the Maputo Development Corridor in Mpumalanga Province and is the fastest growing municipality in South Africa. This is the first full concession in South Africa. Cascal has taken over billing and revenue collection while modernising the facilities and has focused the concession on improving and expanding service delivery to the townships.

In the first 2 years of operation 91km of new water mains were laid as well as 18km of sewers. At the same time thousands of unregistered connections were found and many household and mains leaks repaired. This has substantially reduced NRW and over 6Ml/day have been saved to date; over 8,000 broken meters have been replaced and a further 15,000 new meters have been installed. 78,000 m3 per day of water is treated along with 44,200 m^3 per day of sewage.

Contracts

Year	Location	Contract & length	People served & service
1999	Dolphin Coast	30 year concession	62,000 water & sewerage

In May 2007, Cascal acquired 73.4% of Siza Water from Bouygues for USD2.9million. At the time, Siza Water provided water and wastewater services to approximately 50,000 people in the Dolphin Coast region of South Africa. The Borough of Dolphin Coast in Ballito is one of the main tourist resorts in South Africa and is experiencing rapid growth of both its resident population and its tourist industry. The concession is operated through Siza Water which will make USD172million of investments during the life of the concession. The population served varies between 30,000 (low season) and 100,000 (high season). Siza Water generated revenues of USD5.5million in 2006.

Sources:

SembCorp Annual Reports, 2010-2014

SembCorp, corporate web site

Cascal, Annual Reports, 2008-2009

Cascal, corporate web site and press releases

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Kong Hua Ang (Chairman)

Kin Fei Tang (President and CEO)

Chiap Khiong Koh (CFO)

The Rest of TOP 50 - Table of Contents

The rest of TOP 50

Brazil

Andrade Gutierrez Concessoes

Population served by service and country 2014 data Andrade Gutierrez	Water Only	Sewerage Only	Water & Sewerage	Total
Brazil	3,800,000	0	7,000,000	10,800,000
Global total	3,800,000	0	7,000,000	10,800,000
% home markets	100%	0%	100%	100%

Andrade Gutierrez Concessões (AGC) is part of Andrade Gutierrez (AG), one of Brazil's three largest construction companies active in construction projects and concessions throughout Latin America. AG holds 77.22% of AGC, with the World Bank's IFC owning 13.48% and Fundo de Investimentos em Ações (Fundação Sistel) with 9.29%. AGC holds 27.5% of Domino Holdings and Domino (other holders: VE 30.0%, Daleth Partners 27.5% and Copel 15.0%) in turn holds 34.75% of Sanepar. 52.5% of Sanepar is held by the Government of Parana, with the rest being in the market.

Andrade Gutierrez - Profit & loss account, 2010-2014

F/Y 31/12 (BRLmillion)	2010	2011	2012	2013	2014
Sanepar – Revenue	1,590	1,876	2,290	2,555	2,815
Sanepar – EBITDA	578	734	878	937	942
Sanepar – Investments	397	354	476	403	422
Group revenues	18,186	16,272	18,460	19,390	25,165
Group EBITDA	3,419	3,061	4,272	5,186	6,382
Net profit	775	1,514	2,070	2.277	2,244

In 1998, Domino Holdings was awarded the concession for Sanepar, the water and sewerage company serving the state of Parana. This is Brazil's fourth largest water utility. Parana borders Argentina and is seen as a growth region in Brazil. Sanepar then provided water to 9.5million people and sewerage to 6.0million.

In 2008-09, the major expansion has been in sewerage services, where in excess of a million people were connected to the network over the two years. Except in 2006 (investments of BRL500million), annual investments between 2003 and 2009 were between BRL251million and BRL361million. Sewerage and sewage treatment accounted for 59% of investments in 2009. Water quality meets applicable criteria in 99% of samples. Improved network management has seen water consumption fall from 296 litres per capita per day in 2005 to 237 per capita per day in 2009. In 2014 the company had operations in 345 of the state's 399 cities and one concession in Santa Catarina. In its operating area, 100% of households have had access to treated water since 2008 and 62% are connected to the sewerage network, with 99% of sewage collected, the highest level in Brazil.

Sanepar - operating data, 2010-2014

F/Y 31/12, Sanepar	2010	2011	2012	2013	2014
Water – people served (million)	9.272	9.509	10,200	10,200	10,800
Water connections ('000)	2,547	2,632	2,723	2,800	2,900
Water billed (million m^3)	511	529	553	564	587
Sewerage – people served (million)	5.757	6.013	6,962	6,700	7,000
Sewerage connections ('000)	1,373	1,459	1,565	1,660	1,800
Sewerage billed (million m^3)	307	325	347	364	385

The acquisition of Water Port SA by AGC Participações Ltda in 2003 involves the development of a water and sewerage network serving the right bank (30.5% of the total area) of the port of Santos. Construction work started in 2005 and the facility entered service (with a five year operating contract) in late 2007, generating BRL29million of revenues in 2010.

Sources:

Andrade Gutierrez, Annual Reports, 2005-2014

Andrade Gutierrez, company web site

Sanepar, company web site

Veolia, corporate presentations

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Edwardo Borges do Andrade (Chairman)

Ricardo Coutinho de Sena (President & Chief Executive, AGC)

Brazil

CAB Ambiental

Population served by service and country 2014 data Cab Ambiental	Water Only	Sewerage Only	Water & Sewerage	Total
Brazil	5,900,000	235,000	1,095,000	7,230,000
Global total	5,900,000	235,000	1,095,000	7,230,000
% home markets	100%	100%	100%	100%

CAB Ambiental was floated in 2013 as a subsidiary of Galvão Engenharia S/A, a Brazilian company active in sewerage services since 2003. Since its inception in 2006, the company has gained eight contracts in Sao Paulo state, three on its own and five jointly with SABESP with CAB as the majority holder. The earlier contracts were taken over by CAB Ambiental in 2008-09. Excluding the main SABESP contract, the company provides water to 400,000 people and sewerage and sewage treatment services for 233,000 people and water and sewerage to 1,095,000 people.

It is understood that Galvão Engenharia 67%holding in CAB Ambiental is to be sold in the near future (information as of September 2015).

CAB Ambiental- Profit & loss account, 2010-2014

F/Y 31/12 (BRLmillion)	2012	2013	2014
Revenue	364.7	579.8	609.9
EBITDA	77.2	105.9	160.2
Net profit	-12.4	19.6	17.0
Population served (million)	6.4	6.6	6.6
Water (million m3)	102.6	156.4	163.6
Investments	185.4	277.3	272.9

CAB Ambiental - concessions noted

2000	Canarana, Mato Grosso	40 year concession	15,000 water & wastewater
2001	Pontes de Lacerda, Mato Grosso	30 year concession	35,000 water & wastewater
2002	Alta Floresta, Mato Grosso	30 year concession	45,000 water & wastewater
2007	Palestina, Sao Paulo	30 year concession	9,000 water & wastewater
2007	Comodoro, Mato Grosso	30 year concession	13,000 water & wastewater
2008	Alto Tiete, Sao Paulo	15 year concession	5.5 million water
1997	Paranagua, Sao Paulo	48 year concession	135,000 water & wastewater
2008	Guaratingueta, Sao Paulo	30 year concession	118,000 wastewater
2008	Mirassol, Sao Paulo	30 year concession	53,000 water & wastewater
2002	Colider, Mato Grosso	30 year concession	26,000 water & wastewater
2010	Piquete, Sao Paulo	30 year concession	14,000 water & wastewater
2010	Andradina, Sao Paulo	30 year concession	60,000 water & wastewater
2011	Castilho, Sao Paulo	30 year concession	14,000 water & wastewater
2012	Cuiaba, Mato Grosso	30 year concession	561,000 water & wastewater
2012	Tubaro	30 year concession	101,000, water & wastewater
2012	Ipatoa	30 year concession	14,000 water & wastewater
2012	Agreste, AL	30 year concession	400,000, water
2012	Atibaia, Sao Paulo	30 year concession	115,000 wastewater

Palestina is a 50:50 joint venture with Brazil's Enops Enghenharia. The main Sao Paulo concession (CAB spat) is jointly held with SABESP for the Alto Tiete water treatment system. Within their concession areas, there was a 100% water connection rate, 79% for sewerage with 51% of sewage generated being treated.

Sources:

CAB Ambiental, company web site

CAB Ambiental, Annual Report, 2009, 2014

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Otavio Silveria (President)

Eduardo Torzecki (Director)

Leonardo Araujo (Director)

Brazil

Companhia De Saneamento De Minas Gerais (Copasa)

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
COPASA	Only	Only	Sewerage	
Brazil	5,400,000	0	9,800,000	15,200,000
Global total	5,400,000	0	9,800,000	15,200,000
% home markets	100%	0%	100%	100%

Companhia de Saneamento de Minas Gerais (COPASA) operates in the state of Minas Gerais, Brazil and is the third largest water and sewerage company in Brazil in terms of its net revenue. In 2006 the State of Minas Gerais had a total population of 19.5million (with an urban population of approximately 16.5million). COPASA provides water supply services to 635 municipalities and 288 towns and villages, serving 15.1 million people as of March 2015, along with 9.8million people. The number of people being served by water and sewerage contracts is growing at 3% and 11% per annum respectively. In February 2006, COPASA floated 30% of its shares on the Sao Paulo stock Exchange (Bovespa). A secondary placement of shares by the municipality of Beol Horizonte and Minas Gerais took place in April 2008, resulting in 53.1% of the shares being held by the state and 46.9% by private and institutional investors.

COPASA- evolution of activities, 2010-2014

	2010	2011	2012	2013	2014
Water connections (million)	3.501	3.635	3.779	3,915.1	4,042.3
Sewerage connections (million)	1.956	2.111	2.259	2,404.1	2,529.1
Water (million m3)	628.9	649.7	667.4	684.4	689.7
Sewage (million m3)	382.3	402.6	428.2	446.8	453.4
Sewage treated	157.1	182.2	211.1	237.3	252.0
People served with water (million)	13.2	13.6	14.1	14.6	15.0
People served with sewerage (million)	7.8	8.3	8.8	9.3	9.8

	2010	2011	2012	2013	2014
Concession cities, water	615	620	625	626	635
Concession cities, sewage	213	225	277	283	288
Operation cities, water	603	606	6123	617	618
Operation cities, sewerage	161	176	200	223	233

37.5% of the state's population was connected to COPASA's sewage treatment services in 2009.

Concession agreements are negotiated with each municipality, with a typical term of 30 years. The most important contract is for the City of Belo Horizonte, a co-operation agreement that was signed in November 2002. This contract accounted for 37.6% of COPASA's net revenue for the nine-month period ended September 2005. 80% of COPASA's revenue is derived from concession agreements that have at least 14 years to run. COPASA had 894 concessions in 2014 against 888 in 2013, with 79 expiring in 2014 against 55 in 2013, which are expected to be renewed.

COPASA Serviços de Saneamento Integrado do Norte e Nordeste de Minas Gerais SA (COPANOR) provides water and sanitation to small settlements (200-5,000 people each) in poorer areas in the State. Through 138 water systems and 18 sewerage systems, it served 242,000 people in 2011.

COPASA - Principal concession contracts (BRL million, 2008)

Municipality	Concession	Date Signed	Term	Revenues
Belo Horizonte	Water/Sewage	04-2004	30 years	778
Contagem	Water/Sewage	02-1974	99 years	145
Betim	Water/Sewage	12-2004	38 years	95

Municipality	Concession	Date Signed	Term	Revenues
Monte Claros	Water/Sewage	04-1998	30 years	59
Ipatinga	Water/Sewage	12-1997	25 years	51
Others	N/A	N/A	N/A	1,118
Total	N/A	N/A	N/A	2,247

COPASA - Profit & loss account, 2010-2014

Y/E 31/12 (BRLmillion)	2010	2011	2012	2013	2014
Water supply	1,713.9	1,784.0	1,858.4	1,980.7	2,053.2
Sewerage	597.3	725.6	910.0	1,027.1	1,079.0
Group turnover	2,311.2	2,509.6	2,786.4	3,007.6	3,132.2
Operating Profits	980.5	1,059.8	761.7	724.9	619.5
Net Profits	677.1	470.4	483.1	419.7	318.1
Earnings per share (BRL)	5.89	4.09	4.04	3.52	2.67

COPASA has 1,086 water treatment plants, with a treatment capacity that has grown from 37m^3 per second in 1999 to 40m^3 per second in 2005. By 2008, there were 1144 water treatment plants in operation, with some of the smaller facilities being replaced by new, larger plants.

Sewage treatment has increased from 100.9million m^3 in 2007 to 252.0million m^3 in 2014, with eight new wastewater treatment works entering service in 2011. COPASA is continuing to expand its networks, through new concessions and internal growth.

Sources:

COPASA, Annual Reports, 2008-2014

COPASA, company web site

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Sinara Inacio Meireles Chenna (CEO)

Marco Antonio De Rezende Teixeira (Chairman)

Antonio Cesar Pires De Miranda Junior (Vice-Chairman)

Edson Machado Monterio (CFO)

Brazil

Sabesp

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
SABESP	Only	Only	Sewerage	
Brazil	6,100,000	0	22,400,000	28,500,000
Global total	6,100,000	0	22,400,000	28,500,000
% home markets	100%	0%	100%	100%

In 1877, the Province of Sao Paulo granted a concession for the provision of water and sewage services to Companhia Cantareira de Agua e Esgotos. In 1893, the Province assumed responsibility for the provision of water and sewage services and formed the Reparticao de Agua e Esgotos (Office of Water and Sewers), a Governmental agency. Companhia de Saneamento Basico do Estado de Sao Paulo (SABESP) was founded in 1973. The state water and sewerage company for Sao Paulo was partly floated on the Soma in November 1996 and promoted to the Bovespa exchange in June 1997. The Sao Paulo Government sold a further 19% of SABESP's equity for BRL507million (USD204million) in May 2002 and after further sales in 2003 and 2004 now holds 50.3% of SABESP's equity. The sale took place both on the Sao Paulo Bourse (24.7% of shares) and the NYSE (25% of shares).

SABESP - breakdown of 2014 revenues and volumes

	Water Volume	Sewage Volume
Residential	75%	83%
Commercial	8%	10%
Industrial	2%	3%
Public	3%	3%
Wholesale	12%	1%

SABESP serves water to 25.3million people in 363 of the 645 cities in the area (60% of the state's urban population), along with five bulk treated water supply contracts serving a further 3.1million people. The company operates 493 sewage treatment facilities and seven ocean outfalls. In June 2010 SABESP signed a concession contract with the Sao Paulo municipality to operate the city's sanitation services for 30 years, renewable for a further 30 years.

SABESP - concession maturity profile

	Contracts	% revenues
30 year concessions gained in 2007-14	274	73.4%
Concessions currently under renegotiation	54	16.5%
Concessions due to expire in 2015-30	38	8.7%
Wholesale	5	1.6%

393 municipalities are served by concession contracts. Where concessions have not been renewed, service is maintained via a short term contract. Six concessions have been lost in recent years, accounting for 0.1% of revenues. SABESP own the assets of the Sao Paulo system. In 2014, the bulk water contract for Diadema (368,000 people) was turned into a 30 year water and sewerage concession.

SABESP - water provision, billed by region, 2010-2014

Y/E 31/12 (million m^3)	2010	2011	2012	2013	2014
Sao Paulo Metropolitan Region	1,119	1,151	1,182	1,207	1,172
Regional Systems	580	597	614	628	639
Wholesale	293	297	298	299	257
Total	**1,992**	**2,045**	**2,094**	**2,134**	**2,069**

SABESP, sewerage, billed by region, 2010-2014

Y/E 31/12 (million m^3)	2010	2011	2012	2013	2014
Sao Paulo Metropolitan Region	947	977	1,006	1,029	1,005

Y/E 31/12 (million m^3)	2010	2011	2012	2013	2014
Regional Systems	459	482	502	520	533
Wholesale	28	27	27	30	24
Total	**1,434**	**1,486**	**1,535**	**1,594**	**1,562**

Since 2004, a bonus scheme was implemented to encourage domestic and commercial customers to minimise water consumption. This has made a material impact on water usage. The current drought is seen as the most serious to affect the state since 1930. Water inflow in 2014 was half of the previously assumed worst case scenario, based on the 1953-54 drought.

SABESP - operating indicators, 2010-2014

Operating indicators	2010	2011	2012	2013	2014
Water connections (000)	7,295	7,481	7,679	7,888	8,210
Sewage connections (000)	5,718	5,921	6,128	6,340	6,660
Population directly served – water (million)	23.6	23.9	24.2	24.6	25.3
Population directly served – sewage (million)	20.0	20.5	21.0	21.5	22.4
Number of employees	15,330	14,896	15,019	15,015	14,753
People served & service – water	99%	99%	99%	99%	99%
People served & service – sewerage	81%	82%	83%	84%	85%
People served & service – sewage treatment	75%	76%	77%	78%	77%
Water billed (million m^3)	1,992	2,045	2,094	2,149	2,069
Water losses - L/connection/day	403	395	393	372	319

Capital spending totaled BRL8.4 billion for 2012 to 2014, BRL 2.5 billion in 2012, BRL 2.7 billion in 2013 and BRL 3.2 billion in 2014. A further 990,000 water and 1.44 million sewerage connections are planned between 2015 and 2020, with the aim of a sewerage connection rate of 95% and 95% of wastewater being treated by 2020. Capital spending of BRL13.5 billion is planned from 2015 to 2019.

SABESP has an 11 year BRL4.3billion leakage reduction plan which started in 2009 to reduce water losses from 436 litres per connection per day in 2009 to 280 by 2020. Water treatment capacity for the Metropolitan Region was 67.7m^3 per second in 2009 via eight water treatment works and 192 storage reservoirs.

National and International possibilities

Law No. 12,292 which was passed in March 2006, allows SABESP to expand its activities into other states in Brazil and internationally. From 2008, SABESP has been allowed to acquire stakes in other companies, with cooperation agreements signed in Spain, Israel and Costa Rica along with a joint venture (SESAM) with Spain's OHL for a sewage treatment concession in Moi-Mirim. SABESP Environmental Solutions has been established to concentrate on large users.

SABESP - Pofit & loss account, 2010-2014

Y/E 31/12 (BRLmillion)	2010	2011	2012	2013	2014
Water supply	4,257	4,610	4,944	5,276	4,897
Sewerage service	3,399	3,670	3,983	4,264	4,009
Turnover	9,231	9,942	10,738	11,316	11,213
Operating profits	2,672	2,354	2,843	3,139	1,911
Net income	1,631	1,223	1,912	1,913	903
Earnings per share (BRL)	**2.39**	**2.02**	**2.80**	**2.81**	**1.32**

Sources:

SABESP, Form 20F, 2010-2014

SABESP, Sustainability Report, 2009

SABESP, company web site

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Benedito Pinto Ferreira Braga Junior (Chairman)

Rui De Britto Alvares Affonso (CFO)

Jason Kelman (CEO)

Chile

Aguas Andinas

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Aguas Andinas	Only	Only	Sewerage	
Chile	345,000	0	6,975,000	7,320,000
Global total	345,000	0	6,975,000	7,320,000
% home markets	100%	0%	100%	100%

Aguas Andinas (AA), formerly EMOS, is Santiago's water supply and sewerage company. AA serves 7.3 million people via 2.1million customer connections. Water services to Santiago were formally organised in 1861 with the first capital works starting in 1865. AA was founded in 1977 and turned into a limited company in 1989.

Aguas Andinas - number of connections, 1999-2014

	1999	2003	2005	2009	2011	2014
Water	1,152,000	1,435,723	1,502,634	1,871,287	1,966,639	2,096,999
Sewerage	1,120,600	1,404,739	1,474,391	1,826,606	1,913,081	2,045,634

Aguas Andinas - number of connections, 2014

	Aguas Andinas	Aguas Cordillera	ESSAL	Aguas Manquehue
Water	1,726,529	148,160	211,350	10,960
Sewerage	1,689,214	145,556	200,297	10,567

42.0% of the equity of AA was sold to Inversiones Aguas Metropolitana Ldta (IAM, Suez-Lyonnaise and Aguas de Barcelona) for USD957million in 1999 and a further 7.9% for USD178million, valuing the company at USD2,180million. Various share sales have taken place since 1999, resulting in 42.8% being held by outside investors, with 5% of the equity in Government hands (CORFO) and 2.4% held by Chilean pension funds.

Aguas Andinas - service development

Revenues are expected to double in the next ten years because of service expansion. At present its charges are amongst the lowest fees in Latin America. Tariffs vary by company, for AA in 2008 it was CLP266 per m^3 and for sewerage CLP242 per m^3 compared with CLP339 per m^3 for water and CLP179 per m^3 for sewerage at Aguas Cordillera and CLP378 per m^3 for water and CLP565 per m^3 for sewerage at ESSAL.

Currently, 100% of the population is served with piped water and 99% by mains sewerage and 100% of sewage effluents are treated, compared with 3% in 2000. Service expansion in recent years has concentrated on adding new connections as Santiago's population has risen. 7,800 connections were added in 2003 through the award of six new concessions, along with two concessions serving 135 customers in 2004 and four serving 1,080 customers in 2005. 2,116 customers were gained through six new concessions in 2007 and in 2008, seven concessions were gained in the Santiago area, serving 5,523 clients, with a further ten under consideration, serving 10,409 clients. Water is also provided to 43,542 customers (261,252 people) living in rural areas which previously did not have a service. This continues, with 3,745 new customers from 20 local concessions being gained in 2014.

Aguas Andinas - service development, 2003-2014

Year	Aguas Andinas		Aguas Cordillera		ESSAL	
	Water (km)	Sewerage (km)	Water (km)	Sewerage (km)	Water (km)	Sewerage (km)
2003	10,683	8,664	1,237	1,056	N/A	N/A
2004	10,820	8,759	1,264	1,060	N/A	N/A
2006	11,111	8,994	1,322	1,084	N/A	N/A
2008	11,621	9,398	1,420	1,123	1,804	1,579
2010	11,699	9,303	1,415	1,061	1,876	1,685
2012	11,572	9,432	1,332	1,069	2,076	1,733
2014	11,700	9,526	1,347	1,077	2,171	1,755

During 2003, 71% of capital spending was for sewage treatment and 11% for sewerage. Water distribution accounted for 8% and bulk water treatment 4% with 6% going on information technology and monitoring. The lower spending in 2004-05 reflects the completion of the main elements of the sewage treatment programme, sewage treatment accounting for 21% of spending in 2005. CLP325billion on capital spending in 2000-2004, compares with CLP85billion in 1995-1999.

Aguas Andinas - capital spending, 2002-2014

Year (CLPbillion)	Aguas Andinas	Aguas Cordillera	ESSAL
2002	92.33	5.45	N/A
2003	75.51	6.44	N/A
2004	28.31	5.06	N/A
2005	22.18	7.74	N/A
2006	25.88	10.97	N/A
2007	29.75	9.34	N/A
2008	59.40	16.62	2.84
2009	63.01	12.68	9.11
2010	53.95	7.80	6.96
2011	134.84	3.46	5.48
2012	79.78	4.95	6.68
2013	64.48	9.20	8.51
2014	60.09	19.20	9.04

Aguas Andinas - sewage treatment works

Facility	Completion date	Cost (USDmillion)	Capacity (m^3/s)	Treatment coverage
El Trebal	2001	150	4.4	23.2%
La Farfana	2003	315	8.8	71.8%
Mapocho	2012	420	6.6	100.0%

The Farfana sewage treatment works handles sewage from 3.3million people, placing it amongst the five largest WWTWs in the world. The USD700million sewage treatment programme involves the construction of 13 smaller WWTWs for 610,000 people in outlying areas. The water recovered from these facilities will be used to irrigate 130,000ha of farmland. In 2008, biogas from the La Farfana facility was treated to provide gas for 35,000 households.

In April 2010 a EUR260million contract was signed with Agbar (51%) and Degrémont (49%) to extend the Mapocho plant from 380,000m^3 per day to 760,000m^3 per day doubling the number of people it serves to 4million. The expanded plant entered service in 2012.

Aguas Andinas - Profit & loss account, 2010-2014

Y/E 31/12 (CLPmillion)	2010	2011	2012	2013	2014
Water revenues	136,573	147,715	152,918	157,307	171,488
Sewerage revenues	148,169	166,504	174,838	184,299	202,001
Other – regulated	12,994	11,707	14,908	16,557	20,282
Other – non regulated	31,228	36,854	40,182	45,716	46,693
Turnover	328,964	362,768	382,886	403,879	440,734
Operating profits	149,786	173,230	186,713	183,827	207,412
Net income	103,850	111,479	121,270	116,676	119,422
EPS (CLP)	17.00	18.00	20.00	19.00	20.00

Service data	2010	2011	2012	2013	2014
Water clients ('000)	1,909	1,946	1,984	2,039	2,097
Sewerage clients ('000)	1,866	1,905	1,944	1,999	2,046
Water coverage	100%	100%	100%	100%	100%
Sewerage coverage	99%	99%	99%	99%	TBC
Sewage treatment coverage	76%	86%	100%	100%	100%

Service data	2010	2011	2012	2013	2014
Water billed (m m3)	521	534	539	550	559
Sewage collection billed (m m3)	507	522	527	534	541
Sewage interconnections (m m3)	116	119	120	119	119

Acquired activites in Chile

Contracts

Year	Location	Contract & length	People served & service
2008	ESSAL	Acquisition	700,000 water & sewerage

Iberdrola's Iberener acquired 51% of Empresa de Servicios Sanitarios de Los Lagos SA (ESSAL) from the Chilean Government for USD94million in 1999. AA acquired 54% of ESSAL for CLP72.5billion in March 2008. ESSAL is one of Chile's smaller water companies and is based in Region X in the south of the country ESSAL serves 186,000 customers (700,000 people, against 500,000 in 1999) in the Region, which includes the cities of Osorno and Puerto Montt, with a population growth of 6% per annum. USD240million in investments have seen 100% treated water connection rate in 2009, along with 92% connected to sewerage and 91% sewage treatment.

2000	Santiago	Aguas Cordillera	315,000, water & sewerage

Enersis sold Aguas Cordillera to AA for USD193million in June 2000. The second highest bidder was Biwater at USD179million. In 2000 Aguas Cordillera served 110,636 customers (280,000 people) for water and 108,919 for sewerage in the Vitacura, Las Condes and Lo Barnechea districts of Santiago. By 2008, the number of customers had increased to 131,398.

2000	Santiago	Aguas Manquehue	13,000, water & sewerage

50% of Aguas Manquehue was acquired in 2000 and the remaining 50% in 2003. The company has 4,982 water and 4,837 sewerage customers. The company, along with Aguas Los Dominions was integrated into Aguas Cordillera in 2008.

Customer accounts - 2011-14

Zone	2011	2014
Mapio	118,811	127,765
Anticlo	533,948	555,907
Cordillera-Mapue	557,681	592,132
Mapocho	558,717	609,845
ESSAL	197,482	211,350
Total	1,966,639	2,096,999

Sources:

Aguas de Barcelona, Annual Reports, 1999-2003

Suez Environnement, Annual Reports, 1999-2003

Aguas Andinas, Annual reports, 2003-2014

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China

Anhui Guozhen Environmental Protection

Population served by service and country 2014 data Anhui Guozhen	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	6,700,000	0	6,700,000
Global total	0	6,700,000	0	6,700,000
% home markets	-	100%	-	100%

The Anhui Guozhen Environmental Protection Technology Company (GZEP), is owned by the Anhui Guozhen Group Ltd. Co. GZEP was founded in 1997 and has been the lead builder for some 30 wastewater treatment plants and has been involved in the construction of over 200 other wastewater treatment plants. In 2009 Marubeni acquired 30% of the company's equity. Post the IPO in 2014 on the Shenzhen SE ChiNext, Marubeni holds 22.5%, Anhui Goezhen Group 44.1% and 33.4% was floated.

Anhui Guozhen Environmental Protection - Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover	344	463	504	638	1,023
Operating profits	46	58	65	74	85
Pre-tax profits	57	67	85	71	71
Net income	52	57	76	58	52
Earnings per share (RMB)	0.26	0.29	0.38	0.29	0.23

Contract awards

A total of ten BOT and TOT contract awards were originally identified, the first five of which were generating revenues of approximately USD13million per annum in 2005. These contracts serve approximately 6 million people. In 2009 the total treatment capacity was 650,000 m^3 per day.

2000: BOT for the Bozhou City Wastewater Treatment Plant with a capacity of 80,000 m^3 per day.

2001: 15 year operating contract for two wastewater treatment plants in Shenzhen City (total city population of 1.285million in 2005).

2001: BOT project in Guangdong Province, the Xinhui East Wastewater Treatment Plant. The wastewater treatment plant serving the Xinhui District of Jiangmen (Guangdong Province) opened in

October 2003. The municipality had estimated that the 80,000m^3 per day WWTW would have cost CNY280million to develop and finance. Xinhui had a population of 735,500 in 2005.

2003: First BOT project in Anhui Province, the Zhuzhuanjing Wastewater Treatment Plant.

2003: 30 year TOT for Xu Zhou Kuihe River wastewater treatment plant with capacity 165,000 tonnes per day (city population of 1.662million in 2005).

2004: 20 year TOT for the Changsha Second Wastewater Treatment Plant with a capacity of 140,000 tonnes per day (city population of 2.051million in 2005).

2005: The management of the Shenzhen Caopu Sewage Treatment Plant was taken over in April. The treatment capacity of Shenzhen Buji Caopu Sewage Treatment Plant is 150,000m^3 per day.

2007: BOT for Lankao County (25,000m^3 per day), Suqian City Yanghe (10,000m^3 per day) and Wuhu City Tranmenshan (Phase1, 60,000m^3 per day).

In 2013 the company stated it handled 37 sewage projects in seven provinces with a 2 million m^3 / day capacity, equivalent to serving 10 million people.

In 2014, 30 sewage treatment BOT & TOT projects with a total capacity of 1,340,000 m^3 per day along with 1,220,000 m^3 per day in O&M projects. It is understood that these are all long term O&M projects.

Sources:

Company web site

Bloomberg / FT.com

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Jian Xingchao (Chief Engineer)

Wu Hao (Vice President)

China

Beijing Capital Co

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Beijing Capital	Only	Only	Sewerage	
China	7,500,000	16,320,000	0	23,820,000
Global total	7,500,000	16,320,000	0	23,820,000
% home markets	100%	100%	0%	100%

The Beijing Capital Group was founded in 1995 through the amalgamation of 17 state owned enterprises in Beijing. In 1999, the company entered the water sector when it acquired the Gao Bei Dian Water Treatment Plant from the Beijing Municipal Water Treatment Company. Since 1989, the Group has invested over CNY6billion in urban infrastructure development and has average returns of 9-12% on its water activities. BCC was partly floated on the Shanghai Stock Exchange in 2000. It's 72.6% held subsidiary Beijing Capital Co. (BCC) was listed on the Shanghai Stock Exchange in 2000. BCC has invested in a series of water joint ventures and has started to operate its own water contracts, generating revenues of CNY14.8million in 2003.

Water revenues accounted for 73% of BCC's revenues in 2007. BCC's water treatment capacity in 2005 was 6million m^3 per day, supplying 10million people in total. The capacity rose to 7.4million m^3 per day, serving 14million people in 2006 and by the end of 2007, and total capacity was 8.3million m^3 per day. BCC aimed to have a total treatment capacity of 15million m^3 per day by 2010. In 2014, water treatment capacity was 5.927 million m^3 per day and 9.005 million m^3 per day for wastewater treatment (source, GWI, August 2015).

Beijing Capital Co - Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover – Water supply	659	645			
Turnover – Sewerage	934	1,196			
Turnover	3,037	3,538	3,383	4,231	5,589
Operating profits	485	615	620	757	762
Net profits	483	523	581	601	610
Earnings Per Share (CNY)	0.22	0.24	0.26	0.27	0.28

Principal joint venture companies:

Beijing Water Co., Ltd. A joint venture established in 2002 by Beijing Urban Drainage Group (51%) and Beijing Capital Co., Ltd (49%), Beijing Water Co., Ltd is focused on city sewage treatment. Its registered capital is CNY4.02billion, ranking first in China. Its two subsidiary factories, Gaobeidian Sewage Treatment Factory and Jiuxianqiao Sewage Treatment Factory, have a total capacity of 2.1million m^3 per day, accounting for 81% of sewage handling capacity in Beijing. 1.2million m^3 per day of capacity was operational in 2006 with 900,000m^3 per day (serving 2.88million people) under construction.

Contracts

Year	Location	Contract & length	People served & service
2002	Maanshan	30 year BOT	800,000 water provision

The Maanshan Capital Water Co., Ltd was established by Beijing Capital Co. Ltd, in 2002, with a 30 year concession, BCC has invested CNY90million and holds 60% of the equity. The total capacity of the joint venture is 455,000m^3 per day. The company is developing water treatment works in eastern China: Shandong, Jiangsu, Zhejiang and Anhui.

2006	Anyang	25 year BOT	600,000, sewage

The contract covers the Anyang East District Sewage Treatment Plant, with a 120,000m^3 per day capacity.

2006	Tongling, Anhui	30 year BOT	630,000 water

Tongling Capital Water Co., Ltd. was founded in May 2006 with a registered capital of RMB87 million and a 30-year exclusive water supply franchise. It has a capacity of 370,000 m^3 per day, now serving about 630,000 people.

Beijing Capital VW Investment Co, Ltd.

This company was founded in 2003 following a strategic agreement signed in 2001 and has a registered capital of USD30million; Beijing Capital Co., Ltd (51%) and Veolia Water Investment (49%). This was the first Sino-Foreign investment company in this sector. Three contracts have been gained to date, in Shenzhen, Baoji and Weinan.

In December 2003, the joint venture announced that it was paying CNY2.94billion for a 40% stake in the Shenzhen Water Group (SWG). Shenzhen Water Holdings Co., Ltd (SWH) was formed out of the merger of the former SWG with the former Shenzhen Sewage Administration on 28 December 2001. This water wastewater service company operates five water treatment plants, four wastewater treatment plants, four sewerage system and 15 fully owned or holding companies. BCC has 55% of the contract's equity, Veolia Environnement 40% and CGE-BC Water Investments 5%. As a water supply and sewage company SWH's total asset amounts to CNY6.6billion and net assets to CNY5.9billion, of which about CNY2billion is from the former SWG and about CNY4billion from sewage assets.

Contracts

Year	Location	Contract & length	People served & service
2003	Shenzhen	25 year BOT	2,400,000 water & sewage

SWH was formed out of the merger of the former SWG with the former Shenzhen Sewage Administration on 28 December 2001. This is the first water group that has transformed from a water company to a company with both water service and wastewater service. With total assets of over CNY6 billion which include five water plants, four wastewater processing plants, five branches, four sewage systems and 15 fully owned or holding companies, the state-owned SWH treats 1.672million m^3 per day, 93% of Shenzhen City's drinking water, along with a sewage treatment capacity of 1.082million m^3 per day, accounting for 95% of the City's total. It supplies 500million m^3 of water and treats 300million m^3 of wastewater and its annual turnover is over RMB1billion.

2005	Weinan	29 year BOT	300,000 water provision

In 2005, Beijing Capital Co., Ltd, Veolia Water, and Weinan Water Supply Co., Ltd founded the Weinan VW-BC Operation Co., Ltd. The operation period is 25 years, with BCC holding 44% of the equity, VE 26% and the municipality 30%. Its design capacity is 70,000m^3 per day, covering water provision for 300,000 people.

Other contract gains noted

Year	Location	Contract & length	People served & service
2006	Linyi	30 year BOT	1,000,000 wastewater treatment

The Linyi Capital Water Co., Ltd. is 40% held by Beijing Capital Co., Ltd, along with 30% by Beijing Capital (HK) Ltd and Linyi Wastewater Treatment Plant holding 30%. The treatment capacity of the company is 150,000m^3 per day, including 100,000m^3 per day in the first phase and 50,000m^3 per day in the second phase, expanding coverage from 600,000 to 1,000,000.

2011	Linyi County	30 year BOT	570,000 water

The Linyi County Capital Water Co., Ltd. has a registered capital of RMB66.9 million. This urban-rural integrated water service project in Linyi County was initiated to provide 75,000 m^3 per day of potable water to 570,000 people who previously depended on contaminated supplies.

2004	Qingdao	BOT	250,000 water provision

Qingdao Capital Ruihai Water Co., Ltd. is 40% held by BCC, with the rest being held by Qingdao Municipal Drainage Management Section and Qingdao City Development & Investment Co., Ltd. This joint venture company provides 80,000m^3 of water each day and serves 250,000 people.

2004	Yuyao	25 year BOT	680,000 water provision

The Yuyao Capital Water Co., Ltd is 95% held by BCC and was formed in January 2004. It has a 25 year contract to supply 680,000 people with drinking water, with an average supply of 200,000m^3 per day.

2004	Xuzhou	30 year BOT	2,000,000 water provision

The Xuzhou Capital Water Co., Ltd is 80% held by BCC and 2% by the Xuzhou Tap Water Company. The company supplies 692,000m^3 of water per day, covering a population of 2 million. In 2013 the plant was expanded and upgraded.

2005	Qinhuangdao	25 year BOT	720,000 water treatment

Qinhuangdao Capital Water Co., Ltd is 51% held by BCC and 49% by the Qinhuangdao Public Utilities Department. It has a water supply capacity is 390,000m^3 per day, covering a population of 720,000.

2004	Huainan	30 year BOT	550,000 water & wastewater

Huainan Capital Water Co., Ltd. is 88% held by BCC and 12% by Huainan Water Service Co., Ltd. The company has a water treatment capacity of 270,000m^3 per day and a sewage treatment capacity of 100,000m^3 per day, serving a population of 550,000.

2007	Hewenhu	30 year BOT	500,000 water & wastewater

In September 2007, BCC acquired 65% of the Jiujiang Hewenhu Environmental Protection Co., Ltd. from Shenzhen Jin Da Lai Environmental Protection Co., Ltd. and Jiangxi Jin Da Lai Environmental Protection R&D Centre Co., Ltd. The company gained the Hewenhu Sewage Plant and Tail Water Discharge Project BOT in Hewenhu, Jiangxi in 2006. Hewenhu Sewage Plant is expected to process polluted water of 100,000m^3 per day after the first-stage construction, rising to 300,000m^3 per day in the future.

2008	Dongying	30 year BOO	600,000 water & wastewater

In December 2007, Beijing Capital Co., Ltd. and Guozhong Water Investment Co., Ltd. agreed a 30 year BOO contract serving the Shandong Dongying Economic Development Zone Sewage Treatment Plant with a 120,000m^3 per day capacity. BCC also reached a Strategic Cooperation Agreement with Hunan Provincial People's Government in Changsha for the franchise rights to construct and operate new sewage treatment installations in Hunan Province.

2008	Taiyuan, Shanxi	25 year BOT	770,000 sewage treatment

A CNY400million project, designed to boost the municipality’s wastewater treatment capacity by 200,000m^3 per day.

2008	Haining, Zhejiang	25 year TOT	550,000 water provision

The Dinqiao Sewage Treatment Plant will have a 100,000m^3 per day capacity. At the same time BCC acquired 60% of a joint venture with Haining Water Service Group to develop opportunities in the province.

2010	Zhengzhou	30 year BOT	1 million, wastewater treatment

A BOT contract for the Qilihe Wastewater Treatment Plant in Zhengzhou Economic and Technical Zone was signed in January 2010, with an estimated investment of RMB165.2 billion. The full capacity will be 200,000m^3 day, with the first phase having a 100,000m^3 per day capacity.

2011	Liaobin, Panjin	30 year BOT	Water provision

A water supply project for the Liaobin Coastal Economic Zone, Panjin was signed in August 2011. BCC has a 51:49 joint venture with Liaobin Honghai Water Services Co., Ltd. This covers the 306km^2 planned area of the zone for water treatment and supply.

2011	Shengxin	30 year BOT	750,000, sewage

Shaoxing Shengxin Capital Sewage Treatment Co., Ltd. has a registered capital of RMB253 million. Phase I now has a sewage treatment capacity of 150,000 m^3 per day, which is expected to reach 300,000 m^3 per day in the future.

2010	Enshi	30 year BOT	300,000, sewage

The Enshi Capital Water Co., Ltd. has a registered capital of RMB40 million and total investment of RMB100 million in this project, which has a design capacity of 60,000 m^3 per day.

2005	Heze	26 year BOT	300,000, sewage

Heze Capital Water Co., Ltd. has a registered capital of RMB40 million and spent RMB137 million on the 60,000 m^3 per day facility.

2015	Yanqing, Beijing	30 year BOT	200,000, water reuse

The contract is for a 40,000 m^3 per day facility which it is planned will grow to 100,000 m^3 per day. RMB191 million will be spent on the two year construction work for the first phase. Beijing Longqing Water Services Co., Ltd. is planning to increase its registered capital by RMB76 million for the project’s investment, construction and operation.

2008	Anqing	30 year BOT	600,000, sewage

Anqing Capital Investment Co., Ltd. has a registered capital of RMB72 million. The facility has a designed sewage treatment capacity of 120,000 m^3 per day.

2008	Shenzhen	22 year BOT	1,500,000, sewage

Shenzhen Capital Investment Co., Ltd. has a registered capital of RMB227 million. It has 3 sewage treatment plants in Furong, Yanchuan and Gongming. The short-term designed daily capacity is 375,000 m^3 per day with a long-term designed daily capacity of 750,000 m^3 per day.

2008	Hunan & Hubei	30 year BOT	5,000,000, sewage

Hunan Capital Investment Co., Ltd. was founded in February 2008, with a registered capital of RMB650 million. It has 16 sewage treatment contracts with Loudi, Zhuzhou, Yiyang, Zhangjiajie, Xiangxi, Shaoyang, Changde, Yueyang and Hengyang in Hunan Province and Jingzhou and Enshi in Hubei Province. The company currently has total assets of RMB1.8 billion, with a daily operational sewage treatment capacity of over 1 million tons.

Sources:

FT.com / Bloomberg / Reuters

Company web site

Global water Intelligence

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China

Cheung Kong Infrastructure Holdings Ltd

Population served by service and country 2014 & 2015 data CKI	Water Only	Sewerage Only	Water & Sewerage	Total
England & Wales	1,669,000	0	2,714,000	4,383,000
Scotland	0	890,000	0	890,000
Gibraltar	26,000	0	0	26,000
Ireland	0	220,000	0	220,000
United Kingdom				
Total - home markets	0	0	0	0
Total - international	1,695,000	1,110,000	2,714,000	5,519,000
Global total	1,695,000	1,110,000	2,714,000	5,519,000
% home markets	0%	0%	0%	0%

Cheung Kong Infrastructure (CKI) is 85% held by Hutchinson Whampoa Limited and was partly floated on the Hong Kong Stock Exchange in 1996. CKI invested HKD69million in the HKD140million Yueyang water treatment works project serving Yueyang City (Hunan Province) in 1998. This stake was sold for an HKD11million profit in 2003. In addition, CKI's CK Life Sciences has developed a series of bioremediation product applications; WonderTreat™, for treatment of municipal wastewater, contaminated surface water and industrial wastewater. CKI acquired AquaTower of Australia in March 2004. In April 2004, CKI acquired Cambridge Water Plc of the UK from Spain's Union Fenosa for GBP51.4million. Union Fenosa had in turn acquired Cambridge Water for GBP57million in 1999. In July 2011, Cheung Kong Infrastructure Holding Ltd (CKI) of Hong Kong approached Northumbrian Water about acquiring the company. Northumbrian Water agreed to a bid in August 2011 valuing the company at GBP2, 412million. As part of the transaction CKI sold its holding in Cambridge Water Plc to HSBC. CKI holds 4.75% of Southern Water Plc.

Cheung Kong Infrastructure - Profit & loss account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Turnover	2,184	3,493	4,105	5,018	6,100
Pre-tax profits	5,175	8,266	10,056	12,254	32,346
Net profits	5,028	7,745	10,082	12,320	32,325
Earnings Per Share (HKD)	2.23	3.38	3.93	4.77	13.00

Source: CKI, Annual Reports, 2010-2014

Cheung Kong Infrastructure- International activities

Australia: AquaTower

AquaTower Pty Ltd was formed in 2002 to provide potable water to 25,000 people in four regional towns in Victoria. CKI was one of the two original investors in the 25 year BOT project and in 2004 acquired the outstanding 50% held by Abigroup of Australia, CKI holding 49% and CK Life Sciences holding 51%.

Northumbrian Water

Northumbrian Water Plc was acquired by Suez in 1996. It was subsequently transformed into the holding company for all of Suez's water activities in Britain, along with being the base for their Anglophone markets. In 2001, Northumbrian Water Group was renamed Ondeo Services UK. The regulated water and sewerage activities of OSUK consist of the 1996 merger of Northumbrian Water Services Limited and North East Water Limited and the consolidation of Essex and Suffolk Water Limited. In May 2003, Suez reduced its stake to 25% through a buyout to a consortium set up by Ecofin Limited. The company was renamed Northumbrian Water Plc, floated on the AIM and returned to a full London Stock Exchange Listing in September that year. Suez sold its remaining stake in 2005.

In May 2004, Northumbrian Water arranged a GBP212million refinancing based on the securitisation of its Kielder Water cash flows through a 30 year bond. The Kielder contract with the Environment Agency generated revenues of

GBP12.6million and an operating profit of GBP12.3million in 2007-08. Kielder revenues were GBP13.6million in 2010-11.

Northumbrian Water, Profit & loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Northumbrian Water turnover	689.4	730.6	730.0	750.3	761.5
Other water turnover	54.1	-	-	-	-
Group turnover	**738.1**	**730.6**	**730.0**	**750.3**	**761.5**
Northumbrian Water profit	297.6	320.4	-	329.9	297.8
Other water profit	6.4	-	-	-	-
Group operating profit	**304.2**	**320.4**	**327.4**	**329.9**	**297.8**
Group pre-tax profit	181.0	214.3	212.7	212.3	187.2
Net profit	178.4	143.1	150.0	167.9	149.8

2012 and subsequent years is for the regulated activities only

Source: Northumbrian Water, Regulatory Accounts, 2011-2015

Northumbrian Water Services Limited

The merger of Northumbrian Water Limited (NWL) with North East Water (acquired by Suez in 1989) allowed for immediate economies of scale. The only water entity in the region not held by NWG is Hartlepool Water (92,000 people), which was acquired by AWG in 1997. Essex & Suffolk Water (acquired by Suez in 1988) was merged with Northumbrian during 2000 and now operates under a single licence via two divisions, NWL North in the Northumbrian Water area and NWL South serving the Essex & Suffolk Water area. NWL is now the sixth largest water and sewerage company in England and Wales.

Resources at Essex & Suffolk are being boosted through a series of water reuse projects at the Langton water treatment works using water from the Brookend WWTW operated by AWG. Metering in Essex has increased from 0% in 1990 to 34% by 2006. Metering was 20% in Northumbria in 2009, compared with 43% in Essex and 56% in Suffolk.

Northumbrian Water, breakdown of service coverage, 2000 and 2014

Population served [1]	Water	Sewerage	Total
Northumbrian Water (2000)	1,328,000	2,714,000	**2,714,000**
North East Water (2000)	1,195,000		
Essex & Suffolk Water (2000)	1,662,000	0	**1,662,000**
Total (2014)	**4,383,000**	**2,714,000**	**4,383,000**

[1] Water - individual area data is from 2000, licences have subsequently been merged

Source: Water UK, industry facts and figures, 2014

The company's GBP200million Regional Sludge Treatment Centre at Bran Sands was completed in 2002 and is designed both to treat effluents from 500,000 people and to offer effluent treatment services to major industrial customers. These include Corus Plc, Shell Plc, and Huntsman & Vopak who signed contracts in 2003-04 and a 25 year contract with Degussa in 2004-05. Phillips Petroleum signed a 15 year water treatment contract in 2000. In 1999, NWL signed a contract for water provision to all of the Scottish Courage breweries in the UK.

Northumbrian Water International (NWI)

Suez developed NWG's international activities so that they address Suez's potential English-speaking markets. The Australian activities have been kept by Suez.

Gibraltar

This is a water service provision contract in a joint venture with the Government, along with a management contract for sewage pumping and utility billing and meter reading services. 26,000 people are served. The 30 year contract was awarded in 1991. NW holds 67% of AquaGib Limited, which generated a turnover of GBP7.8million in 2002. Due to limited water resources, particular emphasis has been placed on leakage management and total losses are currently 8%.

Scotland

Contracts

Year	Location	Contract & length	People served & service
1999	Levenmouth	40 year PFI BOT	440,000 sewage treatment
1999	Ayr	30 year PFI BOT	450,000 sewage treatment

The two contracts were awarded to a consortium consisting of Northumbrian Water, Degrémont and AMEC, in the case of Ayrshire, and Northumbrian Water and Degrémont in the case of Levenmouth. Each contract involves GBP50million in capital spending. NWG holds 100% of Caledonian Environmental Services' (Levenmouth) equity and 75% of Ayr Environmental Services' equity. These contracts are being used to form the basis of PFI type contract marketing in Ireland.

Ireland

Contracts

Year	Location	Contract & length	People served & service
2002	Cork	22 year BOT	220,000 wastewater treatment

The EUR70million contract is part of a EUR270million drainage and effluent treatment scheme for the city, which was completed in September 2004. The STW has a 270,000m^3 capacity with a PE of 440,000, half being for industrial clients.

A second contract in Cork, covering the Fermoy and Mallow WWTWs was gained in March 2011.

Sources:

Northumbrian Water Group, Listing Document, 2003

Northumbrian Water Limited, regulatory accounts, 1999-2015

CKI, Annual Reports, 2010-2014

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China

China Everbright International

Population served by service and country 2014 & 2015 data China Everbright	Water Only	Sewerage Only	Water & Sewerage	Total
China	0	14,585,000	0	14,585,000
Global total	0	14,585,000	0	14,585,000
% home markets	-	100%	-	100%

China Everbright International (CEI) is a Hong Kong based company active in various provinces. Water and wastewater activities are managed by its China Everbright Water International Ltd (CEWIL) subsidiary.

Acquisition of HanKore and reverse takeover

Bio-Treat Technologies specialises in developing and implementing wastewater systems using its BMS Biological Process Technology. This process was developed by the company in 1993 and has been used in 500 waste and wastewater treatment projects in China. In January 2004 and gained its first BOT contract in China (Kunshan) in February 2004. Since then, the company has gained 11 BOT and TOT water and wastewater treatment contracts serving an estimated 7.86million people. The company was restructured and renamed HanKore Environment Tech in 2011.

In 2014, CWEIL acquired HanKore. The reverse takeover was completed in December 2014. In 2014, HanKore has a water related turnover of HKD 911 million, and CEWIL's revenues were HKD 1,051 million.

China Everbright Water International and HanKore

	Plants	Capacity
		(million m^3 per day)
CEWIL - sewage	21	1.83
CEWIL - water reuse	4	0.06
HanKore - sewage	11	1.57
Total	36	3.46

In December 2014, CWEIL's water activities were spun off into the HanKore subsidiary and listed on the Singapore exchange as China Everbright Water Lid.

China Everbright International - Profit & loss account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Wastewater turnover	856.7	804.5	1,267.4	1,290.7	1,060.8
Turnover	2,929	3,487	3,410	5,320	6,355
Operating profits	1,023	1,260	1,483	2,127	3,675
Net profits	616	737	881	1,325	1,703
Earnings Per Share (HKD)	0.17	0.22	0.29	0.33	0.38

In 2011, the company had 19 wastewater treatment projects with a total annual wastewater treatment capacity of 657million m^3, along with three wastewater reuse projects (22.3million m^3) and one surface water project (36.5million m^3). In 2011, the company treated 501million m^3 of wastewater.

China Everbright Water International - development of treatment capacity, 2012-2014

Million m^3 pa	2012	2013	2014
Wastewater capacity	657	668	938
Wastewater treated	509	526	585
Water reuse capacity	22	22	22

Shandong Province

Contracts

Year	Location	Contract & length	People served & service
2005	Qingdao	25 years BOT / TOT	1,100,000 wastewater treatment

The Everbright-Veolia Water joint venture was signed in 2003. In August 2004, CEI, Veolia Water and the Qingdao Municipal Government started a project covering the city's Qingdao Haibohe and Qingdao Maidao Waste Water Treatment Plants. The total investment cost of the project is USD42.8million, with CEI holding 60% of the project's equity. CEI is the lead player in the asset owning contract (Qingdao EB-VW Waste Water Treatment Co. Ltd.) and Veolia is the lead player in the operating contract (Qingdao Veolia Water Operating Company Limited). Commercial operation of the plants started in January 2005, with a treatment capacity of 150,000m^3 per day. During 2009, 67.3million m^3 of sewage was treated, compared with 54.4million m^3 in 2005. In March 2005, a consortium led by Veolia Water Systems was appointed by the operating company to extend the plant, boosting overall treatment capacity to 220,000m^3 per day with a total investment of CNY356million. This facility entered service in July 2007. In 2014, CEI acquired 78% of the venture.

2005	Zibo	25 years TOT	1,200,000 wastewater treatment

CEI gained a concession for Zibo's wastewater treatment with the Zibo Municipal Government, Zibo Finance Bureau and Zibo City Environmental Protection Bureau and Zibo City Fisheries Bureau in September 2005. This is a 25 year contract for two plants on a TOT basis, with an investment cost of CNY354million. Operations started in December 2005, with the rehabilitated facilities entering service in May 2008, raising its operating capacity to 250,000m^3 per day.

2007	Zibo	25 years BOT	Industrial wastewater treatment

This facility is to serve the city's High-tech Zone, the first phase of which cost CNY150million with an operating capacity of 100,000m^3 per day.

2009	Zibo	25 years BOT	200,000 wastewater treatment

This is for the city's Zhouchun facility, the first phase of which cost CNY70million with an operating capacity of 40,000m^3 per day.

2008	Boxing County	30 years, TOT	300,000 wastewater treatment

In February 2008, CEI signed a two phased wastewater treatment contract with the Boxing County Government, Shandong Province. This covers a 30,000m^3 per day TOT contract (Phase I, a works upgrade) and Phase II, a 30,000m^3 per day BOT contract which entered service in 2009. The project cost CNY85million, financed by raising the waste water treatment service fee will be increased from CNY0.75 per tonne to CNY0.9 per tonne. Boxing neighbours Zibo City and has a population of about 478,000.

2008	Jinan	26 years BOT	500,000 wastewater treatment

In March 2008 CEI signed a concession with the Jinan Municipal and Public Utility Bureau for a 26 year BOT, 100,000m^3 per day Jinan Number 3 wastewater treatment works. The CNY138million facility opened in October 2009.

2006	Jinan	30 years TOT	2.5 million wastewater treatment

The first phase of the Jinan Waste Water Treatment Upgrade Work Project, covering the waste water treatment plants No. 1 and 2 were completed in May 2009 for approximately CNY420million. CEI acquired the two waste water treatment plants in Jinan City by way of TOT in 2006 and secured operation rights of the plants for 30 years. After the completion of the refurbishment work in 2007 and extension work worth CNY287million carried out in 2009, their waste water treatment capacity is approximately 500,000m^3 per day.

2009	Jinan	28 year BOT	500,000 wastewater treatment

Licheng (Phase 1) is the third wastewater treatment works in the city, with a capacity of 100,000m^3 of wastewater per day. It cost CNY138million to develop and entered service during 2009.

2009	Jinan	26 year BOT	150,000 wastewater treatment

Xike is the fourth wastewater treatment works in the city, with a capacity of 30,000m^3 of wastewater per day. It cost CNY72.7million to develop and entered service during 2010. It was upgraded in 2014.

2009	Ling Country 1	30 year BOT	150,000 wastewater treatment
2009	Ling Country 2	30 year TOT	150,000 wastewater treatment

The Dezhou Ling County Plant 1 facility entered service in 2010, at a cost of CNY34million, with a capacity of 30,000m^3 of wastewater per day. It was upgraded in 2014. The Plant 2 facility entered service in 2010, at a cost of CNY58million, with a capacity of 30,000m^3 of wastewater per day.

2013	Dezhou	25 year BOT	375,000 wastewater treatment

The Nanyunhe facility has a treatment capacity of 75,000m^3 per day and will cost CNY230million to develop, entering service in two phases in 2013.

2013	Jinan	28 year BOT	500,000 wastewater treatment

Licheng (Phase 2) is an addition to the third wastewater treatment works in the city, with a capacity of 100,000m^3 of wastewater per day.

2014	Zhangqui	BOT	150,000 WW treatment

CNY670.7 million project in Shandong, with a capacity of 30,000m^3 of wastewater per day.

2012	Binzhou	25 year BOT	Industrial WW treatment

A capacity of 40,000m^3 of wastewater per day.

2009	Zibo	20 year BOO	Wastewater reuse

The project entered service in 2011, at a cost of CNY44million, providing 4,800m^3 of reclaimed water per day.

2010	Jinan	24 year BOO	Wastewater reuse

The project which serves the Licheng facility, entered service in 2011, at a cost of CNY31million, providing 42,000m^3 of reclaimed water per day.

Jiangsu Province

Contracts

Year	Location	Contract & length	People served & service
2007	Jiangyin	Acquisition /30 year TOT	1million, wastewater treatment

In November 2007, Everbright Water (Jiangyin) Limited a joint venture between CEI and Jianguin's Xin Guo Lian took over four waste water treatment plants in Jiangyin City for CNY624million. CEI holds 70% of the joint venture. The facilities have a total capacity of 190,000m^3 per day and cost CNY201million to upgrade in June 2008 along with CNY267, 000 for acquiring the sewerage network. The asset owning element of the project was terminated in 2011.

2011	Jiangyin	25 year BOO	Wastewater reuse

The project which serves the Jiangyin facilities entered service in 2013, at a cost of CNY73million, providing 10,000m^3 of reclaimed water per day.

2006	Kunshan 1	29 year BOT	Industrial WW
2008	Kunshan 2	BOT	Industrial WW

The Kunshan Development Zone projects both have a capacity of 50,000 m^3 per day.

2008	Yangzhou	BOT	Industrial WW

Yangzhou Jiangdu Development Zone has a capacity of 12,500 m^3 per day.

2011	Nanjing 1	25 year BOT	200,000 sewage treatment
2013	Nanjing 2	16 year BOT	200,000 sewage treatment

Phase1 and 2 of Nanjing Liuhe have a capacity of 40,000 m^3 per day.

2009	Lianyungang Dapu	TOT	1,250,000 sewage treatment

This project has a capacity of 100,000 m^3 per day. Hong Kong's Perfect Grace Investments Limited owns 95% of the CNY140million project in a joint venture with Oriental Fortune, covering the rehabilitation and upgrading of the city's 100,000m^3 per day wastewater treatment plant. The plant was expanded to 250,000m^3 per day in 2011.

2001	Lianyungang Xugou	BOT	400,000 sewage treatment

Phase 1 of this project has a capacity of 80,000 m^3 per day. Hong Kong's Perfect Grace Investments Limited owns 95% of this CNY05million project in a joint venture with Oriental Fortune.

2010	Nanjing Pukou	30 year BOT	200,000 sewage treatment

Phase 1 of Nanjing Pukou has a capacity of 40,000 m^3 per day.

2009	Suzhou	30 year BOT	700,000 sewage treatment

The Suzhou Wuzhong Chengnan CNY500million contract was awarded in January 2006. It involves the construction of a 150,000m^3 per day facility which will eventually become a 450,000m^3 per day complex. Construction took place between mid 2006 and 2008.

2005	Suqian	30 year BOT	700,000 wastewater treatment

This covers two contracts gained in March 2005 worth a total of CNY178million for the construction of two plants with a capacity of 80,000m^3 per day and 60,000m^3 per day. Construction started in May 2005 and was completed in September 2006. Suqian is in Jiangsu Province.

Beijing

Contracts

Year	Location	Contract & length	People served & service
2008	Daxing	BOT	200,000 sewage treatment

The Daxing Tiananghe project has a capacity of 80,000 m^3 per day. The CNY110million contract was awarded in July 2006. The Construction started in 4Q 2006 and was completed within 24 months.

Shaanxi Province

Contracts

Year	Location	Contract & length	People served & service
2006	Xianyang 1	BOT	500,000 sewage treatment
2014	Xiangang 2	BOT	500,000 sewage treatment

Both phases of Xiangyang Nanjing Liuhe have a capacity of 100,000 m^3 per day. The Xianjiang contract incurred a CNY36million cost over-run in 2006. The contract's construction phase was originally meant to run from October 2004 to December 2006 at a cost of CNY288million. It entered service in May 2006 and has a capacity of 100,000m^3 per day. In 2012, Phase 2 saw the facility expanded to 200,000m^3 per day at a cost of CNY185 million.

2012	Liquan, Xianjiang	25 year BOT	160,000 wastewater treatment

Two phases had been completed by 2011-12, with a total capacity of 43,000m^3 per day, with the final capacity to be 60,000m^3 per day. The facility will provide 50,000m^3 per day of recycled water and the first phase cost CNY100million.

Henan Province

Contracts

Year	Location	Contract & length	People served & service
2009	Sanmenxia	25 year TOT	Industrial WW

The Sanmenxia Industrial Cluster Area WW Treatment Project Phase 1 has a capacity of 30,000 m^3 per day. The total capacity of the wastewater treatment works will be 150,000m^3 per day.

Guangdong Province

Contracts

Year	Location	Contract & length	People served & service
2008	Foshan	23 year BOT	250,000 wastewater treatment

The CNY66million plant will serve Shishan Town, in the Nanhai District of Foshan City. It will have a capacity of 50,000m^3 per day, entering service at the start of 2010.

Anhui Province

Contracts

Year	Location	Contract & length	People served & service
2008	Xuancheng	30 year BOT	250,000 wastewater treatment

The CNY66million plant will have a capacity of 50,000m^3 per day. It entered service at the start of 2010.

Sources:

Company web site and media releases

Global water Intelligence

Han Kore, Annual Reports 2010-2013

China Everbright, Annual Reports, 2006-2014

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Shuanging Tang (Chairman)

Xiaoping Chen (CEO)

Kam Chung Raymond Wong (CFO)

China

China Water Affairs Group

Population served by service and country 2014 data China Water Affairs	Water Only	Sewerage Only	Water & Sewerage	Total
China	12,750,000	1,750,000	1,050,000	15,550,000
Global total	12,750,000	1,750,000	1,050,000	15,550,000
% home markets	100%	100%	100%	100%

The China Water Affairs Group (CWAG) started operating water and sewage BOT contracts in 2002-03. The company provided 0.5million m^3 per day of water in 2006, serving 1.2million people. CWAG now operates 62 operating units in China. A number of other potential projects have been previously mentioned, but are not included here. USD300 million in loans were drawn up in 2014-15 including USD200 from the ADB. In 2015, the company acquired Goldtrust water for USD110 million. Goldtrust added 300,000 m^3 per day in water treatment capacity (and 750,000 m^3 per day in development) along with 725,000m^3 per day in sewage treatment through 15 projects.

Current and planned treatment capacity, 2015

M3 per day	Water	Sewage	Total
Current (April 2015)	5,348,000	723,000	6,071,000
Potential	6,098,000	1,098,000	7,196,000

Summary of facilities currently in operation in 2010 ('000m^3 per day)

Segment	Contracts	Capacity	People served
Bulk water	4	620	1,200,000
Potable water	27	4,377	8,600,000
Sewage treatment	5	286	1,000,000

Summary of facilities currently in operation in 2015 ('000m^3 per day)

Segment	Contracts	Capacity	People served
Bulk water	5	810	1,640,000
Potable water	37	5,438	9,260,000
Sewage treatment	20	723	2,075,000

Expansion phases of signed projects, 2015 ('000m^3 per day)

Segment	Contracts	Capacity	People served
Bulk water	0	0	0
Potable water	37	1,875	3,400,000
Sewage treatment	6	285	725,000

China Water Affairs Group - Profit & loss account, 2010-2014

F/Y 31/03 (HKDmillion)	2011	2012	2013	2014	2015
Water	884.1	1,049.7	1,490.4	1,733.9	1,875.4
Sewage	78.4	48.6	46.4	50.9	82.3
Turnover	1,398.2	1,478.2	1,896.9	2,250.7	2,746.6
Pre-tax profit	520.1	725.2	687.1	764.5	787.6
Net profit	444.7	600.5	532.5	525.5	557.6

The data below includes current capacity. Planned future capacity is added where indicated.

Current and planned capacity of projects (000m^3 per day)

Bulk Water Company	City / Province	Year	Stake	Size
Guangdong Xinhui Water Affairs	Huizhou, Guangdong	2008	50%	340
Hainan Xing Cheng Xiang Water Supply	Haikou, Hainan	2007	53%	100
Jiangxi Wannian Silver Dragon	Wannian, Jiangxi	2006	100%	30
Yanshan	Yanshan, Jiangxi	2014		190
Xinyu Water Affairs Group	Xinyu, Jiangxi	2008	60%	150

Drinking Water Company	City / Province	Year	Stake	Size
Jingwei	Jingwei, Beijing	2013		5
Yongchuan, Chongqing	Yongchuan, Chongqing	2007	100%	190 + 300
Guangdong Renhua Silver Dragon Water	Renhua, Guangdong	2003	73%	20 + 20
Huizhou Daya Bay Yiyuan Purified Water	Daya Bay, Guangdong	2008	70%	210
Shenzhen Big Industrial Zone	Shenzhen, Guangdong	2015		100 + 200
Zhengcheng	Zhengcheng, Guangdong	2010	16%	270 +150
Heyuan	Heyuan, Guangdong	2015		100 + 200
Wuzhou	Wuzhou, Guangxi	2010	49%	355
Hegang	Hegang, Heilongjiang	2013		50 + 40
Henan Yinlong (Fugou) Water Supply	Fugou, Henan	2006	100%	15
Henan Yinlong (Xihua) Water Supply	Xihua, Henan	2006	55%	30
Zhoukou Silver Dragon Water Affairs	Zhoukou, Henan	2006	70%	95
Henan Luyi Silver Dragon Water Supply	Luyi, Henan	2004	100%	150 + 100
Zhoukou II	Zhoukou, Henan	2013		95
Shilongnan	Shilongnan, Henan	2013		40
Yexian	Yexian, Henan	2013		35
Jiaozuo	Jiaozuo, Henan	2013		30
Jingzhou Water Supply	Jingzhou, Hubei	2007	51%	550 + 150
Jiangling Silver Dragon Water Affairs	Jiangling, Hubei	2007	100%	20 + 40
Ningxiang	Ningxiang, Hunan	2009	100%	130 + 160
Chenxi	Chenxi, Hunan	2013		20
Zixing	Zixing, Hunan	2013		53
Anxiang	Anxiang, Hunan	2013		40 + 50
Xingxiang	Xingxiang, Hunan	2013		40
Ruiyang	Ruiyang, Jiangxi	2013		40 + 40
Cunqian	Cunqian, Jiangxi	2013		25 + 75
Pengze	Pengze, Jiangxi	2013		60
Luxi	Luxi, Jiangxi	2012		30 + 50
Yanshan Silver Dragon Water Affairs	Qianshan, Jiangxi	2007	100%	40
Fenyi Silver Dragon Water Affairs	Fenyi, Jiangxi	2007	60%	30
Gaoan Water Affairs	Gaoan, Jiangxi	2007	60%	45
Gaoan Water Affairs II	Gaoan, Jiangxi	2010	60%	80
Xinyu	Xinyu, Jiangxi	2006	60%	125
Xinyu IV	Xinyu, Jiangxi	2008	60%	125
Shangli	Shangli, Jiangxi	2009	60%	20
Wannian	Wannian, Jiangxi	2006	100%	55 + 40
Yifeng Tap Water Company	Yifeng Company Jiangxi	2010	55%	90
Jian Water Supply Company	Jian, Jiangxi	2010	70%	200 + 80
Pingxiang Company	Pingxiang, Jiangxi	2011	51%	230 + 100
Foundation Gang-Wu (Changzhou) Water	Wujin, Jiangsu	2007	40%	700
Yungcheng	Yungcheng, Shanxi	2015		60
Changi Penghao	Changi, Shandong	2015		10 + 40
Qingdao Penghao	Qingdao, Shandong	2015		50 + 50

Sewage				
Company	**City / Province**	**Year**	**Stake**	**Size**
Tongsheng	Jingwei, Beijing	2013		20
Huizhou Daya Bay Qingyuan Env Prtn	Yongchuan, Chongqing	2008	70%	25
Fengfeng	Renhua, Guangdong	2013		20
Chengsheng	Daya Bay, Guangdong	2013		33
Zhenping	Shenzhen, Guangdong	2013		10
Shilong	Zhengcheng, Guangdong	2913		25
Hubei Jingzhou China Water Env Prtn	Heyuan, Guangdong	2006	100%	100 + 50
Wujin Wunan	Wuzhou, Guangxi	2015		40 + 100
Wujin Zouqu	Hegang, Heilongjiang	2015		10
Wujin City	Fugou, Henan	2015		80
Fenyi China Water Environmental Prtn	Xihua, Henan	2009	53%	10
Fenyi China Water Environmental Prtn II	Zhoukou, Henan	2009	53%	20 + 20
Wannian China Water Environmental Prtn	Luyi, Henan	2009	53%	15
Yanshan	Zhoukou, Henan	2009	100%	15 + 15
Baoji Shilipu	Shilongnan, Henan	2015		120
Baoji Chencang	Yexian, Henan	2015		50 + 50
Baoji High Tech Zone	Jiaozuo, Henan	2015		50 + 50
Zhongke	Jingzhou, Hubei	2013		30
Sisheng	Jiangling, Hubei	2013		30
Zhengkun	Ningxiang, Hunan	2013		20

Acquisition of Ming Hing Waterworks

Ming Hing Waterworks is the first Hong Kong based company that integrates waterworks, technology, engineering and investment management. It was founded in 1967. The company was renamed Mongolia Investment Group in 2010 and Peace Map Holding to reflect its move into aerial imagery in 2013. Ming Hing was sold by Peace Map to China Water Affairs in 2013.

Ming Hing established in January 2008 a strategic alliance with China Water Affairs and formed a 60% Ming Hing / 40% China Water joint venture to manage both parties' water assets in the PRC including over 30 water treatment and sewage plants, covering over 20 cities with a distribution network of over 9,000km of pipes for more than 10million people. The joint venture will also participate in the building of sewage plants, pipeline extension projects.

In May 2008, the company purchased 83.33% of the equity of a joint venture providing drinking water services via a water treatment plant and 40km distribution network in the Jiangkou Administration Area, Feilaxia Town, and Qingyuan City, Guangdong under a 30 year agreement. This serves 80,000 people and population in the area. After a CNY13million capital injection, the facility's treatment capacity has been upgraded from 10,000m^3 per day to 30,000m^3 per day.

In Hong Kong, 2014 revenues broke down as follows:

Replacement and rehabilitation projects - HKD454.3 million (56.4%)

Waterworks maintenance projects - HKD259.6 million (32.0%)

Slope maintenance projects - HKD92.3 million (11.4%)

Alliance with the China Water Industry Investment Group

A strategic alliance with the China Water Industry Investment Corporation (CWIIC) (81% held by various government bodies and 19% by CWAG) which provides 3.7million m^3 of water per day, along with 2million m^3 per day via associated companies. CWIIC has 19 water projects in Xinjiang, Inner Mongolia, Shandong, Beijing, Jiangsu, Sichuan and Zhejiang. In October 2007, China Water Affairs acquired 19.4% of CWIIC from Shanxi Wanjiazhai Yellow River Diversion Project General Company for CNY175million. CWIIC was founded in October 2004 as a national investment company focusing on investment, construction and operation of projects for urban water supply, sewage treatment and desalination. Xinjiang Changyuan Water Resources Industry Group Co Ltd (XCWR), a 60% owned subsidiary of CWIIC, acquired a 60% interest in Kuerle Huitong Yinquan Water Co Ltd, a water utility company, from Xinjiang Huitong Co Ltd, for CNY78million in 2007. Kuerle Huitong Yinquan Water is engaged in the urban water supply for Korla, Xinjiang Uygur Autonomous Region. Korla has a population of 380,000, up from 40,000 in 1982. Xinjiang Huitong's water revenues were CNY23.1million in 2005 and CNY27.6million in 2006, with part year revenues

of CNY12.3million in 2007. The company's interest in the China Water Industry Investment Corporation joint venture was sold to Jiangyin Chang Jioang Steel Pipes Company in 2010 for CNY236million. This resulted in a gain of HKD128million for the company.

Sources:

Investor presentations, 2007, 2015

Interim Report, 2015

Annual Reports, 2007-2015

Company web site

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Duan Chuan Liang (Chairman)

Liu Yong (General Manager)

China

Chongqing Water Group

Population served by service and country				
2013 data	Water	Sewerage	Water &	Total
Chongqing Water Gp	Only	Only	Sewerage	
China	0	7,500,000	7,500,000	15,000,000
Global total	0	7,500,000	7,500,000	15,000,000
% home markets	0%	100%	100%	100%

The Chongqing Water Group was founded in 2001 and granted a 30 year concession to serve the Chongqing urban area. The company had its IPO in March 2010 placing 12% of its shares on the market, raising CNY3.49billion (USD511million). The company was awarded a 30 year concession in 2007. In 2010, it was responsible for 54% of water services and 96% of sewerage services for the area. Suez Environnement acquired 15% of the company's equity as part of their cooperation agreement in August 2008 for EUR140million. As of April 2010, the municipality's Chongqing Water Assets Operation Corporation held 75% of Chongqing Water Group, Suez Environnement 13% and Chinese investors, 12%.

For individual contracts with Suez, see company entry.

Chongqing Water Group - Profit & loss account, 2010-2014

F/Y 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Water provision	710.0	793.2			
Sewage treatment	1,910.3	2,028.1			
Engineering Construction	235.1	559.5			
Other water facilities	198.1	140.0			
Turnover	3,280	3,775	3,969	4,000	4,137
Operating profit	1,205	1,468	1,724	1,745	1,254
Net profit	1,294	1,609	1,889	1,877	1,450
Earnings per share	0.28	0.34	0.39	0.39	0.30

Funds raised by the IPO and a CNY1.7billion bond issue are to be invested in six water treatment plants with a total 400,0000m^3 per day capacity and nine wastewater treatment works with a total capacity of 250,000m^3 per day.

Treatment capacity was increased by 250,000m^3 per day in 2012. The Yuelai Water Plant (100,000m^3 per day) entered service in July, along with Nan'an District (100,000m^3 per day) in October and Honggong Water Plant in Beibei District (50,000m^3 per day).

In June 2015, a second partnership was formed between CWH and Suez and NWS Holding. 36.6% of CWG via the municipality's holding and Suez's 13.44% stake (50.4% overall) are being put into Derun Environment, a new water and waste management holding company. The Chongqing municipality will hold 74.9% of Derun and Suez and NWS will hold 25.1%.

Sources:

FT.com / Bloomberg / Reuters

Company web site

Global water Intelligence

Suez Environnement, company announcements

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Zuwei Li (Chairman)

Xiangcheng Qiu (Vice President, Secretary)

Fengqing Wang (Chief Engineer)

China

CITIC Ltd

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
CITIC Limited	Only	Only	Sewerage	
China	6,300,000	1,600,000	0	7,900,000
Global total	6,300,000	1,600,000	0	7,900,000
% home markets	100%	100%	-	100%

CITIC Limited (formerly called CITIC Pacific) is the Hong Kong arm of CITIC, China's leading Investment Company. It was floated on the Hong Kong Stock Exchange in 1996. 50.5% of the equity is held by private and institutional investors, 29% by CITIC's CITIC Hong Kong and 20.5% by the management.

CITIC developed five water and waste management projects in Shanghai, Hangzhou, Guangzhou and Jiangsu in 2004-05. In 2014 CITIC Limited and KKR & Co (a USA based private equity house) acquired United Envirotech of Singapore for SGD 1.2 billion. CITIC acquired 50.6% of UE and KKR 23.8%.

CITIC Limited - Profit & loss account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Turnover	70,614	96,890	93,272	409,747	402,124
Operating profits	10,085	9,585	7,405	92,265	78,890
Net profits	8,893	8,934	6,655	48,430	39,834
Earnings Per Share (HKD)	2.44	2.53	1.91	1.94	1.60

Citic Pacific activities

Contracts

Year	Location	Contract & length	People served & service

Zunyi

2004	Zunyi	35 year concession	Water treatment

CITIC Pacific holds 75% of the asset and 25% of the operational companies (CGE (Zunyi) Water Treatment Company Ltd), with CGDE (Veolia) holding the remaining 25% and 75% respectively. Zunyi is in Guizhou Province. The contract involves acquiring the extant facilities for CNY152million and has a total cost of CNY200million. These consist of the Nanjiao and Beijiao water treatment works, each having a capacity of 100,000m^3 per day. The asset company is to pay the operational company a set of fees up to an annual cap of CNY51million. CITIC anticipates a 15% return on its investment in the project.

Changzhou

2005	Changzhou	30 year concession	Water treatment

CITIC holds 24% of Changzhou CGE Water Company Ltd, which is responsible for treating and distributing water to Changzhou in Jiangsu Province. The four WTWs have a combined capacity of 710,000m^3 per day. It is anticipated that the Jiangsu project will involve a total investment of HKD1billion.

Kunming

2006	Kunming	30 year concession	Water treatment

CITIC holds 12.5% of Kunming CGE Water Supply Company Ltd, which is responsible for treating and distributing water to Kunming, Yunnan Province. The seven WTWs have a combined capacity of 1.115million m^3 per day.

Acquisition of United Envirotech

United Envirotech - Profit & loss account, 2011-2014

F/Y 31/12 (SGD million)	2011	2012	2013	2014
Engineering	-	144.5	139.8	-

F/Y 31/12 (SGD million)	2011	2012	2013	2014
Treatment services	-	40.6	62.6	-
Turnover	85	185.0	202.3	349
Operating income	14	49	45	108
Net income	10	30	20	59

United Envirotech - treatment capacity by contract type, 2014

M = Municipal

I = Industrial

W = Water

WW = Wastewater

WR = Water reuse

M^3 per day	BOO / BOT / TOT	O&M	Total
Industrial water (I W)	0	0	0
Industrial sewage (I WW)	725,000	14,400	739,400
Industrial water reuse (I WR)	0	0	0
Municipal water (M W)	350,000	0	350,000
Municipal sewage (M WW)	335,000	465,000	800,000
Municipal water reuse (M WR)	100,000	30,000	130,000
Mixed water (M / I W)	0	0	0
Mixed sewage (M / I WW)	85,000	20,000	105,000
Mixed water reuse (M / I WR)	0	0	0
Water	350,000	0	350,000
Sewage	1,145,000	499,400	1,644,400
Water reuse	100,000	30,000	130,000
Total	1,595,000	529,400	2,124,400

United Envirotech - contracts, 2014 (date and duration in years given when known)

	Contract type		M^3 per day
United Envirotech Water (Liaoyang Hongwei) Co Ltd			
Liaoyang Central Plant, Liaoyang, Liaoning	30, TOT (2005)	M W	200,000
Dong'erbao Plant, Dengta, Liaoyang, Liaoning	O&M	M / I WW	20,000
Liaoyang Plant, Liaoyang, Liaoning	O&M	M WW	35,000
United Envirotech Water (Liaoyang Hongwei) Co Ltd			
Hedong Water Purification Plant, Taizihe, Liaoyang	BOT (30, 2005)	M W	100,000
Hedong Wastewater Plant, Wensheng, Liaoyang	O&M	M WW	30,000
Aton Environmental (Shenyang) Co. Ltd			
Xinmin Wastewater Plant, Xinmin, Liaoning	TOT (30, 2011)	M WW	50,000
United Envirotech Water (Diaobingshan) Co. Ltd			
Diaobingshan Wastewater Plant, Diaobingshan, Liaoning	TOT (30, 2012)	M WW	30,000
United Envirotech Water (Hegang) Co. Ltd			
Western District Wastewater Plant, Hegang, Heilongjiang	BOT (30, 2010)	M WW	50,000
Western District Water Recycling Plant, Hegang	BOT	M WR	30,000
Eastern District Wastewater Plant, Hegang, Heilongjiang	BOT (30, 2011)	M WW	30,000
United Envirotech Water (Shangzhi) Co. Ltd			
Shangzhi Wastewater Plant, Shangzhi, Heilongjiang	TOT	M WW	40,000

	Contract type		M^3 per day
Qitaihe Wanxinglong Water Co. Ltd			
Qitaihe Wastewater Plant, Qitaihe, Heilongjiang	BOT	M WW	50,000
Qitaihe Water Recycling Plant, Qitaihe, Heilongjiang	BOT	M WR	40,000
United Envirotech Water Treatment (Guangzhou Nansha)			
Xiaohudao Wastewater Treatment Plant, Nansha	BOO	I WW	20,000
Guangdong Huizhou Oil Refinery, Huizhou, Guangdong	O&M	I WW	14,400
United Envirotech Water (Xintai) Co. Ltd			
Xintai Plant, Xintai, Shandong	TOT (30, 2005)	M WW	30,000
Xinwen Plant, Xintai, Shandong	TOT (30, 2005)	M WW	50,000
Loude Plant, Xintai, Shandong	BOT (30, 2011)	I WW	40,000
United Envirotech Water (Changyi) Co. Ltd			
Liutuan Wastewater Plant, Liutuan, Changyi, Shandong	BOT (30, 2012)	I WW	40,000
Liutuan Industrial Park Water Plant, Changyi, Shandong	BOT (30, 2012)	I W	40,000
Liutuan Industrial Park Water Plant, Changyi, Shandong	BOT (30, 2012)	I WW	60,000
Xiaying Wastewater Plant, Changyi, Shandong	BOT (30, 2012)	I WW	60,000
Bofa Wastewater Plant, Weifang Binhai DZ	BOT (30, 2013)	I WW	100,000
Mengzhou Shengfang Water Service Co. Ltd			
Mengzhou Wastewater Plant, Henan	BOT	M WW	25,000
Mengzhou Water Recycling Plant, Henan	O&M	M WR	30,000
Bazhou Max Rise Water Service Sci-Tech Co. Ltd			
Bazhou Wastewater Plant, Bazhou, Henan	BOT	M WW	40,000
Shengfang Wastewater Plant, Bazhou, Henan	BOT	M / I WW	50,000
United Envirotech Water (Siyang) Co. Ltd			
Lai'an Wastewater Plant, Siyang, Jiangsu	TOT	I WW	10,000
Chengdong Plant Phase 1, Siyang, Jiangsu	TOT	I WW	100,000
Chengdong Plant Phase 2, Siyang, Jiangsu	BOT	I WW	90,000
Chengdong Pre-treatment Plant, Siyang, Jiangsu	TOT	I WW	5,000
United Envirotech Water (Dafeng) Co. Ltd			
Shihuayuan Water Plant, Dafeng, Jiangsu	BOO (30, 2014)	I WW	100,000
Fenggang Water Plant, Dafeng, Jiangsu	BOO	I WW	100,000
Anhui Water Star Treatment and Operation Co. Ltd			
WangTang Plant, Hefei, Anhui	O&M	M WW	400,000
United Envirotech Water (Yantai) Co Ltd			
Mouping Wastewater Plant, Yantai, Shandong	BOT (30, 2015+)	M WW	80,000
United Envirotech Water (Qixia) Co Ltd			
Zhongqiao Wastewater Treatment Plant, Yantai, Shandong	TOT + BOT	M WW	40,000
United Envirotech Water (Liaoyang Hongwei) Co Ltd			
Hongwei Plant, Hongwei, Liaoyang	TOT + BOT	M / I WW	15,000

Sources:

United Envirotech, Listing Documents, 2004

United Envirotech, Annual Report, 2014

CITIC, Annual Reports, 2010-2014

CITIC, corporate announcement, 2004

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Zhenming Chang (Chairman)

Jijing Zhang (Managing Director)

China

Guangdong Investment Ltd

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
GDI	Only	Only	Sewerage	
China	1,800,000	1,350,000	0	3,150,000
Hong Kong SAR	5,400,000	0	0	5,400,000
Global total	7,200,000	1,350,000	0	8,550,000
% home markets	100%	100%	0%	100%

Guangdong Investment Ltd (GDI) is a property and investment company controlled by the municipality of Guangdong's GDH Limited (58%) and Guangdong Trust (11%). Following heavy losses in 1998 and 1999, the company has been restructured to concentrate on utilities, infrastructure and property. The traditional utility activities were in power generation. In December 2000, GDI acquired 81% of GH Water Supply (Holdings) for HKD3.96billion as part of a refinancing exercise. GH Holdings owns 99% of WaterCo, a company that operates the assets for the transfer of treated bulk water to Hong Kong. WaterCo was corporatised in April 2000 and supplies water to parts of Shenzhen and Donnguan in Guangdong Province along with supplying 75% of Hong Kong's drinking water under a 30 year non-exclusive contract (from August 2000.) This is equivalent to serving 5million people. The latter contract accounts for 90% of WaterCo's revenues. A water piping project (Phase IV renovation project) increased the system's capacity from 1,743million m^3 per annum to 2,423million m^3 in 2003 at a cost of CNY4.7billion and it was more or less steady at 2,424million m^3 in 2012. GDI's stake in GH was increased to 94.47% in 2011 and to 96.0% in 2012.

Guangdong Investment Ltd - Profit & loss account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Turnover from water supply	4,067	4,493	4,775	4,934	5,302
Group turnover	6,352	7,161	7,736	7,990	8,426
Pre-tax profits from water supply	2,068	2,586	2,687	2,861	3,020
Net income	2,420	2,994	3,414	4,426	4,397
Earnings per share (HKD)	0.389	0.481	0.548	0.710	0.705

Under the original agreement, the agreed supply for 1995 was 690million m^3, increasing by 30million m^3 per annum to the designed maximum capacity of 1,100million m^3 per annum by 2008. In return for an interest free loan granted by Hong Kong to Guangdong Province in 1998, the agreed increase in water supply was cut from 30million m^3 per annum to 10million m^3 per annum from 1998. In Hong Kong, despite the lowered rate of growth in water deliveries since 1998, demand has continued to be significantly lower than the agreed volume. Revenues from the Hong Kong Water Supply Agreement have been fixed for 2012 to 2014, rising from HKD3, 539million to HKD3, 959million during the period.

Revenues from the Hong Kong contract were HKD3, 146million in 2010 and HKD3, 344million in 2011.

Guangdong Investment Ltd - water provision, 2010-2014

Year, million m^3 pa	2010	2011	2012	2013	2014
Water to Dongguan, Shenzhen & Hong Kong	1,963	2,163	1,991	1,817	1,939
Water to Nansha	N/A	N/A	56	60	67
Total	**1,963**	**2,163**	**2,047**	**1,947**	**2,006**
Total water revenues, HKDmillion	**2010**	**2011**	**2012**	**2013**	**2014**
Water to Hong Kong	3,146	3,344	3,539	3,743	3,959
Water to Dongguan & Shenzhen	921	1,149	1,236	1,191	1,205
Water to Nansha	N/A	N/A	128	148	204
Total Water Sales	**4,067**	**4,493**	**4,775**	**4,934**	**5,302**

Nansha Water Supply

In 2012, 49% of Nansha GDH Water Co acquired in March 2012 for CNY121 million from the state owned Nansha Infrastructure and Nansha Industry for CNY246million. The Huangge Water Plant supplies 200,000m^3 of water per day to Nansha District in Guangzhou City, serving approximately 400,000 people.

Sewage treatment acquisitions

In 2014, GDI acquired five sewage treatment companies for HKD679 million. They have been grouped under the Wuhua Water Co, GDI's new sewage treatment arm.

Companies acquired

Entity	Stake	M^3 per day
Jinsheng Water Co	100%	20,000
Daojiao Water Co	100%	70,000
Kaiping Water Co	54%	40,000
Meizhou Water Group	70%	100,000
Danzhou Water Group	70%	50,000
Total		280,000

Sources:

Annual Reports, 2000-2014

Corporate announcements, 2014

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Xiaofeng Huang (Chairman)

Yinheng Wen (MD)

Hon Nam Tsang (CFO)

China

Jiangxi Hongcheng Waterworks Co

Population served by service and country				
2011 data	Water	Sewerage	Water &	Total
Jinagxi Hongcheng	Only	Only	Sewerage	
China	1,500,000	6,500,000	0	8,000,000
Global total	1,500,000	6,500,000	0	8,000,000
% home markets	100%	100%	-	100%

The Jiangxi Hongcheng Waterworks Co was founded in 2001 and partly floated on the Shanghai Stock Exchange in June 2004. The IPO raised CNY264million, CNY256million of which was used to three projects designed to expand the water supply network capacity from 900,000m^3 per day to 1.2million m^3 per day by 2007. The company is responsible for 85% of Nanchang's water supplies.

During 2005, the company supplied approximately 279.56million m^3 of water from its Qingshan, Changyang, Xiazheng Street, Niuhang and Changling water plants. In 2007, 304.3million m^3 of water was supplied and 21million m^3 of sewage was treated. In 2009, 293.2million m^3 of water was supplied and 54.9million m^3 of sewage was treated. During 2011, the company supplied 272.49million m^3 of water, and treated 445.27million m^3 of wastewater.

It is estimated that the company serves 1.5 million people with water and a further 6.5 million with wastewater treatment.

Jiangxi Hongcheng Waterworks Co - Profit & loss account, 2010-2014

Y/E 31/12/(CNYmillion)	2010	2011	2012	2013	2014
Turnover – residential water	131.0	135.1			
Turnover – water for schools	54.5	51.1			
Turnover – water for industry	45.0	42.6			
Turnover – water for municipalities	38.7	35.2			
Turnover – projects	167.5	152.3			
Turnover – sewage	318.6	483.0			
Turnover	832.4	983.3	1,042	1,188	1,448
Operating Profit	107	113	112	112	178
Net Profit	93	99	101	100	148
EPS (CNY)	0.28	0.30	0.31	0.30	0.45

Sources:

Annual Report, 2010-2014

Company web site

Bloomberg / FT.com

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Gang Li (Chairman)

Xiaohua Shi (President)

Jianguo Kou (CFO)

China

Kangda International Environmental

Population served by service and country				
2014 & 2015 data	Water	Sewerage	Water &	Total
Kangda Intl Env	Only	Only	Sewerage	
China	0	11,750,000	0	11,750,000
Global total	0	11,750,000	0	11,750,000
% home markets	-	100%	-	100%

Kangda was founded in 1996 and was listed in Hong Kong in July 2014. It is a privately owned company. As Chongqing Kangda Environmental, the company has been gaining wastewater treatment contracts since 2005. All of its activities are concerned with developing and operating wastewater treatment projects in China.

Kangda International - Profit & loss account, 2011-2014

Y/E 31/12 (CNYmillion)	2011	2012	2013	2014
Construction services	366.3	545.9	829.9	1,106.1
Operating services	261.9	315.3	328.0	448.1
Financial income	109.6	138.1	181.8	258.6
Total turnover	734.9	999.3	1,339.7	1,812.8
Pre-tax profit	185.5	233.1	281.7	381.7
Net profit	156.9	197.4	232.6	296.5
Earnings per share (RMB)	-	-	0.154	0.166

Contract status

In June 2015, the company had 46 contracts in operation, plus a further 16 in development. There is one water treatment contract in development.

Million m^3 per day	Jun-14	Jun-15
In operation	1.46	2.092
Under construction	0.272	0.365
In the pipeline	0.185	0.065
Total	1.917	2.522

Distribution of contracts, 06-2015

	Projects	M^3 per day	Million m^3 pa
Sewage - Henan	16	825,000	181.8
Sewage - Shandong	27	890,000	159.7
Sewage - Anhui	5	225,000	64.9
Sewage - Jiangsu	4	62,000	20.2
Sewage - Other	9	470,000	84.6
Sewage - Total	61	2,472,000	511.2
Water	1	31,300	-
Total	62	2,503,000	511.2

Kangda International - wastewater contracts, 2015

Project capacity is in m^3 per day

[1] Urban wastewater contracts

M^3 per day	Year	Type	Capacity
Haiyang WWT Haiyang, Shandong	2005	TOT	20,000
Suzhou South No.1 WWT Suzhou, Anhui	2006	TOT	80,000
Jiaozuo WWT Phase I Jiaozuo, Henan	2006	TOT	100,000
Feng County WWT Phase I Xuzhou, Jiangsu	2006	BOT	20,000
Gaomi No.2 WWT Phase I Gaomi, Shandong	2006	BOT	50,000
Shangqiu WWT Phase I Shangqiu, Henan	2007	TOT	80,000
Linying WWT Luohe, Henan	2008	TOT	30,000
Gaomi No.2 WWT Phase II Gaomi, Shandong	2008	BOT	50,000
Guangrao WWT Phase I Dongying, Shandong	2008	TOT	50,000
Guangrao WWT Phase II Dongying, Shandong	2008	TOT	50,000
Jixi WWT Phase I Xuancheng, Anhui	2009	BOT	15,000
Jiaozuo WWT Phase II Jiaozuo, Henan	2009	BOT	100,000
Feng County WWT Phase II Xuzhou, Jiangsu	2009	BOT	20,000
Nanfang WWT Phase I Linxin, Shandong	2009	BOT	40,000
Ningguo WWT Phase I Ningguo, Anhui	2010	BOT	40,000
Hshan WWT Phase I Chaohu, Anhui	2010	BOT	10,000
Dacheng WWT Phase I Langfang, Hebei	2010	BOT	15,000
Shangqiu WWT Phase II Shangqiu, Henan	2010	BOT	100,000
Yuhe WWT Weifang, Shandong	2010	BOT	100,000
Hejiagou Qunli WWT Phase I Harbin, Heilongjiang	2011	TOT	150,000
Gaomi No.1 WWT Gaomi, Shandong	2011	TOT	35,000
Gaomi No.3 WWT Phase I Gaomi, Shandong	2011	BOT	25,000
Rushan Residential WWT Phase I Rushan, Shandong	2011	TOT	20,000
Ninghe WWT Phase I Tianjin, Tianjin	2011	TOT	30,000
Zhulan WWT Wugang, Henan	2012	TOT	20,000
Suzhou South No.2 WWT Suzhou, Anhui	2013	TOT	80,000
Yucheng No.2 WWT Phase I Dezhou, Shandong	2013	BOT	30,000
Puyang No.2, Henan	2014	BOT	50,000
Yanggu Phase I, Shandong	2014	BOT	40,000
Liaocheng, Shandong	2014	BOT	5,000
Jiaxiang No.2, Shandong	2014	BOT	15,000
Xin County Phase I, Shandong	2014	BOT	20,000
Xin County Phase II, Shandong	2014	BOT	20,000
Liaocheng - expansion, Shandong	2014	BOT	15,000
Jiaxiang No.2 - expansion, Shandong	2014	BOT	15,000
Suihua Phase I, Heilongjiang	2014	BOT	50,000
Suihua Phase II, Heilongjiang	2014	BOT	50,000
Yanggu T Phase II, Shandong	2014	BOT	40,000
Xin County Phase III, Shandong	2014	BOT	30,000
Gaomi No.3 Phase II Gaomi, Shandong	2014	BOT	25,000
Yucheng No.2 Phase II Dezhou, Shandong	2014	BOT	30,000
Xingcun Haiyang, Shandong	2014	BOT	20,000
Binghai Shuicheng Weifang, Shandong	2014	BOT	10,000
Nanhai Plant Wendeng, Shandong	2014	BOT	25,000
Jiaozuo Phase II - Expansion Jiaozuo, Henan	2014	BOT	50,000
Puyang No.2 Puyang, Henan	2014	BOT	50,000
Hejiagou Qunli Phase II Harbin, Heilongjiang	2014	BOT	100,000
Huadian WWT Huadian, Jilin	2014	TOT	30,000
Rushan Residential WWT Phase II Rushan, Shandong	2014	BOT	25,000
Jibei Hi-Tech Zone WWT Jining, Shandong	2014	BOT	25,000
Xinzheng Plant I Phase 1, Henan	2014	BOT	10,000
Xinzheng Plant II Phase 1, Henan	2014	BOT	25,000
Xinzheng Plant II Phase 2, Henan	2014	BOT	25,000
Laiyang, No 2 WWT, Shandong	2014	TOT	20,000
Pingdinshan WWT Phase II, Henan	2014	TOT	130,000

M^3 per day	Year	Type	Capacity
Shangqiu No. 2 WWT Phase 1, Henan	2015	BOT	50,000
			2,360,000

[2] Industrial zone wastewater contracts, 2015

M^3 per day	Year	Type	Capacity
Daxing Caiyu Eco. Zone WWT Phase I, Beijing	2006	BOT	15,000
Wanfang Ind. Zone Phase I Jiaozuo, Henan	2009	BOT	25,000
Rushan Industrial WWT Phase I Rushan, Shandong	2011	TOT	20,000
Feng County EZ WWT Phase I Xuzhou, Jiangsu	2012	BOT	20,000
Liangshan Eco. Zone Liangshan, Shandong	2014	BOT	20,000
Dongying Harbour EZ Dongying, Shandong	2014	TOT	50,000
Feng County Ind. Zone Xuzhou, Jiangsu	2014	BOT	2,000
Yuchuan Ind. Zone Phase I Jiyuan, Henan	2014	BOT	20,000
Liangyuan Ind. Zone WWT Shangqiu, Henan	2014	BOT	20,000
Baoshan Eco. Zone WWT Phase I Hebi, Henan	2014	BOT	15,000
Jiazuo City Industrial Park Phase I, Henan	2014	BOT	25,000
Shan County Ind. Zone WWT Heze, Shandong	2014	BOT	40,000
Feng County EZ WWT Phase I Xuzhou, Jiangsu	2012	BOT	20,000
			323,000

[2] Industrial zone water contracts, 2015

M^3 per day	Year	Type	Capacity
Baoshan Eco. Zone Water supply Hebi, Henan	2014	BOT	31,000

Sources:

Kangda International, Listing Documents, 2013 & 2014

Kangda International, Annual Report, 2014

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Juanxian Zhao (Chairman)

Weizhong Zhang (CEO)

Gang Li (CFO)

China

NWS Holdings Ltd

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
NWS Holdings	Only	Only	Sewerage	
China	12,750,000	1,370,000	700,000	14,820,000
Global total	12,750,000	1,370,000	700,000	14,820,000
% home markets	-	0%	0%	0%

NWS Holdings Ltd (NWS) is the Hong Kong Stock Exchange listed services arm of the New World Development Company. The company was listed on the HKSE in 1997. NWS has been involved in the water sector in China since 1993 through Sino French Holdings (Hong Kong), its 50:50 joint venture with Suez Ondeo. Total water and wastewater treatment capacity at the start of 2004 was 3.95million m^3 per day, rising to 5.72million m^3 per day by the end of 2007 with 21 water projects and 23 projects with a capacity of 6.8million m^3 per day in 2009. Operating profit of NWS' water activities were HKD80.6million for 2005, rising to HKD87.4million in 2006 and HKD102.2million in 2007. In April 2008, NWS & Suez Environnement paid EUR140million for 15% of Chongqing Water Group. CWG owns and operates 32 water treatment works and 35 sewage treatment works in Chongqing and aims to expand its services into neighbouring areas.

NWS Holdings Ltd - Profit & loss account, 2010-2014

Y/E 31/06 (HKDmillion)	2010	2011	2012	2013	2014
Turnover	12,089	9,561	14,954	16,248	21,443
Operating profits	1,922	2,657	4,838	3,638	3,556
Net profits	4,012	4,656	5,428	4,082	4,383
Earnings Per Share (HKD)	1.26	1.40	1.52	1.11	1.17

NWS Holdings' with Suez Environnement, attributable interest (%)

Project	Capacity (m^3 per day)	NW stake	Start	End	Region
Macau Water	330,000 450,000 people	42.5	1985	2030	Macau
Zhongshan Tanzhou Water	150,000 (Phase II) 200,000 people	29	1992	2027	Guangdong
Zhongshan Dafeng Water	500,000 (Phase II) 600,000 people	25	1998	2020	Guangdong
Zhongshan Quanlu Water	500,000 600,000 people	25	1998	2020	Guangdong
Nanchang Water	100,000 (Phase II) 200,000 people	25	1996 / 08	2023	Jiangxi
Baoding Water	260,000 900,000 people	27.5	2000	2020	Hebei
Siping Water, Plants 2 & 4	118,000	25		2030	Jilin
Zhengzhou Water	360,000 1,300,000 people	25	2000	2031	Henan
Xinchang Water	110,000 140,000 people	30	2002	2032	Zhejiang
Changtu Water	50,000 100,000 people	35	2000	2029	Liaoning
Panjin Water	110,000 350,000 people	30	2002	2032	Liaoning
Shanghai Spark Water	100,000 20,000 people	25	2002	2032	Shanghai
Shanghai SCIP Water	Wastewater - 50,000 Industrial Water - 200,000 Demineralised Water - 4,800	25	2002	2052	Shanghai

Project	Capacity (m^3 per day)	NW stake	Start	End	Region
Qingdao Water	726,000 (Phase II) 2,500,000 people	25	2002	2027	Shandong
Qingdao Dongjiakou WW	13,200	16	2015	2042	Shandong
Chongqing Water	540,000 (Phase II) 1,200,000 people	30		2052	Chongqing
Sanya Water	235,000 (Phase II) 290,000 people	25	2004 / 15	2033	Hainan
Tianjin Tanggu Water	310,000 600,000 people	24.5	2005	2034	Tianjin
Changshu Water	875,000 1,800,000 people	24.5	1984 / 12	2036	Jiangsu
Chongqing Tangjiatuo WW	300,000 1,000,000 people	28	2007	2036	Chongqing
Jiangsu Water Company (Golden State)	350,000 Water 700,000 people 300,000 WW 1,000,000 people	25	2011	2037	Jiangsu
Chengdu Shuangli Dayi Water	15,350 Water 19,800 WW (O&M)	33	2012	2043	Sichuan
Chengdu Chongzhou Dayi	40,000 WW	33	2008	2039	Sichuan
Wuhan Chemical Industry Park	50,000 water 10,000 WW	22	2013	2041	Hubei
Chongqing Changsou Chemical Ind Park	Water – 120,000 Wastewater – 40,000	25	2010	2055	Chongqing
Tianjin Jieyuan Water (formerly Earth Tech)	500,000 1,500,000 people	50	2002	2023	Tianjin
Dalian Changxing Island Harbour Industrial Zone	Wastewater – 40,000 70,000 people	47.5	2010	2040	Liaoning

Sources:

NWI, Annual Report, 2008-2014

Company web site

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Henry Cheng Kar-Shun (Chairman)

Yam Pui Tsang (CEO)

Tak Wing Chow (CFO)

China

Shanghai Industrial Holdings

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
SIHL	Only	Only	Sewerage	
China	7,150,000	8,100,000	0	15,250,000
Global total	7,150,000	8,100,000	0	15,250,000
% home markets	100%	100%	0%	100%

Shanghai Industrial Holdings Limited (SIHL) is a broadly based infrastructure, logistics and Technology Company which is 58% held by the Shanghai municipal government. The company was partly floated on the Hong Kong Stock Exchange in 1996. In 2003, the company decided to enter the Chinese water and sewage treatment BOT market.

Acquisition of Asia Water Technology

SIHL acquired 36% of Asia Water Technology in 2010 as part of its refinancing. This was increased to 54.6% in 2011. AWT has retained its Singapore listing as SIIC Environmental Holdings and is to be used as a platform for SIHL's water sector growth in the future. See company entry for SIIC.

Shanghai Industrial Holdings - Profit & loss account, 2010-2014

Y/E 31/12 (HKDmillion)	2010	2011	2012	2013	2014
Water	1,043	1,239	1,597	1,577	1,794
Total turnover	14,435	14,969	19,287	21,568	19,967
Pre-tax profits	4,488	6,317	5,948	4,834	6,759
Net income	6,205	4,088	3,438	3,444	4,292
Earnings per share (HKD)	5.75	3.79	3.18	2.37	2.63

In August 2003, SIHL formed a CNY500million 50:50 joint venture with the state-held China Energy Conservation Investment Corporation (CECIC), now called General Water of China Co. The joint venture's China Water and Sewage Treatment Company and Zhong Huan Water Treatment Construction Limited Corporation started operations in November 2003. China Water and Sewage Treatment subsequently signed heads of agreements with Xiamen Water Services Group and Zhenjiang New Area Administrative Commission in Jiangsu province for water services investment projects. After a further investment of CNY103million by China Energy, SIHL owns 47.5% of the joint venture.

By the end of 2007, General Water of China had 14 project companies in nine provinces with a total daily capacity of 4,543,000m^3 per day. By the end of 2009, the capacity had fallen to 4,283,000m^3 per day after the sale of their activities in Chongqing for CNY260million in 2009 (280,000m^3 per day) and the gaining of a second contract in Suifenhe (20,000m^3 per day) in 2009. In 2011, capacity rose to 5,159,000m^3 per day with 23 water and 16 sewage projects against 11 and one respectively in 2010. Revenues were CNY1, 239million in 2011.

Shanghai Industrial Holdings - project status in 2014

Wastewater (m^3 per day)

Province	Project	Capacity	Year	Length	Stake	Status
Anhui	Bengbu 2, 3 and 4	350,000	2004	30	100%	Operating
Fujian	Xiamen	1,054,000	2006	30	55%	Operating
Guangdong	Longhua, Shenzhen	150,000			90%	Operating
Heilonjiang	Suifenhe	20,000			100%	Operating
Hunan	Xiangtan	150,000			100%	2015 upgrade
Zhejiang	Huzhou (east)	50,000		22	100%	Operating
Zhejiang	Wenzhou (east)	150,000	2007	27	100%	2015 upgrade
Zhejiang	Wenzhou (central)	200,000			70%	Operating
Total		2,124,000				

Water (m^3 per day)

Province	Project	Capacity	Year	Length	Stake	Status
Anhui	Bengbu	430,000	2004	30	60%	Operating
Anhui	Guzhen	130,000	2011	30	60%	Operating
Fujian	Xiamen	1,305,000	2006	30	45%	Operating
Heilonjiang	Suifenhe, Wuhua	195,000			100%	2015 upgrade
Hubei	Xiangyang	950,000			50%	Operating
Hunan	Xiantan	425,000		30	70%	Operating
Shaanxi	Xianyang	300,000	2010	30	100%	2015 upgrade
Zhejiang	Tiger lake, Huzhou	200,000	2010	34	100%	Operating
Total		3,935,000				

China Water and Sewage Treatment have in turn set up a joint venture with the Xiamen Water Services Group to operate the principal water supply and sewage treatment facilities in Xiamen. The city is one of China's five Special Economic Zones and contract covers a water supply capacity of 1.0million m^3 per day and a sewage treatment capacity of 514,000m^3 per day. Capacity for these two projects was increased to 1,155,000m^3 per day and 834,000m^3 per day respectively between 2007 and 2011.

Sources:

Asia Water Technology, Annual Report, 2004-2009

Shanghai Industrial, Annual Reports, 2004-2014

Company web site

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Wei Wang (Chairman)

Jie Zhou (CEO)

China

Shanghai Urban Construction Group

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Shanghai Urban	Only	Only	Sewerage	
China	0	6,000,000	0	6,000,000
Global total	0	6,000,000	0	6,000,000
% home markets	0%	100%	0%	100%

China's largest wastewater treatment BOT project, Shanghai Zhuyuan No.1 WWTP, with a capacity of 1.7million m^3 per day was originally awarded to Shanghai Youlian Development Company (45%), Huajin Information Investment (40%) and Shanghai Urban Construction Group (15%) in 2002. This group in turn gained the tender for Zhuyuan No.2 WWTP project in 2004. Shanghai Youlian subsequently withdrew from the two WWTP projects due to the changed financing policies in China. In 2005 Shanghai Urban Construction Group won Zhuyuan No.2 tender and was awarded a twenty-five year concession. At the end of the concession, the facility will be handed over to the Shanghai Chengtou Corporation.

The Zhuyuan No.2 Sewage Treatment Plant will cost CNY600million and has a design capacity of 500,000m^3 per day and will mainly deal with sewage from the northern part of the city, such as Yangpu District. Construction started in late 2005 and was continuing in 4Q 2007. Treated sewage from the facility will reach Level 2 of the state sewage discharge standard, above that of most local facilities. The project is to be supported in part through a World Bank loan of USD200million for various urban environmental projects in the city. The original bid by Shanghai Youlian Group was the lowest with a price of CNY0.299 per tonne.

Sources:

Company web site

Bloomberg / FT.com

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Zhu Jiaxiang (Chairman)

Zhu Renwei Jiang Xianfu (Vice Chairman)

Chen Jinzhang (Chief Financial Supervisor)

China

SIIC Environment Holdings

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
SIIC Environment	Only	Only	Sewerage	
China	2,576,000	17,404,000	0	19,980,000
Global total	2,576,000	17,404,000	0	19,980,000
% home markets	100%	100%	0%	100%

SIIC Environment Holdings ((SIIC) is 41.9% held by Shanghai Industrial Holdings (SIHL). SIHL is listed separately as it has a distinct portfolio of activities.

SIIC, Profit & loss account - 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Water concessions	19	39	121	190	217
Water and waste contracts	85	307	533	681	814
Total turnover	282	520	805	1,214	1,288
Operating profits	64	110	158	207	213
Net income	22	110	131	215	334
Earnings per share	1.00	3.00	3.00	2.70	2.86

In 2011, capacity rose to 5.159million m^3 per day with 23 water and 16 sewage projects against 11 and one respectively in 2010. Revenues were CNY1, 239million in 2011.

Asia Water Technology (AWT) was listed on the Singapore Exchange in 2005. In the wake of financial problems encountered by AWT, Shanghai Industrial Holdings made a significant investment in the company in 2011. Shanghai Industrial holds 55% of the company and is using it as a platform for developing projects in China.

SIHL has subsequently grouped part of its water and waste management activities into SIIC Environmental Holdings (SIIC). The entity has 71 water-related contracts. 64 of these have been individually identified.

General Water of China, contracts gained 2003-10

Projects	Stake	Investment (CNYmillion)	Capacity (m^3/day)	Operation period
Xiamen GWC Water Supply Ltd, Fujian	45%	105	1,155,000	30 years, 2006
Xiamen GWC Sewage Treatment Ltd	55%	356	834,000	30 years, 2006
Bengbu Water Supply Company, Anhui province	60%	155	430,000	30 years
Xiangtan Water Supply Company Hunan	70%	140	425,000	30 years
Eastern Huzhou Water Sewage Treatment, Zhejiang province (BOT)	100%	90	50,000	22 years
Yinshi Guo Wei Water Supply Co, Xianyang, Shaanxi province	50%	85	180,000	30 years, 2007
Xianyang Water Supply Project (re-routing of water distribution, BOT)	100%	568	300,000	30 years, 2010
Longhua Sewage Treatment, Shenzhen province (BOT)	90%	160	150,000	22 years, 2006
Tiger Lake, Huzhou Water Supply Project (BOT), Zhejiang province	100%	824	200,000	34 years, 2010
Eastern Wenzhou Sewage Treatment, Zhejiang province	100%	203	100,000	27 years, 2007
Central Wenzhou Sewage Treatment, Zhejiang province	70%	N/A	200,000	N/A
Suifenhe water supply, Wuhua Mountain, Heilongjiang province	100%	N/A	110,000	N/A
Xiangtan, sewage treatment, Hunan	100%	N/A	100,000	N/A
Xiangyang water supply, Hubei	50%	N/A	1,000,000	N/A

China Water and Sewage Treatment have in turn set up a joint venture with the Xiamen Water Services Group to operate the principal water supply and sewage treatment facilities in Xiamen. The city is one of China's five Special Economic Zones and contract covers a water supply capacity of 1million m^3 per day and a sewage treatment capacity of 514,000m^3 per day. Capacity for these two projects was increased to 1.155million m^3 per day and 834,000m^3 per day respectively between 2007 and 2011.

In addition, SIIC holds 25.3% on Longjiang Group, which has wastewater treatment projects totalling 2.87 m^3 per day.

Acquisition of Asia Water Technology

Guangdong Province

Contracts

Year	Location	Contract & length	People served & service
2006	Dongguan	25 year BOT	350,000 wastewater

Dongguan City Da Lang Shui Kou Xin Bao Water Treatment is located at Song San Lake, Dalan Town in Dinguan. This is a 100,000m^3 per day facility 75.5% held and in operation since 2009.

2005	Huizhou	25 year BOT / TOT	200,000 WW

Huizhou City Nanfang Water, Guangdong. WW treatment plant project, 200,000 m^3 per day

2011	Shenzhen Longgang	22 O&M & BOT	2,410,000 WW

Shenzhen City Nanfang Water covers five sewage treatment plants in Longgang District, Shenzhen; Pinghu Phase 1 (O&M), Pinghu Phase 2 (operating in 2013, BOT), Egongliong Henggang and Pudixia (all BOTs, operating since 2011). 280,000 m^3 per day, 69.378% held.

2011	Shenzhen Henggang	8 year O&M	310,000 water recycling

Shenzhen City Henggang Recycling Water is in Henggang, Shenzhen. 50,000 m^3 per day, 69.378% held. Phase I project in operation since 2011.

2011	Shenzhen Banxuegang	1+Yr O&M, renewable	140,000 WW

Shenzhen City, Longgang District Banxuegang Waste Water Treatment is in Banxuegang, Shenzhen. 40,000 m^3 per day, 69.378% held. The facility started in 2012.

2012	Shenzhen	8 year O&M	1,000,000 WW

Shenzhen City Guan Lan Nanfang Water is in Guanlan, Shenzhen. 260,000 m^3 per da, 45.096% held.

2013	Zhanjiang	25 year TOT	100,000 WW

Zhanjiang City Nanfang Water is a TOT project in Wuchuan, Zhanjiang City, Shenzhen. 40,000 m^3 per day, 69.378% held.

Hubei Province

Contracts

Year	Location	Contract & length	People served & service
2008	Huangshi Kaidi	27 year BOT	1,000,000 wastewater

Huangshi Kaidi Water Services: Upgrading a 125,000 m^3 per day WWTW in Huangshi City in Hubei to serve the entire population of the city at a cost of RMB153million. 100% held.

2004	Tianmen Kaidi Water	25 year TOT	250,000 water

Tianmen Kaidi Water Services: This is the sole provider for Tianmen urban area and Yuujou Town in Hube, a RMB193million 150,000 m^3 per day plant.

2004	Tianmen Kaidi Xinnong	23 year BOT	56,000 water

Tianmen Kaidi Xinnong Water Services SIIC's second facility is in Tianmen in Hubei province, serving 56,000 people in 40 villages surrounding the city. It cost RMB29million to develop. 70% held.

2004	Wuhan Xincheng	20 year BOT	Industrial wastewater

Wuhan Xincheng Waste Water Treatment This is an industrial wastewater treatment project serving the Wuhan City Economic Zone in Hubei. The plant cost RMB73million and has an initial capacity of 60,000 m^3 per day, expandable to 120,000 m^3 per day. 100% held.

2004	Wuhan Kaidi Xinchuan	30 year BOT	150,000 wastewater

The Wuhan Kaidi Xinchuan Waste Water Treatment plant in Qianchan Hubei has a 30,000 m^3 per day capacity. 100% held.

2010	Wuhan Kaidi Xinlong	30 year BOT	100,000 wastewater

The Wuhan Kaidi Xinlong Waste Water Treatment plant in Panlong Hubei has a 22,500 m^3 per day capacity. 100% held. A second phase is planned. 100% held.

2004	Wuhan Hanxi	25 year BOT	580,000 wastewater

The Wuhan Hanxi Waste Water Treatment plant in Hubei has a 400,000 m^3 per day capacity at a cost of RMB460million. In 2011, AWT increased its holding in the project company to 80%. A second phase which will increase its capacity to 600,000m^3 per day at a cost of CNY722 million was announced in 2015.

2004	Wuhan Dongxihu	30 year BOT	Wastewater management

A sewerage management project costing RMB300-330million for the Dongxihu District of Wuhan in Hubei. Wastewater collected is to be sent to the company's Wuhan Hanxi WWTW.

2008	Wuhan Huang-Pi Kaidi	30 year BOT	700,000 water

Wuhan Huang-Pi Kaidi Water Services A RMB645-840million 150,000 m^3 per day project managing seven WTWs and piping for all connected residents in the southern Huang Pi district in Hubei. 100% held. Can be expanded to 230,000 m^3 per day.

Hunan Province

2012	Chenzhou	25 year BOT	600,000 WW

Chenzhou Nanfang Waste Water Treatment is located in Chenzhou City. 120,000 m^3 per day 69.378% held, having commenced service in 2005.

2012	Linwu, Chenzhou	21 year BOT	70,000 WW

Linwu County Waste Water Treatment is in Linwu County, Chenzhou. 10,000 m^3 per day. 87.6% held, starting operations in 2010.

2010	Taojiang	30 year BOT	150,000 wastewater

Taojiang County Tao Hua Jiang Waste Water Treatment The Tao Hua Joiang facility in Taojiang, Hunan Province, 20,000 m^3 per day capacity, 75.5% held and in operation since 2010.

2009	Yiyang Lianhe	30 year BOT	120,000 wastewater

Yioyanbg Lianhe Runtong Water Treatment: 40,000m^3 per day capacity, 75.5% held and in operation. Entered service in 2010.

2011	Yiyang Shangshi	25 year BOT	120,000 wastewater

Yiyang Shangshi Lianhe Eastern District, In the Gao Xin District of the city in Hunan Province, 30,000m^3 per day capacity, 75.5% held and has been in operation since 2012.

Jiangsu Province

Contracts

Year	Location	Contract & length	People served & service
2012	Jingjiang	33 year BOT	65,000 WW

Jingjiang City Xingang District Waste Water Treatment: Sewage treatment BOT project. 80,000 m^3 per day, 48.565% held.

2012	Shuyang	30 year TOT & BOT	230,000 WW

Shuyang County Waste Water: Shuyang County, Suqian City. 60,000 m^3 per day, 69.378% held. Phase I in operation since 2012.

2012	Taixing	30 year BOT	160,000 WW

Taixing City Huangqiao Waste Water: in Taixing City. 50,000 m^3 per day, 48.565% held. Phase I project in operation since 2012.

2012	Yancheng	30 year BOT	80,000 WW

Located in the Yancheng Environment Protection Industry Park. Yancheng Nangfang Water Co. 30,000 m^3 per day, 48.565% held.

Shandong Province

Contracts

Year	Location	Contract & length	People served & service
2006	Dezhou City	20 years, TOT	300,000 wastewater

In Shandong Province, 100,000m^3 per day capacity, 75.5% held and in operation.

2007	Weifang Waste Water	20 year BOT	250,000 wastewater

Weifang City Lianhe Runtong Waste Water Treatment Co., Ltd. is located in the Gao Xing District of the city. 50,000m^3 per day, 75.5% of Chengxi Water is held by the company and it is in operation.

2009	Weifang Reclaimed Water	20 year BOT	Water reclamation

In Shandong Province, 35,000m^3 per day capacity, 75.5% held, in operation. It is related to Weifang Waste Water.

2009	Weifang Chengxi	30 year BOT	200,000 wastewater

Weifang Lianhe Runtong Chengxi Waste Water Treatment Co., Ltd. is in the High Tech Industrial Development District of the Shandong Province city. 50,000m^3 per day, 75.5% held and in operation.

2009	Weifang Chengxi	30 year BOT	200,000 wastewater

In the Economic Development District. 40,000m^3 per day capacity for Phase 1, 75.5% held, in operation. Entered service in 2011.

2011	Weifang Tap Water	25 year BOT	1,050,000 water

The Weifang City Tap Water Supply project. 320,000 m^3 per day capacity, 51.3% held.

2011	Weifang Hanting	Ownership	350,000 water

Weifang City Hanting Lianhe Runtong Water Treatment Co., Ltd. is in the Hanting District. 60,000m^3 per day capacity, 26.2% held and serving 300 villages and 500 enterprises.

2004	Weifang	20 year TOT	600,000 wastewater

United Environment Co Ltd is located in the Kui Wen District. 100,000m^3 per day capacity, 75.5% held, in operation since 2004.

2011	Zaozhang	25 year TOT	45,000 wastewater

In the Shanting District of Zaozchange City. 20,000m^3 per day capacity in two phases. 75.5% held, entering service in 2013.

2010	Zaozhang	30 year TOT & BOT	120,000 wastewater

In the Yicheng District of Shandong City. 40,000m^3 per day capacity. Zaohuang Lianhe Runtong Water Treatment is 75.5% held, Phase 1 in operation since 2010 and construction of BOT for Phase 2 starting in 2013.

Other Provinces

Contracts

Year	Location	Contract & length	People served & service
2012	Anxi	30 year BOT	195,000 wastewater

The Fujian Anxi County, Longmen Town Waste Water Treatment project has a capacity of 50,000 m^3 per day and is 69.4% held. Phase 1 commenced operations in 2013.

2008	Beiliu	25 year BOT	180,000 wastewater

In Guangxi Province, 40,000m^3 per day capacity, 75.5% held and has been in operation since 2009.

2009	Luohe	30 year BOT	38,000 wastewater

The Luohe City Dong Cheng Waste Water Treatment facility in Henan Province, 20,000m^3 per day capacity, 75.5% held and in operation since 2010.

2012	Dalian	30 year BOT	400,000 WW

Dalian Xinya Hengji Environmental: Puwan New Area, Dalian in Liaoning Province. 50,000 m^3 per day, 70% held. The project started operations in 2013.

2007	Lv Liang Xinya	50 year BOO	200,000 water

Lv Liang Xinya Water Services: This project provides water for two coal mining and other related projects in Shanxi. The treatment capacity is 55,000 m^3 per day with a total investment of RMB256million.

2012	Kunming	25 year O&M	170,000 water

Kunming Nangfang Water in the Kunming Economic & Technical Development Zone in Yunnan. It has a capacity of 70,000 m^3 per day. 36.077% held.

2005	Taizhou Kaidi	20 year BOT	200,000 WW

This project serves the Zhejiang Pharmaceutical Park in Linhai City in Zhejiang. It has a current treatment capacity of 12,500 m^3 per day and can be expanded at a total cost of RMB100million to 50,000tonnes per day over four phases by 2016.

Post AWT contract gained noted

Contracts

Year	Location	Contract & length	People served & service
2012	Wuchuan City	25 years, TOT	200,000 wastewater

A 40,000 m^3 per day wastewater treatment plant for the city in Guangdong Province, with the contract being acquired for CNY75 million.

2014	Shanghai Qingpu	30 years, BOO & TOO	600,000 wastewater

100% of the equity of the Shanghai Qingpu Second Wastewater Treatment Co was acquired in 2014. This plant has a 120,000m^3 per day wastewater treatment capacity with the original contract entering service in 2008.

2014	Dailian City	22 years, BOT	200,000 wastewater

A 40,000m^3 per day wastewater treatment plant BOT for Dailian City in Liaoning Province was awarded to SIIC's SIIC Weifang.

2014	Dongguan Shijie	25 years, BOT	300,000 wastewater

A 60,000m^3 per day wastewater treatment plant for the city in Guangdong Province. 100% of the equity was acquired in 2014.

2014	Dongguan Fenggang	25 years, BOT	250,000 wastewater

A 50,000m^3 per day wastewater treatment plant for the city in Guangdong Province. 100% of the equity was acquired in 2014.

2014	Yinchuan City	30 years, BOT	250,000 wastewater

A 50,000m^3 per day wastewater treatment plant for the Riverfront District Wastewater Treatment Plant project in Yinchuan City, Ningxia Province. Yingchuan has a population of over 800,000.

2014	Yinchuan City	30 years, TOT	250,000 wastewater

A 50,000m^3 per day wastewater treatment plant project, the Fifth Wastewater Treatment Plant in Yinchuan City in Ningxia Province. Yingchuan has a population of over 800,000. The TOT consideration is CNY176 million.

2015	Huizhou City	27 years, concession	500,000 wastewater

Nangfang Water Co - a new project for Meihu Water Treatment Centre Phase 3 BOT, in Huizho City, Guangdong Province. 100,000m^3 per day.

In 2015, Global Envirotech Investments was acquired. This company holds 92% of Fudufan water, which owns 10 water projects in Shanghai, Jiangsui, Zhejiang and Guangdong Provinces with a combined water treatment capacity of 1,000,000 m^3 per day.

Sources:

SIIC Investors Presentation, 2014

SIIC Project Overview, 20133

Asia Water Technology, Annual Report, 2004-2009

Shanghai Industrial, Annual Reports, 2004-2014

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Jun Zhou (Chairman)

Zhan Xu (CFO)

China

Tianjin Capital Environmental Protection

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Tianjing CEP	Only	Only	Sewerage	
China	0	15,800,000	1,050,000	16,850,000
Global total	0	15,800,000	1,050,000	16,850,000
% home markets	0%	100%	100%	100%

Tianjin Capital Environmental Protection Company Limited (TCEP) is involved in sewage treatment and other municipal services and operates in Tianjin and Guizhou Province and has expanded into other provinces. 51% of the company's equity is indirectly held by the Tianjin Urban Construction Bureau.

Tianjin Capital Environmental Protection - profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013	2014
Turnover – Sewage	1,106	1,271	1,341	1,259	1,301
Turnover – Potable water	38	40	44	50	62
Turnover – Water recycling	70	105	133	165	165
Turnover	1,468	1,562	1,637	1,750	1,828
Operating profits	407	379	352	369	411
Net income	271	276	275	288	318
Earnings per share (CNY)	0.19	0.19	0.19	0.20	0.22

Capacity in 2014 was 3.823 million m^3 per day against 3.708 million m^3 in 2013.

Tianjin Capital Environmental Protection - facilities in 2014

Water and sewage treatment subsidiaries

Company	Location	Activity	Stake
Anguo Capital Water	Anguo	Sewage and tap water	100%
Baoying Capital Water	Baoying	Sewage processing	70%
Fuyang Capital Water	Fuyang	Sewage processing	100%
Guizhou Capital Water	Guizhou	Sewage processing	95%
Hang Zhou Tianchuang Capital Water	Hangzhou	Sewage processing	70%
Tianjin Capital Environmental Protection (HK)	Hong Kong	Sewage processing	100%
Qujing Capital Water	Qujing	Sewage and tap water	87%
Tianjin Jinghai Capital Water	Tianjin	Sewage processing	100%
Tianjin Water Recycling	Tianjin	Reused water	100%
Tianjin Capital Water	Tianjin	Sewage processing	100%
Tianjin Jinning Capital Water	Tianjin	Sewage processing	100%
Wendeng Capital Water	Wendeng	Sewage processing	100%
Wuhan Tianchuang Environmental Protection	Wuhan	Sewage and tap water	100%
Xi'an Capital Water	Xi'an	Sewage processing	100%

Tianjin Capital Environmental Protection - breakdown of revenues, 2013 and 2014

Revenues by activity	2013	2014
CNYmillion		
Sewage - Tianjin	788	796
Sewage - Huangzhou	156	164
Sewage - others	314	366
Reused water	165	165

Revenues by activity	2013	2014
Drinking water	36	62
Others	291	275
Total	1,750	1,828
Revenues by location		
CNYmillion	2013	2014
Tianjin	1,141	1,137
Hangzhou	156	164
Qujing	72	100
Xi'an	79	82
Others	167	189

Tianjin Capital Environmental Protection - water and sewage treated, 2013-2014

Million m^3	2013	2014
Sewage - Tianjin	401.5	446.8
Sewage - Subsidiaries	538.6	537.5
Sewage - Entrusted	149.4	190.2
Sewage - Total	1,090.10	1,174.6
Million m^3		
Reused water	18.7	20.4
Tap water	42.5	38.2
Water - total	61.2	58.6

Contracts

Year	Location	Contract & length	People served & service
2001	Tianjin	26 year BOT	7,500,000 sewage treatment

TCEP's main contract is with the Tianjin Sewage Company. TCEP acquired a series of sewage treatment works serving the city that was either in development or not complying with the appropriate standards. The original Jizhuangzi sewage treatment plant (260,000m^3 per day) was rehabilitated during 2005 and is undergoing trials with a second plant (280,000m^3 per day). The other treatment plants, at Jizhuangzi (450,000m^3 per day), Xianyanglu and Beicang are being replaced or upgraded to meet contemporary standards.

The second Jiahuangzi plant was relocated in 2013 and further upgraded to 550,000m^3 per day, along with a 70,000m^3 per day water recycling facility.

2014	Tianjin Jizhangzi	30 year BOT	Sewage treatment
2014	Tianjin Xianyanglu	30 year BOT	Sewage treatment
2014	Tianjin Dongjiao	30 year BOT	Sewage treatment
2014	Tianjin Beican	30 year BOT	Sewage treatment

Four contracts were awarded in 2013 which entered service in 2014. The combined capacity of the four plants is 0.115 million m^3 per day, serving approximately 550,000 people. TCEP's sewage treatment plant capacity in the Tianjin region has reached 1,600,000m^3 per day.

2005	Baoying, Jiangsu	26 year BOT	250,000 sewage treatment

TCEP set up a joint venture in June 2005, for the Baoying Sewage Water Treatment Project. Baoying Capital Water Co. Ltd. has a registered capital of CNY38million, 70% held by TCEP. Baoying Capital Water Co. Ltd. will build and operate a sewage water treatment plant with a capacity of 25,000m^3 per day, which can be expanded to 50,000m^3 per day. The total investment for the first phase of the joint venture was CNY93.4million.

2005	Hangzhou, Zhejiang	26 year TOT	2,000,000 sewage treatment

The Hangzhou Qige Sewage Treatment Plant joint venture was signed in June 2005 for a 26 year Transfer-Operation-Transfer (TOT) Project. Phase I of Hangzhou Qige Sewage Water Treatment Plant has commenced operation, with a capacity of 400,000m^3 per day, with phase II (200,000m^3 per day) completed in 2011. The total investment is at CNY881million.

2005	Fuyang	30 year licence	500,000 sewage treatment

In August 2005, TCEP's 98% held Fuyang Capital Water Co. Ltd. gained the contract for the Anhui Fuyang Sewage Water Treatment Project. The sewage plant's treatment capacity is 100,000m^3 per day, and has commenced operation. The project is under licensed operation, the transfer price was approximately CNY102million, with a term of 30 years.

2005	Honghu	TOT	350,000 water & sewage treatment

The Hubei Honghu Sewage and Water Supply Project started in December 2005, with TCEP holding 98% of Hubei Honghu Capital Water Co. Ltd., which has acquired three facilities under a TOT contract; the sewage water treatment plant of Honghu city (70,000m^3 per day) and two water treatment plants with designed capacity of 80,000m^3 and 30,000m^3 per day. The total investment amount of the sewage treatment portion was CNY50million.

2005	Qujing	26 year BOT	750,000 water & sewage treatment

A cooperation agreement was signed in June, 2005, for recycled water supply and sewage treatment in the central urban area of Qujing in Yunnan. A joint venture is being established with the Qujing City Recycled Water Supply and Sewage Water Treatment Corporation, to acquire the sewage treatment plant and the water supply plant through a 30 year TOT project. The Qujing Sewage Treatment Plant has a daily treatment capacity of 80,000m^3 (to be expanded to 160,000m^3 per day) and the No. 1, No. 2 and No. 3 Water Supply Plants have daily production capacities of 80,000m^3, 60,000m^3 and 60,000m^3 respectively. The acquisition price of the assets will be approximately CNY290million. Qujing Capital Water Co. Ltd. is 90% held by TCEP.

2008	Xian	25 year TOT	1,000,000 sewage treatment

In March 2008, TCEP acquired sewage treatment works of the Xian Capital Water Company Limited along with a 25 year operations contract after a tender process for CNY643million. The plants were held by the Xian Sewage Water Treatment Plants and Xian Infrastructure Investment and Construction Company (XICC). Sewage processing volumes are contracted to be 102,000m^3 per day for the first year of the contract and 114,000m^3 per day for the rest of the contract at the Xian Sewage Water Treatment Plant and 127,500m^3 per day for the first year and 142,500m^3 per day for the rest of the contract at the XICC Purification Centre. The two plants have a total maximum capacity of 310,000m^3 per day.

Contract bundle

2008	Anguo, Hebei		Sewage treatment
2008	Xianning, Hubei		Sewage treatment
2009	Yingdong, Anhui		Sewage treatment
2011	Qujing, Yunnan		Sewage treatment
2011	Chaohu, Anhui		Sewage treatment

The combined treatment capacity of these five facilities is 0.92 million m^3 per day. The facilities treat sewage for approximately four million people.

TCEP also has three industrial effluent treatment contracts serving: [1] the Tianjin Port Bonded Area, one of the functional areas of the Tianjin Binhai New District; [2] the Tianjin Binhai Mass Transit Development Co. Ltd.; and [3] the Huaxi sewage treatment plant and the Erqiao sewage treatment plant with a design capacity of 40,000m^3 per day in Guiyang City..

Sources:

Annual Reports, 2008-2014
Media releases, 2003-2005

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Yujun Liu (Chairman)
Yana Fu (Deputy General Manager)

France

Eranove - Ecp

Population served by service and country				
2013 data	Water	Sewerage	Water &	Total
Eranove	Only	Only	Sewerage	
Cote d'Ivoire	5,000,000	0	3,000,000	8,000,000
Senegal	5,500,000	0	0	5,500,000
Total - home markets	0	0	0	0
Total - international	10,500,000	0	3,000,000	13,500,000
Global total	10,500,000	0	3,000,000	13,500,000
% home markets	0%	0%	0%	0%

Bouygues is one of the leading French construction companies. Société d'Aménagement Urbain et Rural (SAUR, see company entry) was part of the Bouygues Group from 1984 to 2004. Bouygues sold its Czech activities to Veolia and South East Water in the UK to Macquarie during 2004, followed by the sale of all of SAUR's activities outside Italy and Africa to PAI in 2004 for EUR1,037million. Sigesa, the holding company for the Italian activities was sold to ACEA in July 2005 and the contract in Mali was terminated that year. Revenues for the water and power activities in Africa were EUR280million in 2008. Contracts in Guinea and the Central African Republic were terminated in 2002 and SAUR withdrew from the Mozambique concession that year. In 2007, Siza Water, SAUR's South African interests were sold to Cascal (see SembCorp entry). The water activities are 46% held by Eranove 60% of which was acquired by Emerging Capital Partners (ECP) in 2009 for EUR25 million.

Senegal

Contracts

Year	Location	Contract & length	People served & service
1996	Urban areas	10+10-year lease	5.5 million water management

The contract is for operations and management for water provision services to 54 towns and cities (2.5 million outside Dakar) through its 62.83% stake in Sénégalaise Des Eaux. Water produced has increased from 96 million m3 in 1997 to 147 million m3 in 2010 and 155 million m3 in 2013. Revenues have increased from XOF 44.3 billion in 2004 to XOF 73.1 billion in 2010 and XOF 76.6 billion in 2012. Connections rose from 241,671 in 1996 to 519,756 in 2010, including 154,151 low income connections serving 1.5 million people. Coverage is currently 79% against a contractual target of 85%. The contract was renewed in 2006. There were 617,000 connections in 2013 and a 100,000 m^3 per day desalination plant is currently under consideration.

Côte d'Ivoire

Contracts

Year	Location	Contract & length	People served & service
1987	Abidjan	20-year concession	8.0 million water & sewerage

SODECI is 46% held by Eranove and has the O&M contract for water and sewerage services for Abidjan (4.7 million people in 2014), the capital city and other urban areas. This is a renewal of the original 1959 water concession and the sewerage O&M contract was awarded in 1999. Total revenues were XOF 65,575 million in 2010, including XOF 36,812 million for water via 670,904 connections (35,129 more than in 2009) with 740,000 water and 375,000 sewerage connections in 2013.

Côte d'Ivoire - service data, 2013-2014

	2013	2014
Abidjan - connections	375,617	388,467
Abidjan - water produced (m m^3)	141.4	139.4
Interior - connections	364,790	398,859
Interior - water produced (m m^3)	66.5	69.4
Total - connections	740,407	787,326
Total - water produced (m m^3)	207.9	208.8

Sources:

Bouygues, Annual Reports, 1999-2004

Sodeci, corporate web site

Sde, corporate website

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Hurley Doddy (Co-CEO)

Vincent Le Gennou (Co-CEO)

Germany

Gelsenwasser AG

Population served by service and country 2010 & 2014 data Gelsenwasser	Water Only	Sewerage Only	Water & Sewerage	Total
Germany	4,720,000	1,150,000	0	5,870,000
Hungary	0	0	190,000	190,000
Czech Republic	0	0	96,800	96,800
Poland	9,000	0	75,000	84,000
Total - home markets	4,720,000	1,150,000	0	5,870,000
Total - international	9,000	0	361,800	370,800
Global total	4,729,000	1,150,000	361,800	6,240,800
% home markets	100%	100%	0%	94%

Gelsenwasser is a water supply company operating in North Rhine Westphalia, and with the re-municipalisation of Berlin Water, is the largest and oldest water company in Germany. In 1887 it was awarded the contract for the operation of Gelsenkirchen's water provision services. In 1997, this contract was renewed to 2027. Gelsenwasser serves 400 industrial customers and 1.4million people directly, 1.5million people via other water suppliers and 2.6million through its subsidiary companies. The company is developing its presence in the Eastern Länder and central and Eastern Europe. E.ON's 80.5% stake in Gelsenwasser was sold to the municipalities of Bochum and Dortmund for EUR835million in 2003. In December 2007, Gelsenwasser, Dortmunder Energie und Wasserversorgung and Stadwerke Bochum unveiled plans to merge by the end of 2009, along with a share offering. Other utilities may also merge with the new grouping.

Gelsenwasser AG - Profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water	265.0	255.4	255.4	270.4	-
Wastewater	7.9	10.3	10.6	13.3	-
Revenues	702.3	866.5	1,175.8	1,175.8	902.0
Operating profits	135.5	71.6	64.2	62.5	63.1
Net profits	158.7	101.7	95.6	89.4	93.0
Earnings per share (EUR)	46.16	29.60	27.82	25.79	

The population of the company's core operating area is forecast to fall by 350,000 between 2000 and 2015, hence the geographic diversification strategy.

Water services are via direct water supply on behalf of municipalities, the sale of water to industrial users (mainly in coal mining and steel manufacturing) and the resale of water to neighbouring utilities. Household sales are broadly stable or showing a slight decline as water conservation measures gain in popularity. Prices for domestic water remained constant at EUR1.37 per m^3 between 1997 and 2006, when they were increased to EUR1.56 per m^3.

Gelsenwasser AG - Operating data, 2010-2014

Y/E 31/12 (million m^3 pa)	2010	2013	2014
Gelsenwasser AG	221.0	215.5	211.8
Gelsenwasser Group	238.0	246.7	273.9
Sales to third parties	161.0	131.5	122.5
Total sales	399.0	378.2	396.4
Wastewater treatment:			
Overall (million m^3)	148.7	215.4	204.2

Gelsenwasser has three main 100% held subsidiaries involved in water and sewerage service provision. Vereinigte Gas und Wasserversorgung GmbH (VGW) and Niederrheinische Gas und Wasserwerke GmbH (NGW), which operate in Gelsenwasser's region. NGW was acquired in 1973, while VGW was incorporated by Gelsenwasser in 1968. VGW supplies water to 152,000 people in four municipalities. AWS Abwassersysteme GmbH (AWS) specialises in sewerage contracts. AWS is still at the start up stage, with one sewage treatment work construction project awarded and 2010 revenues of EUR12.5million. Otherwise, the company believes that in Western Germany it has suffered from the fiscal discrimination against awarding service contracts to the private sector. Gelsenwasser (51% stake) took over the operations of Abwassergesellschaft Gelsenkirchen GmbH in April 2004, which is responsible for the operation of the city of Gelsenkirchen's sewage disposal operations, serving 275,000 people. This represents a return to the company's origins, handling all aspects of the city's water cycle.

In August 2004, Gelsenwasser gained 49% of Stadtentwässerung Dresden GmbH, which runs the waste-water operations for the state capital of Saxony. With 480,000 inhabitants around 26million m³ of wastewater will be disposed of. In August 2004, 49.9% of the shares in Technische Werke Emmerich am Rhein GmbH (TWE) was acquired. TWE operates the 223km of sewerage pipes and the sewage treatment plant in the city of Emmerich-on-Rhine. The city of Emmerich-on-Rhine holds 50.1% of the shares. In 2006, Stadtentwässerung Dresden GmbH acquired two sewage treatment management contracts serving Pirna and Heidenau in Saxony covering 70,000 people. 2010 revenues were EUR 69.8 million.

In 2005, the Datteln and Oer-Erkenschwick concessions were both extended until 2028, along with a contract with Werl until 2015 and with Wickede until 2029, in total a water supply volume of 6.4million m³ for 92,500 customers. Three water supply contracts with different utilities were also extended: Lünen until 2023, Werl until 2015 and Stadtwerke Münster for a further 16 years. Contracts with industrial customers involving a total supply volume of 20million m³ were extended.

In 2006, the 120-year partnership with Castrop-Rauxel was extended until 2028 along with the contract with Marl until 2030. Along with Nordkirchen and Welver, these four towns represent 16% of Gelsenwasser's population base. External contract renewals included the Münster municipal utilities (until 2020) and with Wasserversorgung Herne (160,187 people served in 2009, contract running until 2036), securing an annual sales volume of 30.6million m³ over the next two decades.

In 2010 the company acquired 64.9% of Osmo GmbH, which provides water to 43,500 people in Oranieburg, near Berlin.

Wasserbeschaffung Mittlere Ruhr GmbH (WMR), Bochum

WMR is jointly held (50% each) by Stadtwerke Bochum GmbH (commercial management) and Gelsenwasser (technical management) under a 1971 agreement covering water supply to the city of Bochum and Gelsenwasser's supply territories south of the River Ruhr. Water is supplied by Gelsenwasser's Essen plant and Wasserbeschaffung Mittlere Ruhr GmbH's Stiepel waterworks.

Wasserversorgung Herne GmbH (WVH), Herne

The company (50% held by Gelsenwasser and 50% Stadtwerke Herne AG) was formed in 1961 after Gelsenwasser had provided waster to the municipality for some decades via franchise contracts. In 2006, the contract was renewed for a further 30 years.

Wasserversorgung Voerde GmbH (WVV), Voerde

A 1994 joint venture (50% each) between NGW and the municipality, providing water to 15,721 customers in Voerde. Drinking water is sourced exclusively from NGW's Bucholtwelmen Waterworks.

Wasserwerke Westfalen GmbH (WWW), Dortmund

Formed in 2000 as a joint venture (50% each) between Gelsenwasser and Dortmunder Energie- und Wasserversorgung GmbH (DEW), serving DEW in Westhofen, Ergste, Villigst, and Hengsen and for Gelsenwasser in Witten, Echthausen, and Halingen. The contract is designed as an open option for further expansion.

In August 2001, a 20-year contract was gained for supplying 1.2million people in 400,000 households in Bochum and Hamm, Iserlohn and Sendenhorst. Wasserwerke Westfalen GmbH (WWW) abstracts and Gelsenwasser (50%) with Dortmunder Energie und Wasserversorgung GmbH (50%) distribute the water. Up to 120million m³ of water pa is delivered from eight waterworks along the River Ruhr.

Hanse Wasser

In 2000, Gelsenwasser formed Hanse Wasser GmbH, a 49%:51% joint venture with Stadtwerke Bremen AG, a municipal water utility serving the municipality of Bremen. Hanse Wasser gained a 74.9% stake in Abwasser Bremen GmbH, paying the city DEM708million to use the sewerage and sewage treatment network, which serves its 550,000 people in the City of Bremen and 150,000 (Lemwerder, Schwanewede, Ritterhude, Lilienthal and Oyten) Achim in the surrounding area. The network has 160,000 connections and is served by two tertiary level treatment plants: Seehausen purification plant (serving a population equivalent of 1million) and Farge (population equivalent of 150,000). 43.9million m^3 of wastewater was treated in 1999.

Gelsenwasser AG – International activities

Algeria

The 5.5 year Annaba & El Tarif O&M contract was terminated early in 2011.

France

Nantaise des Eaux was established as a company in 2001 and became a 60% held subsidiary of Gelsenwasser in 2007. It was sold to Suez Environnement in 2015.

Hungary

Contracts

Year	Location	Contract & length	People served & service
2001	Miskloc	20-year concession	190,000, Water & wastewater

Gelsenwasser holds 49% of the equity of Borsodviz Rt., the regional utility providing water and wastewater services to 109 municipalities in Miskloc in the Borsod region. The municipality holds 51% and an annual turnover of DEM12million is anticipated.

Poland

Contracts

Year	Location	Contract & length	People served & service
2002	Glogowie	20-year concession	75,000 water & wastewater

46% of PwiK w Glogowie Sp zoo (PwiK) was acquired in 2002. PwiK acquired 85% of PWKiC, the holding company serving Przemkov, 30 km from Glogowie, with a 30 year lease covering 9,000 people.

Czech Republic

NGW holds 30.58% of Chevak Cheb a.s. with the remainder being held by local municipalities. The company provides water and sewerage services to Cheb, Mariánské Lázne, Ash, Františkovy Lázne and surrounding municipalities (total population 87,800). It was founded in 1994 and NGW acquired its stake in 1998.

In 1999, NGW acquired 50% of KMS Kraslickla Mestska Spolecnost s.r.o., which provides water, wastewater and heating services to 9,000 people in the town of Kraslice, near Pilsen. 50% of KMS's shares are held by the municipality. A new wastewater treatment plant entered service in 2003.

Industrial water and wastewater services

Rhur Oel, Gelsenkirchen: A ten-year lease contract with Rhur Oel GmbH and Veba Oel Verabeitungs-GmbH was signed in July 2002. Two 4m^3 per hour wastewater treatment plants (0.7million m^3 pa) are operated, with an investment of EUR4million and total revenues of EUR9million. A new contract signed in 2004 increased total revenues to EUR17million pa.

Ciba Speciality Chemicals, Grenzach: A ten-year contracting agreement to supply desalinated industrial process water to the Rhineland facility was signed in 2003. There is an option to extend this to other facilities.

Krupp Thyssen Nitrosda, Düsseldorf: Operation of a pilot plant for the dewatering of slurry from the company's speciality steel production unit. The contract was renewed in 2004, covering 40m^3 per hour of waste.

Thyssen Krupp Steel AG, Bochum: In 2006, AWS was commissioned to build and operate a demineralisation plant with a capacity of 110,000m^3 pa. The contract will run for 10 years.

Henkel and Stora Enso, Düsseldorf: Operation pilot plants for the advanced treatment of paper manufacturing wastes generated at the Stora Reishoz facility and chemical manufacturing wastes for the Henkel facility.

Agust Storck KG, Halle/Westphalia: 10-year BO for a 1,300m^3 per day tertiary wastewater treatment plant running from the plant entering service at the end of 2004.

Rudolph Wild GmbH & Co., Eppelheim: A long-term contract was gained in 2006 for the management of the sewage treatment plant near Heidelberg. This plant handles about 0.8million m^3 sewage annually.

Sources:

Annual Reports, 1998-2013

Company web site

FT.com

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Dr Manfred Scholle (Chairman)

Dr-Ing Bernhard Hörsgen (Management Board)

Germany

RWE AG

Population served by service and country 2011 data RWE	Water Only	Sewerage Only	Water & Sewerage	Total
Germany	7,500,000	0	1,700,000	9,200,000
Croatia	0	760,000	0	760,000
Poland	0	0	135,000	135,000
Total - home markets	7,500,000	0	1,700,000	9,200,000
Total - international	0	760,000	135,000	895,000
Global total	7,500,000	760,000	1,835,000	10,095,000
% home markets	100%	0%	93%	91%

RWE is the largest of the German multi-utilities. In the late 1980s, the company began to develop RWE Umwelt AG into one of Europe's largest waste management companies. In the mid 1990s, the company set up RWE Aqua as a subsidiary of Umwelt, to exploit the opening up of the water and wastewater markets in Germany and in central and Eastern Europe.

RWE – Water acquisitions 2000-03

Company	Year	Revenues EUR million	Stake (%)	Equity value EUR million
Thames Water plc, UK	2000	2,247.00	100.00	7,100.00
ESSBIO, Chile	2000	46.00	51.00	340.00
E'town Corporation Inc., USA	2000	190.00	100.00	670.00
ANSM, Chile	2001	22.00	N/A	N/A
ESSEL, Chile	2002	20.00	25.50	150.00
Ondagua & Pridesa, Spain	2002	148.00	75.00	95.00
China Water Company, China	2002	[1] 9.70	48.80	N/A
RWW, Germany	2002	97.00	14.30 to 74.90	194.00
RWW, Germany	2002	97.00	74.90 to 79.80	N/A
American Water Inc., USA	2003	1,700.00	100.00	4,500.00

[1] Six months to 31-10-2001

RWE sought to become the third largest European water company by 2005 and achieved this by 2000 through its agreed bid for Thames Water. As a result of the September 2001 bid for American Water Works, RWE is now the third largest water utility company globally and the market leader in Germany, the UK and the USA. In 2005, RWE completed the divestment of RWE Umwelt and decided to sell its activities outside Germany and Central & Eastern Europe.

A move away from water…

In 2004, RWE decided to concentrate on its European and American activities and is considering the fate of its other contracts on the basis of a "managed exit from all non-core markets". After a series of differing announcements on its Chilean and Spanish operations during 2005, the company formally announced in 2005 that it would divest its Thames Water and American Water Works holdings, along with its water activities outside continental Europe. In December 2006, Thames Water was sold to Kemble Water, a special purpose vehicle organised by the Macquarie European Infrastructure Fund for GBP4.8billion plus GBP3.2billion in assumed debt. The total value of the divestment of EUR11.9billion resulted in a book gain of EUR0.7billion for RWE. AWW was sold off in November 2009 after three placings following its April 2008 IPO.

…save for a safe European home

RWE has retained some of its German activities, along with those directly held by the company in Central & Eastern Europe. This covers approximately 10 million people, often within multi-utility contracts.

RWE - Divestment programme:

Pridessa / Ondagua	Spain	Sold to Acciona (EUR150million)
Thai Tap Water	Thailand	Sold to CH Karnchang, its JV partner
Ajman	UAE	Sold to Veolia
Berlinwasser International	Global	Sold to Marubeni, but bid was rescinded in 2006
China Water Company	China	48% stake sold to Biwater in 2007
United Water	Australia	47.5% stake sold to Veolia, its JV partner
ESSAM/ESSBIO/ESSEL	Chile	Sold to Southern Cross (USD300million)
Thames Water	England	Sold to Macquarie in 2006
American Water Works	USA	IPO, May 2008, stake sale completed in 2009
Budapest	Hungary	Stake sold back to the municipality in 2012
Berlinwasser	Germany	Stake sold back to the municipality in 2013

RWE AG - Profit & loss account, 2010-2014

Y/E 30/06 (EURmillion)	2010	2011	2012	2013	2014
Turnover	53,320	51,686	53,227	52,545	48,468
Pre-tax profit	4,978	3,024	2,230	-2,016	2,246
Net profit	3,308	1,806	1,306	-2,757	1,704
Earnings/share (EUR)	6.20	3.35	2.13	-4.49	2.77

In 2007, all water activities were classified as discontinued operations. No separate information is provided about RWE's water activities. In 2011, RWE stated that it served 15million people in Continental Europe.

RWE AG – Activities in Germany and internationally

Germany

RWE Aqua is responsible for the water business of RWE in Germany, Poland and Croatia. In 2000, it was split from RWE Umwelt and merged with Thames Water, and then in 2003 it was merged with the rest of RWE Energy. RWE Aqua had a total turnover of EUR808million in 2000 due to the Berlin Water acquisition.

Entity	Population
RWW	1,000,000
Süwag Vertreib (Frankfurt)	900,000
Rhurwasser (Essen)	720,000

Stakes held by RWE Aqua account for 9.2million people in ten German states. These cover Essen along stakes in the following entities: Hastrabau (Langenhagen), SEG (Schwerte), Ruhrwasser (Essen), WVN (Essen), MKW (Frankfurt), WRH (Ludwigshafen), Envia Aqua (Chemnitz) and W&A Holzland (Hermsdorf), DAR (Aachen, Trier, Weisbaden, Mannheim and Berlin) and ARGE (Neuweid), KAWAG (Ludiwigsburg) and LEW (Augsburg).

RWE Aqua acquired the majority stake in RWW (Rheinisch-Westfälische Wasserwerks-gesellschaft GmbH) in Mülheim an der Ruhr in April 2002. RWE was one of the founding members of RWW in 1912 with a 14.3% stake, which was increased to 74.9% in 2002. RWW has responsibility within RWE Aqua for North Rhine Westfalia and the Rhineland Palatinate. In September 2002 RWE Aqua acquired an additional 4.8% in RWW. RWW serves 1million people and had a turnover of EUR108 million in 2014, delivering 67 million m^3 of water that year. The stakes cost a combined EUR233million.

Croatia

Contracts

Year	Location	Contract & length	People served & service
2000	Zagreb	26 year BOT	0.76 million sewage treatment

This is the largest sewage treatment concession award in central and Eastern Europe to date, involving EUR270million in capital spending. The project scope includes design, construction and operation of the wastewater treatment plant (1million PE) and the administration facilities, construction of the main collecting pipeline (9.8km) and coverage of main drainage canal (5.5km). The concession company, Zagrebacke otpadne vode d.o.o (ZOV), is formed by RWE Aqua (48.5%), WTE Wassertechnik GmbH (48.5%, see EVN,

Austria) and the City of Zagreb (3%). Construction began in July 2002 and was completed between 2004 (mechanical treatment) and 2006 (biological treatment).

Poland

Contracts

Year	Location	Contract & length	People served & service
2002	Gornicza	25 year concession	135,000 water & sewerage

RWE acquired a 34% stake in PwiK, the municipal supplier for Dabrowa Gornicza in Silesia. The contract runs for 25 years. The partnership between RWE Aqua and the city of Dabrowa Gornicza is the first project for RWE Aqua in Central & Eastern Europe and at the time also only the third privatisation project in the Polish water market. Sewage treatment coverage will be extended from 30% to 100%.

Sources

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Thames Water, analyst presentaions, 1992-2000

Thames Water, press releases, 1992-2000

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Germany

Remondis

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Remondis	Only	Only	Sewerage	
Germany	13,000	558,000	1,054,500	1,625,500
Russia	0	0	120,000	120,000
Turkey	0	4,450,000	0	4,450,000
Poland	0	0	20,000	20,000
Total - home markets	13,000	558,000	1,054,500	1,625,500
Total - international	0	4,450,000	140,000	4,590,000
Global total	13,000	5,008,000	1,194,500	6,215,500
% home markets	100%	11%	88%	26%

Remondis was founded by Josef Rethmann in 1934 as a haulage company in Selm, North Rhine-Westphalia. From the 1960s, it started concentrating on waste collection, becoming one of Germany's leading municipal waste management companies by the 1990s. Renamed Remondis, the company operates in 14 countries including water and wastewater operations in Germany, Spain, Poland and Turkey. Remondis remains under the control of the Rethmann family and has revenues of EUR6.8 billion in 2013 and EUR6.4 billion in 2014. Remondis has been involved in waste water treatment services since 1982, but traditionally this was a low key adjunct of its waste management activities. Remondis manages 202 water treatment plants (115 million m^3 per annum) and 180 sewage treatment plants (370 million m^3 pa), handling 1.272 million tonnes of sewage sludge pa.

Germany – five municipal contracts

The Wesendorf local authorities assigned operation of their sewage treatment plant to Remondis in 1982, thus being one the first Public Private Partnerships. The plant has a capacity of 300,000m^3 per annum (15,000 people). Remondis took over the operation of the sewage treatment plant for the city of Genthin in 1992, treating more than 1.2million m^3 of municipal and industrial wastewater a year (15,000 people). Management of Wirtschaftsbetriebe Oberhausen started in 1996 and Remondis controls 49% of the entity, serving 219,000 with sewerage in Oberhausen. In 1998, Rethmann Wasserwirtschafts GmbH acquired an equity participation in Gotha municipal services company. Stadtwirtschaft Gotha GmbH is responsible for the entire water supply and sewage disposal system (150,000 people), from the operation of the water treatment and sewage treatment plants and the canalisation network to invoicing the final consumers.

Since the beginning of 2002, Remondis has managed the waste water management system for the city of Bremerhaven as a Public Private Partnership. Remondis is responsible for the operation of two sewage treatment plants serving 175,000 people (2003, 74.9% held, PE: 612,000) and 600km of sewers, handling up to 60,000m^3 of waste water each day. A contract for sewerage management in Frechen (Stadtbetrieb Frechen, 40% held by Remondis, 48,000 people) was gained in 2004. An O&M contract was signed with Gemünden in 2005 covering water & sewage for 19,000 people.

In 2007, Remondis took over the management of water and sewerage services for 200,000 people in Tettau and the Lausitz region of Brandenburg, Wasserverb and Lausitz. A new water treatment works with a capacity of 23,000m^3 per day entered service in 2007 at a cost of EUR10million. A contract serving Amseldorf and adjoining towns was awarded in 2008 serving 20,000 people.

Remondis acquired 50% of Wedemark's KED Kommunale Entsorgungsdienste GmbH in 2012. The contract in Lower Saxony serves 28,500 people. Previously, Remondis had a cooperation agreement, first signed in 1986.

Remondis Aqua operates industrial water and wastewater contracting work in Germany, serving customers including Lorenz Snack-World, MAN, BASF and the Humana Group.

Eurawasser was sold by Suez Environnement to Remondis for EUR95 million in 2012. Eurawasser had a turnover of EUR75million in 2001 and serves 800,000 people. Revenues in 2011 were EUR73million.

Contracts

Year	Location	Contract & length	People served & service
2010	Bad Breisig	Partnership	13,000 water
2009	Rheingau	5&3 year partnership	79,000 water & sewerage

Eurawasser has taken over the operations of Rheingauwasser GmbH (44,000 people) and Abwasserverband Oberer Rheingau (36,000 people).

2004	Cottbus	25 year partnership	135,000 water & sewerage

Eurawasser acquired 28.9% of Lausitzer Wasser in February 2004. The town of Cottbus retains 50.1% of the company with the balance being held by local municipalities. Water will be supplied to 102,000 people in Cottbus and 45,000 in surrounding areas, along with sewerage services for 117,000 people. Water revenues are EUR12million for water supply and EUR16million for wastewater pa.

1993	Rostock	25 year concession	255,000 water & sewerage
2000	Mecklenburg	25 year concession	61,000 water & sewerage

Rostock was the first major concession awarded to a private sector consortium in Germany. It forms part of the 1991 Baltic Action Plan for reducing effluent discharges into the Baltic Sea. Eurawasser work on the first phase of the Rostock wastewater treatment facility was completed for EUR85million in 1996 and its treatment capacity increased from 320,000 PE to 400,000 PE in 2002. Total capital spending over the life of the contract will be approximately EUR450million, with EUR300million spent by 2008. 311,000 are served for sewerage and 262,000 for water. The Mecklenburg concession was merged with Rostock in 2003. Wastewater connections for peripheral communities have increased from 28% in 1993 to 86% by 2007 for EUR142million.

2000	Gustrow	25 year BOT	35,000 wastewater treatment

The two contracts (Mecklenburg and Gustrow) signed in April 2000 serve a total of 105,000 people in the Mecklenburg-Pomerania region of North East Germany. The Gustrow contract, signed in April 2000, is for the design, construction and management of a wastewater plant to treat 2.4million m^3 pa.

1994	Goslar	25 year concession	51,000 sewerage

Eurawasser has gained a 25 year sewerage contract for Goslar (Lower Saxony) from April 1996. Eurawasser controls a holding of 100% of the management and 49% of assets in terms of equity stakes. The facility treats 98,000 PE: 55,000 people, 43,000 for industry.

2000	Kriensen	25 year concession	12,000 water & sewerage

In February 2000, a concession was signed for services to the city of Kriensen.

2001	Schwerin	Participation	95,000 water & sewerage

Remondis holds 49% of the water company. The WWTW has a PE of 200,000.

Russia – a municipal PPP

Remondis Arzamas Service has been set up to serve the city of Arzamas some 400 km east of Moscow. Remondis holds 75% of the venture, which took over the water and sewerage operations of GorVodokanal in January 2010 and serves 120,000 people. EUR 21 million will be invested in the entity which supplied 13.5 million m^3 of water in 2009 and has 16,500 connections.

Poland – two municipal contracts

In 2006, Remondis acquired 49.9% of Zaklad Gospodarki Komunalnej i Mieszkaniowej (ZGKiM Sp. zoo) the water company serving Drobin. This is for a small town, with 10,000 people 2,000 households, with 450,000m^3 of water being provided per annum (1,250m^3 per day) through a 350km distribution system. Investments of EUR0.6million will be made between 2007 and 2010.

A contract to supply water and wastewater services to 10,000 people in Toszek in Silesia was gained in 2007. 0.3million m^3 of water pa is provided to 1,900 customers through five water treatment works, along with a central wastewater treatment works.

Turkey – Joint venture

In December 2006, Remondis established a joint venture with the Turkish company, Sistem Yapi A.S. (Remondis International 51% / Yapi 49%). Remondis-Sistem Yapi A.S, operates nine wastewater treatment plants in the cities of Antalya, Bursa (two plants, with a PE of 1,500,000 and 650,000), Fethiye, Izmir, Balikesir and Malatya, treating wastewater from around 4million inhabitants. The total initial investment in these facilities was EUR145million. Sistem Yapi is part of the Sistem Group which has an annual turnover of EUR56million.

An O&M contract to serve 70,000 people in Fethiye was signed in 2007 and was followed by a contract to serve Denizli in 2012. The latter contract covers 380,000 of the 500,000 people living in the city.

Spain – Industrial wastewater

In 2006, Remondis Aqua GmbH took over the management of a wastewater treatment and energy recovery facility owned by Deprovesa Wild. The BOT contract will run for fifteen years with anaerobic pre-treatment of the wastewater which will generate biogas as a natural gas substitute.

Netherlands – Industrial wastewater

In 2009, Remondis took over the treatment of effluents generated by Akzo Nobel at the Rotterdam Botlek Chemical Park on a long term basis.

India – strategic acquisition

In 2009, Remondis Aqua acquired Shrushti Consultants, based in Pune. The company provides water and wastewater management services to nine industrial clients and two municipal clients. Clients include Tata, Wheels India, Volkswagen India, Serco Tools India and Kalyani Thermal Systems.

Sources:

Company web site and news releases

Remondis Aqua, corporate presentaion, 2014

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Ludger Rethmann (Chairman)

India

SPML Infra Limited

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
SPML Infra	Only	Only	Sewerage	
India	6,270,000	0	0	6,270,000
Global total	6,270,000	0	0	6,270,000
% home markets	100%	0%	0%	100%

SPML is an Indian utility and infrastructure engineering company which has diversified into PPP and BOOT contracts, notably in the water and wastewater sector. The company has been active in water infrastructure projects in India since 1979.

SPML - profit & loss account, 2010-2014

F/Y 31/03 (INRmillion)	2010	2011	2012	2013	2014
Net sales	15,655	13,491	10,208	11,255	15,914
Pre-tax profit	525	276	496	-1,278	1,622
Net profit	462	195	79	54	-125
EPS (INR)	13.0	5.3	2.2	1.5	-3.4

Contracts

Year	Location	Contract & length	People served & service
2011	Goa	5 years O&M	1.5 million, water

The INR1.37billion project comprises of rehabilitating the extant 60,000m^3 per day water treatment works and expanding its capacity by 100,000m^3 per day. A second phase will bring the total capacity up to 260,000m^3 per day. On completion of the first phase, SPML will operate the facility for five years.

2008	Latur	10 years O&M	450,000, water

This involves managing the city in Maharashtra State to take over and rehabilitate water provision services for 50,000 customers. The aim of the INR360million (USD9million) project is to reform water management and ensure continual water provision for the city. SPML holds 33.3% of the project equity.

2008	Bhiwandi	30 years O&M	1.1 million, water

The INR500million (USD13million) project involves taking over the management of 50,000 meters and increasing the metered base to 225,000 along with customer services and network rehabilitation work. Bhiwandi is in Maharashtra State.

In 2009, SPML gained a BOOT for the city. Five years construction and 25 years O&M for a INR3.42billion (USD86million) water transfer and treatment project serving the city. The project is expected to enter service in 2014 following the rehabilitation of the city's water treatment plant and the construction of 13km raw water mains.

2013	Jalore	13 years BOT	300,000, bulk water

Water provision for 256 villages and the town of Bhinmal in Jalore District, Jodhpur, Rajasthan. Reservoir and transmission mains for INR 3.7 billion, from PHED Jodhpur with 36 months of construction and 10 years of O&M. 1.85 million in the entire district, with 46,000 in Brinmal itself (2011).

2013	Nadouti	13 years BOT	100,000, bulk water

Bulk water provision for Nadouti Tehsil in Karoui district and Gangapur and Karouli towns and 46 villages. INR 2.3 billion from PHED Bharatpur in Rajasthan. 30 months construction and 10 years O&M. Karauli population is 1.46 million.

2013	Rajasthan	13 years BOT	400,000, bulk water

445 villages to be supplied with water, INR 0.8 billion project funded by PHED Kota, Bharatpur and Jhalawar districts in Rajasthan. INR 0.31 billion for Gagreen in Jalawar (36 months constriction, 10 years O&M), INR 0.25 billion for 199 villages in Jawaja Panchayat Samiti in Beawar (36 months construction, 9 years O&M), INR 0.25 billion for 246 villages in Kaman and Pahari of Bharatpur (30 months build and 10 years O&M).

2013	Churu	13 years BOT	130,000, bulk water

PHED Jaipur in Rajasthan. INR 4.0 billion for Ratangarth-Sujangarth and Patephur-Laxmangarth. 3 years build and 10 years O&M.

2013	Sikar	13 years BOT	90,000, bulk water

PHED Jaipur in Rajasthan. INR 0.9 billion for 92 villages in Laxmangarth Tehsil of Sikar district. 2 years build and 10 years O&M.

2013	Jaipur & Amjer	13 years BOT	500,000, bulk water

PHED Jaipur and Ajmer in Rajasthan. INR 0.3 billion three contracts covering 337 villages in Tonk (9 year O&M), Nagaur and Ajmer in Sikar district (both 10 years O&M).

2012	Nagaur	13 years BOT	500,000, bulk water

PHED Ajmer in Rajasthan. INR 3.2 billion for Nagaur villages with 3 years build and 10 years O&M.

2014	Pokhran	12 years BOT	1,200,000, bulk water

Water supplies for four towns, Pokhran, Falsoond, Balotra and Siwana and 580 villages. This project involves developing 400 km of pipelines, 0.125 million m^3 in water treatment and water management systems. It includes a ten year O&M element.

Sources:

Company website

Company Annual Reports, 2008-2014

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Subash Chand Sethi (Chairman)

Lalit Khatan (CFO)

Sushil Kumar Sethi (Managing Director)

Japan

Mitsui

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
Mitsui	Only	Only	Sewerage	
Mexico	0	15,350,000	517,000	15,867,000
Global total	0	15,350,000	517,000	15,867,000
% home markets	0%	0%	0%	0%

Mitsui & Co Ltd has built up a portfolio of minority stakes in companies and projects, along with one majority holding. In March 2006, Mitsui acquired 35% (later adjusted to 26%) in Thai Tap in Thailand, along with 25% of Pathum Thani (Thai Tap, see Company Entry). The company subsequently acquired 85% of Earth Tech's Mexican activities from Aecom in 2008, with Toyo Engineering a Mitsui associate, acquiring the remaining 15%.

In September 2013, Mitsui signed a MOU with Rangoon (Yangon City Development Committee) for future water supply collaboration. In June 2013, 49% of SMVAK (Aqualia Czech SL) was acquired from Aqualia for JPY 12.5 billion. SMVAK 1.3 million people, FCC still holds the other 51%.

Mitsui - profit & loss account, 2011-2015

Y/E 31/03 (JPYbillion)	2011	2012	2013	2014	2015
Revenues	4,679	5,252	4,912	5,732	5,405
Operating profit	190	297	254	271	190
Net profit	307	435	297	350	306
EPS (JPY)	168	238	163	192	171

Mexico - Atlatec

In June 2001, Earth Tech acquired Atlatec S.A. de C.V. (Atlatec), the Environmental Division of Cydsa. S.A. de C.V. Atlatec specialises in the provision of water and wastewater treatment services to the refinery industry and is moving into the water distribution market. Concessions include wastewater treatment facilities for Pemex refineries located in Cd. Madero, Tula, Cadereyta and Minatitlán. These operations have been renamed by Mitsui under the original Atlatec banner.

Contracts

Year	Location	Contract & length	People served & service
2012	Atotonilco	20 year BOT	10,500,000 wastewater

This USD710 million construction project, with a capacity of 4,300,000 m^3 per day is probably the largest sewage treatment facility in the world. It entered service in 2013 and treats 58% of Mexico City's wastewater. .

2008	Guadalajara	20 year BOT	1,000,000 wastewater

2009	Guadalajara	O&M	3,000,000 wastewater

The two contract gains in Guadalajara City were gained by Atlatec after its acquisition by Mitsui. The first facility (El Ahogado) has a capacity of 190,000m^3 per day and the second treats 700,000m^3 per day. Both of these projects are being carried out with Mexico's Servicos de Agua Trident SA.

2004	Chihuahua	20 year DBFO	250,000 wastewater

The original project was awarded to Atlatec in 1994. It serves the northern region the city and treats 5million gallons of wastewater per day. Earth Tech has operated the plant since 1995. The client is the Junta Municipal de Agua y Saneamiento de Chihuahua.

2004	Chihuahua	10 year DBFO	500,000 wastewater

The second facility has been located in the southern region of the city and it treats more than 50million gallons of wastewater per day having entered service in 2006. The two facilities account for the entire city's wastewater.

2002	Orizaba	20 year DBFO	117,000 water & sewerage

In September 2002, the company gained a USD15.5million DBO for a wastewater treatment plant in Orizaba by Fideicomiso del Sistema de Aguas Residuales del Alto Rio Blanco (FIRIOB), a local industrial grouping. The system will treat 80,000m³ of wastewater daily with a biochemical oxygen demand of 109.9tonnes per day. The facility will treat wastewater from Orizaba, as well as wastewater from a brewery, a paper mill and 12 other industries. Work was completed in August 2004. 70% of the finance comes from FIRIOB and 30% from municipal sources.

2003	Xalapa	20 year DBFO	400,000 water & sewerage

An USD55million DBFO water and wastewater contract for the town of Xalapa was awarded to ET's Aguas Tratadas de Xalapa, including increasing the connection rate to these services from 50% to 100%. Works will include a 65,000m³ per day water treatment plant which entered service in 2005. Base revenues from 2005 will be USD7million per annum.

China - Galaxy New Spring

In 2010, Mitsui entered into a 50:50 joint venture within Hyflux of Singapore (see company entry) to manage the latter company's portfolio of 22 water and wastewater treatment projects in China. Total investments by Mitsui to the end of 2011 were JPY35billion.

Desalination contracts

Mitsui holds 25% of RLC Power Holding Company, which operates the Ras Laffan IWPP desalination project in Qatar and the Umm Al Nar IWPP desalination project in the United Arab Emirates.

Sources:

Company Annual Reports, 2010-2014

Company Handbook, 2012, 2014

Earth Tech, company web site

Tyco International, Form 10K, 2001-2007

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Masami Iijima (Chairman)

Tatsuo Yasunaga (President)

Keigo Matsubara (CFO)

Malaysia

Puncak Niaga Berhad

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Puncak Niaga	Only	Only	Sewerage	
Malaysia	7,100,000	0	0	7,100,000
China	250,000	0	0	250,000
Total - home markets	7,100,000	0	0	7,100,000
Total - international	250,000	0	0	250,000
Global total	7,350,000	0	0	7,350,000
% home markets	97%	0%	0%	97%

Puncak Niaga (PN) was incorporated in January 1997 and listed on the Kuala Lumpur Stock Exchange in July 1997. PN is the holding company for Puncak Niaga Sdn Bhd (PNSB), which was incorporated in 1989 and gained the water treatment operation and management contract for facilities responsible for 70% of water supplied to the state of Selangor and the Federal Territory of Kuala Lumpur in 1994. A second contract for expanding the state's water treatment capacity was awarded in 1997. In 2014 the system has a capacity of 4.593 million m^3 per day, serving 7.5 million people a total of 716.23 million m^3 of water.

It is anticipated that at some point in 2015 the state government will acquire Puncak Neoga's water activities for MYR 1,553 million. The water activities are classified as discontinued activities in the company's accounts.

Water treatment activities in Malaysia

The first concession agreement was signed in September 1994 for the operation of 26 WTPs. The second concession, signed in March 1995, is for a construction come operation agreement for the 950Ml per day Sungai Selangor Water Supply Phase 2 Project (SSP2) treatment plant. Two further agreements cover two additional water treatment plans. In 2007, total treatment capacity was 1,930 Ml per day. The concessions are due to expire at the end of 2020. 33.9% of PN's equity is held by Central Plus Sdn Bhd and 2.9% by Corporate Line Sdn Bhd, the original investors in PNSB. In 2005, PN took over from Veolia as the operator of the water treatment works.

The main project has been the development of the SSP2 water treatment plant. Stage 1 was completed in 2000 with a capacity of 475million L per day. Stage 2, costing MYR533.9million, entered service in 2001 and supplies a number of towns and parts of Kuala Lumpur. It also has a daily production capacity of 475million L. Delivery in 2009 was 963million L per day. PNSB is involved in the financing, design, construction, operations, maintenance and management of SSP2. PNSB now produces 1,930million L of water per day.

Puncak Niaga - Profit & loss account, 2010-2014

Y/E 31/12 (MYRmillion)	2010	2011	2012	2013	2014
Turnover - Water	1,488	1,533	1,599	-	-
Water tariff compensation	419	458	1,024	-	-
Turnover	2,056	2,592	1,563	514	607
Pre-tax profit	-109	-75	490	-68	9
Net income	-91	9	259	201	248
Earnings per share (MYR)	-0.22	0.03	0.63	0.49	0.61

Water distribution

In December 2004 PN's 70% held subsidiary Syarikat Bekalan Air Selangor Sdn Bhd (SYABAS) was awarded a 30 year concession for operating the water supply services in the state of Selangor and the Federal Territories of Kuala Lumpur and Putrajaya by the Federal Government. It is understood that MYR2billion will be needed to replace 6,000km of supply pipes. The concession started in January 2005 and covers 7.1million people via 1.48million customer connections, rising to 7.3million people and 1.664million domestic and business connections in 2009.

Non revenue water (NRW) was 33.0% in 2007, down from 42.8% in 1994, but still short of the 15% target for 2015. Financial constraints due to no tariff rises meant that NRW was 32.3% in 2009. After the replacement of 202,420m in

2007, no water meters are more than seven years old. During 2007, PN spent MYR400million replacing 500km of water pipes. The company had previously replaced 336km of its 5,600km network.

SYBAS planned a total spending of MYR110billion during the 30 year water concession period in Kuala Lumpur, Selangor and Putrajaya. This will include MYR10.7billion for capital expenditure, including development and upgrading of its distribution system (MYR4.8billion); asset management and replacement (MYR2.1billion); (NRW reduction programme including pipe replacement (MYR2.7billion); and provision for land matters (MYR1.1billion).

International developments

PN has opened affiliated offices in Brunei, Philippines, Indonesia and Cambodia with the longer term aim of entering these markets on a joint venture basis. In November 2002, PN gained a MYR234million contract to lay a 1,124km water pipeline to Chennai in India which entered service in 2004 and involved a five year management contract from 2005-10.

In May 2008, Sino Water, a joint venture between PN (80%) and Environmental Holding (20%) of Singapore was formed. Subsequently, Sino Water acquired 83% of Luwei (Pingdingshan) Water based in Lushan, Henan Province in August 2008 and 100% of Xinnuo Water (Binzhou) Limited, a company based in Laodian Village, Binzhou County, Shandong Province in July 2008, along with Luancheng Dayu Water Supply Co (water distribution in Luancheng County, Hebei) and Hebei Sino Panlong Industrial Water Supply Co (industrial water provision in Yuanshi County, Hebei) in 2009. The Lushan project was expanded in 2012 to increase coverage from 21,000 people to 130,000 people in 2014.

Contracts

Year	Location	Contract & length	People served & service
2008	Lushan	BOT	130,000 people water treatment
2008	Binzhou	BOT	30,000m^3 per day industrial wastewater
2009	Luancheng	BOT	120,000 people water
2009	Yuanshi	30 year BOT	10,000m^3 per day industrial water

In August 2015, Puncak Niaga announced that it will be selling its Chinese activities to Environmental Holding, its partner company in the venture.

Source:

Annual Reports, 2003-2014

Company web site

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Y Bhg Tan Sri Rozali bin Ismail (Chairman, MD)

Ley Chan Wong (CFO)

Philippines

Manila Water Co

Population served by service and country 2014 data Manila Water	Water Only	Sewerage Only	Water & Sewerage	Total
Philippines	6,450,000	0	750,000	7,200,000
Vietnam	1,200,000	0	0	1,200,000
Total - home markets	6,450,000	0	750,000	7,200,000
Total - international	1,200,000	0	0	1,200,000
Global total	7,650,000	0	750,000	8,400,000
% home markets	84%	-	100%	86%

In 1997, Manila Water gained the 25 year concession for operating Manila's East Zone, where 5.6million people lived at the time. 35% of the company's equity was sold when the company was listed in 2005. United Utilities (UK) no longer has a shareholding in the company, and the main corporate shareholders are Ayala (Philippines, 32%), the World Bank's IFC (a 7% stake bought from United Utilities for USD15million in 2004) and Mitsubishi (7%, Japan, see company entry). The concession was extended from 2022 to 2037 in 2009.

Manila Water Co - Profit & loss account, 2010-2014

Y/E 31/12 (PHPmillion)	2010	2011	2012	2013	2014
Water – Manila	10,724	11,525	13,866	14,794	14,882
Water – Laguna, Boracay & Clark water	214	310	730	935	1,387
Environmental Charges	N/A	1,683	2,237	2,250	2,304
Sewerage	N/A	318	390	397	420
Revenue from international contracts	75	169	170	175	25
Total revenues	11,013	12,004	14,553	15,280	16,357
Net profits	3,987	4,278	5,492	5,752	5,813
Earnings per share (PHP)	1.62	1.73	2.23	2.34	2.36
Billed water - Manila (million m^3 pa)	409.8	411.6	427.3	433.6	449.0
Billed water - Boracay (million m^3 pa)	2.1	2.5	3.1	3.6	4.0
Billed water - Clark (million m^3 pa)	0.8	7.8	9.0	9.8	11.6
Billed water - Laguna (million m^3 pa)	3.9	4.9	8.1	11.4	31.8
Billed water - Thu Duc (million m^3 pa)	-	-	122.4	120.4	119.7
Billed water - Kenh Dong (million m^3 pa)	-	-	-	20.6	55.2
Billed water - total (million m^3 pa)	416.6	422.8	569.9	599.4	671.3
Non revenue water - Manila (%)	11.0%	11.2%	12.2%	11.2%	11.3%
People served (million)	6.0	6.1	6.2	6.3	6.4
Service connections - Manila (000)	814	858	896	922	949
Service connections – Laguna (000)	19	29	42	66	90
Service connections – Boracay(000)	4	5	5	6	6
Service connections – Clark Water (000)	2	2	2	2	2
Households connected (000)	1,158	1,204	1,259	-	1,346
Sewer connections	69	99	110	-	112
Urban poor - connections (000)	282	287	303	-	308

A number of service quality targets have been set with mixed results. Near universal 24 hour water availability has been achieved since 2007, compared with 26% availability in 1996 and 58% availability in 1997. Household connected have increased from 325,000 in 1997 to 1,106,000 by 1Q 2010 an increase of 4million people being served. Under the Tubig Para Sa Barangay scheme, 700 projects have resulted in 1.8 million people from 307,761 poor households (2014) have been connected to the water network since 1998, including 950,000 since 2005.

Capex in 2007 was PHP4.4billion, rising to PHP4.95billion in 2009. The World Bank funded USD85million Manila Third Sewerage project aims to boost sewerage coverage from 10% to 30% by 2010, connecting 3.3million people. A PHP187billion 2007-22 investment plan has been drawn up. The concession extension has been linked to PHP450billion in capital projects between 2010 and 2037. 49% of the company's loans are PHP denominated, the balance mainly being in JPY (36%) and USD (19%).

Sewerage and sewage treatment have made limited progress to date, and a PHP 50 billion programme for service extension was implemented in 2009. 68,425 households were connected to the sewerage network by the end of 2009 and 112,282 in 2014. Sewerage coverage has increased from 3% in 1997 to 12% by 2007. This is well behind original expectations and progress continues to be slow. 29 million m3 of sewage was treated in 2014.

The company has rehabilitated the Magallanes wastewater treatment plant which processes up to 40,000 m^3 per day of wastewater. Three new WWTWs are currently being built: Pasig N and S WWTW (100,000 m^3 per day), Taguig North (100,000 m^3 per day) and Marikina North (100,000 m^3 per day).

New projects

Boracay is a resort island with a resident population of 24,000 and Laguna is a province near to Manila, the concession covering a 13,000Ha service area, with a 2010 population of 700,000, which is forecast to grow to 1million by 2014. Clark water was acquired in 2011, providing 1,800 connections with 22,000m^3 of water per day with revenues of PHP27million.

Laguna: Laguna Water, a 25 year concession 70% held by Manila Water. In 2009, there were 18,000 connections rising to 90,000 in 2014, with NRW at 54% falling to 12% by 2014. Coverage is now to 60% with 400,000 more to be connected.

Boracay (BIWC, 80% Manila Water, 25 years from 2010, with a 25 year extension option, 2009 revenues of PHP112million and PHP184 million in 2011, 3,367 service collections and NRW at 40%, down to 16% in 2014). Sewerage coverage is set to rise from 22% to 76% by the end of 2016. Water coverage has increased from 60% to 100%

In 2011, Manila Water also started a bulk water project supplying 35,000m^3 of water per day to six areas in the central and northern part of Cebu Province, which have a target population of 900,000. This was completed in 2013.

Vietnam

The 5 year O&M NRW reduction project in Ho Chi Minh City was concluded in 2014. This accounted for Manila Water's international revenues. The contracts below are treated as investments.

Contracts

Year	Location	Contract & length	People served & service
2011	Ho Chi Minh City	50 year BOO	1 million bulk water

49% of the Thu Duc Water BOO Corporation project company was acquired in 2011. A minimum of 300,000 m^3 per day of bulk water is to be supplied to five districts of Ho Chi Minh City. The facility is to be expanded to 600,000 m^3 per day in the medium term. 119.7 million m^3 in 2014 (328,000 m^3 per day).

2013	Ho Chi Minh City	BOO	200,000 bulk water

Manila Water acquired 100% of Kenh Dong Water Supply Co in 2012. The company has a 200,000 m^3 per day bulk water facility which entered service in 2013, supplying 20,600 m^3 per day in 2013 and 55,200 m^3 per day in 2014.

Negotiations in 2013 to acquire PALYJA Jakarta from Suez did not work.

Sources

Listing Document, 2005

Annual Reports, 2005-2014

Investor presentations, 2006-2015

Company web site

Contact Details	
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Geraldo Ablaza (President & CEO)

Fernando Zobel de Ayala (Chairman)

Luis Juan B Oreta (Finance Director)

Philippines

Metro Pacific Investments

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
Maynilad Water	Only	Only	Sewerage	
Philipines	8,960,000	0	900,000	9,860,000
Global total	8,960,000	0	900,000	9,860,000
% home markets	100%	-	-	100%

After the end of Suez Environnement's management of Maynilad Water, it was taken back into ownership by the MMWSS. The Metro Pacific Investment Co (MPIC) is an investment holding company. In 2007, Maynilad Water was sold to a consortium led by MPIC. Currently MPIC holds 53% of Maynilad Water, DMCI 25%, Marubeni 20% and 2% by others.

Maynilad Water Services, Inc. (MWSI) was awarded the western half of the Metro Manila water distribution concession in August 1997. MWSI **has suffered from a mid concession-life crisis when** MWSI **took on 90% (USD800million) of** MWSS' foreign debt, which between 1997 and 2000 doubled in Peso terms from PHP20billion to PHP40billion due to the Peso's weakness. Although MWSI gave notice to halt the concession in March 2003, continuing arbitration and associated legal processes have meant that it continues to run under its current structure. The November 2003 and April 2004 agreement would have resulted in a write-off of PHP3.8billion (PHP3.2billion in equity and PHP629million in debt) and the loss of control in MWSI. On April 29 2005, MWSI and its bank creditors, along with the MWSS executed a Debt Capital and Restructuring Agreement. As part of this, MWSS acquired 83.97% of the shares of MWSI, with Ondeo holding the remaining shares. In return, the creditors released it from loan obligations worth a total of USD220million.

MPIC - Profit & loss account , 2010-2014

Y/E 31/12 (PHPmillion)	2010	2011	2012	2013	2014
Maynilad – water in West Zone	9,905	11,152	12,490	13,469	14,509
Maynilad - water in other areas	0	0	49	119	135
Maynilad – sewerage	1,739	2,172	2,906	2,909	3,294
Maynilad – total revenues	12,050	13,769	15,883	16,859	18,363
MPIC - total revenues	18,564	22,070	27,807	30,877	33,832
Maynilad – net profit	2,394	5,883	6,380	6,936	8,255
MPIC – net profit	2,866	5,054	5,907	7,209	7,940
Earnings per share (PHP)	0.14	0.22	0.26	0.37	1.03
Billed water (million m^3)	374	405	428	444	463
Non revenue water (%)	54%	48%	43%	39%	33%
Service connections (000)	904	1,005	1,074	1,129	1,190
People served	-	-	8,200	8,400	8,870
Sewerage connections (000)	N/A	N/A	23	28	-
People served (000)	N/A	N/A	770	895	-

The West Zone concession area covers eleven cities in Metro Manila (Pasay, Caloocan, Las Piñas, Parañaque, Valenzuela, Muntinlupa, Manila except portions of San Andres and Sta. Ana, some parts of Makati and Quezon City, Malabon and Navotas) and one city (Cavite City) and five towns in Cavite province (Rosario, Imus, Noveleta, Bacoor and Kawit). There were 831,578 customers in March 2010, or 6.6million people (5.9million in 2007). In February 2008, Maynilad repaid its outstanding USD232million loan and the company was released from administration. In 2007, 72% of the zone's 7.5million people were covered, rising to 8.87 million out of 9.5million by the end of 2014. 24 hour coverage for the entire concession area is planned for 2012 (58% in 2008 and 84% in at the end of 2011), along with lowering NRW to 40% (33% by the end of 2014). A PHP44billion Capex programme is underway from 2008 to 2012, with PHP9billion spent during 2011. The 1.6million people yet to be connected are the immediate investment priority. In April 2010, the concession was extended by 15 years to 2037. This means that the capital spending planned to the end of the concession has been raised from PHP208billion to PHP564billion.

Maynilad Water acquired 10% of Subic Water in 2013 - see SembCorp company entry.

Philippine Hydro (PhilHydro) was acquired in 2012 for PHP 527 million. It supplies treated bulk water to the Legazpi City Water District in Albay, Norzagaray Water District and Santa Maria Water District in Bulacan, and the municipal waterworks of Bambang, Nueva Vizcaya under a 25 year agreement. The company also owns and operates the treated water supply and distribution system of Rizal, Nueva Ecija. The capacity of these plants is 53,000 m^3 per day, supplying 28,000 m^3 per day in 2013, generating revenues of PHP 119 million, rising to PHP 135 in 2014.

Metropac - bulk water supplies

Metropac Water Investments Corporation (MWIC) is 100% held by Maynilad Water. MWIC holds 20% of Cebu Manila Water Development Inc (CMWD) via an indirect 39% stake acquired for PHP 130 million. CMWD made its initial deliveries in 2015, with contracted sales for 18,000 m^3 per day in 2015 and 35,000 m^3 per day for 2016-2035.

In 2014 MWIC signed an O&M agreement for the Rio Verde Water Corporation (RWCI). RWCI covers 80% of Cagayan de Oro's 640,000 inhabitants. The project supplies 100,000 m^3 of water per day.

Contracts

Year	Location	Contract & length	People served & service
2015	Iloilo	25+25 year BOT	420,000 water services

In 2014 MWIC gained a bulk water supply and distribution contract serving the city of Iloilo. The incumbent Metro Iloilo Water District currently suplies 20% of the city. MIWD's current distribution capacity of 35,000 m^3 day will be expanded to 170,000 m^3 per day through a USD65 bulk water project. USD200 million will be spent developing distribution services to cover the city. The population of Iloilo will grow to 800,000 in the medium term.

Maynilad Water, people served, by contract area

Manila	8,870,000
Bulacan	75,000
Cebu	85,000
Cagayan de Oro	510,000
Iloilo	420,000
Total	9,440,000

Sources:

MPIC, Annual Report, 2006-2014

Maynilad, Annual Report, 2013-2014

Corporate web site

Investor company web sites

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Manuel V Pangilian (Chairman)

Jose Ma K Lim (President & CEO)

David J Nicol (CFO)

Victorico P Vargas (President & CEO, Maynilad)

Russian Federation

Rosvodokanal

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Rosvodokanal	Only	Only	Sewerage	
Russia	0	0	5,066,000	5,066,000
Global total	0	0	5,066,000	5,066,000
% home markets	0%	0%	100%	100%

Rosvodokanal is a 90% held subsidiary of Alpha, a private equity company. Rosvodokanal has been active in the wastewater and sewerage sector since 1949 as engineers and consultants. It was acquired by Alpha in 2003. The company seeks to gain concession contracts in cities where Alpha has a presence, in part as this assists sin developing funding packages for development work.

Contracts

Year	Location	Contract & length	People served & service
2003	Orenburg	20 years, lease	540,000, water & wastewater

Orenburg Vodokanal Ltd has a lease serving Orenburg for water and sewerage. Since 2003, revenues have increased by 16% with the collection rate increasing from 85% to 97%, while water losses distribution fell from 27% to 21%. This contract was renewed as a concession in 2005 with a RUB1.6billion investment programme. The system provides 175,000 m^3 of water per day.

2007	Barnaul	25 years, lease	636,000, water & wastewater

This involves a RUB2.7billion investment programme for a broad range of refurbishment projects as well as developing new facilities.

2006	Krasnodar	25 years, lease	754,000, water & wastewater

RUB3.2billion to be spent developing and extending the town's water and sewer services and reducing leakage from 39% to 25%.

2007	Omsk	24 years, lease	1,159,000, water & wastewater

A 2007-10 programme was implemented at a cost of RUB2.5 billion including repairs to some 60% of the city's water and wastewater infrastructure. The system provides 800,000 m^3 of water per day.

2013	Voronezh	30 years, lease	950,000, water & wastewater

A RUB 2 billion investment programme focussed on modernising and retrofitting water and wastewater treatment facilities in the city.

2007	Tver	20 years, lease	407,000, water & wastewater

The 2007-12 investment programme concentrated on water treatment and storage.

2007	Tyumen	20 years, lease	620,000, water & wastewater

A RUB 4.5 billion investments programme was carried out from 2007-11

Debt management is vigorous, with 5,000 lawsuits including against debtors including 1,700 during 2010 including debarring them from leaving the country. As a result, debtors have fallen from 10% to 3% by the end of 2010.

In 2010, the company announced that it would increase investments in water activities from USD800million in 2010 to USD1,280 million in 2011, with the aim of increasing its customer base from 6.1million people in eight cities in Russia to 10.0million people in 10-15 cities in Russia and the Ukraine.

The 2007 lease contract covering Lugansk in Ukraine was cancelled following Russian activities in Ukraine in 2014.

Sources:

Company web site

Global water Intelligence

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Michael Shneyderman (CEO)

Alexander Shenkman (President)

Petr Zolotarev (General Director)

Singapore

Hyflux Ltd

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Hyflux	Only	Only	Sewerage	
Singapore	850,000	0	0	850,000
Algeria	1,500,000	0	0	1,500,000
China	1,280,000	1,450,000	150,000	2,880,000
Oman	500,000	0	0	500,000
Total - home markets	850,000	0	0	850,000
Total - international	3,280,000	1,450,000	150,000	4,880,000
Global total	4,130,000	1,450,000	150,000	5,730,000
% home markets	21%	0%	0%	15%

Hyflux Ltd designs, manufactures and operates water and wastewater treatment and conditioning systems. The company's membrane systems have been used on a variety of major desalination contracts. In recent years, the company has entered into a number of industrial water outsourcing contracts and BOT contracts. Its traditional customers have been the Singapore Public Utilities Board (PUB) and the Environment Ministry. The proportion of revenues in industrial projects shifted from 81% in 2004 to 44% in 2005 and to 11% in 2009 as various BOT projects entered their construction phase.

Between 2004 and 2008 Hyflux gained a series of water and wastewater treatment BOT contracts with a total treatment capacity of 870,000m^3 per day, which entered service between 2006 and 2010. Hyflux is developing approximately 45 water and wastewater treatment plant projects in China.

Desalination contracts

Singapore

Contracts

Year	Location	Contract & length	People served & service
2003	Singapore	20 year BOT	250,000 desalination

In 2003, Hyflux gained a 20 year desalination BOT contract from the Singapore PUB. Construction of the SingSpring facility will cost SGD250million. This contract supplies 136,380m^3 of water per day for the Government's Public Utilities Board since September 2005 and will run for 20 years, generating SGD30-50million per annum. In June 2003, Hyflux acquired Suez's 30% stake in SingSpring Pte Ltd for a "nominal consideration". The total equity investment in SingSpring will be SGD50million with the other SGD200million coming from debt financing. Hyflux's share of the equity investment amounted to SGD35million with Suez's stake being sold to Singapore's Temasek Holdings.

2011	Singapore	25 year BOT	600,000 desalination

Hyflux gained the Tuaspring Desalination contract in 2011; this is the City-State's second desalination facility, with a 318,500m^3 per day capacity, serving approximately 600,000 people. Tuaspring entered service in 3Q 2013. In 2012, development costs were forecast to be SGD1.05billion.

China

2007	Tianjin	30 year BOT	300,000 desalination

The facility is in Bohai Bay in Dagang and will have a daily capacity of 100,000m^3, expandable to 150,000m^3. This will be the largest seawater desalination facility in China. In 2009, the facility entered service and it was announced that the expansion would go ahead.

Oman

Contracts

Year	Location	Contract & length	People served & service
2015	Qurayyat	2+20 year BOT	500,000 desalination

Hyflux holds 85% of the shares of Qurayyat Desalination Company, which was awarded the 200,000 m3 per day facility which will supply Muscat.

Algeria

Contracts

Year	Location	Contract & length	People served & service
2008	Oran	25 year BOT	1,500,000 desalination

Hyflux announced the financial close for the world's largest desalination project, Marta at Oran in Western Algeria in 2009 with a capacity of 500,000m^3 per day. The USD468million facility is being developed by Hyflux's MenaSpring Utility Ltd and the state owned Algerian Energy Company. The facility opened in 2015. A 25 year O&M contract which will be 47% held by MenaSpring, 43% by Algerian Energy Company and 10% by the state owned L'Algerienne Des Eaux.

India

Contracts

Year	Location	Contract & length	People served & service
2015	Dahej	30 years DBOO	Industrial water desalination

Hyflux, Hitachi and Itochu are developing a desalination plant for the Dahej Special Economic Zone in Gujarat. The 336,000m^3 per day facility will cost USD600million to develop and will be Asia's largest desalination facility. The project got its final go-ahead in 2015.

Hyflux Ltd - Profit & loss account, 2010-2014

Y/E 31/12 (SGDmillion)	2010	2011	2012	2013	2014
Turnover	561.58	460.18	654.77	535.79	321.39
Operating profit	100.41	61.70	76.17	51.62	53.06
Net profit	88.89	55.73	64.71	42.90	58.81
Earnings per share (SGD c)	10.52	4.30	4.33	2.42	1.66

Projects in China - Galaxy New Spring

In 2010, Hyflux transferred its Chinese water and wastewater treatment operations into Galaxy New Spring, a 50:50 joint venture with Japan's Mitsui. Hyflux Water Trust (HWT) was partially floated in November 2007 and bought back as part of the joint venture agreement in 2010. HWT was bought back for SGD160million and four contracts held by Hyflux were brought in for a further SGD53million. These projects had a total capacity over 1 million m^3 / day by the end of 2012.

Contracts

Year	Location	Contract & length	People served and service
2011	Chongqing, Hexing	30 year BOT	Industrial wastewater
2011	Chongqing, Weituo	30 year BOT	Industrial wastewater
2011	Chongqing, Weituo	30 year BOT	100,000 water

The three facilities serve the Hechuan District of the city. The Hexin and Weituo wastewater treatment facilities will both have a capacity of 20,000m^3 per day. The two facilities involve an investment of JPY6billion by Mitsui. The Weituo water treatment works will serve both domestic and industrial customers and has a capacity of 50,000m^3 per day. The three projects will cost USD45million.

2011	Zunyi	30 year BOT	750,000 wastewater

The Zunyi City facility in Guizhou Province has a capacity of 150,000m^3 per day. Capital spending to 2012 is approximately CNY200million.

2011	Xiajin	32 year BOT	200,000 water
2008	Xiajin	28 year BOT	200,000 water

The Xiajin, Shandong Province, plant contract signed in 2008 covered 50,000m^3 per day in capacity at a cost of CNY130million. It is being expanded from 50,000m^3 per day to 100,000m^3 per day.

2010	Taoyuan	28 year BOT	120,000 water

A water treatment works in Hunan Province, with a capacity of 60,000m³ per day.

2007	Tiantai	20 year BOT	100,000 wastewater

For municipal and industrial wastewater in Tiantai County, Zhejiang Province with a design capacity of 20,000m³ per day, which may be expanded and to include water recycling.

2008	Xiajin	25 year BOT	150,000 water & wastewater

This will be the largest WTW in Xiajin, Shandong Province, with a capacity of 50,000m³ per day which is to be expanded to 100,000m³ per day at a total cost of CNY130million.

2007	Langfang	25 year TOT	400,000 wastewater
2007	Langfang	25 year TOT	Water recovery

Mainly for municipal wastewater in Langfang City in Hebei Province. This has a design capacity of 80,000m³ per day, and incorporates a water recovery unit with a capacity of 40,000m³ per day.

2007	Zunhua	25 year BOT	100,000 water

Serves municipal, commercial and industrial customers in the southern area of Zunhua City, Hebei Province, with a design capacity of 40,000m³ per day, which may be expanded.

2007	Changshu City	25 year BOT	Industrial wastewater

Serves an industrial park in Changshu City, Jiangsu Province with a design capacity of 30,000m³ per day, which may be expanded to its concession capacity of 60,000m³ per day.

2007	Tiazhou	20 year BOT	Industrial wastewater

In the Gao Gand District, in Jiangsu Province with a design capacity of 50,000m³ per day, which may be expanded to include a water recycling facility.

2007	Yangkou	30 year BOT	Industrial wastewater
2007	Yangkou	30 year BOT	Water recovery

Serves the Yangkou Chemical Industrial Park in Rudong County, Jiangsu Province with a design capacity of 20,000m³ per day, which may be expanded to its concession capacity of 40,000m³ per day. The facility will also provide 20,000m³ per day of recycled water.

2007	Yangzhou	20 year BOT	Industrial water

Serves the Yangzhou Chemical Industrial Park in Yi Cheng, Nantong, Jiangsu Province. The facility will be developed in three phases with a final capacity of 100,000m³ per day and will incorporate water recovery. A Memorandum of Understanding covering preparations for Phase 3 (20,000m³ per day) was signed in 2011.

2007	Dafeng	30 year BOT	Industrial water

Serves the South Port area in Defeng, Jiangsu Province with a design capacity of 20,000m³ per day, which may be expanded.

2008	Wuxi	30 year BOT	50,000 wastewater

Serves an industrial park in Wuxi City, Jiangsu Province with a design capacity of 20,000m³ per day, which may be expanded to include a water recycling facility.

2007	Wuxi	20 year BOT	Industrial wastewater

A Wastewater Treatment Plant with a design capacity of 10,000m³ per day, in Huishan District, Wuxi City, Jiangsu Province.

2008	Guanyun	30 year BOT	200,000 water

Two Water Treatment Plants with a combined design capacity of 100,000m³ per day, in Guanyun County, Lianyungang City, Jiangsu Province.

2008	Liaoyang	30 year Own & Operate	Water

Water Treatment Plant with a design capacity of 40,000m³ per day, in Gong Changling District, Liaoyang City, Liaoning Province.

2007	Liaoyang	30 year BOT	Industrial wastewater

Serves municipal users and an industrial park in the Gongchangling District of Lioyang City, Liaoning Province with a design capacity of 80,000m³ per day, after two expansion phases. The facility also provides 40,000m³ per day of recycled water to the local mining industry.

2008	Mingguang	30 year, BOT	150,000 wastewater

A contract for refurbishing and operating a Wastewater Treatment Plant with a design capacity of 35,000m³ per day, in Mingguang City, Anhui Province. Investment will be CNY53million.

2008	Mingguang	30 year, BOT	100,000 water

A BOT contract for a Water Treatment Plant with a design capacity of 35,000m³ per day, in Mingguang City, Anhui Province. Investment will be CNY87million, with the facility entered service in 2009.

2008	Leping	30 year, BOT	60,000 water

A BOT contract for a water treatment plant in Jiangxi Province with a design capacity of 30,000m³ per day.

2007	Tianjin	30 year BOT	Industrial wastewater
2007	Tianjin	30 year BOT	Water recovery

Serves the Jing Jin hi-tech industries belt in Beichen, Tianjin with a design capacity of 50,000m³ per day (wastewater treatment) and 5,000m³ per day (water recovery) each of which may be doubled.

Contract bundle

Five facilities were acquired in 2014 with a combined capacity of 0.265 million m³ per day. They are to be sold to a jointly held vehicle set up by Tuspark TSI is a subsidiary of TUS-Holdings Co., Ltd, the former Tsinghua University Science Park (TusPark) Development Centre founded in August 1994. Hyflux is to hold 25% of the venture. The total value of the bundle is CNY890 (SGD 195 million).

Zunyi Wastewater Treatment Plant, Zunyi City, Guizhou Province

Funing Water Treatment Plant, Yancheng City, Jiangsu Province

Leping Wastewater Treatment Plant, Leping City, Jiangxi Province

Caojie Wastewater Treatment Plant, Chongqing Municipality

Beichen Wastewater Treatment Plant, Tianjin Municipality

Sources:

Annual Reports, 2005-2014

Hyflux Water Trust, 2007 Listing Document

Corporate web site

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Olivia Lum Ooi Lin (Chairman & CEO)

Sam Ong (Deputy CEO)

Cho Wee Peng (CFO)

Dr Andrew Ngaim (COO)

Singapore

Sound Global Limited & Sound Environmental Resources Group

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Sound Global	Only	Only	Sewerage	
China	1,215,000	6,410,000	0	7,625,000
Global total	1,215,000	6,410,000	0	7,625,000
% home markets	100%	100%	-	100%

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Sound Environmental	Only	Only	Sewerage	
China	3,050,000	12,560,000	200,000	15,810,000
Global total	3,050,000	12,560,000	200,000	15,810,000
% home markets	100%	100%	100%	100%

Sound Global was originally called Beijing Sound Environmental Industry Group a privately owned company, founded in 1993 and had a turnover of CNY200million in 2000, employing 180 senior engineering staff. Sound Group entered the water and waste treatment sector in 1999 and had completed 600 projects in China. In September 2006, as Epure International, the company had its IPO on the Singapore stock exchange and was renamed Sound Global Ltd in 2010. The company had a second Listing (on the Hong Kong Stock Exchange) in 2010. As Eguard Resources Development, a group of contracts held by the company were partly listed on the Shenzhen stock exchange and are again wholly owned by Sound Global.

Sound Group is privately held. The 2014 Sound Global results have yet to be announced.

Currently, the activities have been reorganised so that Sound Group holds the bulk of the major contracts, especially those awarded before 2012-13. Sound Global holds most of the smaller contracts that have been awarded since 2012-13.

Sound Global - Profit & loss account, 2010-2014

Y/E 31/12 (CNYmillion)	2010	2011	2012	2013
Construction project revenues	1,610.6	2,169.6	2,446.0	2,882.9
Sale of goods revenues	124.4	58.2	112.0	63.8
O&M revenues	30.6	59.8	94.3	192.8
Group turnover	1,765.7	2,287.6	2,652.3	3,139.5
Operating profits	349.1	481.2	503.4	566.2
Net profits	289.6	414.5	427.5	423.3
Earnings per share (CNY)	0.22	0.31	0.32	0.32

Sound Global and its water and wastewater services subsidiaries

Sound Global (Singapore, holding company)

Beijing Epure International Water Co (China) (100% Sound Global)	Beijing Sound Environmental Engineering Co (China) (75% SG, 25% Beijing Epure)	Sound International Investment Holdings (British Virgin Isles) (100% Sound Global)
Hangcheng City Yiqing Water	Hainan Baichuan Water	Yantai Bihai Water
Shangluo Wastewater	Xian Qinqing Water	Jiangyuan Wastewater
Yulin City Jingzhou Water	Xian Huqing Water	Fushun Qingxi Water
Anyang Mingbo Water	N/A	Guangxi Liqing Water

The various developments relating to the group's activities in China over the past 14 years mean that it is uncertain that a comprehensive insight into their activities at any one time is feasible until a comprehensive contract survey is published. The following survey reflects information put into the public domain at various times.

Sound Group's 'China Clear Water Project' was launched in 1999 to encourage the concept of locally funded WWTW BOT contracts. In June 2001, Sound Group signed agreements to build sewage treatment plants in 11 Chinese cities. These include Golmud in Qinghai Province, Jinshan District (of the Shanghai Municipality), Jianzhou, Jianyin, Huanggang and Xiangtan in Hubei Province. The 11 sewage treatment plants will have a combined daily handling capacity of more than 1.7million tonnes. This is equivalent to serving approximately 5million people. These facilities will require a total investment of about CNY2billion (USD240million). The BOT contracts signed are to last for 25 years. The company expects the facilities to pay off the project financing after ten years. These are the first privately financed and operated sewage treatment facilities in China. Further contract awards have subsequently been gained.

Facilities in operation or development, 2006-08:

Henan	Huixian
Henan	Gongyi
Henan	Anyang (CNY128million, 100,000m^3 per day WWTW)
Henan	Luoyang Chandong District
Beijing	Xiaojiahe WWTW (BOT, 2000)
Hebei	Zhengding (20,000m^3 per day WTW)
Shandong	Ningyang
Shandong	Jinan Changqing Economic and Technical Development Zone
Shandong	Feicheng
Shandong	Fenshang
Shandong	Linyi
Shandong	Dongping
Shandong	Xintaxinwen
Shanxi	Datong
Shanxi	Taiyuan Northern Middle of Hexi
Hubei	Jingmen Xiajiawan (BOT, 2003, 100,000m^3 per day WWTW)
Hubei	Xianning (25 year 60,000m^3 per day WWTW BOT)
Hubei	Xianning (25 year 100,000m^3 per day WTW BOT)
Hubei	Xiangfan Guanyinge (CNY165million, 100,000m^3 per day WWTW)
Hubei	Zhushan (30,000m^3 per day WWTW)
Hubei	Danjiangkou (100,000m^3 per day WWTW)
Hubei	Yichang Yiling District (200,000m^3 per day WWTW by 2010)
Hubei	Yichang (440,000m^3 per day WTW)
Jiangsu	Wuxi Shuofang
Jiangsu	Wuxi Shitangwan
Jiangsu	Shuyuan (100,000m^3 per day WTW BOT)
Jiangxi	Nanchang Xianghu (CNY185million, 200,000m^3 per day WWTW)
Inner Mongolia	Xilinhaote
Inner Mongolia	Tonglaio (100,000m^3 per day 25 year WWTW BOT)
Inner Mongolia	Wuhai
Inner Mongolia	Baotou (CNY320million, 200,000m^3 per day WWTW BOT, 2006, 55,000m^3 per day water re-use)
Gansu	Baiyin
Xinjiang	Dushanzi
Guangdong	Heyuan
Yunnan	Chuxiong
Zhejiang	Huzhou (300,000m^3 per day WTW BOT)
Zhejiang	Hengcun, Tonglu (50,000m^3 per day WTW)

Eight of Sound's wastewater projects and four drinking water projects were included under Eguard. These served approximately 3.76million people, 1.46million for water and 3.30million for wastewater. Eight of these are incorporated in there table above. In addition, there were four other wastewater treatment plants in Hubei previously managed by Eguard:

Plant	Capacity	Wastewater – people served
Hubei Jingzhou	80,000m^3 per day	200,000 people
Hubei Zhijiang	60,000m^3 per day	200,000 people
Hubei Daye	60,000m^3 per day	150,000 people
Hubei Jiayu	40,000m^3 per day	100,000 people

Wastewater contracts gained in 2009

Contract – Operating company	Length (years)	Capacity (m^3 per day)
Xian - Xi'an Qinqing Water Co., Ltd	30	100,000
Xian - Xi'an Huqing Water Co., Ltd	28	30,000
Guangxi - Guangxi Liqing Water Co., Ltd	26	30,000
Hancheng City - Hancheng City Yiqing Water Co., Ltd	25	50,000
Shangluo City - Shangluo Wastewater Treatment Co., Ltd	25	30,000
Yulin City - Yulin City Jingzhou Water Co., Ltd	25	15,000
Jiangyan - Jiangyan Jiangyuan Wastewater Treatment Co., Ltd	30	80,000
Fushun - Fushun City Qinxi Wastewater Treatment Co., Ltd	30	100,000
Anyang City - Anyang Mingbo Water Co., Ltd	25	50,000

Wastewater contracts gained in 2010

Contract – operating company	Length (years)	Capacity (m^3 per day)
Yantai (Joint venture 80% held by Sound Global)	25	50,000
Luohe, Henan	N/A	40,000

The Henan contract also includes a water supply plant for supplying up to 50,000m^3 of recycled water per day.

Wastewater contracts gained in 2011

Contract	Length (years)	Capacity (m^3 per day)
Liaoning – Ningyuan, Anshan City (CNY190 million)	30	80,000
Liaoning – Dongtai, Anshan City (CNY203 million)	30	100,000
Jiangsu – Jianguan rural towns (CNY480 million)	25	13,000

Wastewater contracts gained in 2012

Contract	Length (years)	Capacity (m^3 per day)
Fujian – Quangang Petrochemical Industrial Zone of Quanzhou City (Phase 1 – 25,000m^3 per day for CNY133 million)	30	100,000

Contract gains announced in 2012-13

Build, Operate and Transfer (BOT) project in Chang'an District, Xi'an City, Shaanxi Province

May 2012, 200,000 people WW. Sound Global won the bid for the BOT project of the phase II expansion of a wastewater plant in Chang'an District, Xi'an City, Shaanxi Province, the PRC. Upon completion of phase II, its treatment capacity will be increased by 50,000 m^3 per day to realize a total treatment of 100,000 m^3 per day. The investment is approximately RMB58.6 million.

Transfer-Operate-Transfer (TOT) project in Hailun City, Heilongjiang Province

June 2012, 80,000 people WW, a TOT project for a wastewater plant in Hailun City, Heilongjiang Province. The project has a treatment capacity of 20,000 m^3 per day. Sound Global will acquire all the assets and interests of the plant for RMB30 million.

BOT project in Nanshanpian, Quangang Petrochemical Industrial Zone of Quanzhou City, Fujian Province

Industrial WW. Wastewater treatment plant BOT project in Nanshanpian, Quangang Petrochemical Industrial Zone of Quanzhou City, Fujian Province, June 2012. The Company will invest and construct a wastewater treatment plant with a current designed capacity of 100,000 m^3 per day. The first phase of construction, with a total investment of RMB133 million, will process 25,000 m^3 of wastewater per day. The concession period is 30 years with basic water treatment tariff at RMB4.48 per tonne.

Jingbian County Wastewater Treatment BOT Project

August 2012, 120,000 people WW. A project for expanding the existing capacity and to increase the existing discharge standard of the wastewater treatment plant, to 30,000 m^3 per day. The investment will be approximately RMB81.49 million. The operational service tariff is at RMB1.55 per tonne, with a concession period of 30 years

Siyang County, Jiangsu Province

September 2012, 100,000 people, WW. A sewage treatment plant network project located in 14 rural areas in Siyang County, Jiangsu Province, with a total daily capacity of 22,000 m^3 tonnes and has a licensed operating term of 30 years. A BOT with total investments of approximately RMB240 million.

Hancheng City, Shaanxi Province

September 2012, for 400,000 people, WW. A licensing agreement for the BOT project with a total investment of RMB98 million.

Nanshan Sub-District, Quangang District, Quanzhou City, Fujian Province

Feburary 2013, 200,000 people, water. A total investment amount of approximately RMB95.02 million for water intake engineering, water transmission pipeline construction and a water treatment plant.

No.6 Water Treatment Plant Project in Changchun City, Jilin Province

December 2012, 1,000,000 people, water. A long-term projected capacity of 500,000 m^3 per day with the near term capacity at 250,000 m^3 per day, with a total investment of approximately RMB2.035 billion. Gained jointly with China Railway 18th Bureau.

Shuanggui, Liangping County, Chongqing City

December 2012, 000,000 people, WW. This project is has a sewage treatment capacity of 15,000 m^3 per day for phase I and 30,000 m^3 per day for phase II. Phase I of the project requires a total investment of approximately RMB50 million, with sewage treatment tariff of RMB1.89 per tonne. The licensed operating term is 22 years.

Fuqing City, Fujian Province in Gaoshanzhen and Yuxizhen, Fuqing City

August 2013, 300,000 people, WW. Investment amount of approximately CNY350 million. The total water capacity is 80,000 tons m^3 per day. Fuqing City, the service location of subsidiary project 1, is ranked at a leading position among the top 100 counties in China. Subsidiary project 2, the sewage treatment plant in Gaoshanzhen, Fuqing City and subsidiary project 3, the sewage treatment plant in Yuxizhen, Fuqing City are in Fujian Province.

Baoding Electricity Valley, Baoding High-Tech Industrial Development Zone

August 2013, industrial WW. The designed sewage treatment capacity for phase I of the project is 30,000 m^3 per day. Total investment amount of phase I construction project is over RMB70 million. The sewage treatment tariff will be RMB1.815/m^3 and licensed operating term is 30 years.

Xingping City, Shaanxi Province

July 2013, 200,000 people, WW. The second expansion phase of the sewage treatment plant in Xingping City, adding 50,000 m^3 per day in capacity, with a total treatment capacity of 100,000 m^3 per day. Total investment amount of the phase two construction project is RMB123.5 million.

Contract status as of June 2014

Province		Project type		W / WW	Number	Capacity (m^3 per day)
Anhui	Fuyang Yingzhou	BOT		WW	1	100,000
Anhui		BOT		W	3	160,000
Beijing	Beijing acquisitions	TOT		WW	3	120,000
Chongqing		BOT		WW	1	15,000
Fujian		BOT		WW	5	120,000
Fujian		TOT		WW	2	70,000
Fujian		O&M		WW	1	500
Gansu		O&M		WW	1	8,000
Guangdong		TOT		WW	2	110,000
Guangxi		BOT		WW	1	30,000
Guizhou		BOT		WW	2	15,500
Hainan		O&M		WW	2	152,000
Hebei		BOT		WW	3	55,000
Heilongjiang		TOT		WW	1	100,000
Heilongjiang		O&M		WW	1	4,800
Henan		BOT		WW	2	150,000

Province		Project type		W / WW	Number	Capacity (m^3 per day)
Henan		O&M		WW	1	5,000
Hubei		O&M		WW	1	25,000
Hunan		BOT		WW	1	5,000
Hunan		O&M		WW	1	29,400
Inner Mongolia		TOT		WW	1	100,000
Inner Mongolia		O&M		WW	1	4,800
Jiangsu		BOT		WW	6	168,500
Jiangsu		O&M		WW	1	5,000
Liaoning		BOT		WW	4	280,000
Shaanxi		BOT		WW	11	375,000
Shaanxi		O&M		WW	10	78,000
Shanxi		BOT		WW	1	20,000
Shandong		BOT		WW	3	75,500
Sichuan		BOT		WW	1	10,000
Xinjiang		BOT		WW	2	115,000
Xinjiang		O&M		WW	1	20,000
Total					77	2,435,000

Project summary for 2013

Type	Status	Number	Capacity (m^3 per day)
O&M	In operation	19	310,000
BOT / TOT / PPP	In operation	27	1,242,000
BOT / TPT / PPP	Under construction	17	491,000
BOT / TOT	Bids won	18	571,000
Total		81	2,614,000

Water & Wastewater BOT & TOT projects at end of 2013

Province		Project type	Client	W / WW	Status	Capacity (m^3 per day)
Anhui	Fuyang Yingzhou	BOT	M	WW	UC	100,000
Beijing	Beijing 3 acquisitions	TOT	M	WW	IO	120,000
Fujian	Fujian Sanmingjikou	BOT	I	WW	IP	15,000
Guizhou	Guizhou Xishui	BOT	R	WW	UC	10,500
Hebei	Hebei Baoding	BOT	I	WW	IP	15,000
Jilin	Jilin Changbaishan	BOT	M	W	UC	20,000
Jilin	Jilin Changbaishan	BOT	M	WW	UC	15,000
Jiangsu	Jiangsu Siyang Wood Park	BOT	I	WW	UC	10,000
Jiangsu	Jiangsu Xinghua	BOT	R	WW	UC	30,500
Shandong	Shandong Xintai Guodu	BOT	I	WW	UC	10,000
Shandong	Shandong Xintai	BOT	R	WW	UC	10,000
Shanxi	Shanxi Xingping	BOT	M	WW	UC	50,000
Shanxi	Shanxi Ankang Xunyang	BOT	M	WW	UC	15,000
Shanxi	Shanxi Huxian Dongchang	BOT	M	WW	UC	30,000
Xinjiang	Xingjiang Tacheng	BOT	M	WW	IP	40,000
Xinjiang	Xingjiang Yamalike	BOT	M	WW	UC	75,000
Total						2,435,000

Wastewater treatment O&M contracts at end of 2013

Province	Name	Client	Year	Capacity (m^3 per day)
Hainan	Hainan Ledong	M	2013	10,000
Hainan	Hainan Bundled Project	M	2010	142,000
Heilongjiang	Heilongjiang Kedong	M	2013	10,000
Jilin	Jilin Changbai Mountain	M	2013	15,000
Hunan	Henan Zhengzhou 27 District	R	2013	4,900
Henan	Hunan Changsha	R	2013	5,000
Hubei	Hubei Dazhi	M	2012	25,000
Shanxi	Shanxi Dingbian	M	2011	10,000
Shanxi	Shanxi Ankang Lan'gao	M	2013	7,000

Province	Name	Client	Year	Capacity (m^3 per day)
Shanxi	Shanxi Ankgang Pingli	M	2012	8,000
Shanxi	Shanxi Shangluo Zhen'an	M	2012	10,000
Shanxi	Shanxi Ankang Zhenping	M	2013	5,000
Shanxi	Shanxi Shuoluo Zhashui	M	2012	8,000
Inner Mongolia	Inner Mongolia Wulanchabu	I	2011	4,800
Jiangsu	Jiangshu Jinghu	R	2013	5,000
Shanxi	Shanxi Shuoluo Shangman	M	2012	10,000
Shanxi	Shanxi Wubao	M	2012	2,000
Shanxi	Shanxi Ankang Ziyang	M	2013	8,000
Xinjiang	Xinjiang Tacheng	M	2013	20,000
Total				310,000

Key:

I: Industrial

M: Municipal

R: Rural

World Bank and other finance

In 2006, the World Bank's IFC decided to invest CNY80million in the company in order to support its project development and in 2009 had a 8.1% holding in the company. Sound Group believes that it is the largest Chinese private sector WWTW operator. The IFC provided a USD34million loan to the company in 2010. In addition, a USD600million credit line was secured from China Merchants Bank.

Bundled management contract gain

In November 2009, Sound Global won contract to manage and operate eight municipal wastewater treatment plants in Hainan Province with a total maximum treatment capacity of up to 142,000m^3 per day. This was the first bundled operating contract award for multiple municipal plants made to private bidders. The contract is worth approximately CNY124million, based on tonnage of wastewater treated. Hainan Baichuan Water Co Ltd will operate under a five year contract.

International contract gain

In August 2009, Sound Global gained its first overseas contract, an CNY620million (SAR308million) engineering, procurement and construction (EPC) project to extend and upgrade the 72,000m^3 per day SWTP-9 wastewater treatment plant for Marafiq, a water and utility provider in Jubail and Yanbu, Saudi Arabia. This is the first international EPC contract gained by a Chinese water/wastewater services company.

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Wen Yibo (Chairman)
Yu Man To Gerald Maxmillian (CFO)
Wan Kai (CEO)

South Korea

GS Engineering & Construction (GS Inima)

Population served by service and country				
2015 data	Water	Sewerage	Water &	Total
GS Inima	Only	Only	Sewerage	
Spain	1,200,000	1,000,000	0	2,200,000
Algeria	1,500,000	0	0	1,500,000
Brazil	0	1,138,000	18,000	1,156,000
USA	190,000	100,000	0	290,000
Mexico	70,000	300,000	0	370,000
Chile	210,000	0	0	210,000
Total - home markets	1,200,000	1,000,000	0	2,200,000
Total - international	1,970,000	1,538,000	0	3,526,000
Global total	3,170,000	2,538,000	0	5,726,000
% home markets	38%	39%	0%	38%

In 2012 OHL of Spain sold 79.6% of Obrascon Huarte Lain's OHL Medio Ambiente's Inima to South Korea's GS Engineering & Construction Corporation for EUR231million. OHL had acquired Inima in 2001 from RWE Thames Water. GS Engineering & Construction specialises in plant, power, environmental, civil engineering and housing projects. Inima will be incorporated in the Power and Environment Division.

Inima has 50 O&M contracts in Spain, the largest of which treat 438,000m^3 per day of water and municipal and industrial wastewater. Inima also has 16 international concession contracts, in six countries with a total treatment capacity of 838,000m^3 per day.

Spain

Contracts

Year	Location	Contract & length	People served & service
2000	Trapiche	20 year BOT	300,000 water

The EUR20million EM SER Trapiche plant treats 146,880m^3 of water per day, serving the Axarquia district of Malaga. Inima is currently selling this concession.

1996	Cadiz	25 year concession	350,000 wastewater treatment

A 24 year concession after the facility entered service in 1997. The AIE Cadiz-San Fernando facility treats 75,000m^3 of wastewater per day, serving Cadiz and San Fernando.

Other desalination BOT projects in Spain:

Location / Client	Capacity (m^3 per day)	Construction	Operation
Carboneras / ACUSUR	120,000	2000-01	2001-25
Marbella / Decosol	55,000	1996	1996-16

Brazil

Contracts

Year	Location	Contract & length	People served & service
2015	Paraibuna	30 year concession	18,000, water & sewage

Inima's first comprehensive contract in Brazil.

2010	Sao Paulo	2+20 year DBO	70,000, wastewater treatment
2014	Sao Paulo	20 year DBO	120,000, wastewater treatment

These are two sub-contracts for SABESP, for the 18,500m^3 per day facility at Campos de Jordao with a PE of 92,000

and a second with a PE of 150,000.

2012	Sao Paulo	25 year concession	90,000, wastewater treatment

This is a EUR132million subcontract for SABESP, for the 13,000m^3 per day 0.13 million PE facility at Mogi Mirim, which is 57% held by Inima.

2000	Ribeirao Petro	22 year concession	750,000, wastewater treatment

2003	Cariaca	23 year concession	90,000, wastewater treatment

The two wastewater treatment plants were built by OHL and are to be operated by Inima until 2022. Inima holds 100% of Ambient (Servicos Ambientais de Riberao Petro SA), which involves a total investment of EUR35million. The facility has a capacity of 143,000m^3 per day and a PE of 1.08 million.

Mexico

2006	Cabo San Lucas	20 year concession	50,000, wastewater treatment

A 69,000 PE facility in Baja California.

USA

Contracts

Year	Location	Contract & length	People served & service
2010	Hialeah	2+15 year DBO	100,000, wastewater treatment

This is a EUR35.6million contract for the city of Hialeah in Florida which will have a 40,000m^3 per day capacity (PE of 150,000) than can be expanded to 70,000m^3 per day.

Desalination concessions

Chile	Antofagasta	Desalant (100%)	20 year BOT, 2003-23, 52,000m^3 per day
Mexico	Cabo San Lucas	-	20 year BOT, 2006-26,
Mexico	Los Cabos	Promoaqua (90%)	20 year BOT, 2007-27, 20,000m^3 per day
Spain	Churriana de la Vega	Inima (25%)	24 year BOT, 123,000m^3 per day
Algeria	Mostaganem	AEC (25%)	25 year BOT, 200,000m^3 per day
Algeria	Cap Djinet	AEC (25%)	25 year BOT, 100,000m^3 per day
USA	Brockton, MA	Aquaria Water (78%)	20 year BOT, 2008-28, 22,500m^3 per day

The Antofagasta plant provides 70% of the city of 300,000's water needs.

GS Inima - profit & loss account, 2010-2014

Y/E 31/012 (EUR million)	2010	2011	2012	2013	2014
Turnover	138.3	125,4	144.0	133.6	105.7
EBITDA	15.5	15.6	21.6	16.6	22.6
Net profit	-	-	5.9	1.1	0.3
O&M Capacity (m3 / day)	-	-	1,199,910	1,195,564	1,406,241
Concession capacity (m3 / day)	-	-	772,714	726,478	838,434

GS Engineering and Construction - Profit & loss account, 2010-2014

Y/E 31/012 (KRWbillion)	2010	2011	2012	2013	2014
Group turnover	8.420	9,168	9,569	9,566	9,488
Operating profit	633	410	176	-935	51
Pre-tax profit	556	524	182	-993	-30
Post tax profit	406	424	95	-827	-22
Earnings Per Share (KRW)	8,030	8,563	1,744	-16,012	-667

Sources:

GS Engineering, Annual reports, 2010-2014

Thames Water, analyst presentaions, 1999-2000

OHL, Annual Reports, 2001-2011

OHL company web site

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Chang Soo Huh (Chairman)

Myung-Soo Huh (President & CEO)

Si Min Kim (CFO)

Spain

Abengoa

Population served by service and country 2014 data Abengoa	Water Only	Sewerage Only	Water & Sewerage	Total
Spain	780,000	0	0	780,000
Algeria	2,000,000	0	0	2,000,000
Ghana	500,000	0	0	500,000
Morocco	800,000	0	0	800,000
Tunisia	250,000	0	0	250,000
Saudi Arabia	200,000	0	0	200,000
USA	500,000	0	0	500,000
Mexico	1,450,000	0	0	1,450,000
India	500,000	0	0	500,000
China	500,000	0	0	500,000
Total - home markets	780,000	0	0	780,000
Total - international	6,700,000	0	0	6,700,000
Global total	7,480,000	0	0	7,480,000
% home markets	10%	0%	0%	10%

Abengoa specialises in developing energy and waste management facilities and projects. Since 2005, it has been gaining a series of desalination concessions. Desalination contracts in Spain include Almeria (60,000 m^3 per day, 140,000 people), Barcelona (60,000 m^3 per day, 310,000 people) and Murica (65,000 m^3 per day, 330,000 people).

Abengoa - profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Water concessions – revenues	15	21	42	40	41
Water concessions – EBITDA	10	10	28	26	28
Revenues	5,566	7,089	7,783	7,245	7,151
Operating profit	548	844	527	794	933
Net profit	207	257	55	101	125
Earnings per share (EUR)	2.29	0.35	0.10	0.16	0.15
Dividend per share (EUR)	0.20	0.35	0.11	0.11	0.11

Desalination capacity was 815,000 m^3 per day in 2014, with a further 260,000 m^3 per day of capacity under construction at that time. The company believes that it served over eight million people in 2014.

Abengoa - desalination plants, 2012-2014

Water treatment capacity	2012	2013	2014
Installed (m^3 per day)	565,000	665,000	815,000
Water handled (million m^3 per annum)	107.5	112.4	124.0

Abengoa – Activities in Spain and internaltioanlly

Algeria

Contracts

Year	Location	Contract & length	People served & service
2013	Tenes	30-year concession	500,000, desalination

The EUR 232 million Tenes project is 51% held by Abengoa and will deliver 200,000 m^3 per day of water when it enters service in 2015.

2010	Honaine	25-year concession	1,000,000, desalination

The Tlemcen-Honaine project is run by the Geida consortium, 26% held by Abengoa. The EUR 165 million 200,000 m^3 per day facility entered service in 2011.

2008	Skikda	25-year concession	500,000, desalination

The USD 100 million project is managed by Befesa and Sadyt for a 100,000 m^3 per day facility that started operations in 2009. Revenues are forecast to be USD 564 million for the contract's life.

Morocco

Contracts

Year	Location	Contract & length	People served & service
2015	Adagir	2+20-year DBOT	800,000, desalination

Funding for the 100,000 m^3 per day EUR82 million facility was closed in February 2015, in partnership with InfraMaroc (CDG Capital Infrastructures Group). The plant is 45 km from Adagir and it can be doubled in size in the future.

Tunisia

Contracts

Year	Location	Contract & length	People served & service
2010	Djerba	20-year concession	500,000, desalination

Abengoa and the Princesse Group have a EUR 70 million contract for a 100,000 m^3 per day facility.

Saudi Arabia

Contracts

Year	Location	Contract & length	People served & service
2015	Al Khafji	25-year concession	300,000, desalination

This is a USD 130 million project for a 60,000 m^3 per day facility. It will be the world's first solar powered RO desalination plant. Acciona is developing the project with Advanced Water Technology of Saudi Arabia. Al Khafji City is in NE Saudi Arabia.

Ghana

Contracts

Year	Location	Contract & length	People served & service
2013	Accra	25-year BOOT	500,000, desalination

The 60,000 m^3 per day facility entered service in April 2015, serving Accra and the surrounding towns of Theshie, Nunga and Tema. It will generate revenues of USD1.3 billion over the contract's life.

China

Contracts

Year	Location	Contract & length	People served & service

In 2014, Abengoa acquired 25% of Berijing's Genentech, a water engineering company, which has completed over 40 water and wastewater treatment6 and reuse facilities in China with a combined capacity of 2.1 million m^3 per day.

2010	Qingdao	25-year O&M	500,000, desalination

Abengoa sold its 92.6% holding in the project to its partner the Qingdao Water Group in 2014 for EUR53 million. It continues to operate the facility, which has a 25 year contract. The 100,000 m^3 per day EUR135 million facility entered service in 2013. Revenues of EUR 654 million will be generated by the project.

India

Contracts

Year	Location	Contract & length	People served & service
2005	Chennai	25-year concession	500,000, desalination

Abengoa (25%) and India's IVRCL (75%) gained the Chennai Water Desalination Ltd contract in 2005. was awarded India's first desalination contract, a 25 year DBOOT worth EUR 80 million Work started in June 2008 and the project entered service in October 2009.

USA

Contracts

Year	Location	Contract & length	People served & service
2014	San Antonio	4+30-year concession	500,000, bulk water

This is a 50,000 acre feet (168,970 m^3 per day) 225 water transfer project bringing water from Burleson County to the Texan city. Construction will take place from 2015 to 2019. It includes a treatment facility.

Mexico

Contracts

Year	Location	Contract & length	People served & service
2014	Leon	25-year concession	1,450,000, water

This is a USD640 million project for the transfer of water from the El Zapotillo dam to the city of Leon with a three year construction and 22 year operational phase.

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Abengoa, analyst presentation, 2015

Company web site and media releases

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Spain

Acciona

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Acciona	Only	Only	Sewerage	
Spain	2,897,000	0	0	2,897,000
Algeria	800,000	0	0	800,000
Peru	0	2,679,712	0	2,679,712
Italy	0	1,150,000	0	1,150,000
Brazil	0	1,850,000	0	1,850,000
Saudi Arabia	0	1,900,000	0	1,900,000
Total - home markets	2,897,000	0	0	2,897,000
Total - international	800,000	7,579,712	0	8,379,712
Global total	3,697,000	7,579,712	0	11,276,712
% home markets	78%	0%	0%	26%

Acciona is an infrastructure and services company based in Spain. Its chief activities are the development and management of infrastructure concessions and renewable energy projects. In 2005 the company was consolidated into three divisions: Infrastructure, Energy and Services. The Services division includes water and waste management operations contracts and water engineering under the Acciona Aguas brand.

Acciona - profit & loss account, 2010-2014

Y/E 31/12 (EURmillion)	2010	2011	2012	2013	2014
Agua – Revenue	454	413	506	495	409
Agua – EBIDTA	23	-	-	40	35
Revenues	6,263	6,646	7,016	6,271	6,499
Operating profit	527	631	646	-1,832	572
Net profit	167	202	189	-1,972	185
Earnings per share (EUR)	2.73	3.40	3.30	-35.00	3.01
Dividend per share (EUR)	3.10	3.00	2.65	0.00	2.00

Pridesa

Thames Water (then part of RWE) acquired 75% of Proyectos Y Installaciones De Desalinacion S.A (Pridesa) and Ondagua S.A. from Iberdrola Diversificacion S.A in July 2002 for EUR100million and the remaining 25% for EUR31million in October 2004. In March 2006, RWE sold Pridesa and Ondagua to Acciona for EUR150million. Pridesa was renamed Acciona Agua and its activities merged with Acciona's extant water treatment activities.

Acciona Agua

The company is involved in the development of 75 RO desalination plants supplying 2.5 million m³ of water per day to 8 million people. 115 water treatment works with a total capacity of 7 million m³ of water per day have been built, which supply 26 million people. 300 wastewater treatment plants handling 13.3 million m³ of effluent per day have been built, serving 54 million people. Many of these contracts involve six-month to two year operations and management elements.

Spain – services

The company serves in excess of two million people in 70 municipalities in Spain through 41 long term integrated water and wastewater contracts. Recent contract gains include Andratx (Majorca), gained in May 2009 for 5,000 people, lasting 36 years and involving EUR120million for water and wastewater management and development. In November 2008, Agua won a wastewater treatment contract for 20,000 people (Acciona Agua 70%, Arascon 30%) serving Aragon's Zone 7B (Al Almunia de Dona, Godina, Lumpiaque, Morata de Jalon, Herrera de los Navarros, Alfarmen, Longares and Villaneuva de Huerva), which involves a EUR27.5million project developing a 15,720m³ per day wastewater treatment facility, sewerage services and operating the facilities for 20 years. In 2011, Caceres awarded Acciona a EUR 300 million 24 year water and sewerage services contract.

Acciona's subsidiary GESBA (Gestión de Servicios Urbanos de Baleares) manages the drinking water concessions in the municipalities of Andratx, Deiá and Paguera in the Balearic Islands. In Andratx, under a 50-year concession, 1,090,000m³ of water was supplied to a population of 12,000.

Desalination

The company has 17 similar contracts in Italy, along with one each in Algeria, Italy and Peru. The total capacity for the DBO contracts is 1,346,275 m³ per day.

Wastewater

The following are contracts which are currently of at least five years in duration or are likely to be extended to at least five years.

Contract location	Country	Year	Length	Capacity	People
San Gonzalo	Brazil	2014	-	103,680	250,000
Arrudas, Minas Gerais	Brazil	2009	10+	388,800	1,600,000
Cagliari is Arenas	Italy	2002	10+	164,000	1,150,000
Arequipa	Peru	2014	5+	34,800	179,712
La Chira	Peru	2010	25	544,320	2,500,000
Hadda	Saudi Arabia	2014	2+	125,000	625,000
Arana	Saudi Arabia	2014	2+	250,000	1,250,000
Total				1,610,600	7,554,712

Desalination

The following contracts are BOO / BOOT contracts as of 2014.

Contract location	Country	Year	Length	Capacity	People
Canal de Cartagena, Murica	Spain	-	BOOT	65,000	433,000
Canal de Alicante, Alicante	Spain	-	BOOT	65,000	380,000
Tordera, Gerona	Spain	-	BOOT	57,600	400,000
Almeria Capital	Spain	-	BOOT	50,000	333,000
Javea, Alicante	Spain	-	BOOT	26,000	185,000
Arucas & Moya, Las Palmas	Spain	-	BOOT	15,000	100,000
Ciutadella, Minorca	Spain	-	BOOT	10,000	66,000
Fouka	Algeria	2011	25	120,000	800,000
Total				408,600	2,697,000

O&M contracts

Overall O&M contract data for 2010 and 2014 is provided below. It appears that many of these contracts are of a short term nature, typically lasting for 12-24 months after a plant has been built.

Acciona also offers water and sewerage outsourcing services to municipalities in Peru and Spain. It is understood that these can be both for short or longer term contracts.

O&M contracts (2010 data)

Drinking water			
Country	**Contracts**	**m³ per day**	**Population**
Spain	19	608,547	223,8700
Italy	8	154,092	1,665,000
Total	**27**	**762,639**	**1,888,870**

Wastewater			
Country	**Contracts**	**m³ per day**	**Population Eq**
Spain	59	1,447,562	7,611,026
Andorra	1	26,500	110,416
Brazil	1	388,800	1,600,000

Wastewater			
Italy	5	347,070	2,421,575
Total	**66**	**2,209,932**	**11,743,017**

O&M contracts (2014 data)

Drinking water			
Country	**Contracts**	**m³ per day**	**Population**
Australia	1	160,000	1,066,667
Dominican Republic	1	86,400	138,000
Egypt	1	500,000	1,000,000
Italy	8	353,880	1,695,060
Spain	17	227,638	403,870
Total	**28**	**2,365,897**	**4,303,597**

Wastewater			
Country	**Contracts**	**m³ per day**	**Population Eq**
Brazil	2	103,680	250,000
Colombia	1	432,000	3,880,000
Costa Rica	1	242,784	1,490,000
Egypt	1	500,000	2,000,000
Italy	7	695,800	2,846,842
Peru	2	579,120	2,679,712
Romania	1	65,000	120,000
Saudi Arabia	2	375,000	1,875,000
Spain	64	1,079,151	5,433,533
Total	**81**	**4,461,335**	**20,575,087**

Sources:

Acciona, Annual Reports, 2006-2014

Acciona Agua, corporate presentations, 2013-2015

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United Kingdom

AWG PLC

Population served by service and country				
2014 & 2015 data	Water	Sewerage	Water &	Total
AWG	Only	Only	Sewerage	
England & Wales	92,000	1,371,000	4,450,000	5,913,000
Ireland	50,000	1,200,000	0	1,250,000
Total - home markets	92,000	1,371,000	4,450,000	5,913,000
Total - international	50,000	1,200,000	0	1,250,000
Global total	142,000	2,571,000	4,450,000	7,163,000
% home markets	65%	53%	100%	83%

AWG is the holding company for Anglian Water Services and a number of infrastructure related activities. Following the acquisition of Morrison Plc in 2000, the company was re-branded as AWG Plc. Since 2003, AWG has been rationalising its activities as a result of problems associated with both its international operations and Morrison, resulting in exceptional write-downs of GBP450million. In November 2006, AWG was acquired by Osprey Acquisitions Limited, a private equity consortium comprising of Canada Pension Plan Investment Board (Canada, 33%), Colonial First State Global Asset Management (Australia, 32%), Industry Funds Management (Australia, 20%) and 3i Group plc (UK, 15%). After the acquisition, AWG was broken up into Anglian Water Services, Morrison and AWG Property. Osprey Water was formed in 2008 to seek new water related business with industrial customers. On 1 April 2009, Osprey Holdco provided GBP90million to Anglian Water Services and GBP25million to the Anglian Water Group in order to maintain their debt covenants. Anglian Water Services repaid this as a special dividend in 2011.

Anglian Water Services - Profit & loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Turnover					
Water – Household Measured	-	206.7	348.3	239.9	250.6
Water – Household Unmeasured	-	126.4	127.0	121.1	113.9
Water – Non-household Measured	-	82.7	92.7	77.5	86.3
Water – Non-household Unmeasured	-	0.9	0.8	0.7	0.5
Wastewater – Household Measured	-	346.7	348.3	390.2	405.7
Wastewater – Household Unmeasured	-	197.6	197.9	191.6	185.5
Wastewater – Non-household Measured	-	65.2	92.7	77.0	82.9
Wastewater – Non-household Unmeasured	-	1.6	1.6	1.4	1.3
Other water	-	53.9	54.0	56.1	45.7
Other wastewater	-	41.6	40.7	42.4	44.5
Total appointed turnover	1,079.3	1,123.3	1,147.0	1,197.9	1,226.9
Non appointed	13.0	14.7	16.0	16.1	17.4
AWL turnover	1,092.3	1,138.0	1,163.0	1,214.0	1,244.3
Operating profit	447.3	492.1	458.8	463.5	451.8
Pre-tax profit	294.5	303.7	301.1	441.2	160.7
Post-tax profit	265.5	259.6	295.2	575.1	195.0
AW Group turnover	1,418.3	1,484.8	1,388.6	1,265.5	1,244.3
Operating profit	372.6	361.8	360.6	402.6	451.8
Pre-tax profit	-12.4	-61.2	-57.1	7.3	160.7
Net profit	-34.6	-95.9	-48.0	29.0	195.0

Regulated activities: Anglian Water Services

Anglian Water Services Limited provides water to 4.5 million people and sewerage services to 5.9 million people in eastern England. The Anglian region is characterised by low rainfall (which will be exacerbated in the longer term by climate change), population growth and development, especially when related to information technology. At the same

time, the region's emphasis towards industrial agriculture, allied with slow flowing waterways makes the region vulnerable to environmental degradation.

AWG has a policy of encouraging the widespread use of domestic metering and low leakage rates. From 2011-15, GBP16 million is being spent on smart metering to optimise network pressure to minimise leakage. The company is also seeking to develop ways of recycling grey water (e.g. bath water) for domestic applications such as flushing lavatories and use of grey water in the garden. Distribution losses of 6.10 m^3 per km of pipes during 2010-11 compares with an industry average of 10.09 but was higher than anticipated due to the hard winter. 183,000 meters were installed in 2006-11 the metering rate reached 88% in 2015 with the aim of 95% coverage by 2020. In addition, 85% of the distribution network is covered by district metering for measuring leakage at all points along the network. While the population served in the Anglian region has increased by over 20% since 1989, the company has managed to keep the actual level of water supplied constant. There were 24,000 new connections in 2007-08 and 18,000 in 2008-90, with up to one million by 2034. Leakage was at 189 Ml/day to 192 Ml/day between 2012 and 2015, the regulatory target of 211 Ml/day.

In 1998 AWG acquired Hartlepool Water Plc, a SWC. Since then, Hartlepool has gained two inset appointments in northern England within the territory served by Northumbrian Water Group Plc.

Anglian Water International Ltd.

Anglian Water International and Anglian Water Processes (AWP) were merged in 1996 to form a combined AWI. Since 2003, the company has sought to sell off its international water activities, which was completed in 2008. The Irish activities are being retained.

Ireland

Contracts

Year	Location	Contract & length	People served & service
2000	Dublin	20-year BOT	1,200,000 sewerage

Ascon, an Irish construction company, Binnie Black & Veatch and AWG Water are to build Ireland's largest sewage treatment works, serving the city of Dublin and surrounding areas in a contract worth GBP185million including GBP120million of construction work. This has been expanded to serve a total of 1.6million PE, includes advanced treatment and is now operated by AWI, with its Celtic Anglian Water JV managing the sewage sludges. In addition this JV won a GBP20million four-year contract in 1998 to tackle leakage in the Dublin area for a population of 1.5million.

2002	Sligo	10-year O&M	50,000 water

In 2002, AWG gained a contract to operate a new water treatment works on behalf of Sligo County Council. The 10-year, GBP5million contract is to deliver 11millionL of water per day to the Sligo area.

Sources:

Anglian Water, regulatory accounts, 2006-2015

AWG, analyst presentaions, 1996-2006

AWG, Annual Reports, 1996-2006

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United Kingdom

Kelda Group Plc (Yorkshire Water Plc)

Population served by service and country 2014 & 2015 data Yorkshire Water	Water Only	Sewerage Only	Water & Sewerage	Total
England & Wales	0	78,000	4,797,000	4,875,000
Scotland	0	450,000	0	450,000
Northern Ireland	700,000	0	0	700,000
Global total	700,000	528,000	4,797,000	6,025,000
% home markets	100%	100%	100%	100%

Yorkshire Water Plc (YW) was renamed Kelda Group Plc in August 1999. An aggressive approach towards resources management was unravelled by the 'once in every 500 years' drought conditions seen in 1995. As a consequence, GBP300million was spent between 1996 and 1999 on developing a water grid. Distribution losses fell by more than 40% between 1995 and 2001 and have been maintained at Ofwat's target of 295Ml per day since 2003-04. Yorkshire Water was unaffected by the water shortages during the summers of 2005 and 2006, with reservoirs at 93% of capacity. In 2006, Kelda was identified by Ofwat as the most efficient of the water and sewerage companies.

Yorkshire Water serves 4.8million people and 130,000 business customers. In February 2008, Kelda was acquired by Saltaire Water a private equity fund currently held by: Deutsche Asset & Wealth Management (33%), Corsair Capital (30%), GIC (26%), and M&G (10%). The non regulated activities continue to be run by Kelda Group.

Yorkshire Water Services Limited - Profit & loss account, 2012-2015

Y/E 31/03 (GBPmillion)	2012	2013	2014	2015
Water – Household Measured	179.8	110.5	125.0	133.7
Water – Household Unmeasured	207.5	215.2	208.5	208.2
Water – Non-household Measured	-	76.6	80.9	84.0
Water – Non-household Unmeasured	-	1.4	1.4	1.2
Wastewater – Household Measured	185.5	131.5	152.8	164.8
Wastewater – Household Unmeasured	242.8	250.8	251.0	249.3
Wastewater – Non-household Measured		68.6	73.6	78.1
Wastewater – Non-household Unmeasured	-	2.5	2.7	2.3
Other water	32.2	30.7	35.3	37.3
Other wastewater	37.2	39.2	42.3	45.9
Appointed turnover	885.0	927.0	973.5	1,004.8
Non-appointed	8.6	9.2	10.7	9.3
Total turnover	893.6	936.2	984.2	1,014.1
Operating profit	300.9	329.1	330.2	350.4
Pre-tax profit	68.5	186.2	142.2	136.0
Net profit	77.7	248.5	203.1	122.4

In 2009-10, KWS generated net revenues of GBP 118.8 million and an operating profit of GBP 6.7 million. The share of KSW's joint ventures generated GBP 30.1 million in revenues and an operating profit of GBP 5.6 million. KWS holds all of Kelda's non-regulated water activities.

UK – Acquisition of York Waterworks Plc

York Waterworks was the smallest of the listed former SWCs when it was acquired for GBP27.9million in March 1999 and was cleared in June 1999. The acquisition involves existing customers of York Waterworks receiving extra price cuts of 15% by 2004, as well as enhanced metering and leak reduction services. York Gas was sold in 1999. York Waterworks generated a 1999/00 turnover of GBP9.6million. The company was subsumed within Yorkshire Water Services in 2000.

Contracts

Year	Location	Contract & length	People served & service

UK – PFI in Scotland

2000	Aberdeen	28-year PFI BOT	450,000, sewage treatment

In May 2000, Aberdeen Environmental Services Ltd., a Kelda-led consortium (50% Kelda Group, the rest held by Balfour Beatty and AECOM) gained the contract with the North of Scotland Water Authority for an GBP80million PFI sewage treatment works project serving Aberdeen, Stonehaven, Peterhead and Fraserburgh. Kelda's Grampian Waste Water Services Ltd is operating the facility until 2031 and generated revenues of GBP10.7million in 2004-05.

UK – Project Aquatrine

2003	UK MoD	25-year PFI	Water & wastewater services

Brey Utilities gained Package A of Project Aquatrine, serving 1,100 military sites in South West England, the Midlands and Wales. The contract is worth GBP1billion, 80% of which is being operated by Yorkshire Water Projects. The project started in December 2003 and generated revenues of GBP32million in 2004-05. Kelda bought out the other shareholders of Brey Utilities in 2010.

UK – Project Alpha

2005	Northern Ireland	25-year PFI	800,000, Water treatment

Dalriada Water Limited gained the water treatment Public Private Partnership with The Water Service in Northern Ireland in 2006. The GBP110million 25-year contract involves designing, building and upgrading four water treatment works responsible for 400Ml per day or some 50% of Northern Ireland's drinking water. Kelda became the 100% holder of Dalriada Water in 2010.

Sources:

Yorkshire Water, Annual Reports, 1990-1996

Kelda Group, Annual Reports, 1996-2008

Kelda Group, analyst presentations, 1996-2008

Yorkshire Water, regulatory accounts, 2009-2015

Kelda Group, company web site and media releases

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Richard Flint (CEO)

Alison Bainbridge (Finance Director)

United Kingdom

Severn Trent Plc

Population served by service and country 2014 & 2015 data Severn Trent	Water Only	Sewerage Only	Water & Sewerage	Total
England & Wales	0	1,089,000	7,854,000	8,943,000
Italy	0	0	1,000,000	1,000,000
Ireland	0	120,000	0	120,000
USA	1,000,000	2,500,000	0	3,500,000
Total - home markets	0	1,089,000	7,854,000	8,943,000
Total - international	1,000,000	2,620,000	1,000,000	4,620,000
Global total	1,000,000	3,709,000	8,854,000	13,563,000
% home markets	0%	29%	89%	66%

Severn Trent Water supplies water services to 7.95 million people via 3.46 million connections and sewerage services to 8.91 million people via 3.94 million connections in the catchment areas of the rivers Severn and Trent. This includes Birmingham, Britain's second largest city, the English Midlands and a part of central Wales. Severn Trent is the third largest of the UK Water Plcs and was formed from the merger of 234 local entities in 1973. In the UK, the company sought to bid for South West Water Plc (Pennon) after Wessex Water launched a hostile bid in 1996. This bid was blocked by the MMC and since then, Severn Trent has concentrated on investigating potential inset appointments and PFI contracts in the UK. The company has a good reputation for water resource management and a pro-active approach to regulatory and environmental developments. Work on water leakage (a decrease of 30% from 1989 to 2002) and changes in industrial usage have seen the average annual water demand fall by 15% since 1995. 78,000 leaks were found and fixed between 2007 and 2009 with leakage at 441Ml/day in 2013. In 2013 34% of the company's million customers had a meter and they also have 171,000 metered commercial customers.

The company has sought to maximise its use of renewable energy both in order to mitigate its carbon impact and to reduce its power costs, currently running at GBP50 million pa. In 2000-11, 22% of the company's energy came from in-house renewable energy projects and this is set to rise to 30% by 2015. 32MW comes from sewage to energy projects with other projects including bio-fuels from silage, small scale hydro power and wind energy.

Severn Trent - Profit & loss account, 2011-2015

Y/E 31/03 (GBPmillion)	2011	2012	2013	2014	2015
Severn Trent Water	1,389.8	1,457.5	1,511.0	1,544.8	1,579.1
Water Technologies & Services	336.1	332.3	328.5	210.2	216.2
Group Turnover	1,711.3	1,770.6	1,831.6	1,856.7	1,801.3
Severn Trent Water	490.7	510.3	514.2	526.8	518.4
Water Technologies & Services	21.2	-26,7	-3.4	8.2	11.6
Group operating profit	497.7	469.8	492.2	318.9	540.3
Pre-tax profit	253.0	156.7	200.0	282.7	148.2
Earnings per Share (pence)	115.2	72.5	95.7	182.1	107.2
Dividends per share (pence)	65.1	70.1	75.8	80.4	84.9

Severn Trent Services

Severn Trent's non-regulated water activities have been grouped under Severn Trent Services. In the USA this covers their operating services (North American Operating Services), with an international arm serving customers in the same sectors in the UK and Europe. In 2000, STS acquired Hyder Laboratories Ltd., to extend its testing activities into Wales.

Severn Trent Services has a stated policy of avoiding BOT and construction type contracts and to concentrate on asset and services management, along with a number of investments in major projects. It is one of the lower key players in the international market, but with a good track record and steadily improving profitability. Severn Trent has one of the world's largest water and wastewater consulting operations and in recent years has carried out consulting work in 48 countries, and is currently active in the USA, Belgium, Azerbaijan, Russia, the Ukraine, and South Africa.

UK – Project Aquatrine

Contracts

Year	Location	Contract & length	People served & service
2005	UK MoD	25-year PFI	Water & wastewater services

Coast to Coast Water (C2C), consisting of Severn Trent Services (50%) and Costain (50%) gained Package C of Project Aquatrine, serving 1,500 military sites in South East, East and North England. The contract is worth GBP1billion and started in April 2005.

Italy and the USA are regarded as the main markets for growth in the short to medium term, along with the MENA region. Indaqua, the Portuguese activities, were sold to Mota-Engil (Portugal) for a GBP4.3million profit in 2005. SVT's 20% stake in Belgium's Aquafin acquired in 1991 was sold back to the Flemish government for in 2006 for GBP29.3million, a GBP14.7million profit. A 15 year contract in Germany serving 45,000 people was completed in 2008. In 2011, SVT announced that it would continue with its international operations, but it would place a lower emphasis on their expansion.

Ireland

Contracts are operated through Severn Trent Response, a joint venture between Severn Trent and Ireland's Response Group.

Contracts

Year	Location	Contract & length	People served & service
2010	Limerick	20-year O&M	90,000, wastewater

The EUR 60 million contract is for managing a 130,000 PE facility. Severn Trent Response is managing a WWTW, sludge drier, 10 pumping stations and 20 km of sewage mains.

2011	Letterkenny	20-year DBO	30,000, wastewater services

This is a EUR 55 million contract to develop and manage a 40,000 PE WWTW which was awarded to Severn Trent Response in February 2011. The Co Donegal facility can be expanded to a PE of 80,000.

Italy

In February 2000, Severn Trent Italia (SVTI) acquired Ecotechnica SRL as part of a strategy of bidding for water and wastewater privatisation opportunities in northern Italy. Ecotechnica is based in Milan and was purchased from Group Maffei. The company operates wastewater facilities in the Brescia region. It has a turnover of GBP8.5million pa, bringing SVTI's Italian turnover to GBP20million. Previous acquisitions were Baden Italia SPA in Lombardy (water treatment plants, April 1999), La Biodepuratrice in Bergamo (wastewater plants and operations, 1999) and Baltea Impianti Depurazione SRL (Valle d'Aosta, October 1998). These companies are active in water engineering in the region. SVTI serves 1,000,000 people in Italy. A GBP55million 20-year DBO contract was gained in 2008.

Contracts

Year	Location	Contract & length	People served & service
2002	Terni	30-year concession	250,000 water & wastewater

The Umbrian ATO concession award will generate revenues of EUR19.5million, linked with a EUR192million Capex programme. SVTI holds 25% of the operating consortium, which gained the concession in February 2002.

USA

North American Operating Services believes that is it the third largest contract operations player in the US market for management services for municipal and industrial water and wastewater systems. STS started through the 1994 acquisition of AM-TEX, a company founded in 1974. In 1997, Severn Trent acquired MHPC, New York State's largest contract operator for water and wastewater facilities, with 75 communities served, and Texas' MTS, serving 26 municipal utility districts in Houston. STS currently serves 150 utility districts in Texas.

Severn Trent Services operates in 22 states, managing 200 wastewater treatment facilities serving 2.5 million people in total and nearly 200 water treatment facilities serving one million people in total. Severn Trent Management Services manages municipal water and wastewater services for 1.5 million people in Florida. In 2006, a USD72million contract with the Florida Governmental Utility Authority was renewed for five years, to operate and maintain four water and wastewater systems for five years, with an additional five-year extension option.

Sources:

Severn Trent, analyst presentaions, 1990-2015

Severn Trent, Annual Reports, 1990-2015

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Liv Garfield (Chief Executive)

James Bowling (CFO)

United Kingdom

Thames Water

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
Thames Water	Only	Only	Sewerage	
England & Wales	0	5,444,000	9,262,000	14,706,000
Global total	0	5,444,000	9,262,000	14,706,000
% home markets	-	100%	100%	100%

Macquarie was founded in 1969 and was floated in 1996. The company acquired South East Water from SAUR, Thames Water from RWE and Aquarion (to be covered in the USA entry) from Kelda. As a prelude to the Thames Water acquisition, South East Water was sold to Westpac (see company entry) in October 2006.

Macquarie led Kemble Water Limited the winning bidding team for the bid to acquire Thames Water in October 2006. The village of Kemble in the Cotswolds is adjacent to the source of the River Thames. The deal was completed in December 2006 with an enterprise value of GBP8billion. Macquarie paid GBP250million for a 11% stake in Thames Water, which is held by the Macquarie European Infrastructure Fund II (MEIF II), which has confirmed commitments of USD6.3billion (EUR4.6billion).

Thames Water Plc

Thames Water provides water supply to 3.6 million customers (8.7 million people) and sewerage services to 5.1 million customers (13.8 million people) in England, making it the leading UK water company. Thames Water's regulated activities are in the south-east and centre of England, including London. The company's origins lie in the New River Company, which was permitted by an act of Parliament in 1606 and incorporated in 1619. In 1822, the New River Company acquired the London Bridge Water Works Company, which was founded in 1582. The New River Company was eventually nationalised by the Metropolitan Water Board in 1902, when at the time, it served 1.25million people. The modern Thames Water was formed by a merger in public ownership in 1974, and floated in 1989.

After failing to reach its agreed leakage reduction targets for three years, in July 2006 Thames agreed with Ofwat on a binding undertaking for GBP150million in extra spending on leakage prevention between 2006 and 2009 on top of the GBP1,000million budgeted for 2005-10. As the investment will not be included in the company's RCV Thames will not get a direct return from this investment. Thames needs to reduce its losses from 894Ml/day in 2006 to 720Ml/day by 2010 against the original target of 715Ml/day. Leakage was reduced by 27% between 2005 and 2011.

The company currently faces three major challenges: bringing its leakage rates in line with sector norms in England and Wales; addressing its current demand and a further 700,000 people being forecast to live within its service area by 2021; and the need to manage its rising volumes of wastewater.

Major projects include the GBP 270million Beckton desalination plant, which entered service in June 2010, the GBP 635 million Lee Tunnel and upgrades costing GBP 675 million for five WWTWs. The Beckton desalination facility has a capacity of 150,000 m3 per day and can supply up to 400,000 customers.

Thames Water Services was sold to Veolia Water UK for EUR115million (GBP78million) in August 2007. UK revenues of EUR160million (GBP109million) were anticipated for 2008. The company has two principal contracts in Wales and Scotland.

Thames Tideway

Thames Water has been associated with the largest water and sewage projects in British history, from the New River water project in 1609-13, Bazalgette's sewerage scheme in 1858-78 and the London Ring Main of 1988-93. The GBP4.2 billion Thames Tideway Tunnel is the next of these projects.

Thames Water is currently carrying out preparatory work for the proposed Thames Tideway Sewer, a project to construct a 22 km long and 7.5 meter wide sewer to augment Bazalgette's mains sewer, which after some 150 years has been overwhelmed by new demand having been designed to deal with the wastewater produced by some three million people.

It took Thames Water a decade for Ofwat to agree that the scheme was necessary. The project is to be developed and financed by Bazalgette Tunnel Limited, a special purpose vehicle which has its debt backed by the Government in order to minimise its coupon and therefore in turn the cost of the project to customers. It is anticipated that tunnelling work will start in 2016 and is expected to be completed by 2023.

Thames Water Ltd. - regulated activities in England, 2012-2015

Y/E 31/03 (GBPmillion)	2012	2013	2014	2015
Water – Household Measured	174.1	183.0	208.6	218.3
Water – Household Unmeasured	468.7	480.1	497.6	508.9
Water – Non-household Measured	157.5	156.6	174.5	178.7
Water – Non-household Unmeasured	6.6	7.2	7.4	7.6
Wastewater – Household Measured	205.1	231.1	271.9	295.8
Wastewater – Household Unmeasured	448.4	477.8	508.1	523.9
Wastewater – Non-household Measured	117.5	127.4	137.2	150.3
Wastewater – Non-household Unmeasured	5.0	6.5	7.5	8.1
Other water	44.5	44.4	48.1	49.0
Other wastewater	43.5	44.8	54.6	58.0
Appointed business	1,670.9	1,758.9	1,912.5	1,998.6
Non-appointed business	24.0	33.0	31.2	28.2
Total turnover	1,694.9	1,791.9	1,943.7	2,026.8
Operating profit	647.8	560.1	677.1	701.3
Pre-tax profit	222.2	144.9	259.3	335.8

Sources:

Thames Water, regulatory reports, 2001-2015

Thames Water, Annual Reports, 1990-2000

Thames Water, investor presentaions, 1990-2000

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Sir Peter Mason (Chairman)

Martin Baggs (CEO)

Mark Braithwaite (Finance Director)

John Halsall (Director of Water Operations)

United Kingdom

United Utilities Plc

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
United Utilities	Only	Only	Sewerage	
England & Wales	0	346,000	7,031,000	7,377,000
Global total	0	346,000	7,031,000	7,377,000
% home markets	-	100%	100%	100%

After two decades of expansion into international water markets and being a regional multi-utility, United Utilities Plc (UU) once again specialises in managing water and wastewater in the north west of England, where serves 7.38 million people.

United Utilities' GBP1 billion rights issue (GBP500 million in September 2003 and GBP500 million in June 2005) was the first UK rights issue to explicitly earmark funds for water and wastewater infrastructure spending since the 1989 privatisation. UU returned GBP1,482 million to its shareholders in the wake of the GBP1,050 million sale of UU Electricity (along with GBP686 million in debt).

In 2010 the company sold its UK non-regulated activities and its stake in the Sofia concession to Veolia Environnement and those in Australia to Mitsubishi. It has retained its investment in Tallinna Vesi which has a separate entry in the Yearbook.

United Utilities - Profit & loss account, 2012-2015

Y/E 31/03 (GBPmillion)	2012	2013	2014	2015
Water – Household Measured	141.2	158.0	174.5	186.5
Water – Household Unmeasured	376.6	378.3	378.5	373.3
Water – Non-household Measured	127.8	132.1	137.2	137.4
Water – Non-household Unmeasured	4.6	4.5	4.4	4.4
Wastewater – Household Measured	157.7	179.1	202.2	217.0
Wastewater – Household Unmeasured	389.8	395.5	404.3	408.0
Wastewater – Non-household Measured	214.7	230.0	245.3	252.8
Wastewater – Non-household Unmeasured	5.7	5.4	5.8	6.3
Other water	61.9	64.7	64.0	76.7
Other wastewater	73.3	75.3	73.6	73.2
Appointed business	1,553.3	1,622.9	1,689.8	1,725.6
Non-appointed business	8.5	8.6	8.8	9.9
Total turnover	1,561.8	1,631.5	1,698.6	1,735.5
Operating profit	595.4	640.8	682.4	696.1
Pre-tax profit	243.8	318.2	544.8	348.7

In September 1999, the Mersey Basin gained the River Prize for the best river clean-up operation in the world. This reflects the gains made since the Mersey Basin campaign started in 1981, when Europe's most polluted river was described as an 'affront to civilised society'. 2,000km of waterways have been restored since then, with UU spending GBP1.6billion on capital works to divert domestic and industrial effluents into an integrated sewerage diversion and sewage treatment scheme between 1989 and 2002. In 2001, the first salmon were caught in the Mersey since 1921. Since 1981, GBP8 billion has been spent cleaning up the estuary which has now achieved 'moderate' ecological status under the EU's Water Framework Directive. GBP400 million is to be spent on river water quality related work in 2015-2020.

After GBP1.1billion in spending between 1990 and 2002, the problem of the region's bathing water is being tackled. Compliance has moved from 18% in 1988 to 97% in 2002. In 1997, after the main scheme had been completed, compliance was at 50% and a GBP150million follow-up scheme concentrated on upgrading specific STWs and to reduce further a number of storm water discharges. In 1999, 11 out of 34 designated beaches failed the mandatory criteria and this fell to 1 in 2003 and all complied in 2006. Subsequent failures have been partly due to heavy rainfall and in part due to new problems being identified. A 3.5 Km storm water storage tunnel was built in 2011-12 at a cost of GBP114 million to relieve stormwater discharges into the Ribble Estuary from Preston. GBP200 million is to be spent between 2015 and 2020 to address the revised Bathing Water Directive standards.

The company's 25 year plan includes targets for 90% of meters installed to be 'smart' by 2020 and metering coverage is planned to reach 76% by 2040. Good ecological inland water standards are aimed for 2027 and 'Blue Flag' (excellent) status for bathing waters under the revised Directive by 2030.

Sources:

United Utilities, regulatory reports, 2010-2015

Unite United Utilities, regulatory reports, 2010-2015

Utilities, CSR Reports, 2004-2014

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Dr John McAdam (Chairman)

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Russ Houlden (Group Finance Director)

United States of America

American Water Works

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
AWW	Only	Only	Sewerage	
USA	13,500,000	1,500,000	0	15,000,000
Canada	420,000	0	0	420,000
Total - home markets	13,500,000	1,500,000	0	15,000,000
Total - international	420,000	0	0	420,000
Global total	13,920,000	1,500,000	0	15,420,000
% home markets	97%	100%	0%	97%

American Water Works (AWW) has a considerable historic presence; one of its main subsidiaries, E'town Water dates back to 1854 and the American Water Works & Guarantee Company was founded in 1886. AWW has been seeking to create a national presence in the USA water market through a long-term acquisition programme that started in earnest during 1996. AWW seeks to concentrate on developing regional strength in water utility operation rather than merely further the numbers served. Thus in August 2001 AWW sold certain activities in New England to Kelda Group as Kelda's Aquarion had a stronger presence in this region.

In September 2001, American Water Works agreed to an USD4.6billion bid by RWE after rejecting an USD3.5billion bid in August 2001. AWW was merged with Thames Water in 2003 and renamed American Water. In addition, E'town Water, which was acquired by Thames in November 1999 after an agreed USD948million bid has been integrated within AWW. The AWW transaction was subject to the approval of utility regulatory commissions which was completed in January 2003. In 2006, it was announced that AWW would be spun off from RWE via an IPO during 2007. As part of this process, American Water was renamed American Water Works and RWE sold 36% of AWW's equity on the NYSE in April 2008. The divestment process was completed by November 2009.

AWW - Profit & loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Regulated business	2,285.7	2,368.9	2,564.4	2,539.9	2,674.3
Non-regulated business	294.7	327.8	307.4	302.5	354.7
Group turnover	2,555.0	2,666.2	2,853.9	2,878.9	3,001.3
Operating income	728.1	801.6	924.1	948.3	1,002.6
Net income	267.8	303.5	373.6	370.8	429.8
Earnings per share (USD)	1.46	1.72	2.10	2.07	2.39

AWW - breakdown of revenues, 2014

Y/E 31/12 2014	Revenues (USDmillion)	Water volumes (million gallons)
Residential	1,515.0	176,975
Commercial	550.1	81,546
Industrial	131.8	39,833
Public & other	330.0	52,710
Other water	26.4	-
Unbilled water	-25.4	-
Total Water	2,531.0	351,082
Wastewater	93.1	-
Other	50.3	-
Total	2,674.3	-

AWW has 72 regulated and non-regulated subsidiaries in the USA and Canada, providing water services in 47 states and one Canadian province along with wastewater services in 11 states. The 3.1 million regulated customers account for 88.8% of 2014 operating revenues.

Capital spending was USD766million in 2010 and USD925million in 2011, with USD900million budgeted for 2012. Replacement of the extant network accounts for 48% of capital spending, 14% for new assets to meet customer growth, 14% for new standards and efficiency and service enhancements accounting for 24%.

AWW -Major acquisitions, 1996-2014

Year	Company	People served	Cost (USDmillion)	Turnover (USDmillion)
1996	PAWC	2,000,000	409	N/A
1998	EHCS	35,000	17	N/A
1999	NEI	1,700,000	700	N/A
1999	American Anglian (50%)	1,000,000	32	31 (1999)
2000	UWR subsidiaries	122,500	50	N/A
2001	City of Coatesville	53,000	48	7 (2001)
2001	Azurix North America	2,000,000	160	134 (2001)
2002	Citizens Utilities subsidiaries	1,100,000	859	140 (2001)
2007	South Jersey Water Supply Co	25,000	14	N/A
2012	New York	50,000	37	N/A

In December 2007, the company announced that it was seeking to acquire the assets of the city of Trenton's water system located in Ewing, Hamilton, Hopewell and Lawrence townships. The proposed purchase price is USD75million. This would add 40,000 new customers. The acquisition has been delayed by legal issues.

The company is currently in the process of purchasing seven systems in New York for USD71million which have 50,000 customers.

AWW -regulated activities in 2014

State	Customers	People (million)	Revenues USDmillion
Pennsylvania	666,415	2.200	605.4
New Jersey	648,066	2.700	652.3
Missouri	464,498	1.500	270.2
Indiana	293,666	1.200	200.6
Illinois	312,017	1.300	262.3
West Virginia	170,371	0.625	127.0
California	174,198	0.610	209.8
Kentucky	N/A	0.492	N/A
New York	N/A	0.372	N/A
Virginia	N/A	0.320	N/A
Idaho	N/A	0.210	N/A
Georgia	N/A	0.032	N/A
Hawaii	N/A	0.029	N/A
Maine	N/A	0.022	N/A
Michigan	N/A	0.012	N/A
Others - total	407,214	N/A	274.7
Total	**3,101,305**	**11.624**	**2,368.9**

There are10.1 million people served in the leading six states and 1.5 million people served in 11 other states, or a total of 11.6 million people. A further 4.0 million are served by non regulated activities in the USA and 400,000 in Canada.

AWW - Customer breakdown

Customers, 2014	Water	Wastewater
Residential	2,813,715	117,602
Commercial	218,314	6,221
Industrial	3,793	17
Public authority & other	59,429	281
Total	**3,095,071**	**124,121**

AWW - tuck-in acquisitions, 1996-2014

Year	Transactions completed	Customers served	Customers per deal	Total cost (USDmillion)	USD per customer
1996	13	N/A	N/A	36.9	N/A
1997	9	N/A	N/A	2.9	N/A
1998	22	26,770	1,785	47.2	1,756
1999	21	14,000	666	12.4	857
2000	12	38,000	3,167	52.1	1,368
2001	10	20,000	2,500	56.3	2,795
2002	9	29,000	3,625	31.9	1,100
2003	10	N/A	N/A	4.6	N/A
2004	8	N/A	N/A	1.9	N/A
2005	7	N/A	N/A	5.0	N/A
2006	11	N/A	N/A	12.5	N/A
2007	8	N/A	N/A	18.0	N/A
2008	10	N/A	N/A	12.5	N/A
2009	8	N/A	N/A	18.1	N/A
2010	5	N/A	N/A	1.6	N/A
2011	59	3,700	63	3.3	892
2012	10	>50,000	N/A	44.6	N/A
2013	15	30,000	2,000	23.7	790
2014	13	4,300	331	8.9	2,070

After being bought by RWE, acquisitions were effectively wound down and have been revived as the company prepared for its partial divestment since 2006. Systems in Haddonfield (NJ), Arnold (Missouri), Rissiaville (Indiana) and Mount Vernon (Illinois) are to be purchased in 2015 that will cover 25,600 additional customers. In 2012, 7 systems serving 50,000 customers in New York were acquired for USD36.7 million. In 2013, a System in Dale (Virginia) was acquired, covering 21,000 wastewater customers.

Regulated activities in Arizona and New Mexico were sold to EPCOR of Canada in January 2012 for USD461million, with USD10million raised from the sale of regulated activities in Texas and the Applied Water Management subsidiary in 2011. Regulated activities in Ohio covering 58,000 customers were in the process of being sold for USD120million in 2012.

Non-regulated activities: Market-Based Operations

Non-regulated activities are grouped into three entities: (1) Contract Operations Group (2011 revenues of USD230.5million, 100 contracts serving over 3million people) - operate and maintain water and wastewater facilities for the United States military, municipalities, and the food and beverage industry; (2) Homeowner Services Group (900,000 people served in 17 states) – water and sewerage pipe maintenance for domestic and smaller commercial customers; and (3) Terratec Environmental Ltd., providing biosolids management, transport and disposal services to municipal and industrial customers.

American Water Services

In 2014, AWW had 70 outsourcing contracts, 44 O&M and 8 DBOs. The O&M contracts have contract revenues of USD3,402million outstanding. A new entity, Contract Operations Group started operations in 2010, combining the Applied Water Management Group's 196 contracts (USD19.5million revenues in 2009) and EMC, which has 26 municipal and 28 industrial customers.

Anglian Water Group (AWG) of the UK formed American Anglian Environmental Technologies (AAET) in 1993, a 50:50 joint venture with AWW to pursue opportunities for water and sewerage projects. AWG sold its stake in the joint venture to AWW in October 1999 for USD32million. AAET serves 1million people through managing 175 water and wastewater treatment facilities in seven states, with a 1999 turnover of USD31million.

In August 2001, AWW acquired all of the North American activities of Azurix from Enron for USD153.3million plus USD6.5million in debt. Azurix had built a broad portfolio of activities in the USA and Canada, including a small utility, and municipal and industrial outsourcing services, water rights and a web-based water trading system. The latter, water2water.com is now a website selling fish tanks. Azurix acquired Philip Utilities Management Corporation for

USD106million in May 1999. Azurix North America (ANA) had a turnover of USD131.5million in 2001, serving approximately 2million people, including 1.82million for water provision and 350,000 for sewerage and wastewater treatment services (estimated).

Azurix contract gains in the USA (USDmillion)

Date	Contract	Location	Value	Duration (Years)	Annual revenues
05-2000	O&M water provision	Jefferson, Louisiana	30	15	2.0
05-2000	O&M water provision	Brunswick, New Jersey	120	20	6.0
05-2000	O&M water provision	Wildwood, New Jersey	71	20	3.6
11-1999	O&M water & wastewater	Gary, Indiana	10	5	2.0

AWW's Military Services Group has 11 50 year contracts, including two gained in 2014. It made two major contract gains in September 2008: a contract for ownership, operation and maintenance of the water and the wastewater systems at Fort Polk Army Installation, Louisiana worth USD348million over a 50 year period and a contract for ownership, operation and maintenance of the water distribution system and wastewater collection system at Fort Hood Army Installation, Texas worth USD329million over a 50 year period.

Keystone Clearwater Solutions

Keystone Clearwater Solutions, a company providing water services to the US oil and gas industry was acquired from Rex Energy for USD130 million in 2015.

Environmental Management Corp

Environmental Management Corp (EMC), which had revenues of some USD40million in 2001, manages water and wastewater treatment facilities for both industrial and local municipal customers around the US. EMC serves municipal clients with populations ranging from 5,000 to around 200,000. Turnover was marginally up during 2004, with the company operating at break-even. Major contract gains have been made in the animal food sector in the USA. In October 2002, BOC Group acquired Environmental Management Corp, a privately held St. Louis-based water services company, for USD50million. In September 2006, Linde acquired BOC for EUR15billion and EMC was sold to AWW in 2009 for USD18.1million.

EMC - main water and wastewater treatment O&M contracts

Location	Type of Plant
Brighton, Il	0.55 MGD wastewater treatment plant
Lichfield, Il	1.72 MGD wastewater treatment plant
Godfrey, Il	2.2 MGD wastewater Plant
Monmouth, Il	4.2 MGD wastewater plant
Mount Vernon, Il	5.0 MGD wastewater plant
Oregon, Il	0.625 MGD wastewater plant
Pittsfield, Il	1.5 MGD wastewater plant
Evansville, Il	East – 18.0 MGD wastewater plant
Evansville, Il	West – 20.6 MGD wastewater plant
Jeffersonville, Il	5.2 MGD wastewater plant
Sellersburg, IN	1.5 MGD wastewater plant
Sellersburg, IN	2.5 MGD water treatment plant
St Charles, MO	Missouri – 5.0 MGD wastewater plant
St Charles, MO	Mississippi – 5.5 MGD wastewater plant (being expanded to 7.9 MGD)
Seymour, IN	4.3 MGD wastewater plant
Vincennes, IN	4.56 MGD wastewater plant

Canada

American Water Services provide O&M outsourcing services in Ontario. In September 2001 Azurix NA was awarded a 10 year contract to operate and maintain the Lake Huron and Elgin Area Primary Water Supply Systems in Ontario. ANA bid was priced at CAD71.2million (USD47.5million) over the length of the contract, a saving of approximately CAD1million per annum. The contract has an option for an additional five years and serves a population of approximately 420,000.

Sources:

AWW, Form 10K, 1998-2000

AWW, Form 10K, 2008-2014

AWW, Listing Document, 2008

RWE, Annual Reports, 2001-2008

RWE, investor presentations, 2002-2007

Azurix, investor presentations, 1999-2000

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United States of America

CH2M Hill

Population served by service and country				
2014 data	Water	Sewerage	Water &	Total
CH2M Hill	Only	Only	Sewerage	
USA	500,000	1,500,000	4,500,000	6,500,000
Global total	500,000	1,500,000	4,500,000	6,500,000
% home markets	100%	100%	100%	100%

CH2M Hill is a part employee-owned and part private equity owned civil engineering company. It was founded in 1946 by Messrs Cornell, Howland, Hayes & Merryfield who in turn merged with Claire A Hill Associates in 1971. The company employs 23,500 staff. In Puerto Rico, CH2M Hill was involved in the design and upgrading or construction of 600 water and wastewater facilities as part of a USD2.1billion investment completed by 2003. In 2011, CH2M Hill acquired Halcrow, which added a further 6,000 staff.

CH2M Hill - Profit & loss account, 2010-2014

Y/E 31/12 (USDmillion)	2010	2011	2012	2013	2014
Turnover - Water	-	-	-	1,207	1,244
Turnover	5,423	5,552	6,161	5,878	5,414
Operating income	175	185	159	192	-342
Net income	94	113	93	118	-182

Operations & Maintenance Business Group (O&MBG)

As the name suggests, CH2M Hill O&MBG specialises in water and wastewater O&M contracts for municipal and industrial clients. The company was founded by CH2M Hill in 1980. Its first O&M contract was awarded by Lebanon, Oregon in 1982 and this was renewed for as further 10 years in 2007. O&MBG currently operates 200 water and wastewater facilities, against 150 in 1999 and has 1,700 staff. In 2008, it was estimated that the company served 3.5million people and was the fourth largest municipal O&M player in the USA, with revenues of USD 270 million in 2008. O&M related activities in the USA were estimated at USD604 million for 2014.

O&MBG – some major contracts

2001	Seattle, WA	25 year DBO	Water treatment
2010	Huron East, Canada	5+5 year O&M	Water & wastewater treatment
2012 [1]	Traverse, Michigan	21+5 year O&M	Wastewater treatment
2002	Rio Rancho, NM	5 year O&M	Water & wastewater treatment
2002	Stockton, CA	20 year O&M	Water & wastewater treatment
2003	Havana, Florida	3 year O&M	Wastewater treatment
2003	Fort Campbell, KY	50 year O&M	Water & wastewater treatment
2004 [1]	Eldorado, NM	4+4 year O&M	Water treatment
2005	Clovia, CA	15 year DBO	Wastewater treatment & reuse
2007 [1]	Lebanon, Ore	10 year O&M	Water & municipal services
2008 [1]	Grants, NM	20 year O&M	Water & wastewater treatment
2008 [1]	Prescott Valley, AZ	5 year O&M	Water & wastewater treatment

[1] Contract renewals

The Fort Campbell contract covers all the ownership and all operations for the 101st Airborne Division's headquarters, covering 3,000 buildings and 4,000 housing units, with a 7.6million gallon per day water treatment plant and a 4million gallon per day wastewater treatment plant. The total contract is worth USD700million. In Seattle, the new Cedar Treatment Facility will provide 70% of the water used by the city's 1.3million people and will save Seattle USD50million over the life of the contract. The water treatment facility is expected to be operating by the end of 2004 and will cost USD109million to design, build and operate for 25 years. The Stockton contract was originally awarded to OMI's joint venture with Thames Water and is intended to save the city USD65million in engineering fees and USD110million in other operational costs.

Source:

CH2M Hill, corporate web site

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Help Section – Table of Contents

Glossary

Introduction

The water and wastewater sectors are not immune to jargon and acronyms, especially as we have seen, the TLA. The Glossary at the back of the book provides an explanation of those examples that are to be found in this book. As with definitions of contract types, definitions of certain terms can vary. In this book, we have kept with the most commonly accepted definitions and those that are most likely to be of relevance to potential readers. A list of currency acronyms is also included.

Glossary of Water and Finance Terms And Abbreviations

Term/Abbreviation	Explanation
Abstraction.	The taking of water from surface water (rivers, lakes and reservoirs) and groundwater (boreholes and springs from water bearing rocks such as chalk, limestone and sandstone).
Acre-Feet.	Expression used in the USA to describe groundwater resources. 1acre-foot = 1.482Ml (1,482m^3)
ADB.	African Development Bank/Asian Development Bank. The former is sometimes known as the AfDB and in general are not to be confused with each other.
Affermage.	See Lease.
AIM.	AIM (formerly Alternative Investment Market). AIM is a sub-market of the LSE London Stock Exchande, where smaller companies may float shares in a regulatory system that provides greater flexibility than the main market.
AMP.	Asset Management Period, the five yearly operating cycles in England and Wales set out by Ofwat, the industry regulator since 1989. AMP6 runs from 2015-20.
Ammoniacal nitrogen (NH_3).	Ammoniacal nitrogen is often found in water as a result of the discharge of sewage effluent with high levels affecting the quality of fisheries.
Aquifer.	Rock and soil which holds water, an underground water source for groundwater.
Artesian.	Water abstracted from groundwater resources.
ASEAN.	Association of South-East Asian Nations.
Asset Sale.	The full privatisation of utility services via the outright sale of their assets and an operating licence to shareholders or to a private sector company. This is known as the 'British Model' after the 1989 privatisation of the WASCs of England and Wales. Placing the operating assets in private hands in perpetuity has proved politically very contentious and, as a result, has not been used elsewhere, save in Chile and to a much lesser extent, in the Czech Republic and in Belize. In the USA, investor owned utilities (q.v.) have developed their assets from scratch.
ATO.	Ambito Territoriale Ottimale. The ideal area for water and wastewater contracts in Italy as designated by the 1994 Galli Law. This law broadly seeks to rationalise some 6,800 water distribution regions into a more manageable 89.
BATNEEC/BAT.	Best available technology not entailing excessive cost/Best available technology. The former's expediencies have earned it the nickname CATNIP, or cheapest available technology not involving prosecution.
Biosolids.	A modish expression for sewage sludge which has been processed for recycling. The latter refers to its application on agricultural land or after further treatment, as compost sold for horticulture and domestic gardens. As far as PR goes, a better term than refined human excreta.
Biotic.	Plant, bacterial or animal life. Biodiversity refers to the optimal diversity of species in an ecosystem. The greater the number of species in a given ecosystem in relation to its ideal number, the less perturbed the habitat is.
Blue Flag.	Under the EU's bathing waters directive, designated bathing areas that meet the stricter 'Guideline' standard for water quality, as well as satisfying standards for safety, can be awarded a 'blue flag'. From 2015, higher standards are being brought in under the revised directive.
BMO.	Build, manage, and operate, a form of O&M contract.
BOD/COD.	These are chemical/biochemical determinants of water quality. As plants and animals do not necessarily respond to numbers and engineering standards, there is a move towards complementing these criteria with a biological assessment of the water's quality. For example, in several families of invertebrates, better water quality results in a greater degree of species diversity. Indicator species are used to measure water quality.
Biochemical oxygen demand (BOD).	This is the amount of dissolved oxygen in water consumed in test conditions over a period of five days by the microbiological oxidisation of biodegradable organic matter contained in effluent. BOD (or BOD_5) measures the amount of oxygen consumed, usually by organic pollution (mainly sewage effluent and effluents from the wood and paper industry), so lower values indicate better quality.

BRICS.	BRICS is the association of 5 major emerging economies Brazil, Russia, India, China and South Africa
Chemical oxygen demand (COD).	Unlike BOD, this includes all the oxygen consumed by effluents. Also called COD_5.
BOT.	Build Operate Transfer, see Concession.
'British Model'.	See Asset Sale.
CAO.	Chief Accounting Officer.
CAP.	The Common Agricultural Policy of the European Union.
Capex.	Capital spending. Money spent on new assets or replacing or upgrading extant assets.
Carcinogen.	A substance which is believed to be a cause of cancers in humans.
CEO.	Chief Executive Officer.
CFO.	Chief Financial Officer.
Coliform bacteria.	Gut living bacteria that are discharged with excreta. Drinking water contaminated with coliform bacteria is the main cause of diarrhoea and other intestinal infections. The most useful indication that sewage effluent is being discharged into a body of water.
Combined sewers.	A sewer that carries both sewage and storm water runoff.
Common Ownership.	A form of privatisation where the operating assets are corporatised and a minority of the shares in the asset-holding company are offered to one or more private sector companies. This is known as Kooperationmodel or the German Model. A further variant is the Beteribermodell, where the private sector operator pays a fixed rate for the right to operate the services.
Concession.	The granting of the right to operate given utility services for a locality for an agreed period of time. Unlike outright privatisation (see Asset Sale), the assets are transferred to municipal ownership at the end of the concession's life. In a full utility concession, the collection of water and sewerage tariffs is included. There are also four main variants of the concession model (BOO, BOT, TOT and BOOT – as described below) where tariff collection usually remains in municipal hands. These versions are typically seen where the municipality needs private sector finance and management for new facilities. **Principal concession models:** **BOO (Build Own Operate).** The private sector company builds, owns, maintains and operates the facility for the length of its operating life. **BOOT (Build Own Operate Transfer).** Similar to the BOO contract, save that the private sector company hands over the assets to the municipality at the expiry of the concession. **BROT (Build Rehabilitate Operate Transfer).** Similar to BOO, but with extant assets being rehabilitated. **BOT (Build Operate Transfer).** Similar to the BOOT except that the private sector company hands over the assets to the municipality on completing construction work. **BT (Build Transfer).** **TOT (Transfer Own Transfer).** Take over an existing facility, rehabilitate and subsequently operate it and hand over the assets to the municipality at the expiry of the concession.
COO.	Chief Operating Officer.
Corporatised.	A utility that is in municipal ownership while being run in a manner similar to that of a private sector entity. A corporatised utility will be structured as a limited liability company, with its share capital controlled by the municipality, while publishing the equivalent of an annual report replete with a profit and loss account, balance sheet and cash flow data.
Cryptosporidium.	Parasitic micro-organisms which live in water and are a cause of diarrhoea. The presence of 'crypto' can arise through an under-maintained distribution network or due to a specific issue affecting the input water.
CSD.	Commission on Sustainable Development of the UN.
CSR.	Corporate Social Responsibility
CUP.	Cambridge University Press
DBFO.	Design, Build, Finance and Operate. A form of BOT concession.
DBFOT.	Design, Build, Finance, Operate and Transfer. A form of BOT concession.
DBO.	Design, Build and Operate. A form of BOT concession.
DBOT.	Design, Build, Operate and Transfer. A variant of the BOT contract incorporating the design of the facility.
DBOOT.	Design, Build, Own, Operate and Transfer.
DBROT.	DBROT (Design Build Rehabilitate Operate Transfer). Similar to BOO, but with extant assets being rehabilitated.
DfID.	The UK Government's Department for International Development, a government agency for promoting development initiatives.

Digestion.	Process for stabilising sewage sludge before application to land. Digestion involves heating the sludge to 40°C to reduce the number of bacteria and pathogens. Anaerobic digestion (see Pasteurise) generates methane, which can be extracted for energy recovery.
Distribution Loss.	Non-contentious expression for leakage (q.v.) which also includes other losses including theft of water.
Dry tonne.	Sewage sludge or industrial effluent after all water has been removed. This is the standard measure used for comparing sewage sludge generation and disposal statistics.
EBITDA.	Earnings before interest, taxation, depreciation and amortisation.
EBRD.	European Bank for Reconstruction and Develop. Loans for municipal and private services, with an emphasis on the EU candidate countries.
Ecosystem.	The community of organisms associated with a particular habitat. It ought to be noted that there is no such thing as 'ecological', as in 'ecologically friendly', since ecology is the science of studying the environment. Expressions such as 'environmentally sound' do, however, make sense.
Effluent.	Liquid wastes typically discharged into a body of water. Strictly speaking, it is the liquid discharged from a wastewater treatment plant into a body of water, which is meant to meet various quality criteria.
EIB.	European Investment Bank. Loans for municipal and private enterprises, priority within the EU.
EPA.	(National) Environmental Protection Agency.
EPC.	Engineering, Procurement and construction (contract)
EPS.	Earnings per share
EU.	The European Union's directorate general for environmental issues is DG XI. The EU acts as a driver for and against water quality. In subsidising inefficient forms of industrial (intensive) agriculture, it is possible that the EU's Common Agricultural Policy (CAP) does more damage to water resources than all of DG XI's environmental initiatives combined.
Eutrophication.	The process by which *lakes* and *ponds* become enriched with dissolved *nutrients*, resulting in increased growth of *algae* and other microscopic plants. Nitrogen and phosphorous enrichment of water, which causes algal growth to extend beyond that associated with the particular aquatic environment. Degrades the quality of the ecosystem and impairs water quality. The main causes are industrial agriculture (fertilisers and slurry) and excess effluent discharges.
Evapotranspiration.	The removal of water from a surface through evaporation.
FAO.	Food and Agriculture Organisation of the United Nations.
'French Model'.	Also known as affermage, (see Lease).
Fresh water.	Water that contains less than 1000 milligrams per litre of *dissolved solids* such as metals and *nutrients*.
FY.	Financial Year.
Gallon.	Unless stated to the contrary, a gallon is a US Gallon (1 US Gallon equals 3.79 litres) rather than an Imperial Gallon (1 Imperial Gallon equals 4.55 litres).
GEF.	Global Environment Facility (World Bank)/Global Environment Fund (privately held).
'German Model'.	Also known as Kooperationmodel and the Beteribermodell (see Common Ownership).
GDP.	Gross domestic product – most effectively compared through using the Purchasing Power Parity tool, PPP.
Green Flag.	EU bathing water quality award for smaller and rural beaches and resorts, similar to the Blue Flag scheme.
Groundwater.	The supply of *fresh water* found beneath the earth's surface (usually in *aquifers*) which is often used for supplying *wells* and *springs*.
Groundwater recharge.	The *inflow* of water into an *aquifer*.
GWI.	Global Water Intelligence, a monthly magazine covering corporate and market developments in the water sector worldwide. It is published by Media Analytics Limited (Oxford, UK), which also publishes surveys on specific water and wastewater markets. The author is a columnist for GWI.
Habitat.	United Nations Centre for Human Settlements (see UNCHS).
Hague.	The second world water forum, held in the Hague in 2000. Unveiled the 2025 target for universal water and sanitation provision, allied with greater private sector investment.
IADB.	Inter-American Development Bank. Development Bank primarily concerned with financing infrastructure projects in Central and South America.
IFC.	International Finance Corporation (World Bank, investment banking and privatisation).
IMF.	International Monetary Fund – encourages the sale of assets as part of state refinancing.
Inset Appointment.	Term for water provision contracts awarded to a new company within an incumbent company's service area. A form of water service provision competition, mainly seen in the UK.
Investor owned.	A term describing utilities that have been developed by the private sector from the start and where the assets are owned by the investors. This is the prevalent asset ownership model

	in the USA, where it is referred to as an investor owned utility or as regulated activities (q.v.).
IPO.	Initial Public Offering, whereby a company's shares are listed and subsequently traded on a recognised stock exchange for the first time.
IPPC.	Integrated pollution prevention and control regulates the discharges from industrial processes into the air, land and water.
ISPA.	Instrument for Structural Policies for Pre-Accession. EU funding for Accession Candidates, providing up to 75% of the cost of transport and infrastructure projects.
IWP.	Independent Water Project. A desalination project, typically based on a reverse osmosis facility.
IWPP.	Independent Water and Power Project. The energy generated is in part used to drive the desalination process.
IWRM.	Integrated Water Resources Management.
Johannesburg.	The Second Earth Summit was held at Johannesburg in 2002. Targets to halve the proportion of people not connected to 'improved' water or sanitation by 2015 were agreed.
JICA.	Japanese International Cooperation Agency.
JMP.	Joint Monitoring Project
K.	The percentage above (or below) the Retail Price Index (RPI, q.v.) that Ofwat allows a water company in England and Wales to alter its fees in a given year. This has evolved from the 'RPI-X' regulatory model pioneered by Oftel when British Telecommunications was privatised in 1984 and is an example of price driven regulation as opposed to the rate of return model used in the USA.
KLSE.	Kuala Lumpur Stock Exchange
kWh.	Kilowatt hour – unit of energy
L.	Litre.
LCD.	Litre per capita per day.
Leakage.	Loss of water through the distribution system either at joins between pipes or due to cracks in pipes. Because the perceived wastage of water is a contentious subject, definitions of leakage rates tend to vary. Pipes are affected by cold weather (ice-cracking) and dry weather (subsidence) as well as structural deterioration. Approximately one third of leakage takes place within the customer's pipe network. It is also affected by water pressure, leading to a pay-off between water supply pressure and leakage rates.
Lease (Affermage).	Privatisation model pioneered in France whereby the private sector company rents the assets from the municipality for a given length of time. The municipality is responsible for investment while the company does the tariff collection. In France, this evolved into a form of concession model, with the company carrying out an agreed programme of asset improvements over the life of the contract.
LGUGC.	Local Government Unit Guarantee Corporation
LNG.	Liquefied natural gas
M^3.	Cubic metre, or 1,000 litres, a measure of water volume. One cubic km is one billion m^3.
M&A.	Mergers and Acquisitions
Mains.	Pipes that carry treated drinking water to the customer's supply pipe via a connection pipe. Also called the distribution mains.
Management Contract.	The simplest form of privatisation, where the private sector company provides management support for the operation of the assets. Usually seen as a means for the private and public sector entities to get to know each other.
Mexico City.	The fourth World Water Forum was held at Mexico City in 2006. A low key event, but one where issues about funding and meeting the MDGs were taken more seriously than in the past.
MDG.	The Millennium Development Goals were drawn up in 2000 and ratified in 2002 by the |United Nations as a series of human development targets to be reached by 2015. The water and sanitation MDGs aim for a halving of people worldwide without access to 'improved' water and sanitation by 2015. This is being replaced by a series of targets for safe water and sewerage access between 2030 and 2050.
MENA.	Middle East and North Africa.
MG/day. Or MGD	3.79million cubic metres per day, where US Gallons are used.
Ml	Mega litre equivalent to one million litres
MLD	Million litres per day
MSW	Municipal Solid Waste facility
Monitoring Techniques.	Monitoring needs to take greater account of water quality in biological, not chemical terms. Sometimes this is good for standards – lowland, slow flowing rivers can have low levels of dissolved oxygen – but usually this will mean tighter criteria.
MWA.	Municipal Water Authority. The body controlling the water and wastewater service activities in Bangkok, Thailand.
N/A.	Not Available.

Nitrates (NO_3).	Nitrates are formed naturally in the soil by micro-organisms, but are also produced industrially and used as fertilisers. Nitrates are the nutrients, which in most saline waters control the production of algal growth with high levels of nitrates in the water causing eutrophication through algal and macrophyte growth. Furthermore 'blue baby disease', an affliction of the blood's oxygen-carrying capacity, is associated with drinking water containing nitrogen in the form of nitrates.
NGO.	Non Governmental Organisation.
Non-accounted for water.	The proportion of water put into a system that does not end up being paid for either directly or indirectly.
NRW.	Non-revenue water. Another term for non-accounted water and unaccounted for water (q.v.).
NYSE	New York Stock Exchange
O&M (Operation and Maintenance).	A step further from management contracts, but not a privatisation in the sense of a concession or asset sale. Here the private sector company operates and maintains the extant assets for a given period of time, but is not involved in the development of these assets or new facilities.
ODA.	Overseas Development Assistance. Infrastructure development aid.
OECD.	Organisation for Economic Co-operation and Development. Global grouping of 24 more developed economies.
Ofwat.	Office for Water Services, the water regulator for England and Wales.
Opex.	Operating expenditure. Money spent maintaining the extant infrastructure and using it to provide a service.
OUP.	Oxford University Press
PAH.	Polyaromatic hydrates. A toxic industrial pollutant of increasing concern in EU and WHO water quality assessment criteria.
Parastatal.	A state held entity that operates at least nominally independently of the state. A Parastatal may also operate as a corporatised (q.v.) entity.
Pasteurise.	Sewage sludge which is more extensively treated than digested sludge (q.v.). After heating the sludge to 60^{o}C for several days, all pathogens and bacteria are removed, making it satisfactory for a wide range of agricultural applications. The main techniques are known as anaerobic digestion and composting.
Pathogen.	An organism which is capable of causing a disease.
PCBs.	Polychlorinated biphenyls were mainly used for electrical transformers. They do not degrade and are understood to be carcinogens which can bioaccumulate (build up in an organism's body, typically in fat reserves) to a dangerous degree. Their manufacture was banned in 1977, but some 60% of all PCBs manufactured remain in use.
PE.	The population equivalent or amount of oxygen demand (see COD/BOD) generated and discharged by the average person each day. In a typical town, it is 1.5 to 2.0 times the population.
P/E.	Price Earnings Ratio (PER), a company's share price divided by its historic financial year (FY) earnings per share.
Pesticides:	There are two main classes of pesticides: chlorinated hydrocarbons are long-lived and capable of being concentrated up the food chain (this is called bioaccumulation). The second group is the organophosphates which are short-lived and presumably degrade to 'harmless' end products, but whose long-term environmental impact is not yet known. **Chlorinated hydrocarbons**: Aldrin, Endrin, Benzene, Hexachloride, DDT, Dieldrin, Endosulfan and others Organophosphates: , Azodrin, Malathion, Parathion, Diazinon, Trithiopn, Phosdrin and others
PFI.	Private Finance Initiative, a tool developed in the UK in the mid 1990s for awarding single projects to the private sector on a concession basis.
Phosphates.	Phosphates are another nutrient, responsible for the eutrophication that mostly stems from sewage effluent with the remainder mainly from agricultural inputs and from extensive use of detergents.
Physicochemical treatment.	The treatment of liquid wastes to reduce their environmental impact (see BOD/COD).
Plumbsolvency.	The ability of water to dissolve lead from piping or solder. Soft waters (e.g. granite) are more plumbsolvent than hard waters (e.g. chalk). Soft water is defined as water that has less than 60 milligrams of calcium carbonate (lime) per litre.
Potable.	Water that is fit for human consumption, as defined by World Health Organisation (WHO), EU or national standards.
PPP.	[1] Polluter pays principle, whereby a discharger of polluting substances pays a fee relating to the pollution load discharged. PPP can either be used to encourage dischargers to minimise their pollution loads or to finance the development of an appropriate effluent treatment network.

PPP.	[2] Purchasing Power Parity, a tool developed to illustrate the relative purchasing power of a common currency (in GDP per capita terms) in different economies. One US dollar goes further in India than it does in Japan.
PPP.	[3] Public-Private Partnership, where the private sector manages state or municipally held assets on a partnership basis. 'PPP' is a common TLA (triple letter acronym) affecting the water sector.
PSP.	Private Sector Participation. Another TLA for PPP; PSP and PPP are interchangable.
PWA.	Provincial Water Authority. The body controlling the water and wastewater service activities in urban areas outside Bangkok, Thailand.
PWPA.	Power and water purchase agreement. An agreement between a government and an IWPP (q.v.) for the purchase of water and power.
Raw water.	Water from surface or ground sources prior to treatment.
RCV.	Replacement Cost Value.
Red List.	Substances deemed harmful to the environment. Their discharge into the environment is to be brought under the control of the EU's IPPC directive. Grey List substances are of intermediate toxicity and are subject to a less stringent set of controls.
Regulated activities.	A term for utility services in the USA where the assets are owned by the private sector (see investor` owned, q.v.). They are so-called as each utility has to negotiate with the State authorities when it wishes to adjust its tariffs.
Reservoir.	A body of water, usually artificially impounded, for maintaining controllable supplies of raw water. Prior to distribution, it is usually sent to a treatment works to be made potable and held in a service reservoir.
RO.	Reverse osmosis, a desalination technique.
River basin.	A term used to designate the area drained by a *river* and its tributaries.
RPI.	Retail Price Index. A measure of domestic inflation, which is used as a benchmark for tariff changes, see 'K'.
Sanitary sewers.	Underground pipes that carry off only domestic or industrial waste, not storm water.
Septic tank.	Tank used to hold domestic wastes when a sewer line is not available to carry them to a treatment plant; part of a rural on-site sewage treatment system.
Sewage.	Domestic sewage mainly consists of human excrement. Agricultural sewage has the same environmental impact, but its legal status is more ambiguous (as long as it is not discharged directly into watercourses).
Sewage sludge.	The House of Lords, in its 1991 paper on the EU's UWWTD perhaps harks back to school when describing sewage sludge as having "the consistency of thin semolina." The principal by-product from sewage treatment. Typically consisting of 96-97% water and 3-4% dry solids, it is usually measured in terms of dry solids to allow international comparisons to be made.
Sewage treatment.	This usually involves a series of phases, each designed to progressively reduce the environmental and health impact of the effluent. Sewage is carried in the effluent either as solid matter or in dilute, suspended solids. While several performance criteria are used to assess the performance of a sewage treatment works (mainly, the removal of silts, BOD and ammonia), each level of treatment can be judged by its ability to remove these solids from the effluent stream prior to its final discharge. There is a fairly close relationship between ultimate solids removal and the lowering of an effluent stream's BOD.
SRF.	State Revolving Facility

Level of treatment	**Process involved**
None and preliminary	Screening out of solids
Primary	Settlement to remove solids from effluent
Secondary	Biological treatment to remove suspended solids
Tertiary and advanced	Further nutrient removal via filtration, etc.

Level of treatment	**Percentage of sludge removed**	**BOD removal**
None and preliminary	2% (range 0-5%) of sludge removed	0-5%
Primary	30% (range 10-40%) of sludge removed	2-35%
Secondary	90-95% of sludges removed	75-90%
Tertiary and advanced	99-100% of sludges removed	95-98%

Sewage treatment levels

Preliminary/Screening.	Intended to remove solids flushed down lavatories, such as condoms, tampons and nappies. Reduces the aesthetic impact of the sludge without affecting its environmental impact.
Primary.	Physical treatment, where the effluent is placed in a settlement tank, so that solids are left behind and the liquid effluent is then discharged.

Secondary.	Biological treatment, where the effluent trickles through inert materials such as slag, clinker, gravel or more recently, moulded plastic, so that it comes into contact with micro-organisms, which oxidise and clarify the effluent.
Tertiary.	Something of a catch-all expression, it usually refers to chemical treatment, concerned with the removal of nutrients such as nitrogen and phosphorous.
Advanced treatment and disinfection.	In addition, reverse osmosis membranes are being adopted where space is at a premium. For example, for serving a bathing area directly backing onto cliffs. Treatment can be extended to include further disinfection by exposing the effluent to ultra violet light or ozone prior to its final discharge.
Sewerage.	The collection and distribution network linking domestic and industrial properties with the sewage treatment system.
Storm sewer.	A system of pipes (separate from *sanitary sewers*) that carry only water *runoff* from building and land surfaces. In reality, storm sewers can be combined with foul sewer systems (combined sewerage) as well as being separate.
STW.	Sewage treatment works. Sewage effluents are collected at a STW for treatment, with the sewage sludge being separated from water for discharge.
Supply pipe.	The part of the water distribution network which is on the customer's property and thus usually owned by the customer, not the water supplier. The statutory obligations of water provision companies usually do not extend to the supply pipe.
Surface water.	All water naturally open to the *atmosphere* (*rivers, lakes, reservoirs, streams,* seas, *estuaries*). It also refers to *springs and wells*, which are directly influenced by surface water.
SWC.	The statutory water companies are private sector companies with a statutory obligation to provide water in England and Wales under the 1973 Water Act. Also known as water only companies (WOCs) and are distinct from the Water Plcs.
SWT	Solid Waste Treatment
TLA.	Triple Letter Acronym. TLAs are used by NGOs and MLIs (Multi-Lateral Institutions).
TNC.	Trans-National Corporation, a TLA expression for describing a Multi-National Corporation which is particularly popular amongst NGOs.
TOT.	Transfer, Operate and Transfer. A variant of the BOT contract where extant assets are taken over and operated for a set period of time.
Trade effluent.	Dilute wastewater (effluent) discharged by industry into the sewerage network. Increasingly subject to restrictions under IPPC whereby it is to be treated separately from domestic sewage.
Tuck-In.	Acquisitions by a major water company of small water companies within or adjacent to their service area, which are 'tucked-in' or integrated into their networks.
Turbidity.	Cloudiness caused by the presence of *suspended solids* in water; an indicator of *water quality*.
UFW.	Unaccounted for water. Distribution losses or leakages (q.v.), either expressed as a percentage of water put into the system or in terms of million litres per day (or year). Percentage losses are typically avoided due to their emotive impact. Often also includes illegal abstraction and unmetered supply that has not been billed for.
UNCHS.	United Nations Centre for Human Settlements (Habitat). Research and aid relating to urban areas.
UNDP.	United Nations Development Programme.
UNEP.	United Nations Environment Programme.
USAID.	US direct aid programme for supporting international development project.
USEPA.	US Environmental Protection Agency.
UV	Ultraviolet light
UWWTD.	The EU's 1991 Urban Wastewater Treatment Directive (91/271/EC). All populations of more than 2,000 to have suitable sewage treatment from 2005.
W & WW	Water & Wastewater
WaSC.	Water and sewerage company, see Water Plc.
Wastewater.	Typically either sewage (q.v.) or an effluent (q.v.). Water that carries wastes from homes, businesses, and industries. A mixture of water and *dissolved* or *suspended solids*.
Water consumption.	Consumption is the part of a withdrawal of water that is ultimately used and removed from the immediate water environment whether by evaporation, transpiration, incorporation into crops or a product, or other consumption.
Water contamination.	Impairment of *water quality* to a degree which reduces the usability of the water for ordinary purposes, or which creates a hazard to public health through poisoning or spread of diseases.
Water for Life.	The United Nations' Decade for Action launched on World Water Day, 22 March 2005 for meeting the 2015 Millennium Development Goals of halving the number of people without access to improved water supplies and sanitation.
Water Plc.	Colloquial expression for the ten water and sewerage companies (WASCs) of England and Wales, which were privatised in 1989.

Water pollution.	Industrial and institutional wastes, and other harmful or objectionable material in sufficient quantities to result in a measurable degradation of the *water quality*.
Water quality.	Classification of inland waters. EU classifications range from 'Very Good' (IA) quality waters that have no appreciable indicators of human activities and are capable of supporting more sensitive species such as Brown Trout, to 'Poor' (III) quality waters that support a significantly degraded community of plant and animal species, and 'Bad' (IV) quality waters that (with the exception of some fungi and algae) are usually incapable of supporting life.
Water use.	Water use is usually defined and measured in terms of withdrawal (q.v.) or consumption (q.v.) that which is taken and that which is used up. Not all water withdrawn is consumed, but is instead returned to a surface or ground water source from a point of use and becomes available for further use.
Water withdrawal.	Withdrawal refers to water extracted from surface or ground water sources.
Watsan.	Water and sanitation - refers to access to these services, usually in developing countries.
WB.	World Bank. Loans targeting services and infrastructure at the pre-privatisation phase. It has a broad remit to encourage cost recovery and commercialisation.
WBCSD.	World Business Council for Sustainable Development.
Wet tonne.	A weight of measure for sewage sludge or industrial effluent. In the case of sewage sludges, this usually refers to material removed from the sewage treatment process. Sewage sludge usually consists of 95-98% water, falling to 75-85% after basic drying. The variability of the water content makes wet tonnes an inconsistent measure of sewage generation, hence the use of dry tonnes when comparing sewage data.
WFD.	The EU's 2000 Water Framework Directive. Inland waters to be of "good ecological quality" by 2012-15. Calls for cost recovery from 2010 and water management at the river basin level. The expected practical compliance date will be during the third assessment cycle, ending in 2029.
WHO.	World Health Organisation. Sets Global Standards for drinking water quality, as specified in its 'Guidelines for Drinking-water Quality' (3rd edition published in 2004 and revised in 2008 and 4th edition in 2011).
WOC.	See SWC.
WRI.	World Resources Institute, United States. Independent body researching the use and abuse of natural resources.
WTP	Water Treatment Plant
WTW.	Water treatment works render raw (untreated) water potable or fit for human consumption.
WW	Wastewater
WWC.	World Water Council. Organises the triennial World Water Fora (WWF, q.v.).
WWF.	World Water Forum. A global gathering of people involved in water issues that as in 2000 has the potential to set the policy agenda or as in 2003 to become mired in polemic. Seven have been held to date and the eighth is in preparation: *Location and date - Visionary theme* *WWF1; Marrakech, Morocco, 1997 - Vision for Water, Life and the Environment* *WWF2; The Hague, the Netherlands, 2000 - From Vision to Action* *WWF3; Kyoto, Japan, 2003 - A Forum with a Difference* *WWF4; Mexico City, Mexico, 2006 - Local Actions for a Global Challenge* *WWF5; Istanbul, Turkey, 2009 - Bridging Divides for Water* *WWF6; Marseille, France, 2012 - Solutions for Water* *WWF7; Daegu / Gyeongbuk, South Korea, 2015 - Water for our Future* *WWF8; Brasilia, Brazil, 2018 - Sharing Water*
WWTP	Wastewater treatment plant
WWTW.	Wastewater treatment works, another term for sewage treatment works.
WWV.	The World Water Vision. Drawn up at the Second World Water Forum (see WWF) in 2000, this project envisages universal access to safe water and sanitation by 2025. In was effectively abandoned after protests at the Kyoto WWF3 in 2003.

Currency Abbreviations

Code	Denomination
ARS	Argentinean Peso
AUD	Australian Dollar
BRL	Brazilian Real
CAD	Canadian Dollar
Cents	Sub unit of USD (1/100)
CLP	Chilean Peso
COP	Colombian Peso
CNY	Chinese Yuan / Reminbi
DEM	The German Mark
EEK	Estonian Kroon
ESP	Spansih Peseta
EUR	Euro
FRF	Franch Franc
GBP	Pound Sterling
HKD	Hong Kong Dollar
HUF	Hungarian Forint
IDR	Indonesian Rupiah
INR	Indian Rupee
JPY	Japanese Yen
KHR	Cambodian Riel
MAD	Moroccan Dirham
MYR	Malaysian Ringgit
PEN	Peruvian Nuevo Sol
Pence	Sub unit of GBP (1/100)
PHP	Philippine Peso
QAR	Qatari Riyal
RMB	Yuan Renminbi
RUB	Russian Rouble
SAR	Saudi Arabia Riyal
Sen	Sub unit of Malaysian Ringgit (1/100)
SGD	Singapore Dollar
THB	Thai Baht
TWD	Taiwan New Dollar
USD	United States Dollar
UVR	Colombian floating inflation index
XAF	Central African CFA franc
XOF	West African CFA franc
ZAR	South African Rand

References and Further Reading

Important sources of country information are included in the relevant country entries. Information on individual companies and privatisation contract awards has been obtained from company annual reports, press releases and web sites, along with analyst briefings and visits since 1989.

This survey mainly covers secondary sources, reviews and overviews rather than reports on field data and primary academic papers, except where they illustrate particular points or the state of the art at the time. It is a provisional list and in general excludes press releases, internal studies and material solely posted on the Internet.

General reviews

The country data entries have broadly been based upon the publications below. The exceptions are where other sources are more recent, or where they have provided information not available in these publications.

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Critiques of PSP and water

This is a selection of the more influential books, publications and papers either highlighting areas which the private sector needs to address or by the outright opposition of the use of private sector finance and management. With one illustrative exception, publications which include exclamation marks in their titles have been omitted.

Some research initiatives looking at European water provision from a historic perspective (WaterTime, sponsored by the European Union) and Latin America and Africa (Prinwass – Barriers to and conditions for the involvement of private capital and enterprise in water supply and sanitation in Latin America and Africa: Seeking economic, social, and environmental sustainability) highlight an informed critical engagement with PSP by the academic community in general.

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