**Who is responsible?**
Biwater International undertook the design, construction and commissioning of both plants, as well as a sludge clarifier treatment facility. The feedwater is sourced from the Lower Usama Dam and the new Gurara Dam, and supplied to Abuja and surrounding districts. The Federal Capital Territory Water Board operates the facilities.

**What makes it special?**
- Biwater's efforts to minimise the plants' environmental footprint were nothing short of inspired. Literally building into an uninhabitable local hillside, the construction team worked with nature to eliminate the need for pumping, leaving the distribution of both raw and treated water to gravity. This had the added effect of slashing operational and maintenance costs.
- Using sludge blanket lamella clarifiers, with their unique inclined plates, was another important decision, cutting by two thirds the space traditionally occupied by clarifiers in the city's other two treatment plants.
- With many forecasts singling out the oil-rich state as a future economic giant, Nigeria's infrastructure deficit offers huge opportunities for intrepid companies. By training locals at an onsite lecture theatre and using Nigerian labour, Biwater has demonstrated its commitment to the country and secured an enviable foothold in a market with vast future potential.

**Judges' verdict:** Working with nature to avert an urban water crisis.

**HIGHLY COMMENDED:**
**Rajasthan rural supply project, India**

**What is it?**
In the parched deserts of Rajasthan, on India's tense militarised border with Pakistan, a former nuclear test site has been transformed by a remarkable new supply project. 100,000 residents, formerly dependent on walking up to eight kilometres to contaminated boreholes, are now connected to a modern piped system, courtesy of the Pokhran-Falsoond-Balotra-Siwana (PFBS) water supply project, which transfers and treats water from the Indira Gandhi Munak Canal.

**Who is responsible?**
SPML Infra secured an EPC and a ten-year O&M contract from the client, the Public Health Engineering Department of Rajasthan.

**What makes it special?**
- Although the project's chief objective was to bring water to remote communities, its proximity to the Pakistani border meant that the bulk demands of the defence forces also had to be met. Add to that a thirsty local textile industry and you have enough different clients to alarm even the most experienced of international contractors. SPML's unmatched expertise in the domestic market meant that it was able to step up to the challenge with ease.
- Involving 80km of piping, 125,000m³/d of capacity across three water treatment plants, and two raw water reservoirs holding a combined 600,000m³, this project was a massive logistical undertaking. SPML's astounding achievement in bringing water to the deepest desert interior has since led to two pipe extension contracts, which will bring the distribution system to almost 400km and supply a million people in 580 villages. Taking this project as the blueprint, Rajasthan's government has already awarded ten more regional water supply projects to SPML, with a total value of over $350 million.
- Thundering industrial expansion and an ever-rising population are competing with growing desertification across India, meaning that water utilities must always keep one eye on the future. SPML has installed a classic example of prescient crisis capacity, with raw water storage facilities prepared for up to 30 consecutive days of canal closure.

**Judges' verdict:** Transforming lives at a former nuclear test site.

# Wastewater Project of the Year

For the wastewater treatment plant, commissioned during 2013, that shows the greatest innovation in terms of optimising its physical or environmental footprint

**WINNER**
**Taboada WWTP, Peru**

WINNER Global Water Awards 2014

**What is it?**
Last year saw Lima, the world's second-largest desert city, emerge triumphantly into a more sustainable era with the commissioning of the Taboada wastewater treatment plant. The colossal facility, with a maximum capacity of 1.8 million m³/d, gives the marine environment a chance to recover from the 20m³ of untreated sewage which was formerly pumped into it every second.

**Who is responsible?**
Spain's Tedagua was awarded a 25-year build-operate-transfer concession by the state PPP agency ProInversión. The plant will treat wastewater collected by Lima's state-owned utility, Sedapal. Halcrow, a subsidiary of CH2M Hill, carried out the initial design.

**What makes it special?**
- Taboada is the largest wastewater treatment plant in South America, transforming Lima in one fell swoop from a notorious polluter with a dismal sewage treatment record of just 16% into a regional leader, delivering 75% of the city's wastewater back into the water cycle as treated effluent.
- The mechanical treatment process employs 22 of the largest screening filters in the world (3,000mm in diameter), rough grates and 1mm fine screening. Integral to the treated effluent discharge system – which disposes of treated wastewater almost four kilometres out to sea – are the 250 diffusers which allow the effluent to be assimilated into the marine environment in under three hours.
- When Tedagua won the contract, it was one of the last major PPPs left standing after political opposition from local authorities scuppered several concessions. With plans for a tertiary treatment upgrade and potential reuse for urban parks and gardens being discussed, Tedagua has an excellent opportunity to prove the ingenuity of the private sector to the sceptical Peruvian public.

**Judges' verdict:** A titanic plant to rescue the marine environment.

> *"A titanic plant to rescue the marine environment.*