The world’s leading operator of water services, Veolia Water operates water and wastewater services on behalf of public authorities and companies. It also designs the technical solutions and builds the facilities needed to provide those services. Veolia Water covers the entire water cycle with a constant focus on protecting resources and saving water. Veolia Water’s activities range from raw water withdrawal from the environment to production and distribution of drinking water and industrial process water, and from the collection and transportation of wastewater to treatment for subsequent recycling or discharge back into the environment. Veolia Water is a division of Veolia Environnement, which also provides services in waste management, energy and transportation.
Interview with Jean-Michel Herrewyn, Chief Executive Officer of Veolia Water

Veolia Water worldwide operations

Key figures

2010 highlights

The constant quest for excellence

Sustainable water cycle management

Combining technology and networks

Water quality, a priority

A company serving the end-customer

VALUE

Recovering all types of resources

Developing alternative resources

From water to energy

Recovering valuable materials

SERVICE

RESPONSIBILITY

A duty to set the example

Fewer environmental impacts

Taking action on the ground

Taking action inside the company
Interview with Jean-Michel Herrewyn, Chief Executive Officer of Veolia Water

How would you sum up the public authority market in 2010?

In a context of continuing economic difficulties, the high points of 2010 illustrated Veolia Water’s talents, beginning with our ability to have our contracts renewed. The decision of SEDIF, the Greater Paris region water authority, to delegate management of its water service to us for another 12 years was important to us, not only for our reputation in France, but also for our international stature.

But as well as contract renewals, we also showed we know how to conquer new markets. The city of Sofia, Bulgaria, asked us to take over its water production and distribution services. This further bolstered our presence in Eastern Europe, which is becoming a real economic center of gravity for our company.

Another example, this time in Asia, where the most promising markets of the future are to be found: the Hong Kong authorities awarded Veolia Water—partnering with Veolia Environmental Services—a design-build-operate contract for a wastewater sludge treatment plant. This is an excellent illustration of our ability to win over clients known for high standards by offering them a solution with strong technology and environment components.

The third major victory I would like to mention is our contract for the Marquette-lez-Lille wastewater treatment plant, in France. This contract, won after quite a battle in an extremely competitive and active French market, will see Veolia Water Solutions & Technologies (VWS) build the biggest wastewater treatment plant in northern France, with Veolia Water operating it for six years.

The Sultanate of Oman; Buffalo, New York; and our Sade subsidiary, chosen for two network projects in Azerbaijan, are just a few of our other successes. Taken together, they made 2010 a generally satisfactory year.
Veolia Water knows how to combine its expertise in operations, technologies and networks to meet local customers’ needs.

“...”

How did the company fare in the industrial water services market?

Geographically, the picture was similar to that in the public sector. As the economy began to shift, companies also closely tied their investment decisions to what was happening in their businesses. The resumption of growth, which varied from sector to sector, enabled us to perform well, particularly in the energy and mining sectors. As an example, in Latin America, our activities in Brazil saw another good year, with our thirteenth contract with the national oil company Petrobras, a major client that has long been loyal to us.

Given those circumstances, what are the key paths to growth for Veolia Water?

Veolia Water combines its proven expertise and substantial resources to push its creativity to the utmost and come up with innovative, robust proposals for its markets. Beyond the boundaries of geography, our business activities and our structure, our strategy now rests on three pillars: service, which is our core business as an operator; the value inherent in the multiple resources to be found in water; and the social and environmental responsibility we have a duty to shoulder as a division of Veolia Environnement. These form the base from which Veolia Water aims at success, in particular by benefiting from the synergies between its teams.

What steps did Veolia Water take in 2010 in terms of service?

Our core business is service, and service excellence is a key focus for us. In 2010, that led us to identify projects and pool our successes so that we could keep raising our performance to new levels by sharing best practices. This approach to continuous improvement is used across all our activities. Its application in a wide range of areas enables us to improve the performance of the infrastructure we build or manage, as was the case for Expo 2010 in Shanghai. It also led us to further combine our different types of expertise and optimize our technologies so that we can provide clients with new solutions. Combining the operating competencies of Veolia Water

12.128 BILLION EUROS IN REVENUE

1.020 BILLION EUROS IN OPERATING INCOME
with the technologies of VWS and the know-how of Sade in installing innovative sensors in networks will soon enable us to roll out unique offers for smart distribution networks.

**What does the second pillar, value, encompass?**

Veolia Water has the capability to recover value from the resources found in water and wastewater: the water itself, plus energy and materials.

We desalinate seawater to respond to the needs of communities where drinking water is scarce. We recycle wastewater for industrial and agricultural use or to recharge aquifers. Australia, a country particularly at the mercy of climate change, has been relying on us to diversify its water supply for years. I’m particularly proud of the fact that, during recent flooding, the authorities could count on our facilities and the preparedness of our operational teams to ensure water service continuity.

With our clients’ growing interest in combined water and energy management, Veolia Water is also very active in energy recovery. We are capitalizing on the solid experience of our Eastern European subsidiaries in combining their expertise with that of the other Veolia divisions to work on providing solutions that can produce more energy and consume less of it for clients with those requirements.

As for materials recovery, we have high hopes for advances in processes that already make it possible to extract constituents such as fertilizers from wastewater and that before long will even make it possible to produce bioplastic. These recovered materials have the advantage of generating marketable value with little investment.

I’m excited about these areas because they are a good illustration of how Veolia Water—a multilocal, not multinational, company—can help each of its clients create value. And by its nature, that multilocalism differs from globalization, where resources are withdrawn in one place, used in another and sold in a third.
Isn’t this related to the notion of responsibility, the third path to growth for Veolia Water?

Yes. As a leader in water services, we have a duty to set an example. When it comes to environmental responsibility, we are unwavering in our commitment to protect water resources and combat climate change. In fact, that commitment is a priority for our management and, in 2010, it took the form of new initiatives in conserving biodiversity and assessing and reducing carbon and water footprints. Our brand new Water Impact Index, for example, which is being used in Milwaukee to assess the overall impact of our activities on water resources, drew considerable media attention in the United States. Veolia Water now needs to share this project with as many communities as possible and provide input on this question, and on all other water issues, as a professional with almost 160 years of experience. In this respect, recent UN recognition of the private sector’s role in implementing the right to water augurs well.

We want to be a responsible company. That is why we engage in social actions everywhere we operate. We’re determined to do our share in reducing the number of people without access to safe drinking water and basic sanitation, and we continued our experiment in social business in Bangladesh throughout the year. Also, our subsidized connection program in Morocco is being evaluated for us. As I said earlier, Veolia Water is a multilocal company, and as such, strives to stimulate employment everywhere it operates. One way we do this is by including workforce development in our proposals, as we did with SEDIF. Our desire to be exemplary also applies internally, where it is reflected in our actions in occupational health and safety, skills development, labor relations and diversity.
Veolia Water worldwide operations

96,260 employees in 67 countries

€12.128 billion in revenue

100 million people provided with water service

71 million people provided with wastewater service

€5,194 million in France

€3,763 million in Europe (excl. France)

€1,578 million in Asia-Pacific

€975 million in the Americas

€617 million in Africa & Middle East
PRINCIPAL CONTRACTS WON OR STARTED IN 2010

Europe (excluding France)
Workforce: 28,709
Some of our contracts:
- Belgium: Brussels
- Czech Republic: Prague
- Germany: Berlin, Braunschweig
- Hungary: Budapest
- Italy: AcquaLatina (Rome)
- Netherlands: The Hague
- Poland: Tarnowski Gory
- Portugal: Mafra
- Romania: Bucharest
- Slovakia: Banska Bystrica
- Spain: Madrid, Barcelona

France
Workforce: 29,186
Some of our contracts:
- SEDIF, Beaune, Deauville,
- Forbach, Granville,
- Lens-Lievin, Lyons, Metz,
- Montpellier, Nice,
- Quimper, Reunion, Royan,
- Toulouse, Verdun

Europe (excluding France)
Workforce: 28,709
Some of our contracts:
- Belgium: Brussels
- Czech Republic: Prague
- Germany: Berlin, Braunschweig
- Hungary: Budapest
- Italy: AcquaLatina (Rome)
- Netherlands: The Hague
- Poland: Tarnowski Gory
- Portugal: Mafra
- Romania: Bucharest
- Slovakia: Banska Bystrica
- Spain: Madrid, Barcelona

Asia-Pacific
Workforce: 19,877
Some of our contracts:
- Australia: Sydney, Gold Coast
  (South Queensland/Brisbane),
  Kwinana, Gerringong, Bundamba,
  (Western Corridor)
- China: Shanghai
  Pudong, Shenzhen, Urumqi, Tianjin,
  Hong Kong, Qingdao, Changzhou
- Japan: Hanamigawa
- Singapore
- India: Nagpur, Delhi
- South Korea: Seoul

Africa – Middle East
Workforce: 8,584
Some of our contracts:
- Gabon, Israel: Ashkelon
- Morocco: Rabat, Tangier, Tetouan
- Oman: Muscat
- Qatar: Doha
- Saudi Arabia: Riyadh
- United Arab Emirates: Abu Dhabi, Dubai, Fujairah
Key figures

**WATER SERVICE**
9.8 billion cubic meters of water supplied
5,089 water production plants
350,300 km of water distribution networks

**WASTEWATER SERVICE**
7.3 billion cubic meters of wastewater collected
3,377 municipal wastewater treatment plants
143,300 km of wastewater mains
93% pollution abatement rate, all treatment plants combined (expressed in BOD5 – Biological Oxygen Demand over five days)

**ENERGY**
103 kWh per capita per year used for water and wastewater service
11% proportion of renewable to total energy consumed by Veolia Water

**CO2 EMISSIONS (direct and indirect*)**
164 g CO2 eq. per cubic meter of water produced
41 g CO2 eq. per cubic meter of water distributed
178 g CO2 eq. per cubic meter of wastewater treated
44 g CO2 eq. per cubic meter of wastewater collected

* Scopes 1 and 2.

Activities

PRODUCE and distribute drinking water
MANAGE raw water withdrawals
DISCHARGE treated wastewater into the environment
RECHARGE aquifers

WATER SERVICE

103 kWh
per capita per year used for water and wastewater service
11% proportion of renewable to total energy consumed by Veolia Water

WASTEWATER SERVICE

164 g CO2 eq. per cubic meter of water produced
41 g CO2 eq. per cubic meter of water distributed
178 g CO2 eq. per cubic meter of wastewater treated
44 g CO2 eq. per cubic meter of wastewater collected

* Scopes 1 and 2.
PROVIDE desalinated water to cities and industry

DESALINATE seawater

RECYCLE treated wastewater for industrial applications

TREAT all types of wastewater

DESIGN and BUILD state-of-the-art technology

TREAT wastewater sludge

RECOVER sludge for use in agriculture

BUILD and MAINTAIN networks

WELCOME and SERVE customers
2010 highlights

**ASIA-PACIFIC**

**China**  Shanghai Pudong Veolia Water, which has been managing water services for Shanghai since 2002, supplied drinking water to the Expo 2010 site, where a state-of-the-art system was deployed to monitor water quality.

**FRANCE**

The new dam at La Caserne, the cornerstone of the major project to desilt and restore Mont-Saint-Michel Bay, came into service. The dam was built and will be operated by Veolia Water and its partners for seven and a half years.

**BANGLADESH**

Grameen-Veolia Water Ltd’s pilot social business project in Bangladesh to provide safe drinking water to poor rural communities moved into a new phase in February 2010, when Veolia Water signed a research partnership agreement with the ESSEC Paris business school’s Institute for Innovation and Social Entrepreneurship to support the project’s deployment.

**12 YEARS**

is the length of the new public service management contract that the Greater Paris area water authority, SEDIF, awarded to Veolia Water for the management of water services in its 142 districts.

**RIGHT TO WATER**

In September 2010, the United Nations Human Rights Council adopted a resolution recognizing the right to water and sanitation and stated that a government may implement the right to water in its jurisdiction through a private operator.

**Veolia Water**

took over many of United Utilities’ activities in Europe, including the management of Sofiyska Voda, the company in charge of water services for the city of Sofia, Bulgaria. The contract also covers activities in Western Europe and the United Kingdom.
FRANCE
The first Organica plant was opened in France, in Le Lude. The process combines eco-engineering with conventional wastewater treatment. The facility looks like a greenhouse, but the plants’ roots extend into treatment tanks below, where microorganisms in the roots digest part of the pollutants. Other Organica plants have been created in Austria, Poland and China.

SULTANATE OF OMAN
Double success for Veolia Water, with a contract for the joint management of water services on behalf of the PAEW public authority and operation of all water infrastructure in the port of Sohar for state-owned company MISC.

BRAZIL
The oil company Petrobras awarded VWS a design-build contract for a plant to treat seawater and produce the injection water needed for the offshore oil production platform in the Campos Basin.

HONG KONG
2,000 metric tons of sludge per day treated to produce 20 MW of electricity in the long term: two characteristics of the wastewater sludge-to-energy plant that will be designed, built and operated by Veolia Water and Veolia Environmental Services.

AMERICAS
The Tampa Bay plant, the biggest design-build-operate project in the history of the United States, is now producing 460,000 cubic meters/day of water that exceeds quality standards in force. Tampa Bay Water and Veolia Water North America are partners in the project.

15,000 km², that is the size of the area drained by the Zapadna Morava River in Serbia, for which Seureca is preparing the strategic master plan for wastewater treatment in a partnership with Seuge (France), Eptisa (Spain) and local consultants. The project, commissioned by the European Union delegation in Belgrade, will benefit 1.5 million people.

INNOVATION
During the 2010 World Water Congress in Montreal, Veolia Water presented the Water Impact Index, a new indicator for enabling a comprehensive assessment of the impact of human activity on water resources.

2013 is the year that the new Marquette-lez-Lille wastewater treatment plant, built by VWS and to be operated by Veolia Water, will come into service and satisfy the requirements of the European Union directive on good ecological status for water.
Veolia Water focuses on finding solutions to the challenges facing public authorities and industry in accessing water of good quality and dealing with the pressures on water resources, as well as their need for productivity requirements. In 2010, our company once again sought to innovate and pool our expertise in the aim of providing increasingly efficient solutions for clients.
SUSTAINABLE WATER CYCLE MANAGEMENT

As a close partner of public authorities, Veolia Water must help them improve the quality of the service they deliver to their constituents while keeping costs to a minimum. Public-authority clients have high expectations with regard to water production and distribution facilities, including safety, regulatory compliance, upgrades, optimized performance, environmental impacts, and more.

In response to these needs, Veolia Water constantly continues to develop its offers, with a firm focus on preserving water resources. In 2010, we diversified our leak detection methods in order to reduce water losses in all types of networks. To help clients manage their networks, we provide tools that deliver a close appraisal of the condition of pipes, predict change and prioritize maintenance.

For 2010, our comprehensive range of expertise earned the trust of the authorities in Le Havre, France, and the Sultanate of Oman.

In France, it prompted existing clients to renew their contracts with us, including Quimper, Verdun and SEDIF, the Greater Paris water authority (see p. 18). In total, 90% of contracts in France that came up for renewal were continued.

In wastewater treatment, population growth and quality requirements for aquatic environments are prompting public authorities to introduce increasingly stringent demands. Despite already being the leader in this market in Europe, Veolia Water continues to improve its services. Our company is exploring new avenues, including radar based flow-forecast to manage wastewater treatment systems. To supplement the work of our subsidiary VWS, which is completing the development of this innovative technology, we signed a 10-year agreement with the École des Ponts engineering school in France to work on improving the prediction of rain periods that heavily impact stormwater management in urban areas.

This search for performance improvements has underpinned the extension of some of our conventional contracts, including Hanamigawa, Japan, Pau and Bergerac, France, and San Ysidro, CA, United States, where the International Boundary and Water Commission extended its contract. It also enables us to provide answers to more specific issues. For areas that are not served by a wastewater collection system, Veolia Water has for the past few years been developing expertise in independent wastewater systems. In 2010, our offer of 14 micro-plants and the renovation of conventional existing plants was selected by the Embrunais joint district authority in the French Alps to manage and bring its wastewater systems into line with the applicable standards.

For its industry clients, Veolia Water must secure water supply, meet their productivity requirements and help them contain their environmental impacts. Clients from all sectors are confronted with increasingly stringent regulations regarding water withdrawal from and discharge into the natural environment, and present us with increasingly specific requirements. We respond by combining the unique technology portfolio of our subsidiary VWS (see p. 15) with our operator services. From the continuous operation of facilities to maintenance and integrated management of all industrial water cycles, Veolia Water maintains its focus on improving performance. In 2010, this expertise won over several companies, such as MISC (Sultanate of Oman, see p. 14) and steelmaker Dongbu Steel in South Korea for two cold-rolled steel mills. In the service sector, Veolia Water will be managing the water infrastructure for several airport precincts, for example, Nagpur, India, and several airports in France, including Paris–Charles-de-Gaulle.

Veolia Water reclaims the natural environment in Reunion

To predict the water needs of a growing population and limit its impact on the aquatic environment, the inter-municipal community of North Reunion is using the full range of expertise offered by Veolia Water (which has also renewed its contracts with the cities of Saint-Denis and Saint-Pierre). In Grand Prado, the company will design, build and operate a new wastewater treatment plant for a 160,000 equivalent population, in accordance with the quality standards for urban wastewater in a sensitive area and with bacteriological quality for bathing water.
Joint management of water services. Veolia Water will provide its expertise and qualified operation teams to the Public Authority for Electricity and Water (PAEW) that serves eight of Oman’s nine regions. This five-year contract aims to improve infrastructure management—supply network performance in particular—and to extend drinking water service, especially through the use of small desalination units.

Water infrastructure operation at the industrial port of Sohar. The state-owned Majis Industrial Services Company chose Veolia Water, though Azaliya Water Services*, to operate and maintain the port’s existing and planned water infrastructure. Under a six-year strategic partner alliance, the company will manage all the water cycles, from the seawater extraction unit (up to 8 million cubic meters/day) through to the distribution of industrial process water (32,000 cubic meters/day), as well as the drinking water supply network. It will also provide its expertise in strategy management assistance.

* Azaliya is the company created jointly by Veolia Water and the Mubadala Development Company for water and wastewater services in the Middle East and North Africa.
COMBINING TECHNOLOGY AND NETWORKS

**Tailored technological solutions**, and skills in design-build engineering for plants to produce all types of water, and treat or recycle all types of effluent for all markets form the heart of the activity of the subsidiary Veolia Water Solutions & Technologies (VWS). With a portfolio of more than 250 technological solutions, VWS innovates and adapts in order to deliver this expertise to industrial companies and public authorities, alone or in combination with Veolia Water’s operator expertise.

In the public authority market, VWS was selected to build the largest wastewater treatment plant for southern Lebanon, which will meet 60% of its own energy consumption need. With regard to the industry market, Brazilian oil group Petrobras has been using the services of VWS for several years for its complex process water and effluent treatment projects. In 2010, Petrobras signed a new contract with VWS (see p. 11). In France, VWS and Veolia Water joined forces to win the contract for treatment by anaerobic digestion of the wastewater generated by Société Européenne d’Embouteillage de Meyzieu. VWS will build the plant that will then be operated by Veolia Water. This complementary activity—construction and operation—was also a deciding factor in 2010 in Hong Kong for the recovery of wastewater sludge (see p. 24) and on Reunion Island. VWS continuously designs tools that improve facility performance and provide solutions to its colleagues’ operation requirements. In 2010, VWS continued to make progress with its Veolink range of software modules used to assess the effectiveness of various treatment stages and thereby to identify where improvements might be made. Veolink will be used at the new Marquette-lez-Lille wastewater treatment plant in France (see p. 32).

**Design, build and rehabilitation of water supply networks** has been the speciality of Veolia Water subsidiary Sade for many years. Sade’s integrated engineering capabilities and its expertise with a broad range of techniques enable it to provide reliable and creative solutions for all its public authority and industry clients, whatever the project size or economic and environmental requirements.

In 2010, its network construction business was marked by significant contracts awarded in Australia and Morocco, the installation of the drinking water and fire protection networks at the site of Expo 2010 in Shanghai, China, and the completion of a large-scale project in Mauritania (see above). Wherever water intakes are required, Sade offers its expertise in boring and maintaining aquifer wells. In 2010, Sade launched a major project to replace the well supplying water to Saint-Denis, Reunion Island.

To guarantee operators—Veolia Water or other—service continuity and minimum disruption during the various operations it performs, Sade constantly improves its portfolio of techniques. For example, the city of Rennes, France, used Sade’s micro-tunneling expertise to modernize its wastewater collection system. Sade is stepping up its business in promising sectors, such as telecommunications networks (fiber optic, video surveillance, 3G mobile phone networks, etc.). Sade’s expertise in the deployment of sensors and meters is crucial to Veolia Water for the development of its intelligent networks (see p. 16) as well as for water quality and customer service.

**Mauritania: Sade completes exemplary project**

The aim of the largest project ever undertaken by Sade was to supply drinking water to Nouakchott from the Senegal River. Construction started in 2007: the Veolia Water subsidiary installed the transfer and connection pipes between the intake pumping station and the production plant. Operational since October 2010, the facility has been designed to meet demand through to 2030.

- **120,000** metric tons of pipes
- **170** km of pipes
- **650** employees working simultaneously on the project
- **170,000** cubic meters of water per day

In 2007, the Veolia Water subsidiary installed the transfer and connection pipes between the intake pumping station and the production plant. Operational since October 2010, the facility has been designed to meet demand through to 2030.
**WATER QUALITY, A PRIORITY**

Monitoring and guaranteeing the sanitary quality of drinking water through to the consumer’s tap is one of the service commitments made by Veolia Water to public authorities. Under the official responsibility of the health authorities, the company scrupulously complies with regulations. It even seeks to outperform the regulatory recommendations, such as in Tampa Bay, Florida where it operates a new plant providing the population with drinking water that exceeds the standards set by the state and federal governments. Deteriorating water resources have led Veolia Water and its partners to adapt to forms of pollution that are sometimes new and poorly understood. Backed by Veolia Environnement’s Research & Innovation (R&I), the company combines its strengths in operation, technology and distribution networks to ensure the ongoing supply of quality water. Each year in France, Veolia Water performs more than 3 million analyses on 64 potability parameters. It is developing microbiological detection tools able to analyze compounds increasingly quickly, and the solutions used to remove them. In 2010 in France, several water production plants started using the Opaline S® and Actiflo Carb® processes that remove organic matter, pesticides and endocrine disruptors. Employing new technology, multi-parameter sensors already enable Veolia Water to meet clients’ expectations for traceability, such as in Shanghai, China (see p. 17) and the Greater Paris area (see p. 18).

**The quality of the treated wastewater** they discharge into the natural environment is a core concern for a growing number of local public authorities. In Europe, the Framework Directive setting 2015 as the buffer date for restoring the ecological status of all bodies of water is driving authorities to bring their wastewater treatment systems into line with the applicable standards. In 2010, 70 million people benefitted from Veolia Water’s expertise in this area, and the company constantly sought to minimize the impact of its activities on the receiving environment. When treated wastewater is discharged at the seaside, public authorities have high expectations—and legislation that must be complied with, especially in Europe—with regard to the quality of bathing water. They are also concerned about the treatment of stormwater, as it carries 50 times more suspended solids than treated wastewater. Public health and the economic attractiveness of tourist sites are at stake. In France, in 2010, Veolia Water made progress in the integrated management of wastewater discharge in coastal areas (the GIRAC project implemented in western and southeastern France). Working with engineering offices, Veolia Water generated vulnerability profiles for numerous municipalities and then provided them with support to roll out monitoring systems for pollution sources and the quality of their bathing water. Among these municipalities, Port-la-Nouvelle in southern France has now been awarded “bathing water certification.”

**Industry too has high water quality demands.** As they are subject to increasingly stringent discharge legislation, industrial companies contract Veolia Water to ensure that their effluent complies with the applicable standards and to produce the specific type of water they need for production purposes in their sector. Whether producing demineralized water for metallurgy, softened water for the oil industry, or pure or ultra-pure water for the microelectronics industry, Veolia Water relies on the technological expertise of VWS to meet each client’s requirements. ELGA LabWater is, for example, a VWS subsidiary specializing in pure water and ultra-pure water production systems for laboratories in the industrial and healthcare sectors. Under a three-year contract, Roche opted for the “ALL IN PACK” solution to secure the supply of quality water for its clinical analyzers in France.

**Smart networks.** Through a system that is unparalleled on the market, Veolia Water can now provide its clients with computer-based intelligent networks that simultaneously communicate technical data (flow rate, pipe condition, losses, etc.) and quality indicators (temperature, chlorine content, etc.). The company combines the expertise of VWS, which develops increasingly small, powerful and sophisticated sensors, with that of Sade to equip networks and that of Veolia Water to analyze the data to improve service management and water quality.
VEOLIA WATER SHANGHAI, A QUALITY PARTNERSHIP

Since 2002, Veolia Water has been managing the water service for Shanghai, China, under the Shanghai Pudong Veolia Water joint venture. In 2009, the capacity of the Linjiang plant that it operates was extended and its quality standards raised by VWS to bring it into line with the population’s growing water needs, in particular during Expo 2010. At the same time, the joint venture was also contracted to monitor the Expo site’s drinking water network. Veolia Water implemented a system designed to ensure water traceability 24/7. The approximately 40 km of pipes were equipped with technical data sensors and latest-generation KAPTA® 3000 probes. The data collected for more than 300 parameters is transmitted every two hours via a GSM module to the central system at a new control center built on the Expo site. It analyzes the data and compares it against that in the Geographic Information System, the client database—with input from remote reading systems—and the hydraulic modeling data. In this way, it obtains a precise display of the quality of water in the network in real time.

Kapta® 3000 is a multi-parameter probe developed by VWS and Veolia Environnement R&I. Ten times less expensive and 20 times more compact than standard analyzers, it consumes very little energy. The probe utilizes the latest innovations in physical-chemical measurements, materials and electronics to recognize fluctuations in the parameters measured and therefore different types of water.
Veolia Water and Orange have created **m2ocity**, an operator specializing in remote water meter reading and environmental data services. Capitalizing on the expertise of Veolia Water, which already has more than 230,000 smart meters in service, and on the know-how of telecom operator Orange, m2ocity offers local public authorities (municipal companies or water service operators), a complete, turnkey service based on an ultra-low energy radio network. In addition to water meter data, this network will be able to collect data from environmental sensors (to combat noise and pollution, for example) in response to public authorities’ expectations.

**SEDIF RENEWS ITS TRUST IN VEOLIA WATER**

In June 2010, SEDIF, the water authority for the Greater Paris area, renewed its trust in Veolia Water to manage its drinking water production and distribution service. This contract, awarded after a highly competitive tender process lasting 14 months, is particularly remarkable in terms of the solutions and organization that will be implemented to ensure service of exemplary quality. A single monitoring and operations center, ServO, will take control of risk and customer-response management. Third-generation Téléo remote meter reading will be rolled out over a five-year period. Customer relations will be stepped up with services tailored to the various categories of users coupled with extensive consultation with them. A brand, Clario, will be created to ensure a clearer identification of the new relationship between the public service and its customers. Following its proposal, which was based on responsible ambition and useful innovation, Veolia Water will also be implementing water traceability, based on the food and beverage industry model, in order to guarantee customers are able to monitor the sanitary quality of their water at all times. As a result of a productivity drive, Veolia Water was also able to offer a significant drop in the price of water and an innovative program for the most underprivileged customers (see p. 34).
A COMPANY SERVING THE END-CUSTOMER

The quality of the service delivered to its end-customers is one of Veolia Water’s priorities, year in, year out. Wherever it operates, the company pays particular attention to listening to customers, and performs satisfaction surveys to get a better understanding of their expectations in areas such as response times to their requests, or information tools. In France, almost 3,000 people work full-time in customer services (call-out teams, call centers and so on). In the UK, Veolia Water opted to improve its organization in this area in 2010. The subsidiary created two centers of expertise to boost innovation and rationalize working methods in order to deliver improved services to customers. By encouraging the use of best practices, this structure has led to substantial savings and improved service quality—the number of written complaints received by the sites in the country’s center and southeast regions fell by 30% and 21% respectively. In the United States, by focusing squarely on improving customer service, Veolia Water won the water service contract for Buffalo. At the same time, we also turned our attention to modernizing customer service centers, as in Liuzhou and Kunming, China, where we are diversifying the centers to match customers’ needs ever more closely. Mobile units have been rolled out for customers in rural areas in Seine-Maritime, France, and payment points have been established with partner stores in Gabon.

Finding ways to control water consumption is a constant request to operators from consumers and public authorities. To monitor network performance and enable consumers to precisely assess the volume of water they use, authorities are installing individual metering solutions. Since January 2010 in France, local public authorities must provide annual water meter compliance certificates. With more than 20 million systems installed worldwide, Veolia Water has solid experience in metering. Thames Water, the largest private water utility in the UK, recently signed a 10-year contract with the Vennsys consortium led by Veolia Water to manage metering and install remote reading. With a remote meter-reading system using radio modules or GPRS, end-customers can track their consumption on the Internet and be immediately alerted in the event of a leak. This service is now included in the company’s “standard” offer. It has been in place in Shanghai Pudong since fall 2010. In France, many public authorities have opted to raise their service level by offering this system to their residents, for example, Quimper, La Valette, Le Havre, Vitré, Forbach and Milly-la-Forêt. Capitalizing on its experience and banking on this technology’s potential, Veolia Water recently joined forces with French telecom operator Orange (see p. 18).

The use of new technology also enables Veolia Water to deliver services in phase with customers’ lifestyles and to meet their expectations for fast and precise information about their account, consumption, distribution network incidents, and so on. In addition to websites, the company communicates with customers by SMS in a growing number of countries: Gabon began use in 2010, along with Ajman, UAE, and Rabat, Morocco. In the Moroccan capital, customers can also pay their bill by mobile phone using the Mobi’Cash service or at ATMs. Veolia Water is also leading the way in this area in Europe with bill payments in supermarkets (see above) and TextBack systems allowing customers to react immediately by SMS following a call to the Customer Service Center or work on their premises.
The difficult economic climate, combined with uncertainties brought about by climate change and greater competition for resources, is driving public authorities and industrial companies alike to constantly strive to produce more from less. Veolia Water, with its focus on innovation, offers them recovery solutions for every resource to be found in water and wastewater: water, energy and materials.
DEVELOPING ALTERNATIVE RESOURCES

Recycling is favored by more and more clients as a way of limiting the amount of freshwater they withdraw from reserves and the volumes they discharge into the environment. Industrial clients that see this as a way to optimize their water cycle choose Veolia Water’s expertise, including automaker Renault in 2010 for its future plant in Tangier, Morocco, or oil company Petrobras in Brazil. Petrobras has entrusted VWS with a large number of projects, many of which include a recycling unit. Veolia Water offers solutions that enable its clients to reuse treated wastewater in many different ways. In Australia, a country extremely keen to tackle changing weather patterns by diversifying its water resources, VWS already operates the Western Corridor project, which played a key part in ensuring continuity of water supply during the widespread flooding in late 2010. Veolia Water has also been awarded a 20-year contract to operate the Rosehill facility outside Sydney; currently under construction by VWS, the site will recycle wastewater that will be used to supply a network of industrial and commercial clients.

Veolia Water has the expertise to turn wastewater into quality water suitable for agricultural irrigation, watering green spaces, such as at Disneyland Paris (see opposite), or replenishing groundwater reserves. Since the rate at which water is drawn from these reserves is often far higher than their natural rate of renewal, Veolia Water has created solutions for artificially recharging aquifers, especially through the use of treated wastewater. These methods have already been used with success in the United States and Australia; however, given the importance of environmental and public health issues, Veolia Water is committed to constantly driving forward progress in this field. In 2010, Veolia’s Research and Innovation teams made good progress with its REGAL project, which aims to artificially replenish groundwater reserves in coastal areas to prevent them becoming contaminated by seawater ingress. The company is also starting on the final phase of the ASTR project, with a pilot under way in Australia to assess the filtering capacities of aquifers when they are replenished by injecting pretreated rainwater, and when the water passes through limestone. Another project launched recently was ACTISOL, which seeks to optimize the ground’s natural filtering capabilities.

Wastewater recycling plant for Disneyland Paris

Disneyland Paris is the first theme park operator in Europe to deploy a wastewater treatment and recycling solution designed to cut the amount of drinking water it uses. By 2013, the plant will be treating wastewater from the two theme parks and the Disneyland Hotel. The wastewater will be almost entirely recycled to provide water to the attractions, clean the road and path networks, and water the open spaces and the Disneyland golf course. The plant will be operated by Veolia Water, with its subsidiaries VWS and Sade handling construction and networks.

Annual savings of 330,000 cubic meters of drinking water

A wastewater treatment plant handling 740,000 cubic meters annually
UNITED ARAB EMIRATES: HYBRID DESALINATION IN SERVICE AT FUJAIRAH 2

The authorities at Fujairah are banking on Veolia Water’s expertise to boost their region’s development potential. The company was awarded the Fujairah 2 contract in 2007. The unique feature of this project is the way that it combines the two main desalination techniques—reverse osmosis and multiple-effect distillation (MED)—in order to cut costs and improve performance. The plant came on stream in October 2010 with Veolia Water, via Azaliya (its joint venture with the Mubadala Development Company), starting to operate the reverse osmosis desalination facilities, which use the new Spidflow® process (see below).

**Innovation:** seawater pumped from the gulf of Oman often risks being contaminated by red and black seaweed, which would strongly impact desalination volumes. Fujairah 2 uses VWS’s Spidflow® process to prevent this problem. This is the first time that pretreatment through flotation filtration has been used in this part of the world.

**CAPACITY OF THE TWO FUJAIRAH 2 UNITS**

136,000 m³/day  
for the reverse osmosis unit  
455,000 m³/day  
for the MED unit
Seawater desalination seems to be an effective way of meeting the needs of populations and businesses in arid coastal areas. Seawater, which represents 97% of the planet’s water resources, accounts for just 1% of all drinking water produced. Harnessing it would therefore be a major boost for development in affected areas. In Egypt, the East Delta Electricity Production Company chose desalination technologies from VWS to supply its planned thermal power plant in Ain Sokhna. Veolia Water’s subsidiary will also be building a desalination plant to provide drinking water on the island of Aruba in the Caribbean. Veolia Water already operates many other sites, such as the plant at Sur, Oman, where the contract runs for 22 years. It also has a 15-year contract to run the desalination plant in Sydney, Australia, which provides 15% of the population’s needs. The outstanding quality of the partnership with local authorities at this site was recognized when it was presented with a 2010 Government Partnership Excellence Award as part of Australia’s National Infrastructure Awards. With its constant focus on improving desalination performance, cutting costs, and reducing their impact on the marine environment as well as energy consumption, the company continues to innovate, for example putting its unmatched know-how to work in fields such as hybrid desalination. During the course of 2010, it completed construction of the two Fujairah 2 desalination plants (see p. 22) in the United Arab Emirates, its first full-scale hybrid facility combining MED and reverse osmosis.

We use a whole series of actions designed to both cut energy use and maximize biogas production—created by digesting wastewater sludge, this is transformed into energy using cogeneration—as well as to promote energy production from renewables. Technical research teams are constantly working on procedures that will produce better results using less energy. After Amonit®, which allows sites using it to cut the amount of energy used for aeration by 20%, 2010 heralded the arrival of Anita Mox™ and Exelys™ (see p. 25). Offering a combination of engineering services to install the equipment, and a continuous improvement approach to operating practices, we are able to partner clients as they move toward greater energy efficiency. Two examples are Gresham, Oregon, in the United States, and Qingdao in China, where the plant that Veolia operates on a 25-year contract will soon achieve energy self-sufficiency greater than 60%. In 2010, the Hong Kong government turned to us for our expertise in the construction and operation of a showcase sludge recovery plant (see p. 24). Veolia Water is also the chosen partner of many industrial companies, such as Oleochemicals in Malaysia, and Diageo in the United States. The new wash water treatment plant for this beverage company uses a process that generates biogas, which is then recycled as an energy source for distilling and to produce fertilizer.

FROM WATER TO ENERGY

Energy efficiency is a key objective for public authorities and industrial companies anxious to reduce their environmental impacts and increase the profitability of their activities. Every water production method demands energy, meaning that efficient management of the water to energy ratio has become a major concern for clients. As a way of meeting these concerns, Veolia Water has developed expertise that aims to arrive at—or at least approach—infrastructure energy self-sufficiency, in particular for effluent treatment. Our company has built on the experiences of its subsidiaries in Central Europe and Germany, which are highly experienced in this field, as is demonstrated by the Gera example (see opposite).

Gera moves to self-sufficiency

Veolia has operated water and wastewater services in Gera and nearby communities (Germany) since 2003; the company has been striving to achieve lower consumption, more biogas, and extra energy for co-fermentation. The plant became heat self-sufficient in 2009 and energy self-sufficient in 2010, with 2011 seeing it start to sell its energy surplus.
HONG KONG: A SHOWCASE CONTRACT

The government of Hong Kong chose the bid put together by Veolia Water working with Veolia Environmental Services for a 15-year contract to build and operate an ultramodern sludge treatment and recovery plant for sludge from the territory’s 11 wastewater treatment plants. The project will entail considerable civil engineering works and equipment, including steam-generating incinerator boiler furnaces and turbines to convert the steam into electricity. By the end of 2013, the plant will be treating 2,000 metric tons of sludge daily, generating 20 MW of electricity. When running at full capacity, the plant will generate more energy than it needs to operate, with the excess being fed into the local electricity network; it will also be self-sufficient in terms of water. This is a contract that well illustrates Veolia’s ability to offer its clients multidisciplinary expertise: VWS will design the project and undertake a significant part of the works.
Options for producing more energy are also tested by Veolia Water, as it seeks to make its clients’ installations self-sufficient. For instance, co-digestion is a way of increasing the volume of biogas produced; this involves mixing in fats and food waste, etc. with wastewater sludge for digestion. Or there is Ecrusor®, a technique for recovering biodegradable liquids (such as creams and yogurts) from their packaging. Veolia Water is a partner in the CoDiGreen research program, which is examining experimental ways of using green waste in co-digestion. Aside from recovering biogas from wastewater sludge, the company also uses technologies to dry or dewater sludge and, in certain cases, to co-incinerate it in power plants. Whenever it is technically feasible and financially worthwhile for the client, we seek to increase the amount of electricity produced from renewable sources such as photovoltaic panels and wind turbines. We make use of gravity and the topography of certain cities, such as Nice, France, to incorporate hydroelectric microturbines into the water supply network to produce electricity. We are also assessing the energy-recovery potential of locating similar turbines at wastewater treatment plant outlets, for instance in Brussels, Belgium, and more recently in Madrid, Spain. At the same time, we are continuing our research efforts, often in collaboration with Veolia Energy-Dalkia, Veolia’s energy services division, into the use of heat pumps. The innovation is to divert part of the effluent in the wastewater collection system to a heat exchanger that transfers the calories to a heat pump, which in turn heats or cools buildings depending on the season. Working together, Veolia Water and home furnishings retailer Ikea have used a solution of this type at a 420,000 square meter store in Berlin. As manager of the water and wastewater cycles for the city, via the Berliner Wasser Betriebe, Veolia Water worked with Ikea to fit a twin-wall pipe bypassing the mains wastewater collection system. With this technology Ikea is able to recover the equivalent of 1,500 kWh of heat during winter and 1,200 kWh of cooling capacity during summer. After trials during the summer of 2010, the system came into operation in October. Ikea now uses its gas-fired boiler only to meet spikes in demand, cutting its annual CO₂ emissions by around 1,000 metric tons.

Innovating with Exelys™

Exelys™ is an innovative process that optimizes the performance of anaerobic sludge digestion (methanization) in a wastewater treatment plant. Using continuous thermal hydrolysis, it results in reductions of up to 40% in sludge production and produces 20% to 50% more biogas than conventional digestion. The biogas is then recovered to be used in cogeneration to produce energy that can be converted into heat or electricity. Exelys™ will be used in France for the first time at the new Marquette-lez-Lille facility.

RECOVERING VALUABLE MATERIALS

Extracting raw materials from water so that they can be reused is a field in which Veolia Water has proven expertise. Wastewater treatment plant operators are able to dry and dewater wastewater sludge that is then used in agriculture or cement manufacture, as in Marquette-lez-Lille, France (see p. 32). In the city of Baltimore, Maryland, United States, whose wastewater service we have operated for over 20 years, we produce a compost that meets the strictest standards demanded by the State of Maryland and the public health authorities. In Milwaukee, Wisconsin, as part of the largest wastewater public-private partnership ever signed in the United States, we operate a plant to process dried sludge into Milorganite (Milwaukee Organic Nitrogen), a high quality biosolids fertilizer. Away from water, as part of its Networks activities, Sade uses the same underlying principles to develop solutions for the benefit of its clients that enable it to make better use of the materials it uses. For example, its innovative Big Recyclor® in Marseilles, France, is able to turn road mix spoil from pipe installation sites into a daily 200 cubic meters of reusable on-site backfill.
RECOVERING REFINERY EFFLUENTS

For the past 10 years or so, Veolia Water has held exclusive US rights to the Hardtac® process. Used to treat refinery effluents, this is a crystallization process with sludge recirculation. Initial applications have made it possible to recycle potassium fluoride and recover potassium hydroxide (KOH), both of which can be returned for use by their clients. What makes Hardtac® special is its high performance (above 90%) and reduced calcium hydroxide consumption in comparison with competing processes.

Applications in other industries:
Hardtac® was first used in France to treat leachate from a sludge storage area, with filtered water returned to the natural environment. The Hardtac® process can also be used in the microelectronics industry.
In the highly complex world of industrial effluents, businesses face demanding financial pressures and ever-tighter environmental standards. This means that they are on the lookout for solutions that enable them to meet discharge regulations and to recover components from their effluents that can either be reused within their own process or sold on. Backed by VWS’s unrivaled technological portfolio, Veolia Water sets up technically advanced solutions on its clients’ behalf. In Asia, we are working on the recovery of coolant used by the photovoltaic industry. In the United States, we are the exclusive provider of the Hardtac® process, recovering effluents from a number of refineries at two centralized sites in Texas and Louisiana (see p. 26). As well as lower annual chemicals bills, clients also benefit from installations that create smaller sludge volumes. Industrial and municipal effluents also contain metals that may in turn provide the raw material for other production cycles. With this aim, Veolia’s Research and Innovation teams are stepping up work on new recycling and at-source separation procedures.

From wastewater treatment plant to biorefinery. Endlessly searching for new solutions on behalf of its clients in order to save resources, and guided by a sense of innovation, Veolia Water is preparing for profound changes in traditional wastewater treatment plants. By 2025, the facility of the future will see wastewater flows refined in-situ into a diverse range of energy sources (biofuels, CH₄, H₂, ethanol), organic and mineral ingredients (fertilizers), and biomaterials such as the PHA biopolymer, which can be turned into a bioplastic. Building on expertise from AnoxKaldnes (see below), Veolia Water has recently installed a full-scale prototype for producing bioplastics from wastewater sludge at the Aquiris North Brussels plant in Belgium. This is a biodegradable material that can be used in many industries, for example making fenders for cars, or as part of a bioplastics mixture.

Recovering wastewater sludge as bioplastics

is a promising new innovation from Veolia Water, thanks to technology from VWS’s Swedish subsidiary AnoxKaldnes and Veolia R&I. Certain bacteria used to degrade wastewater feed off carbon, which they then accumulate as biopolymers, similar to those produced from oil by the chemical industry. AnoxKaldnes’ technology makes it possible to optimize the production of these bacteria by creating the best possible conditions for their development, and then to recover their reserves of green polymers. According to some estimates, a city of 100,000 should be able to produce 500 metric tons of biopolymer annually using this process.
Veolia Water, the global benchmark in water services, is committed to sustainable development. Aside from the immediate competitive edge this offers, our added value can be measured in terms of our ability to make this commitment a reality. Our ongoing efforts to apply the best practices in environmental and social responsibility, including through our human resources practices, contribute to achieving this objective.
FEWER ENVIRONMENTAL IMPACTS

Assisting clients with their carbon management issues is a priority for a company like Veolia Water that is committed to combating climate change. The first thing we do is to analyze the sources of our own activities’ greenhouse gas emissions, in order to reduce them more effectively. In France, for example, the Carbone6 methodology used by Sade to determine the carbon footprint of its projects was certified in 2010 by sustainable development assessment agency Arcet Notation. Still in France, an energy audit is currently being carried out for 20 wastewater treatment plants. The audit, which is based on VWS’ Ocean software, has already allowed Veolia Water to recommend improvement measures to 10 public authorities that will decide for themselves whether or not to implement them. For, though our clients are aware of the need to limit the emissions of their wastewater treatment facilities, they also have financial constraints. At their request, we implement energy recovery solutions (see p. 23) to reduce their carbon footprint. This was the case, for example, with our contracts in Urumqi, China, and in Oklahoma City, United States. For clients who plan to manage their risks on a more comprehensive and long-term scale, we work on developing methodologies to help them make their long-term choices. For example, in Germany, VWS’ subsidiary calculated the 20-year total carbon footprint of the effluent treatment plant that it set up and now operates for the papermaker Schoellershammer (see opposite).

As opinions on these issues vary from one country to another, Veolia Water has set up a network of 150 carbon correspondents in order to adapt its responses to local situations.

Reducing the water footprint of their activities is a growing concern for industrial and public authority clients alike. As their sustainable development partner, Veolia Water provides ever-improving solutions for water resource recovery and conservation. For example, we are working on green chemicals and have launched Predifloc®, a chemical management tool that reduces the use of chemicals by 20% in wastewater treatment processes at our Ginestous plant in France.

For our industrial clients, particularly in the iron and steel industry, we recycle effluents using closed-loop cooling systems. ArcelorMittal, for example, has equipped several of its subsidiary Industeel’s plants with this system, cutting its water withdrawals from natural resources by up to 80%. At the same time, Veolia Water also strives to raise general awareness of all the problems related to water resources. In the United States, for example, we have launched a major program offering as many communities as possible a series of studies and pragmatic tools to help them understand all the issues surrounding water and aid their decision-making. In 2010, this resulted in the creation of a new index: the Water Impact Index (see p. 30). As part of the same drive to take part in debates and research, most of Veolia Water’s entities continue to be involved in several partnerships, for example in France with the FP2E (French professional federation of water companies) and the Chambers of Agriculture for the protection of water withdrawal points threatened by diffuse pollution.

Carbon neutrality for Schoellershammer

Near Cologne in Germany, paper maker Schoellershammer has entrusted Veolia Water with the full management of its annual 1.5 million cubic meters of wastewater since 2008, in a bid to reduce costs. To this aim, Veolia Water calculated the 20-year carbon footprint of its client’s anaerobic effluent treatment system. The assessment included the carbon footprint pertaining to construction of the facility, the years of operation, the sludge treatment process, electricity consumption, etc. and offset the greenhouse gas emissions avoided by the use of the biogas produced by the treatment system itself. The result: a carbon neutral footprint.
Veolia Water and Veolia’s R&I developed the Water Impact Index to obtain a comprehensive assessment of the impact of the company’s activities on water resources. This indicator expands on the existing volume-based water measurement tools by incorporating factors such as the quality of water extracted and discharged into the natural environment, water stress and water consumption. It was used for the first time in a study of Milwaukee, Wisconsin, United States, where Veolia Water manages wastewater systems serving 1.1 million people. This study viewed the water and carbon footprints together and helped the municipality identify ways of improving performance while reducing impacts and to balance its decisions between sustainable development and economic viability issues.

THE WATER IMPACT INDEX,
A WATER FOOTPRINT INDICATOR TOOL
Objective: zero pollution. From carbon and water to the environment in general, our clients expect us, as a leader in this field, to combine our skills to limit all a project’s impacts on its surroundings. Veolia Water is to work with other Veolia subsidiaries to build a zero industrial effluent and zero carbon emissions plant for Renault in Tangier, Morocco. We are also expanding our range of products and services against noise and odor pollution, for instance in Edinburgh, Scotland. To limit the visual impact of our water production plants, Veolia Water uses the services of landscape integration specialists, for example in Hong Kong or Marquette-lez-Lille (see p. 32). We combined our technological know-how with this desire to have the sites blend into their environment to produce the first Organica plant to be opened in France, in Le Lude. This wastewater treatment plant is completely covered by a tropical plant greenhouse and uses the natural purifying virtues of these plants to optimize treatment.

Preserving biodiversity is one of Veolia Water’s major concerns since its activities, by their very nature, interfere with ecosystems. In addition to our core business, we take concrete action, for example through alternative management of green areas around our sites. In Europe, our river biosurveillance service has been well received. In France, for example, the results of our pilot study of the waterways near Beaune convinced the authorities to extend the policy to the entire urban area. In Malaysia, we are going to cooperate with the University of Terengganu to conduct a biodiversity study near our Dungun plant. In Germany, we have partnered with Naturschutzbund Deutschland in a river re-naturalization and wildlife conservation project. As part of the same drive to cooperate with stakeholders, we continue to support a host of initiatives for the promotion of biodiversity around the world, for instance, the program for the protection of European seas (see below).

Veolia Water federates efforts to protect European seas

Under the slogan “Protect the 12,000 leagues of European Seas,” Veolia Water organized an exchange of international experiences in partnership with UNESCO and the Romanian Ministry of Foreign Affairs. More than 150 people from six countries took part in this event—central and local authorities, environmental NGOs, experts, etc.—that was held in a venue close to the emblematic Danube Delta. This event helped encourage cooperation at a European level via the presentation of several projects for the protection of water resources and biodiversity.
MARQUETTE-LEZ-LILLE: ZERO POLLUTION, 100% RESPONSIBILITY

Building a new city-center wastewater treatment plant to meet the growing needs of the population, comply with European standards and cater for sustainable development issues was the challenge set to Veolia Water by Marquette-lez-Lille, in northern France. By combining the best technologies, the plant will generate a low carbon footprint and produce biogas. As early as 2013, it will meet the requirements of the European Directive on the good ecological status of water. It will be integrated into the landscape by architects, will include a seven hectare park and will focus on reducing noise and odor pollution, mainly by using an odor monitoring and treatment system. This project is both environment friendly and human friendly. Operations staff from the current plant will be taken on and trained in the new technologies. Veolia Water has formed a partnership with the regional Campus Veolia training center so that employees can follow courses leading to qualifications in integrated water treatment at the new plant.
TAKING ACTION ON THE GROUND

Helping provide access to basic services for all. In addition to our environmental responsibility, solidarity is central to Veolia Water’s values. In emergency situations, such as earthquakes and hurricanes, our teams organize their own assistance efforts directly, as happened during the flooding in Australia at the end of 2010, or are mobilized through Veoliaforce, which is Veolia Environnement’s emergency response organization. Every possible effort is made to continue water service during such situations.

Outside exceptional events, Veolia Water has a social responsibility for the communities we serve. For 10 years, we have been committed to meeting the Millennium Development Goals, which aim to reduce the number of people with no access to safe water or basic sanitation by 2015. As part of this commitment, we are deploying our skills in all the technical and financial areas of the water business in several countries in partnership with the local authorities, which expect us to contribute a high level of expertise. For example, in Morocco, where we manage water, wastewater and electricity services, in 2002 we initiated subsidized connection programs aimed at connecting homes in Rabat-Salé, Tangier and Tetouan to basic public utilities. These programs became a top priority after the launch of the Moroccan government’s National Initiative for Human Development in 2005. In all, between 2002 and 2010, the programs connected nearly 70,000 families, adding up to 350,000 people, to basic services. Considered pilot schemes, these programs were selected by the World Bank to test—the relevance of OBA (Output Based Aid) and GPOBA (Global Partnership on Output Based Aid). They were also selected as case studies in two major programs assessing the impact of improved water services on people’s living conditions (see opposite).

These programs, as well as those deployed in countries like Niger and India, have been closely analyzed by UN observers and demonstrated that a private operator can contribute efficiently to the fulfillment of the right to water and sanitation for all within the framework of a public-private partnership. In 2010, the United Nations Human Rights Council adopted a resolution recognizing the right to water and acknowledging the role of the private sector in fulfilling it. As part of its Corporate Social Responsibility program, Veolia Water continued its “research and action” policy with the Grameen-Veolia Water joint venture to provide safe drinking water to poor rural populations in Bangladesh, according to an economically viable business model adapted to suit their living standards. This “social business” experiment resulted in the opening of a water production plant in Goalmari in 2009. Since then, the project is being adapted, step by step, with a view to extending the network, which now serves 40,000 people, and optimizing water distribution methods. To assist the deployment of this project, Veolia Water has signed a partnership agreement with the ESSEC business school’s Institute for Innovation and Social Entrepreneurship. In a bid to improve our understanding of lifestyles and water consumption practices in this environment, we also commissioned a study from the Drishti Research Center directed by anthropologist Thérèse Blanchet.
Putting solidarity in practice. Veolia Water also implements programs outside developing countries to guarantee continuity of water service for its most disadvantaged customers. Our Romanian subsidiary included a water solidarity fund in the Bucharest contract and in France, we contribute to the FSL housing solidarity fund. In 2010, we took charge of the water bill for 21,193 families, adding up to €1.45 million. As part of the renewal of SEDIF’s water services contract (see p. 18), our regional entity included an innovative social program, “Water Solidarity,” whereby it allocates 1% of its water sales to helping customers in financial straits. This program provides emergency aid, in the form of a personal welfare voucher for customers or a contribution to the FSL fund for non-customers. It also provides assistance, particularly for housing projects where residents have difficulties paying their water bills, and includes a prevention plan that encourages families to monitor their water consumption.

Local responsibility. At Veolia Water we also strive to support social initiatives and foster the creation of jobs in the regions where we operate. We are very active in this field in the north of France, which is hard hit by unemployment. In the United States, as one of the commitments made under the public-private partnership concluded in 2010 for the Fulton County, Georgia, wastewater service, we put in place a recruitment plan to hire local people and give preference to local subcontractors and to companies headed by women and ethnic minorities. In another US example, in New London, where we have been managing water and wastewater services since 2008, we set up an extensive apprenticeship program to hire and train candidates from the region.

TAKING ACTION INSIDE THE COMPANY

Training and enhancing professionalism. At Veolia Water, our employees are the first focus of our Corporate Social Responsibility policy, notably through our insistence on healthy employee-employer dialogue and our actions in human resource management. To achieve the level of performance expected by our clients and stay ahead of changes in our businesses, our company relies on training. Efforts in this area continued in 2010 and represented 2.5% of the global payroll compared with 2.4% in 2009. Training courses were provided mainly by Campus Veolia training centers. This year, the French network gained two new training centers in Lille and Tarbes. To continue to foster increasing synergy between its businesses, Veolia Water worked on standardizing training methods by pooling Veolia Water’s, VWS’ and Sade’s engineering training programs and by creating a joint catalogue of courses. These changes notably enabled us to improve compatibility between the training courses on offer and our Human Resources Predictive Management Plan (GPRH). The policy, initiated in 2008, is intended to provide support for our managers in handling recruitment and managing career paths. It also enables them to encourage job mobility and optimize their organization to match the company’s strategy. It is based on a set of shared international guidelines deployed at Veolia Water as well as at VWS and Sade.

With the aim of adapting our teams’ level of professionalism to globalization, and of encouraging multiculturalism because it fosters synergies within the company, Veolia Water and its subsidiaries have also taken measures to make human resources more international. For example, at VWS, the PANGEo program is designed to attract young graduates away from other multinational competitors by offering them the opportunity of starting their careers with a 12- to 24-month contract abroad.

In all, Veolia Water aims to promote a general culture of diversity, whether cultural, ethnic or social, within the company. In 2010, in France, its proactive policy against all forms of discrimination (see above) received the French government’s Diversity Certification.  

Diversity: Veolia Water receives Diversity Certification

Veolia Water is committed to the fight against any form of discrimination and was one of the 130 Veolia Environnement entities in France to be awarded the French government’s Diversity Certification in 2010. This label honors a policy that favors equal treatment at every stage of human resources management: recruitment, induction, training, advancement or promotion, etc. In order to ensure the sustainability of its continuous improvement policy, Veolia Water has defined an action plan with measures—use of non-discriminatory recruitment methods, systems that favor diversity, the employment of disabled and older workers, awareness-raising actions and training—that are implemented by a network of local representatives.
Health and Safety policies are based on the same principles of personal dignity and equality upheld in Veolia Water’s social policy. Our company bases its approach on the idea that it is responsible for the integrity and well-being of its employees and that a good performance in Health and Safety is synonymous with a good performance in the organization as a whole. In order to constantly improve our results, we apply a continuous improvement system to all our structures and strive to incite all levels of management to make a clear and visible commitment to H&S issues. With this objective in mind, a series of emblematic measures have been implemented. For example, in the United States, a safety bracelet was distributed to all employees to be worn every day, regardless of their hierarchical position, to symbolize their adherence to safety. In France, the involvement of managers resulted in a survey on psychosocial issues in the workplace. Reflecting healthy employee-employer dialogue within our company, the findings were ratified by a labor-management agreement, which should be officially signed at the International Labor Office in Geneva.

Veolia Water strives to implement the same policy in all its contracts, for example in Shenzhen (see opposite). In another example, we recently acquired the company that operates water services for the city of Sofia, Bulgaria and are mobilizing experts from our Czech and Romanian subsidiaries to carry out a health and safety audit and implement a continuous improvement program with a corresponding action plan.

HEALTH AND SAFETY: TRANSFERRING KNOW-HOW IN SHENZHEN

In China, Veolia Water has been operating the water and wastewater services for the city of Shenzhen since 2003 under the Shenzhen Water Group (SZWG) joint venture. In 2010, at our partners’ behest, we held a seminar on occupational health and safety issues. In the presence of all of SZWG’s managers, local and head office H&S experts organized workshops to identify areas of improvement at the joint venture. They also presented Veolia Water’s key experiences in this area and the policy the company applies to foster a culture of responsibility and management involvement at all levels of the organization.

- **8%** drop in workplace accident frequency
- **10%** decrease in workplace accident severity in 2010