360°+5

SUEZ environnement, ready for the resource revolution

2014 annual report

ready for the resource revolution

We are at the dawn of a revolution.

An economic and social revolution,
an ecological and industrial revolution,
an individual and collective revolution.

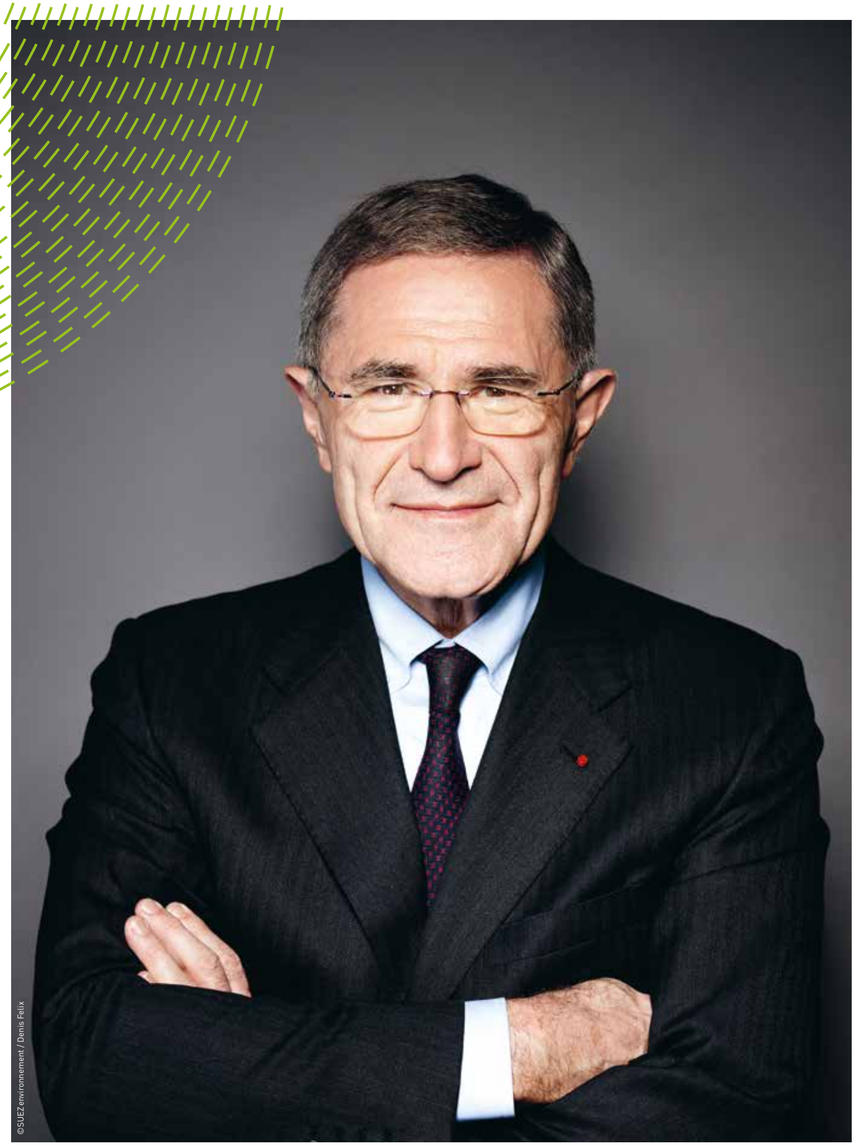
We are at the dawn of the resource revolution.

With a heritage that stretches back more than 150 years,
with a presence in more than 70 countries,
with the expert skills and commitment of more
than 80,000 employees, and, now, with a single brand,
we know that we cannot fight this revolution alone.

Today, we are more motivated and ambitious
than ever before, as we face the challenge of securing
together the resources that are essential to our future,
and writing a new page of our history together.

We are ready.

Are you?



putting a face on the Group of the future

by Gérard Mestrallet
Chairman of the Board of Directors of SUEZ environnement

« we are all mobilised in the transition towards the circular economy that will also engage future generations. »

With a history that stretches back more than 150 years, the SUEZ environnement group is now entering a new era, by federating all of its activities under a single brand. This single brand embodies an approach that we have adopted since SUEZ environnement was listed on the stock exchange in 2008. It will enable us to prepare for the future by becoming more united, integrated and interdisciplinary.

This new era is an essential step in preparing for the challenges and the issues of a world that is changing at breakneck speed. In 2050, the world's population will reach 9.6 billion, of whom two thirds will live in towns and cities. This fact alone raises the question of a sustainable development for all, that consumes fewer natural resources, because resources will become increasingly rare and Man's influence on the climate is now clear. We are all mobilised in the transition towards the so-called circular economy that will also engage future generations. Moreover, new technologies and the digital age are transforming our way of life in society, our customers' expectations and the very activity of SUEZ environnement.

The new page that SUEZ environnement is now turning is very exciting. We are faced with proposing tangible solutions to optimise the management of resources that are essential to the development of human activity.

This challenge calls on the strengths and the talents of every one of us. The time has come for SUEZ environnement to federate all of its know-how and expertise and to build an organisation around a common mission. This will change the profile of the Group and its face in the future, without forgetting everything that forms the very heart of its identity. We must not forget our values and our heritage. It was the boldness of our predecessors and it is the vision and spirit of enterprise of our workforce today that will enable the Group to enter this new era.

SUEZ environnement has been following an ambitious and effective strategy since 2008. Our results speak for themselves. SUEZ environnement has demonstrated its capacity to move with the times. This is one of our greatest strengths. Today, the Group is showing its capacity to bounce back and adapt, and is proudly displaying its new identity as a group that provides services and industrial solutions, and that is specialised in the reuse and protection of resources, to the benefit of its customers and in collaboration with its partners.

The Group must keep its lead in terms of strategy and this spirit of everyday excellence in the field in order to pursue its transformation and remain an innovative enterprise. This is, and will be, the key to the Group's success and performance.

the resource revolution is under way

by Jean-Louis Chaussade
CEO of SUEZ environnement

Speed up our development

In 2014, our Group showed that it is able to adapt in a complex macroeconomic climate. The vitality of our personnel, our innovative offers and the tight control of our investments all allowed us to achieve financial results that met our expected targets. With EBITDA of €2.64 billion and €14.3 billion of revenue, we succeeded in consolidating the financial profitability of our Group. We also strengthened our shareholdings and partnerships, and made acquisitions in high-growth activities.

A total of €498 million of strategic investments were made to durably establish our Group on the most attractive markets and to improve our expertise on high-potential markets, including the industrial market in particular, thanks to the acquisition of companies specialised in industrial services in the petrochemicals and the mining sectors. Elsewhere, on the European water market, we increased our stake in the Italian market leader, ACEA, and finalised the acquisition of Agbar, thanks to an agreement with La Caixa, which is now our Group's second-largest shareholder. Thanks to these numerous commercial successes, we have sustained our growth. We have strengthened our standing in France, the United Kingdom, China, Australia, Morocco and the United States. In 2014, our international revenue increased by 5%.

> "changing activities, innovative solutions, flexibility and cross-functionality in the way we work... these are the keys to the growth of our Group in tomorrow's world."

Develop our activities

Our results have confirmed that our strategy is the right one, and they will enable us to develop our activities in order to generate new growth. We have defined four strategic priorities for our activities: new water services, the reuse of waste, services for industry and development in emerging countries. Over the last 12 months, we have launched major projects for each of these priorities. In June, the High5 plant was inaugurated in Antwerp, Belgium. This factory can recycle and produce up to four different qualities of glass that can be used in industrial applications. More recently, we opened the Smart Operation Centre in Le Pecq near Paris to deploy an increasingly digitized management of the water cycle. This centre continually supervises the remote meter-reading infrastructures (water and gas) and the so-called "Smart Water" solutions that control the water supply and wastewater networks with our Aquadvanced™ offer, designed to optimise drinking water networks, and INFLUX™, which manages rainwater. The market for these new water services offers prospects of annual growth in excess of 10%. We also plan to speed up the development of our packaged "Advanced Solutions" offer, which contains all our solutions for this market.
Our activities are changing in response to the expectations of our industrial and public customers in terms of performance and local presence. This process demands more technological innovation so that we can remain precursors and protect our lead over the competition. In 2014, we invested almost €74 million in R&D to develop new waste reuse techniques and to propose a new generation of water management solutions. Our customers' new needs also demand greater flexibility in the way we work. This is why the Group has defined an integrated organisation that facilitates collaboration between the lines of specific expertise and the geographical business units.

Anticipating tomorrow's world

Changing activities, innovative solutions, flexibility and cross-functionality in the way we work... these are the keys to the growth of our Group in tomorrow's world. A world where the key challenge we all face will be the optimised management of natural resources, which are already rare today, and will be precious tomorrow. A world where our know-how and expertise will be at the very heart of these challenges. In the past, we were simple water distributors and waste collectors. Today we have become experts in the sustainable management of resources for our public and industrial customers.
Our group has been in the forefront of the great revolutions in modern society: the hygiene revolution in the 19th century, and the urban comfort revolution in the 20th. In the 21st century, we will be one of the driving forces behind the resource revolution. We must preserve the deeply human and local character of our activities with the spirit of a unified and global enterprise.
In March, our Group federated its expertise and entities around a single brand, SUEZ environnement, and a single mission, shared by our 80,000 employees: "securing together a resourceful future for all".
Our strengths must converge so that we become more efficient and visible, and so that SUEZ environnement is recognised as the leading specialist in services and solutions for the reuse and preservation of resources.

80,990
employees worldwide.

€14,3
billion of revenue in 2014.


©SUEZ environnement / Doris Felix

SUEZ environnement's Board of Directors

SUEZ environnement's Board of Directors and its four committees bring together experienced experts and professionals from different backgrounds.

The Board of Directors

SUEZ environnement's Board of Directors sets the Group's business directions and oversees their implementation. The Board is chaired by Gérard Mestrallet and Jean-Louis Chaussade, Director, acts as the company's Chief Executive Officer.
Some changes were made to the members of the Board last year. The Board currently has 18 members, who serve a 4-year term:
— 50% of independent members, without counting the Directors representing the employees, in accordance with the Afep-Medef code,
— two Directors who represent the employees,
— 39% of women,
— and 33% of Directors from outside France.

The Strategy Committee

voices its opinion and makes recommendations to the Board of Directors on strategic orientations planned by the Board of Directors or proposed by the CEO and all projects for external and internal growth, sales of corporate assets, strategic agreements, alliances or partnerships submitted to the Board of Directors.

The Audit and Financial Statements Committee

assists the Board of Directors in ensuring the accuracy and veracity of the corporate and consolidated financial statements of SUEZ environnement and the quality of risk management, internal audits and information provided to shareholders and the market.

The Ethics and Sustainable Development Committee

monitors respect for the individual and collective values, on which the Group's actions and rules of conduct are based, and that every employee must apply. These values include the Group's special responsibilities with regard to the protection and the improvement of the environment and of sustainable development. The committee also oversees the implementation and assessment of the health and safety policies. Finally, it examines the social responsibility and environmental policies.

The Nominations and Compensation Committee

is tasked with examining questions relating to the composition of the Board of Directors and its committees and the succession plans of senior executives, and analysing the compensation of executives and the bonus, profit-sharing and employee shareholder policies.

THE NEWS IN 2014

The Board of Directors addressed questions on:
— the progress of business and projects,
— the financial situation, results and the situation of the Group's funding,
— governance, and in particular the changes to the composition of the Board of Directors and its Committees;
— the decision to enter a strategic partnership with La Caixa and the tracking of its implementation.

Gérard Mestrallet
Chairman of the Board of Directors
of the SUEZ environnement company
Chairman and Chief Executive Officer of GDF SUEZ

Jean-Louis Chaussade
Chief Executive Officer
of SUEZ environnement company

Nicolas Bazire
Chief Executive Officer of Group Arnault SAS

Gilles Benoist
Director of SUEZ environnement company

Valérie Bernis
Executive Vice-President of GDF SUEZ
in charge of Communications, Marketing
and Environmental and Social Responsibility

Harold Boël
Chief Executive Officer of SOFINA

Alain Chaigneau
General Secretary of GDF SUEZ

Penelope Chalmers
Executive Vice-President of Strategy
and Communication at GDF SUEZ Energy
International

Delphine Ernotte Cunci
Executive Vice-President Officer
of the France Telecom/Orange Group
and Executive Director of Orange France

Lorenz d'Este
Managing Partner of E. Gutzwiller & Cie

Isidro Fainé Casas
Chairman of CaixaBank

Isabelle Kocher
Executive Vice-President,
Chief Operating Officer of GDF SUEZ

Ines Kolmsee
Director of SUEZ environnement company

Anne Lauvergeon
Chairman of ALP SA

Guillaume Pepy
Chairman and Chief Executive Officer of SNCF

Jérôme Tolot
Member of the Management Committee
and Executive Vice-President in charge
of the Energy Services business line of GDF SUEZ

Agatta Constantini
Director representing the employees
of SUEZ environnement company

Enric Miguet i Rovera
Director representing the employees
of SUEZ environnement company

SUEZ environnement's Management Committee

The Management Committee is the decision-making body of SUEZ environnement. It meets regularly to conduct the general management of the company and to examine the main strategic directions on all five continents. It has nine members.

Jean-Louis Chaussade
Chief Executive Officer
of SUEZ environnement

Jean-Marc Boursier
Senior Executive Vice-President
in charge of the Waste Recycling
and Recovery Activity in Europe

Christophe Cros
Senior Executive Vice-President
in charge of Finance

Marie-Ange Debon
Senior Executive Vice-President
in charge of international Water and Waste Activity

Angel Simón
Senior Executive Vice-President
in charge of the Water Activity in Europe

Thierry Mallet
Executive Vice-President
in charge of Innovation and Business
Performance

Denys Neymon
Human Resources Executive Vice-President
in charge of the Health, Safety
and Security functions

Frédérique Raoult
Executive Vice-President
in charge of Sustainable Development
and Communication

Jean-Yves Larrouturou
General Secretary

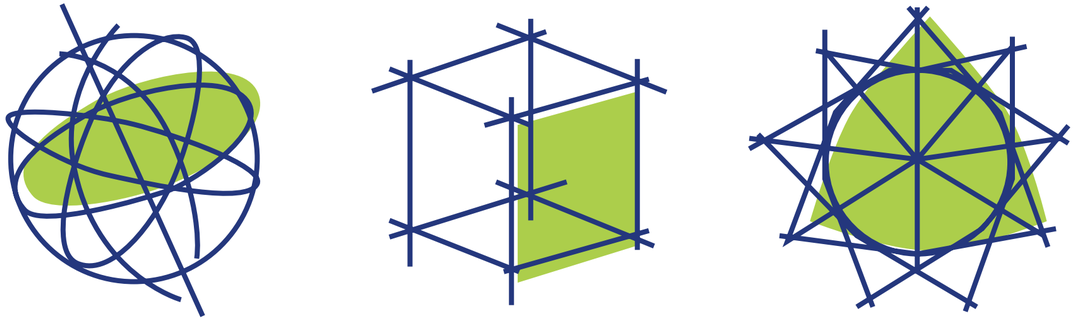
we are at the dawn of the resource revolution

Rampant urbanisation, worldwide demographic explosion, strong growth in emerging countries... Natural resources are limited in a world that is perpetually changing. The needs of cities and industry are set to grow exponentially.

The rise in the awareness of the importance of resources is speeding up and becoming global. The world has gone through a digital revolution. We are convinced that it is now on the eve of the resource revolution.

A revolution that will significantly change our attitudes to resources and will transform our behaviour as consumers and our modes of production.

Our vision of the resource revolution:



circular
because it aims to regenerate resources that are essential to life and the future according to the principles of the circular economy.

concrete
because it involves tangible and innovative actions to secure resources.

collaborative
because it engages everyone who contributes, each at their own level, to better manage and secure resources for the future.

key figures 2014

SUEZ environnement in the world

Employees worldwide

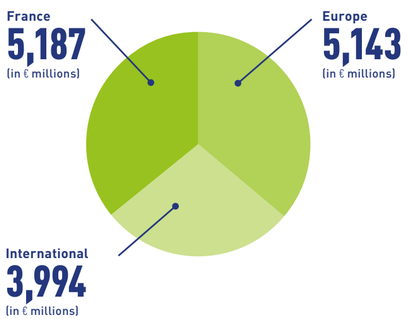
80,990

Revenue

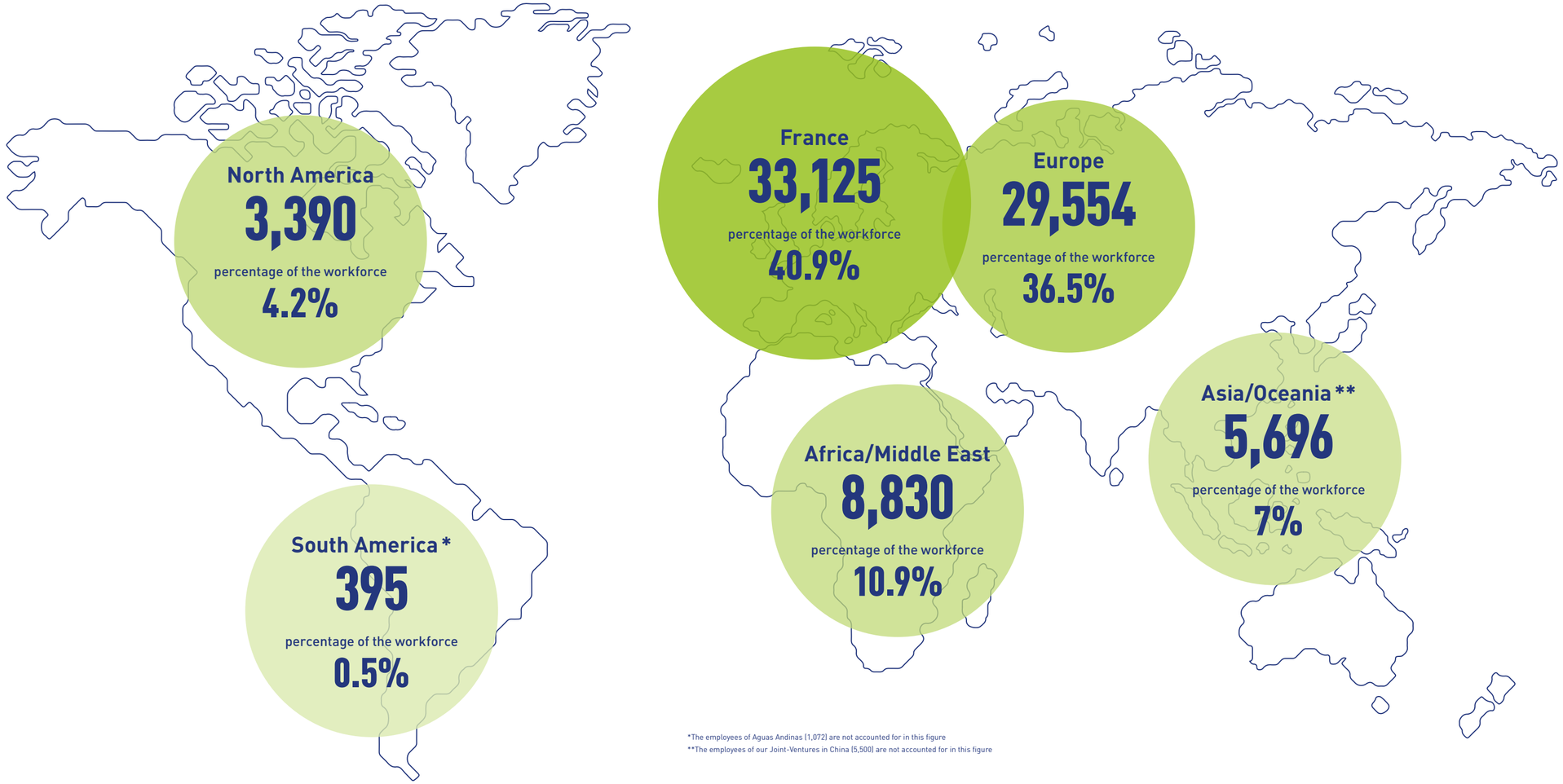
(in € millions)

14,324

Breakdown of revenue by geography



Breakdown of workforce by geography



*The employees of Aguas Andinas (1,072) are not accounted for in this figure

**The employees of our Joint-Ventures in China (5,500) are not accounted for in this figure

key figures 2014

SUEZ environnement Group

Financial figures

Revenue (in € millions)

2013 **14,323**

2014 **14,324**

Net investment (in € millions)

2013 **1,012**

+28.5%

2014 **1,300**

EBITDA (in € millions)

2013 **2,534**

+4.3%

2014 **2,644**

Financial liabilities to EBITDA ratio

2.7 The financial liabilities to EBITDA ratio, on 31 December 2014

Net income, Group share (in € millions)

2013 **352**

+18.5%

2014 **417**

Return on Capital Employed

2013 **7%**

2014 **7.8%** +85 BPS

Innovation

Investment in R&I to protect resources

€74 million

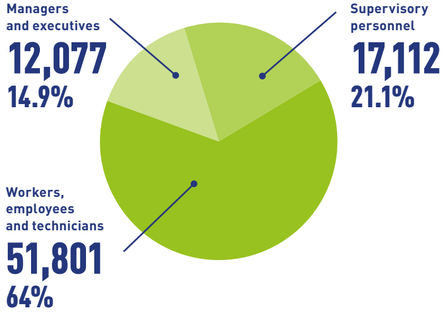
HR figures

Employees worldwide

2013 **79,220**

2014 **80,990**

Breakdown of workforce by socio-professional category



Breakdown of workforce by gender in 2014

79.9%

20.1%

Training

66.5%

Percentage of employees trained

Workplace safety

11
Frequency rate* of accidents

0.54
Severity rate** of accidents

*Frequency rate: the number of accidents requiring time off work x 1,000,000/number of hours worked
**Severity rate: the number of days off work x 1,000/number of hours worked

Resource figures

10 million
people supplied with drinking water produced from desalinated sea water

5,138 GWh.
of energy produced each year from waste worldwide

65 million
people benefiting from wastewater treatment services

92 million
people supplied with drinking water

14 million
tons of reused waste

four strategic priorities to address worldwide resource issues

SUEZ environnement has set itself four strategic priorities to guide its actions and drive its development, based on the sustainable management of resources. We are innovating in water to help nations, cities and industry to better preserve water resources by harnessing the full potential of new technologies. In waste, we are developing new technical and commercial solutions for reuse that aim to create new raw material and energy resources. In industry, we are designing solutions that allow manufacturers to manage resources more efficiently, to meet environmental regulations, to secure the sources of procurement they need to make their products and to optimise their costs. And on the international front, we are deploying our best technological, financial or contractual solutions in order to adapt to the needs and the circumstances of each region.

A strategic partner for leading manufacturers

Stricter environmental regulations, difficult or limited access to resources, rising prices, public image, health and safety risks... The command of the water cycle and waste management has become a major concern for many industrial manufacturers, both on the environmental front and in terms of competitive and economic performance. A fact demonstrated by the industrial water treatment market, estimated by Global Water Intelligence 2014 to be worth $21 billion in the period between 2014 and 2018.

As a historical leader in the water sector, SUEZ environnement intends to consolidate its role as a partner for manufacturers in sectors faced with rising needs: oil and gas, mining, energy, chemicals, agrifoods and the paper industry. The Group is aiming to achieve average annual growth of 10% on the industrial water market between 2012 and 2016, both in its established bases in Europe and North America, and in regions where manufacturing is growing strongly, such as the Middle East, China or Brazil.

SUEZ environnement plans to achieve this target by providing made-to-measure solutions adapted to the needs and constraints of each customer and each country, from the production of process water to the treatment and recycling of wastewater or the reuse of sub-products. Thanks to the Group's presence in 70 countries, its offer is deployed worldwide and meets five major needs: the optimisation of water and energy consumption, the reduction of environmental impacts, guaranteed continuity of production, control of costs and outlay and improvements in productivity. The Group proposes a complete portfolio of solutions for the management of the water cycle, from the engineering and design of treatment processes, to the supply of equipment, operations and maintenance, and special high added-value services, such as mobile water treatment solutions.

Thanks to this range, SUEZ environnement works with major industrial groups all over the world. For example, in the mining industry, the Group helps the leading players in the sector, like Rio Tinto, BHP, Vale, Codelco, Eramet and Areva, to address a varied range of issues (desalination, recycling, treatment of acid water and rainwater, recovery of metals in wastewater, mobile equipment, etc.).

The same is true of the oil and gas industry, both at the front end (exploration and production) and at the back end (refining). For example, in Chengdu, China, a plant recycles 70% of the wastewater from the Petrochina refinery, as part of the process to save the regional water resources.

SUEZ environnement also supports shale gas operators to implement new technologies that limit the quantity of chemical biocides injected into the soil and to purify all the effluents.

In chemicals, for example, the Group supplied a mobile osmosis water unit to Dow Chemical's ion exchange resin production site in Chauny, France in order to rapidly cope with temporary increases in output.

In 2014, SUEZ environnement made some strategic acquisitions, including Process Group (oil and gas), Evatherm (evaporation and crystallisation), or the Australian company MAILS (mining), in order to consolidate its position on this market and meet manufacturers' needs.

At the same time, the Group launched an initiative designed to provide its industrial customers with global solutions for water and waste, two subjects that share similar and close-fitting issues (environmental protection, regulations, resource management, competitive performance, relations with city authorities and the stakeholders, etc.). To achieve this goal, SUEZ environnement has adopted a new "major industrial accounts" approach that offers a single point of entry for major accounts like Total, Areva, Dow Chemical, Sanofi or Bouygues, that are personally managed by members of the Management Committee and the Executive Committee. This organisation engages close partnerships with these strategic customers in order to guarantee a durable performance.

22%

Industry accounts for 22% of the world's water use. This represents more than 800 billion cubic meters a year, a figure that is expected to increase 80% by 2030 due to growing demand in emerging markets.

Rehabilitation of The Avenue coking works in Chesterfield, England

5,000
industrial sites equipped with SUEZ environnement water treatment systems.

1,800
process water production stations built.

2,220
wastewater treatment stations.

© GDF SUEZ / ABACAPRESS / TUGAT NICOLAS

Control monitor of the RAMSES site

Smart Water: “smart” water through innovation

Water is a fragile and precious resource and the consumption of water will increase in response to the needs of a growing worldwide population. To avoid waste and improve the management of water in the cities of the future and in agriculture, SUEZ environnement is developing innovative solutions based on information technology.

By 2030, the world’s need for water will be 40% greater than the quantities currently available. While the problem will be most acute in cities, which will account for 70% of the world’s population, the arable land that feeds the planet will also face a major challenge, at a time when agriculture currently consumes 70% of total water resources.
Faced with these prospects, all the players involved, from local authorities, to farmers, manufacturers and consumers, need to think again about their attitudes to water. Together, they have to learn how to better manage and consume this fragile and precious resource, which is at the heart of our environmental, sanitary and economic concerns.

more than 2 million

SUEZ environnement has already installed, or is currently installing, more than two million smart meters. In 2020, the penetration rate of remote water meters in Europe is expected to exceed 50%.

To help them in this transformation, SUEZ environnement was quick to become established in “Smart Water”, which aims to add some intelligence to water. This market is growing strongly. Revenue from this market is expected to grow by 14% a year, reaching €6.9 billion in 2018.
In concrete terms, the smart solutions from SUEZ environnement, which are marketed in the “Advanced Solutions” range, use digital technologies to optimise the management of the complete water cycle, from the sources of supply, to distribution through public networks or to industry, and the treatment of wastewater.

Upstream of these solutions, the Group has also designed complex systems that prevent the depletion of water tables by monitoring their levels. And further downstream, the Group leads the remote metering market in Europe, with its smart meters that allow consumers to keep track of their consumption in real time and enable city authorities to optimise the performance of their drinking water distribution network. The Group also proposes innovative billing offers, combined with transparent information for users, such as the “Tout sur mon eau” service available in France.

In broader terms, we supply solutions to city authorities for the global control of their networks (drinking water and wastewater treatment).

The Aquadvanced™ system monitors the hydraulic behaviour of a network in real time using sensors that measure flow, pressure or flow rate in order to identify any problems, such as leaks, and to control the quality of the water or solve problems with pressure.
In Pimpri-Chinchwad (India), Chile, Peru, the United States and Spain, injected helium is used to detect holes in the pipes in order to avoid wasting drinking water.
Other solutions, such as the Influx system deployed in Bordeaux, France, are designed to prevent heavy rain from impacting urban wastewater treatment systems (flooding, pollution, etc.) by redirecting the water to storage facilities.
In Spain and France, SUEZ environnement has installed a bathing water management system in numerous seaside resorts that is used to anticipate the decisions to be taken on the wastewater treatment network and the purification stations in the event of heavy rain.

“SUEZ environnement has already installed, or is currently installing, more than two million smart meters. In 2020, the penetration rate of remote water meters in Europe is expected to exceed 50%.”

We also propose innovative solutions for the optimal management of water by farmers. Our Smart Metering Solutions offer a smart irrigation technology that automatically provides plants with the water and the fertiliser they need using sensors buried in the soil.

We are building a modern and optimised irrigation system for the local government in Navarra, Spain, that will provide farmers with access to water in a region where it is in short supply.

All over the world, SUEZ environnement is developing activities in which it already leads the market in France, Spain and Italy, the country that forms the third pillar of the Group’s water activity. To speed up growth on the high-potential smart water market, the Group has rolled out a cross-functional initiative called “Link”, which aims to build on its expertise in the various entities dedicated to water, in terms of operations, finance and human resources.

Thanks to this approach, SUEZ environnement can share its best practices with its customers in order to sustainably and optimally manage water resources.

€300 million

the amount of SUEZ environnement’s revenue from “Advanced Solutions”, including €100 million in Smart Water. The Group forecasts annual growth in excess of 10% in this segment.

Speed up international development

The strong growth of the emerging economies is creating new needs in the countries and cities for better resource management and environmental protection. SUEZ environnement is helping them to rise to this challenge.

China, India, Africa, the Middle East, South America, etc. The regions of the world where demographic and economic growth are the strongest, are usually the regions where the question of the management of resources is most significant, today and even more so in the future. This is where the 1.5 additional billion inhabitants of the planet will live in 2030. This is where urban growth, which will see one half of the world's population living in cities, will be concentrated. And this is where, against a backdrop of rapid industrial growth, the issue of the scarcity of water or environmental protection must be addressed right away.

While consolidating its historical bases in France and Europe, SUEZ environnement has chosen to speed up its international development in order to take up these challenges. The Group aims to help the emerging countries and their regions to manage their resources, so that they can fuel their economic growth, while controlling the impact of their activities on the environment.

This is the case in India, for example, where the Group has already been present for almost 30 years and has designed and built more than 150 water treatment plants. In 2014, three major contracts were signed in the country's biggest cities. In Mumbai, SUEZ environnement has been tasked with optimising the drinking water distribution network in order to guarantee 24x7 access to water for 12.5 million inhabitants. In Pune (2.5 million inhabitants), we are going to design, build and operate a drinking water plant. In Bangalore (4.3 million inhabitants), we have been tasked with building two wastewater treatment stations.

Our teams are also helping regional and city authorities to manage their resources in China (energy reuse, sludge drying, etc.), Myanmar, where they are assisting the city of Mandalay to improve its water, waste and transport services, and in Africa.

By way of example, the cities of Meknès and Casablanca in Morocco, Cairo in Egypt and Karshi in Nigeria have all chosen the Group to address their water and waste management issues.

SUEZ environnement is driving this international development by calling on its deep-seated culture of partnership with its customers and the local players in order to deliver made-to-measure solutions adapted to every country and every region. In its activities that are local by their very nature, the Group positions itself as a local player by adapting its technological and commercial solutions to the expectations of every customer and to the local regulations. This approach leads the Group to propose innovative contracts (shared governance and risks, public-private partnerships, etc.) and project organisations (calling on investment funds, skills transfers, etc.).

SUEZ environnement has adapted and simplified its organisation to strengthen this closeness to customers, better meet the customers' needs and develop its agility. Five business units (AMEI, North America, Australia, Asia, Europe/Latin America) have been set up in the international Division. These business units can call on four business lines (DBO, industrial solutions, water services and waste management) that offer the Group's most advanced expertise to its customers.

47,865

the number of SUEZ environnement's international employees.

Aerial view of Hong Kong

€9,137.1

in million, SUEZ environnement's international revenue (France not included).

Recycâbles - Collecting, processing and recovering cables

In Europe, SUEZ environnement has nine specialised plants dedicated to the recycling of plastic waste that produce 135,000 tons of new resources per year. The Group wants to double production in 5 years.

Reusing more waste

"Nothing is lost, nothing is created, everything is transformed." While Lavoisier's saying may seem rather dated, it forms one of SUEZ environnement's strategic paths of development. As a result, the Group intends to become a major player in the circular economy, where waste is given a new lease of life by the technical and commercial reuse sectors.

2 tons

of reusable waste for 1 ton of waste for disposal: this is SUEZ environnement's reuse target for the European market in 2016.

Regulations on waste are becoming ever more stringent, in both mature and developing countries. And for some very good reasons too. First, due to its impact on the environment and health. Second, and most importantly, because waste is a symptom of a linear worldwide economy - extraction, production, consumption, disposal - that is no longer tenable in the long term. At the current pace of the increase in the needs of the world's growing population, the planet's reserves of natural resources and raw materials will quickly run out. The concept of the circular economy as the solution to this problem is gaining strength. In the circular economy, waste is not a problem. It is a solution. When waste is collected, sorted and reused, it can replace raw materials or be converted into energy.

On the strength of its solid experience in the waste sector, SUEZ environnement aims to become one of the driving forces behind this new economy. While remaining the preferred partner of city authorities and industry for waste management, the Group is also moving towards a position as a supplier and trader of secondary raw materials. While the Group has always organised the collection and sorting of waste on a local or regional scale to meet local needs, it now services the fast-growing market for raw materials produced through reuse on a European scale.

In this way, SUEZ environnement, which is renowned for its capacity to innovate in the extraction of resources from waste, is contributing to the development of the reuse of numerous forms of waste: plastics, glass, household waste, paper and cardboard, waste electrical and electronic equipment (WEEE), end-of-life vehicles, building materials, hazardous waste, etc.

By way of example, in plastics, the Group is investing in its new research and innovation unit, Plast'Lab, to develop, together with industrial manufacturers, plastics that cost less than virgin plastic.

The fully automated and ultra sophisticated sorting line in Rotterdam processes one half of plastic waste in the Netherlands, producing different qualities of materials that are ready to be transformed by manufacturers.

In the United Kingdom, the Group has designed an industrial solution that transforms 1 kilo of plastic into 1 litre of diesel fuel that costs less than conventional diesel.

This capacity to innovate is also being applied to glass, hazardous waste from the building industry, non-recyclable wood (which is transformed into steam for industry) and organic waste from plants and animals. In Sweden, organic waste is transformed into biogas and compost using the unique BioSimplex technology.

a growth strategy founded on strong commitments

The development of SUEZ environnement is founded on a core of commitments and values shared by all our activities worldwide. It is innovation that makes us stand out and allows us to offer our customers the means to be efficient, while optimising their resource management. The issues of sustainable development are at the very heart of our activities, which is why we have set ourselves ambitious and quantified targets as part of an initiative for continuous improvement and dialogue with all our stakeholders. We place great importance on the development of our employees' skills everywhere, so that they can effectively and durably play their part in the preservation of resources. And since we believe that solidarity is an integral part of corporate social responsibility, SUEZ environnement and its employees are engaged in numerous initiatives to help populations in difficulty, both in France and in numerous developing countries.

SUEZ environnement holds about 2,000 national patents, deposited in more than 70 countries worldwide.

Innovation: the driving force behind our development

Innovation in the current and future challenges facing resource management is one of the pillars of SUEZ environnement's strategy and development. The goal of innovation is to differentiate our offers, both technically and economically, and to enable our customers to optimise their resource management.

Our research and innovation policy, which supports the teams in the field, focuses on four main areas: the creation of new water services (Smart Water), the reuse of waste, industrial water and international development. In each of these areas, our innovation projects have several close-fitting objectives: to develop our skills and our knowledge of the major technical and scientific challenges related to our activities, to invent new solutions and methods and to boost our performance by improving our processes.

Our research and innovation activities are based on a global ecosystem managed by Innovation and Industrial performance (DIPI). This ecosystem includes a network of six international research centres and more than 200 laboratories working on R&D, technical assistance, training, look-outs and knowledge-sharing. We employ more than 400 researchers and experts worldwide.

We encourage "open innovation" by collaborating closely with universities, industrial companies and local authorities in order to stimulate, promote and intensify our research and innovation capacities. Open innovation also takes the form of partnerships with other groups. By way of example, in 2014, together with Nexity, AG2R La Mondiale and Sodexo, we launched the "Happy City" award in favour of citizens' well-being. The first award will be organised in 2015. The goal of this award to promote collective intelligence, to capitalise on the creativity of eco-responsible companies and to contribute to the emergence of solutions adapted to new life styles. The competition, which is open to researchers, universities, research centres, entrepreneurs, start-ups, SMEs, industrial manufacturers, NGOs and anyone with an innovative project, includes four trophies (one per partner), with a €10,000 prize for each one. The SUEZ environnement trophy is for initiatives designed to protect resources and the environment.

We also cooperate closely with targeted start-ups, in which we can invest though our "Blue Orange" investment fund dedicated to new technologies. Thanks to this collaborative approach, we can gain access to knowledge and technologies that supplement those we command internally, and to shorten the time-to-market of innovative solutions and products.

€74

million are invested in research and innovation every year.

CIRSEE is SUEZ environnement's main Research and Expertise Centre

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For example, we are supporting Sigrenea's development of a new technology of smart sensors. Those, installed in waste containers, continually measure the fill rate. Information is then transferred to the waste management company for optimisation of waste collection.

Driven by the DIPI, our research and innovation policy also encourages Group-wide cross-functionality. We contribute to creating a common technological culture and heritage, thanks to the teams specialised in our different activities and by pooling the expertise and knowledge of our researchers. In an effort to take this process of sharing even further, three innovations are presented to our network of internal researchers every week and a "Global Innovation Call" is organised once a quarter for around 50 innovation correspondents.

The vitality of our research and innovation activities has resulted in a thriving patents policy (2 000 national patents filed in more than 70 countries), the creation of new solutions (around 30 in 2014) and the organisation of technological tests, in which innovative solutions are tested under industrial conditions in order to cut their time to market. Around 60 technological tests took place in 2014, resulting in the effective market launch of several new solutions (sludge conditioning, optimised maintenance of drilling for drinking water, collection of household waste, etc.). Our strong ambition to innovate is also reflect by targeted investments. In December 2014, we inaugurated Plast'Lab at the International Centre for Research into Water and the Environment (CIRSEE). This unique new laboratory specialises in the development of new recycling solutions for plastics, together with industrial manufacturers. Finally, every year, our capacity to permanently reinvent our activities is demonstrated by the SUEZ environnement Innovation Trophies, in which our worldwide teams of researchers challenge one another with a goal to sharing best practices. The 2014 Trophies proved this point yet again. 130 entries were preselected, of which 30 were presented at the worldwide congress of our activities, attended by almost 1,200 employees from all of the Group's countries.

High ambitions in sustainable development

SUEZ environnement has drawn up a sustainable development roadmap in order to rise to the new environmental, social and societal challenges. By setting out concrete commitments and objectives to be achieved by 2016, this roadmap will help us to speed up our transformation on the path to becoming the worldwide standard-setter in the sustainable management of resources.

The integration of the principles of sustainable development in SUEZ environnement's activities has been structured and guided by a roadmap since 2008. This Group-wide document is implemented and adapted in each activity and each country, down to the operational level. After the first roadmap covering the period from 2008 to 2012, a second roadmap has been drawn up for the period from 2012 to 2016. This roadmap is structured around three major priorities: innovate to develop our activities and to turn our customers into leaders in economic and environmental performance, develop the talents of our workforce, so that they can play a part in the transformation of our activities, and use our activities to contribute to the appeal of our territories and to build solutions with our stakeholders.

Each of these priorities is broken down into several commitments, with concrete, quantified and dated targets to be met by 2016. 2014 saw more progress towards the achievement of these targets, as demonstrated by the following example. 11.8% of our customers are now equipped with remotely read meters, compared with the target of 2 million by 2016. In the course of the year, we helped to cut water consumption by the equivalent of 436,000 inhabitants. Our actions in favour of the circular economy resulted in a 1,845,000 ton increase in substitute fuels. Our own environment performance also improved, with a reduction in our greenhouse gas emissions and a 15% increase in our energy production. Finally, the actions taken in favour of our employees also yielded concrete progress, in terms of training, the reduction in the frequency of occupational accidents and the rise in the proportion of women in management positions, which increased to 27.6% in 2014, compared with a target of 30% in 2016.

In parallel to the everyday actions that we have taken to reach the objectives of our roadmap, we have also launched numerous initiatives to promote the challenges of sustainable development. For example, on World Water Day, on 22 March 2014, we launched "OPEN: discovering SUEZ environnement". This unprecedented initiative is designed to share our knowledge with our customers (everyday users and regional authorities) on an international scale, so that they can better understand water management and its challenges, and also to encourage savings and the protection and conservation of this valuable resource. OPEN has seen the launch of an internet platform (www.openbysuezenvironnement.com) that includes a dynamic map showing the challenges and the solutions of SUEZ environnement in the realm of water all over the world. All over the world, our subsidiaries have organised local initiatives (site visits, conferences, educational activities) that help to raise awareness of local water-related issues.

In 2014, the commitments we have made to sustainable development were rewarded. The Group's ratings were confirmed or increased by the most renowned international social rating agencies. By way of example, our rating with Sustainalytics was 82.2/100, and 95/100 with CDP Driving Sustainable Economies. These results represent a 7-point improvement compared with 2013. In France, the Ministry of the Ecology, Sustainable Development and Energy recognised the Group's plan to commit to the national strategy for biodiversity.
This plan includes actions that will make biodiversity a strategic issue for all our employees and senior management, and will include biodiversity in our research and innovation plans, or will promote the challenges of biodiversity to the general public and stakeholders.


©SUEZ environnement / William Daniels

in 2014, we cut water consumption by the equivalent of 436,000 inhabitants.

SUEZ environnement at the heart of COP 21

At the end of 2015, countries from all over the world will attend the United Nations COP 21 conference on climate change in Paris. For several years now, the fight against global warming has been one of the priorities of our sustainable development policy. We are developing solutions to cut greenhouse gas emissions and to contribute to the energy transition. This is a key factor of the reuse of waste to produce materials and energy that is now at the heart of our Waste activity in Europe. It is also the primary objective of the Water activity, which aims to control consumption, increase the quantity of available water and, thanks to smart technologies, strengthen the capability of cities to withstand unforeseen climatic conditions. Progress was made in 2014 by improving the energy efficiency and performance of our own industrial processes. Finally, the issues addressed by COP 21 are also at the heart of our innovation policy, which aims to provide solutions to local authorities and industry that allow them to improve their environmental performance, while adapting to the rarification of resources at the same time.

5,138 GWh.

This is the quantity of energy produced by SUEZ environnement in 2014.

Develop the skills of our workforce

The commitment and the skills of the men and women who work at SUEZ environnement are essential if the Group is to effectively play its part in the preservation of resources. This is the reason why we implement a human resources policy in all the countries where we do business that aims to allow our employees to develop, while keeping our promises in terms of social responsibility.

And this does not come from SUEZ environnement, but from the independent observers at the Top Employers Institute. "SUEZ environnement provides its employees with outstanding working conditions, nurtures and develops talents at every level of the organisation and is a leader in the field of human resources that continuously strives to optimise its practices." Thanks to the HR actions taken in 2014, our Group was certified as a "Top Employer" at the start of 2015 on the strength of this assessment. This certification rewards all the efforts we have made to implement an HR management policy based on the commitment and the satisfaction of our 80,000 employees.

We are determined to allow every one of our employees to progress in the Group and to develop their skills. They can take control of their own career development and improve their employability, thanks to the tools and possibilities we offer (promotion, internal functional and geographical mobility, training, etc.). This policy is also essential if we are to adapt to activities that are constantly changing and to reinforce our capacity to meet the new demands of our customers.

We believe that our employees should be associated with our growth and our performance, which is the reason why we have set up the ambitious "Sharing" employee shareholder programme. After the first subscription offer in 2011, the second operation in 2014 saw more than 16,000 employees from 22 countries acquire shares in the Group.

Our HR policy is also one of the main levers of our commitment to social responsibility, thanks to the numerous external actions that have been taken to contribute to a responsible economy through employment and local development. In the territories and the countries where we operate, we always favour local resources and we also take action to help the unemployed return to work.

Internally, our social responsibility policy is reflected by the permanent efforts we make to improve safety at work. On every continent, we deploy safety standards and rules on our industrial sites (water treatment plants, waste sorting centres, etc.) and in our "off-site" activities, such as the collection of waste or roadworks on the water networks. We have rolled out a major operation on the 10 "Life Saving Rules". With the support of senior management, these rules were drawn up on the basis of the fatal accidents that occurred in the last 10 years, and they are accompanied by a system that engages both employees and managers. In 2014, this initiative was extended to included subcontractors working on our sites, so that their staff also obeys the same rules. Our safety policy is also based on regular audits and annual action plans in each of our entities that include awareness-raising and training actions designed to achieve continuous progress. In 2014, these actions produced a one-point drop in the frequency of accidents at work (the number of accidents versus the number of hours worked), in comparison with 2013. On the other hand, the severity rate (the number of days not worked further to accidents at work) did not improve significantly, prompting the Group to intensify its efforts in this area in 2015.

66.5%

The percentage of employees trained.

We also work on the promotion of diversity in the company on a daily basis. A specific policy, managed by a team dedicated to diversity and social development, favours the return to work and the employment of the disabled and seniors. Special attention is also paid to equal opportunities for men and women in the Group. Numerous action plans (recruitment, career development, access to management positions, equality of pay, etc.) have been launched in this area, with precisely quantified targets, such as 30% of female managers by 2016. In July 2014, AFNOR recognised this policy in favour of diversity by awarding the label for diversity to SUEZ environnement for 4 years.

3.8%

The percentage of shares held by employees thanks to Sharing. Employees now represent the Group's third-largest shareholder.


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Upper left side:
Downtown Hong Kong, where population grew 40% in 30 years

On the right:
Employee working at the waste water treatment plant of Strasbourg

© Elodie Perriot / Secours Catholique

Improving access to water in rural zones in Cambodia and Madagascar

The most densely populated rural zones in Cambodia and Madagascar are equipped with sub-standard facilities for access to drinking water and for wastewater treatment. In order to respond to the populations' demands for a quality of service equivalent to that found in major towns and cities, the SUEZ environnement Initiatives fund and Aquassitance are supporting a project, managed in conjunction with the GRET, a non-profit organisation that brings together professionals in socially responsible development, who operate in some 30 countries in Asia, Africa and Latin America. This 36-month project, which is being rolled out in close collaboration with the local authorities, aims to help the operators in the field, who are usually small companies, to improve their performance. The project, which includes technical and financial support for the operators, training and help with the establishment of optimised governance or efficient customer service, and will come to an end in 2015, has already made some concrete improvements. These improvements will allow the populations in the zones in question to gain access to better quality water at an affordable cost, thereby improving their quality of life.

Socially responsible commitments to underprivileged populations

In parallel to its business activities, SUEZ environnement is also active in the field, taking socially responsible actions in favour of underprivileged populations. This support, which is part of the Group's sustainable development roadmap, is provided thanks to a specific annual fund that receives €4 million per year: the SUEZ environnement Initiatives Fund.

Each year, the SUEZ environnement Initiatives Fund provides concrete aid to populations in difficulty, in an effort to durably improve their living conditions. In developing countries, this aid focuses on actions that are directly related to our activities in favour of access to water, wastewater treatment and waste management. In France, the fund allows us to take action in favour of the integration of socially fragile populations through employment and training. One example is the "Maison pour Rebondir". This innovative organisation, financed by the SUEZ environnement Initiatives Fund, encourages professional integration through concrete actions, taken together with social players, that aim to offer the possibility of returning to work or creating an activity to the most isolated members of society. As well as facilitating access to work experience programmes and reserved jobs in our subsidiaries and partner companies, the "Maison pour Rebondir" also helps the long-term unemployed with their projects to set up a business. In 2014, 18 applicants received support for the creation of their own business, including 200 hours of training. By the start of 2015, eight of them had already set up a company, and five more were in the process of doing so.

The support provided by our fund on other continents takes the form of direct or indirect financial aid, the transfer of know-how and the input of our employees' and our partners' technical skills (organisations for international solidarity and institutions).

The SUEZ environnement Initiatives Fund is guided by the need to achieve results in the long-term. Therefore, it encourages the co-construction of projects with the populations concerned and all the stakeholders.

Our commitment to social solidarity is also manifested by some of our employees who take part in the actions of Aquassistance, the international solidarity association set up by Group volunteers. Through this association, they can offer assistance to populations in difficult, both in the field and remotely. Aquassistance provides the professional skills of its members, and the material and financial resources that are adapted to humanitarian emergencies (for example, access to water after a disaster) or to development (drinking water, wastewater treatment, waste management). In 2014, the association celebrated its 20th anniversary. It is currently managing more than 80 projects and it accomplishes almost 60 missions every year.

Helping migrant women to make a new start in life

In 2014, the SUEZ environnement Initiatives Fund provided financial support for the Bordeaux-based NGO Promofemmes, which has been helping migrant women with their personal and family integration since 1994. This project is being run in cooperation with employers that have identified job opportunities and allowed 11 women to follow training in help for the aged (retirement homes and home help), and 9 others to be trained as cleaners. They all suffered from the same disadvantages, such as a lack of understanding of employers' expectations, of the cultural codes in the world of work or the methods used to look for a job. In addition to the training, the beneficiaries also received individual guidance, attended job seekers' workshops and underwent assessments in the workplace. Most of the beneficiaries succeeded in acquiring the skills and the professional codes expected by employers and in becoming integrated in the workplace. The success of this project incited the SUEZ environnement Initiatives fund to renew its cooperation with Promofemmes in 2015.

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360°+5

one year of contributions to the resource revolution

2014 annual report

suez environnement

towards a world of unlimited resources

Turning resources from stocks into flows:
this is the primary objective to which
our 80,000 employees are committed to achieving.

We use our services, tools, models and know-how
to offer our customers solutions that allow them
to optimise the management of their resources today,
while securing the resources of tomorrow.

In this respect, 2014 was an eventful year for
SUEZ environnement and its stakeholders:
a year of close collaboration, successful acquisitions,
major innovations and a year of transformation
for our Group, as we federated all our trading names
under a single brand to take up the challenges
we are facing.

Our ambition is a match for the scale of these challenges.
After all, we are at the dawn of a revolution.

The adventure has started and the best is still to come.

Enjoy reading this report.

joint interview with Jean-Louis Chaussade and Navi Radjou

“how to do more with less”,

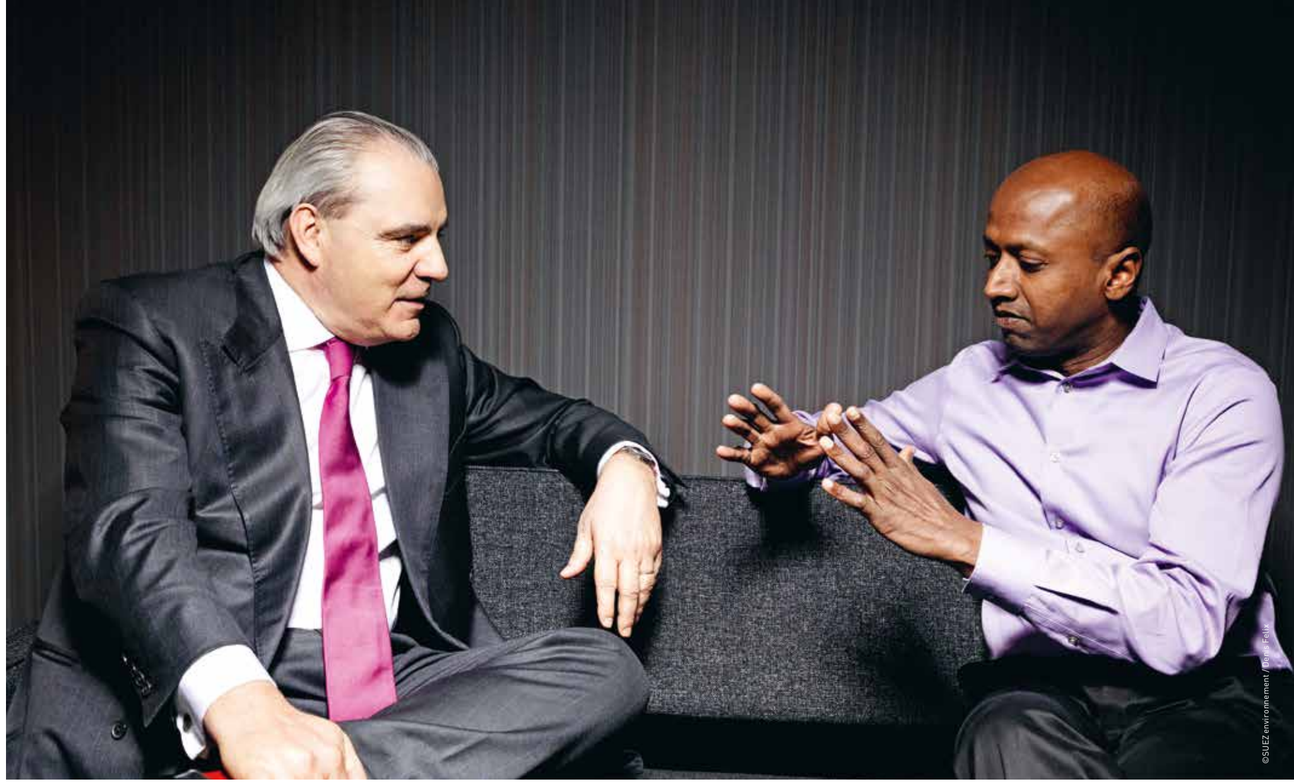
or how new forms of innovation can support the resource revolution.

On March 12th, Jean-Louis Chaussade, CEO of SUEZ environnement, and Navi Radjou, the theoretician behind frugal innovation, discussed the resource revolution. What is at stake? What parallels can be drawn between the concept of “do more with less“, developed by Navi Radjou, and the characteristics of this resource revolution? How can new forms of innovation change our economic and societal models? Discussions that depict the prospects of the mobilisation that is necessary to secure and reuse the resources that are essential to our future.

Jean-Louis Chaussade, on March 12th this year, you announced that the Group was bringing together all of its trading names under a single brand, SUEZ environnement, with a new signature, “ready for the resource revolution”. Could you tell us more about what you mean by “resource revolution”?

Jean-Louis Chaussade: I am quite convinced that we are at the dawn of a breakthrough in the management of resources. We need to change from a linear economy that “over-consumes” natural resources, to a circular economy that optimises the management of resources and is capable of producing the resources necessary for its development, for example by reusing waste as material or energy, or by creating alternative water resources. If we are not careful, and waste our resources, their cost will increase on a massive scale in the next 50 years. In the face of strong demographic growth, if the economy remains linear, their cost will increase even more. In this case, there is a danger of conflicting usages and the obligation to choose the priority usages that receive our resources. In the resource revolution, we will make the shift to a more circular economy. As Navi Radjou has already said, we must “do more with less”. In other words, learn how to make better use of the resources we have, and learn how to reuse them, for example as secondary raw materials.

Navi Radjou: Before we even start talking about a resource revolution, we must first insist on the increasing pressure that resources are under. Let me use two very concrete examples of water resources. I live in California, which is the world’s fifth largest producer and exporter of foodstuffs, fruit and vegetables. Water is so short in California that you now have to ask for a glass of water in restaurants. Customers no longer systematically receive a pitcher of water, because of the drought. My roots are in southern India, so I know how strong the pressure is from the middle classes in emerging countries to have their turn at consuming goods and services. All this inevitably impacts the consumption of resources - raw materials, energy and water - that are necessary to produce them. We say that necessity is the mother of invention, and we are at the dawn of a revolution, because our modes of using, producing and distributing resources are still not optimised. The actions and initiatives that have been taken to rethink and reconfigure these modes will turn them into the spark that sets off this revolution.



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How will these changes affect the activity of a company like SUEZ environnement?

J.-L. C.: Looking beyond my personal convictions, as a company manager, I am faced with changes in our customers and our market to which I must respond. Our activities are changing. In the past, our waste management activity consisted of collecting waste and disposing of it in a controlled landfill. But today, we can no longer simply store resources that the planet needs! Remember that 4 billion tons of waste are produced on the planet every year. The potential is considerable. Changes are already afoot in some countries. For example, the European Union has demanded that waste should no longer simply be dumped in landfills. We are also facing some very strong changes in the market that are gradually but radically tending towards the circular economy.

Our activity in the water sector is changing too, because we must preserve and protect this fragile resource. I believe that we have to combine changes in our lifestyle and technology. But here again, we must also take the local dimension into consideration. Every territory is different. Navi Radjou mentioned California, which consumes about 600 litres of water per day and per inhabitant. But it does not have sufficient quantities of water to consume so much. In France, where we are not short of water, daily consumption per inhabitant is just 110 litres. We must make some changes to our lifestyle: take showers rather than baths, reuse the water in swimming pools, wash the car

About Navi Radjou

Navi Radjou is a consultant in innovation and leadership. He is a Fellow of Judge Business School, University of Cambridge, and a member of the world innovation programme of the World Economic Forum. He also writes for the Harvard Business Review website. In 2013 he won the prestigious Thinkers 50 Innovation Award and spoke at the 2014 international TEDGlobal conference. He is the co-author of “Frugal innovation: how to do more with less”, published worldwide by “The Economist”, and by Les Éditions Diateino in France. Navi Radjou is a Frenchman of Indian origin and lives in Palo Alto, California.

less often, consume less food that contains meat, given that it takes 16,000 litres of water to produce 1 kilo of beef. And technology must evolve too if we are to manage water resources as economically as possible, including means of substitution and alternative solutions, such as desalination, which is spreading. Southern India, which we just mentioned, eastern China, Mexico and the south of the Mediterranean basin will face water problems of gigantic proportions. The pressure on water resources is strong. So the challenge facing our company is considerable, and requires us to permanently reinvent ourselves.

So this is an obligation, not a choice?

N. R.: It is an obligation with several origins, starting with consumer expectations. A study of corporate social responsibility, published by Nielsen in June 2014 and covering 30,000 people in 60 countries, revealed that 55% of the people questioned are prepared to pay more for products and services supplied by companies that care about their social and environment impacts. Company personnel is another factor of change. More than two thirds of workers worldwide want to work for a company that sets a good environmental example. So if companies want to attract and keep talented employees, they must adopt sustainable and innovative models that, for example, apply the principles of the circular economy.

J.-L. C.: You are quite right to mention employees, their sense of service and their commitment. This is quite clear in our own activities: when it comes to resources, an essential factor for the development of our future societies and for future generations, our employees are highly motivated. They feel genuinely proud of their involvement in an activity that is meaningful.

Navi Radjou, you developed the concept of frugal innovation, which you have summarised in the phrase "do more with less". Could you explain your approach?

N. R.: Frugal innovation consists of meeting a need as simply and efficiently as possible and by using as few resources under stress as possible. One of its expressions consists of generating more economic and social value, while reducing the consumption of natural resources, which are becoming rare. This approach belongs to the spirit of "makers", and promotes agility, sharing, models of collaborative innovation or the quest for economies of scale, without damaging the environment. Just a few years ago, I felt like I was preaching in the desert on these subjects. People listened to me more closely in the South, where "doing more with less" is a question of survival. I found it more difficult to make myself heard in the North, where I was told that countries still have abundant resources. But now, in Europe and the United States, people listen more closely, because the circular economy is also a source of opportunities, in particular in terms of job creation and business development.

J.-L.C.: Frugal innovation, or "doing more with less", manifests itself at different points of the production chain. I would like to point out one important detail. In the 19th and 20th centuries, the industrial revolution emphasised two factors of production: capital and labour. There was never any talk of the materials and resources that production required. But growth always resulted inevitably in an increase in the consumption of resources.
Today, the optimisation of resources has become the third central factor of growth. In my opinion, growth is still possible, while preserving resources and using fewer materials. Moreover, I do not believe in negative growth at all, especially in view of the emergence of the middle classes in Africa, China and India. The world's GDP will inevitably rise. Therefore, it is necessary to optimise the management of resources and take this need into consideration in our modes of production and consumption. This can only be achieved by innovating. We must address the questions of recycling and reusing our waste right from the product design phase, for example by making products last longer. It is possible to cut our water consumption without impacting our quality of life.
In France, for example, water consumption per individual has dropped by about 1% per year over the last 15 years. Industrial manufacturers, major housing developments and private individuals are starting to pay attention to how much water they consume.
And these efforts to cut consumption do not impact economic performance. Over the last 15 years, SUEZ environnement's water consumption has dropped, while our revenue has increased. There is now more to this than simply managing volumes of water. It is now a matter of high-tech services. Our customers now demand solutions that help them to manage or reduce their water consumption, such as the installation of computerised leak-detection systems or smart meters.
In the past, we were a group specialised in two distinct fields of expertise: water and waste. The challenges emerging in the world around us have prompted us to converge and unite our skills and expertise, and to become the benchmark in the sustainable management of resources. Resource-related activities have a bright future, because these problems will be made more acute by demographic growth and global warming. But responding to these needs and seizing the opportunities open to us, demand new businesses, research and innovation.

Do you share this point of view on the profitability of this necessary transformation?

N. R.: For major corporations, changing is a matter of survival, and they have to move fast. Big companies are dying out younger and younger, and most of them still have not been born. To last, they need a vision and to anticipate, then support, change. This means that the employees and the shareholders share this vision of leadership. Business leaders in Europe and Asia are far more aware of the importance and the urgency of this radical and systemic change to be made to their organisation and to the entire value chain than their counterparts in the United States. Because it is not just a change of product or economic model, but also of mindset.

Do you think that SUEZ environnement is a pioneer in this respect?

N. R.: Yes. It is quite clear that this company has recognised the obvious need for this change and has taken onboard the ideas of the circular economy and frugal innovation.
I grew up in Pondicherry, India, where water was rationed. We only had water between 6 and 8 o'clock in the morning and my mother got up to fill recipients. So "doing more with less" is something that I learned at a very young age... And I am pleased to see that SUEZ environnement is behaving like a real leader in the forefront of this change and is not simply reacting to customer and consumer demands, like some others.

Jean-Louis Chaussade, how is SUEZ environnement's wish to support and inspire this change of model expressed in "concrete" terms?

J.-L. C.: I sincerely believe that the strength of a company like SUEZ environnement is based on its ability to remain a precursor in its business lines, and to do things faster and better than its competitors. And that demands innovation! With our worldwide network of research centres, we can pool expert resources, share best practices and keep up a technology watch. More than 400 researchers, experts and technicians from our expertise and research centres, or the networks of experts in our technical centres, take part in the Group's research and development activities. We hold about 2,000 national patents, deposited in more than 70 countries worldwide. This innovation policy enables us to develop new solutions, both for waste, by recycling and reusing raw materials, and for water, with smart metering, for example.

Are the innovative solutions that you offer similar for emerging and industrialised countries?

J.-L.C.: Resources are a local issue that require prevalent and diverse specifics and the differences between the maturity of markets to be taken into consideration.
An example. In Sweden, 99% of waste is reused, while many countries have not even got off the ground yet.
So we must understand that every local situation is specific. It is only by working on this scale that we can come up with the right solutions. For me, the local approach is the right one. We must be capable of combining expertise with a vision specific to each situation, and making them the source of innovation and creativity. We must be capable of generally applying certain innovations, so that they can be transposed to other similar situations. This is what we

"before, with the linear economy, we did more with more, but now, in the frugal economy, not only must we do more with less, but better with less. It is a true revolution!"

Navi Radjou

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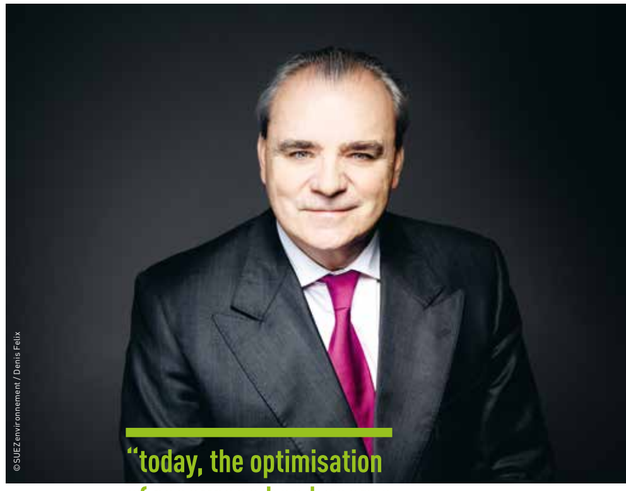

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"today, the optimisation of resources has become the third central factor of growth."

Jean-Louis Chaussade

did in Changshu in China, where we developed a secondary procurement project to supply quality water 24 hours a day. This project was based on an innovative model produced by our analysis of the local specifics. But the suitability of the solution designed in this way has already allowed it to be applied to 62 other similar projects all over the world.

N. R.: Amongst the differences, we have noted that developed countries tend to look to the most recent technological innovations, like big data, connected objects or 3D printers, whereas "doing more with less" in southern countries is more a matter of organisation, human factors and technology that is less advanced, but more widespread, such as simple mobile phones.

Talking of organisation, what do you think of the new approaches to collaboration and "open innovation"?

J.-L.C.: We have taken some open innovation actions to stimulate, promote and co-fund innovative projects on the technical, business and managerial fronts. This is where Blue Orange, our own investment fund, comes in. It has already detected several hundred innovative start-ups and has financed many of them. This strategy also takes the shape of numerous partnerships that we have entered with various public and private technical and scientific players, or in our contracts, because innovation is not always technological. It can also be contractual and commercial. Let's look back at the history of our industry. The major international corporations in the water sector were born of the conjunction of three factors: the availability of capital, the industrial revolution in the 19th century that allowed for significant progress in the design of pipes and pumps, and the demonstration by the brilliant researcher, Pasteur, that it was water that transmitted all the major diseases.
At their outset, our water companies employed engineers who delivered a solution to a problem. This model of engineering companies is no longer applicable today, because in sectors like water, the populations and our customers now want to share with us, they want to understand how we manage this rare and vital resource. So we have shifted to the position of a co-constructor of solutions, together with our customers, and even beyond. It was in this spirit that we designed a new type of contract - the Alliance Contract - with the city of Adelaide in Australia. This public-private partnership is based on a principle of transparency that provides for the sharing of risks and benefits between the parties, and a joint decision-making process on all key subjects.
All the members of the Alliance, whether they belong to the Adelaide city authorities or to our company, are included in the complete decision-making process.
On the waste management front, we also worked closely with the local players in Meknès, Morocco on the design of a modern household waste treatment plant, with the capture of biogas. We established close ties with the players in the local fabric in terms of the sharing and transfer of know-how, and in particular with the 150 sorters, who were previously active on the site. They now sort the raw waste and recover any reusable material (plastic, metal, glass, cardboard, etc.) and have formed a local cooperative.
Yet again, in resource-related activities, sharing, empathy and transparency are essential. You cannot hide what you are up to!

N. R.: I also believe that empathy and sharing are necessary today to achieve a kind of symbiosis and the co-creation of win-win solutions. Corporations need to progress from a model based on competition to one based on cooperation. The director of a multinational corporation needs to humbly admit that he does not have all the answers and he needs to become more open to others and to team up, for example, with local players who have knowledge of the local realities that he does not possess.

In your opinion, what will be the most important stakes in the years to come?

J.-L. C.: Yet again, we are in a period of changing paradigms. The biggest difficulty lies in making people understand that they need to change the way they behave, while the impact of these changes will only be visible in 30 or 50 years, in other words for their grandchildren or great grandchildren. It is very difficult to project ourselves into a world we will never see. So to bring about changes in individual behaviour, we need to send signals.

An example?

J.-L. C.: I am convinced that putting a price on carbon would favour the development of the circular economy. If we do not design a restrictive framework, if we do not send out a signal on prices, the nature of R&D and behaviours will not change. By definition, the circular economy consumes much less energy than the linear economy. If we put a price on carbon, we will release a number of phenomena that are part of the circular economy, especially in developed countries. Thanks to our technologies, emerging countries will consume much less energy as they grow than we did in the course of our own development. If we continue with a linear economy, and with the foreseeable consequences of climate change on water, agriculture, more and more cyclones, etc., the cost will become unbearable for our societies very quickly. Moreover, I have noticed that numerous initiatives have been launched in major conurbations in favour of the circular economy. These initiatives are motivated by factors of economic and demographic appeal, proving that a positive trend has started. States and international institutions now must become engaged with the necessary resolve.

Navi Radjou. Do you think that a price should be put on carbon too?

N.R.: Yes. This is one of the ways available to encourage positive behaviour. But I would like to insist on the need to incite populations and organisations to change the way they behave. Instead of forcing them, we should try to convince them that it is in their own best interests. Moreover, I believe that the new generation who will be in control tomorrow is already convinced of the need to change our behaviour for the environment's sake and to do more with less. And as far as businesses are concerned, they need to change quickly and take the resource revolution onboard. In 10 or 15 years, it will be too late.

More than ever before, for company directors, governing is all about anticipation.

J.-L. C.: I wouldn't say that managing a company amounts to "governing", but it is all about anticipating, while remaining modest and never becoming isolated. In such a changing world, that is difficult to control and sometimes unpredictable, company managers need to keep their ears and eyes open more than ever before. They must listen to consumers, customers, employees, shareholders, thinkers like Navi Radjou, and to the planet itself. Listen to the world we live in.

Discussion chaired by Alain Louyot,
editorial consultant with ELAN-EDELMAN,
journalist at "The Good Life" magazine

"the director of a multinational corporation needs to humbly admit that he does not have all the answers and he needs to become more open to others and to team up, for example, with local players who have knowledge of the local realities that he does not possess."

Navi Radjou

"the biggest difficulty lies in making people understand that they need to change the way they behave, while the impact of these changes will only be visible in 30 or 50 years, in other words for their grandchildren or great grandchildren. It is very difficult to project ourselves into a world we will never see."

Jean-Louis Chaussade

every day, all over the world, one year of contributions to the resource revolution

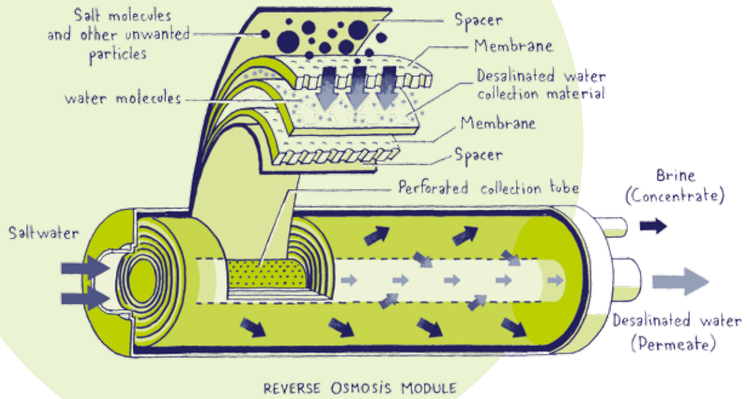
reinventing water, where it is in short supply

Faced with the water stress in California or the Middle East, SUEZ environnement is developing alternative solutions for the supply of drinking or industrial water. Near Los Angeles, we are giving a new lease of life to wastewater through new and diverse usages. In Abu Dhabi, we will soon start desalinating water from the Persian Gulf. And lastly, in Hyères, France, we have launched a global action plan to reduce waste and protect the reserves of fresh water in the water table. In all three cases, we have the same ambition: to help our customers to secure existing resources and to treat and then reuse wastewater to meet the needs of the populations and the economy.

Abu Dhabi: sourcing water from the sea

According to the World Resources Institute, the United Arab Emirates belong to the 19 countries worldwide with a level of water stress (the ratio between the resources consumed and the available resources) in excess of 80%. To address the challenge of the scarcity of water resources, in October 2014, the emirate of Abu Dhabi and Hyundai Engineering & Construction chose our solutions for the design and construction of a seawater desalination plant. The 140,000 cubic meters per day plant will use SeaDaf™ filtration technology to pretreat the turbid waters of the Persian Gulf that are rich in algae. The water will be desalinated using an energy-efficient two-pass reverse osmosis solution.
The future plant will meet the growing demand for electricity and drinking water in the Mirfa region, to the west of Abu Dhabi.

"the Abu Dhabi project demonstrates our capacity to offer sustainable technological solutions in response to the challenge of local water stress challenges."



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the

24,000

water meters in Hyères have been fitted with a remote reading system that turns them into smart meters.

Hyères: protecting the fragile water table

During several summers, the town of Hyères-les-Palmiers on the French Riviera, and the neighbouring island of Porquerolles, were beset with the problem of salt water seeping into the water table, making the water unfit for human consumption. In the face of these incidents, which were caused by the decline in fresh ground water resources, the town's authorities had to buy imported water to cope with the sharp rise in consumption, as thousands of holidaymakers arrived in the region. Faced with a situation that resulted in an increase in the cost of water for the local residents, the town council turned to SUEZ environnement for a solution. Together, they drew up a global action plan called "Aqua Renova", designed to implement the well-reasoned and sustainable management of water resources. The plan provided for the construction of a seawater desalination plant on the island of Porquerolles, the replenishment of the town's fresh water table from a local watercourse and the extensive modernisation of the water distribution network. 150 acoustic sensors have been installed to detect leaks, as well as an ultra modern remote meter-reading system, making Hyères a genuine "smart city". The automated remote meter-reading solution allows all the inhabitants to keep track of their consumption on a daily basis and to detect any leaks or abnormal patterns of consumption, without asking the water company to come and read the meter. This system also guarantees that water bills are based on actual consumption.

Previous page:
Aerial view of the Al Mirfa region, United Arab Emirates

Above:
Sectional view of the reverse osmosis process

California: five different qualities of recycled water for diversified uses

Lakes and hundreds of wells that almost run dry, water restrictions on industry, rural districts with no drinking water... In 2014, California went through its worst drought for 500 years. In association with the West Basin Municipal Water District, SUEZ environnement recycles the wastewater from its Edward C. Little plant, in an effort to reduce the impacts of this type of climatic event. The site's performance is based on its capacity to recycle more than 150 million litres of water every day and on its made-to-measure output. This is the only plant in the world that can produce five different qualities of water to meet the diverse needs of its 200 municipal, commercial and industrial customers: process or washing water, demineralised water, water used for cooling in refineries, water for gardens and irrigation, and water for the replenishment of the water table.
Since the plant's advanced technologies were implemented, drinking water imports into the basin have been cut from 80% to 60%, and the discharge of wastewater into Santa Monica Bay has been reduced too. The West Basin Municipal Water District renewed its faith in us for 5 more years in February 2014. With a target that is as ambitious as it is vital: to work together to reduce the level of dependency of the coastal zone of Los Angeles by 33% by 2020.

150 million

litres of five different qualities of water produced every day to meet the specific needs of 200 municipal, commercial and industrial customers.

El Segundo: Edward C. Little water recycling facility, West Basin Municipal Water District (California)

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transforming our waste into new resources

According to the OECD, our planet will produce 45% more waste in 2020 than it did in 1995. Increasing the reuse of waste has now become a matter of urgency, if its environmental impact is to be reduced, and if it is to substitute natural resources. In keeping with the thinking behind the circular economy, SUEZ environnement is contributing to the development of new technologies and processes to recover and reuse our waste. In the United Kingdom, we turn household waste into energy. In Belgium, we are innovating to optimise the recycling and reuse of glass. In France, we have set up a new centre to process household waste from Paris that combines energy and organic reuse. Our laboratories are working hard to imagine new processes that improve the reuse of plastics and household waste.

Plast'Lab: innovating to recycle more plastic waste

Today, only 25% of the 60 million tons of plastic waste produced in Europe each year is recycled. Producing more recycled plastics would help industrial manufacturers to cope with the scarcity of natural resources and the rising price of raw materials. Using recycled plastics also helps to protect the environment, because it takes 80% to 90% less energy to produce recycled plastic than to produce virgin plastic.
SUEZ environnement has set itself the target of doubling its output of recycled plastic in Europe, which currently stands at 135,000 tons per year, in 5 years, in order to contribute to the development of the circular economy of this sector. We will achieve this target through innovation. Which is the reason why Plast'Lab, a dedicated R&I lab, was set up in December 2014 at the International Centre for Research into Water and the Environment (CIRSEE) in Le Pecq, near Paris. Plast'Lab, which is unique on its market, responds to the demands of industrial manufacturers by co-developing made-to-measure solutions with them. The goal is to design plastics that offer the required physical qualities at a price close to, or lower than, that of a plastic made from virgin raw materials.

using recycled plastics cuts energy consumption by 80% to 90% compared with the production of virgin plastic. 60 million tons of plastic waste are produced in Europe each year, but only 25% are then recycled.

Plast'Lab: SUEZ environnement's research and innovation center, dedicated to plastic recycling

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Improved recycling puts the colour back into glass

In Europe, glass is usually collected in separate bins according to colour (clear and coloured). Not only do the citizens in most European countries have to sort their glass by colour at the source, but recycling operators also have to alternate their production processes between plain glass and coloured glass. SUEZ environnement and its partner Sibelco solved this problem by investing in a highly innovative production site. Inaugurated in 2014, the High5 plant in the heart of the port of Antwerp, Belgium, is the first plant in the world that separates the incoming flow into five separate qualities. After the preparatory steps, the glass is broken up and flows through latest-generation optical sorting machines. After any remaining waste has been removed, the flow is sorted into four colours (clear, green, amber and russet), so that coloured recycled glass can be supplied to the glass makers to produce bottles and other glass packaging containers. Thanks to these facilities, the glass-making industry will be able to significantly increase the proportion of recycled glass in its products, thereby preserving natural mineral resources and saving energy at the same time.

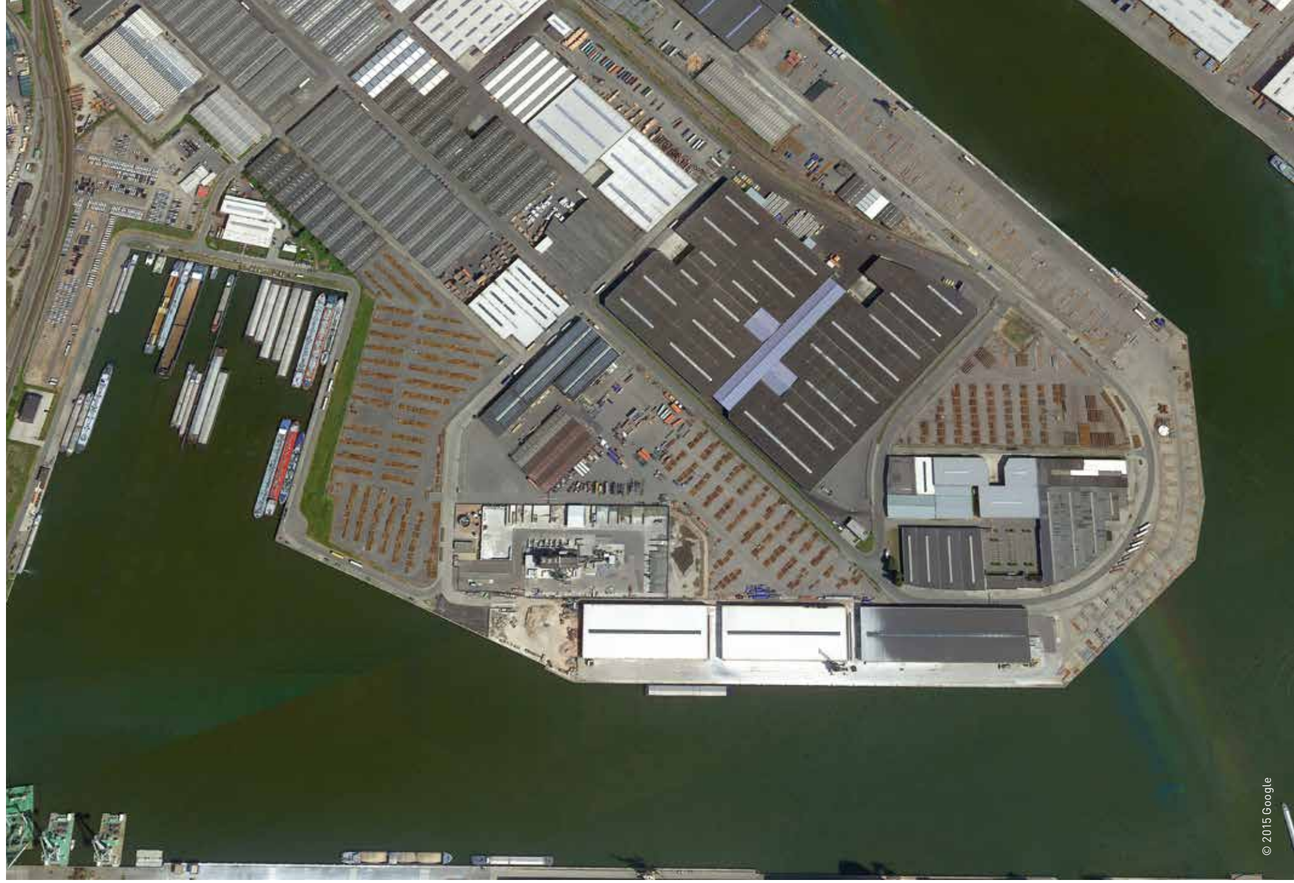
250,000 tons

The quantity of glass recycled each year by High5.

High5 glass recycling plant in Antwerp, Belgium

Greater Paris opts for more sustainable management of household waste

The environment is at the heart of the Greater Paris project, which aims to turn the metropolis into a sustainable city that better addresses the issues of climate change. Consequently, the question of waste represents a major challenge for the regional syndicate for the treatment of household waste (Syctom), which manages waste in 84 localities in the Paris region. Which is the reason why, in November 2014, the syndicate tasked SUEZ environnement with a vast project to design, build and operate a new centre that will replace the one that the Group has been operating since 2011. The existing incineration unit will be replaced by a more efficient system that combines energy and organic reuse. The system will include a new incinerator, a mechanobiological sorting unit and a methane digester producing energy and compost. The future facility, a symbol of the urban ecology, will feature the very latest technologies used to transform waste into new resources, while achieving a best-in-class environmental performance.



Aerial view of the High5 recycling plant in Antwerp, Belgium

starting in 2019, the future waste treatment centre in Ivry will process 544,000 of the 2 million tons of waste collected by the Syctom in the Paris region every year. This tonnage will be made up of 482,000 tons of residual household waste, 54,000 tons of residual combustible fraction and 8,000 tons of bio-waste that is collected separately.

Turning household waste into a new source of energy

In 2016, a new infrastructure for the treatment of household waste will start up in the county of Merseyside (1.5 million inhabitants) in north-west England. Thanks to this new facility, the local council will limit the waste that goes into landfill by 92%, while transforming it into a source of energy at the same time. Built and operated by SUEZ environnement and its partners, the facility will include a transfer station with a rail connection (avoiding 21,000 days of transportation by truck per year) and an energy reuse unit, with a production capacity of 49 megawatts. The 430,000 tons of waste reused each year will produce enough energy to supply the equivalent of 63,000 households.

helping agriculture to optimise the water it needs

Agriculture meets the world population's need for food. But it also consumes almost 70% of the water available on the planet, which is much more than industry or individual consumers. In the many regions of the world where water resources are scarce, agriculture needs to produce better and with less. SUEZ environnement is helping farmers to rise to this challenge by taking action in the field and on the technological front. For example, in Spain, we are building a modern irrigation network that consumes less energy. And the Group's stake in the capital of the startup Agri-Esprit in France allows for the development of innovative computerised solutions for an agriculture that consumes less water.

-20%

On a 1,600-hectare farm near Bordeaux, the Agri-Esprit software suite helped to reduce water consumption by 20% while increasing production by 10%.

Navarra improves its agriculture through optimised irrigation

Agriculture is a key economic activity in Navarra, Spain. In an effort to guarantee its long-term development, in July 2014, the provincial government turned to SUEZ environnement for the implementation of a modern and optimised irrigation system for the territories exposed to acute water stress. The project consists of completing the existing irrigation network of the Navarra canal with an additional 429 kilometres. The new network will be fed from the Arga-Ega section of the canal, in turn supplied by the Itoiz dam, which was brought into service in 2003. The network will irrigate a total of 15,275 hectares of farm land spread across 15 localities, 60% of which previously did not benefit from any irrigation facilities. Work on the project started in November 2014 and will be completed by the end of 2018. The project will provide farmers with access to quality water resources for the territories, without any significant consumption of energy. SUEZ environnement has joined forces with the Spanish group BTP OHL, which will build the network. For 30 years, SUEZ environnement will then operate and maintain the network, applying smart management techniques to the equipment thanks to the remote controls.

Above:
Agriculture uses more than 70 percent of all water withdrawals

Below:
Aerial view of the Navarra Canal and the Itoiz reservoir, Spain

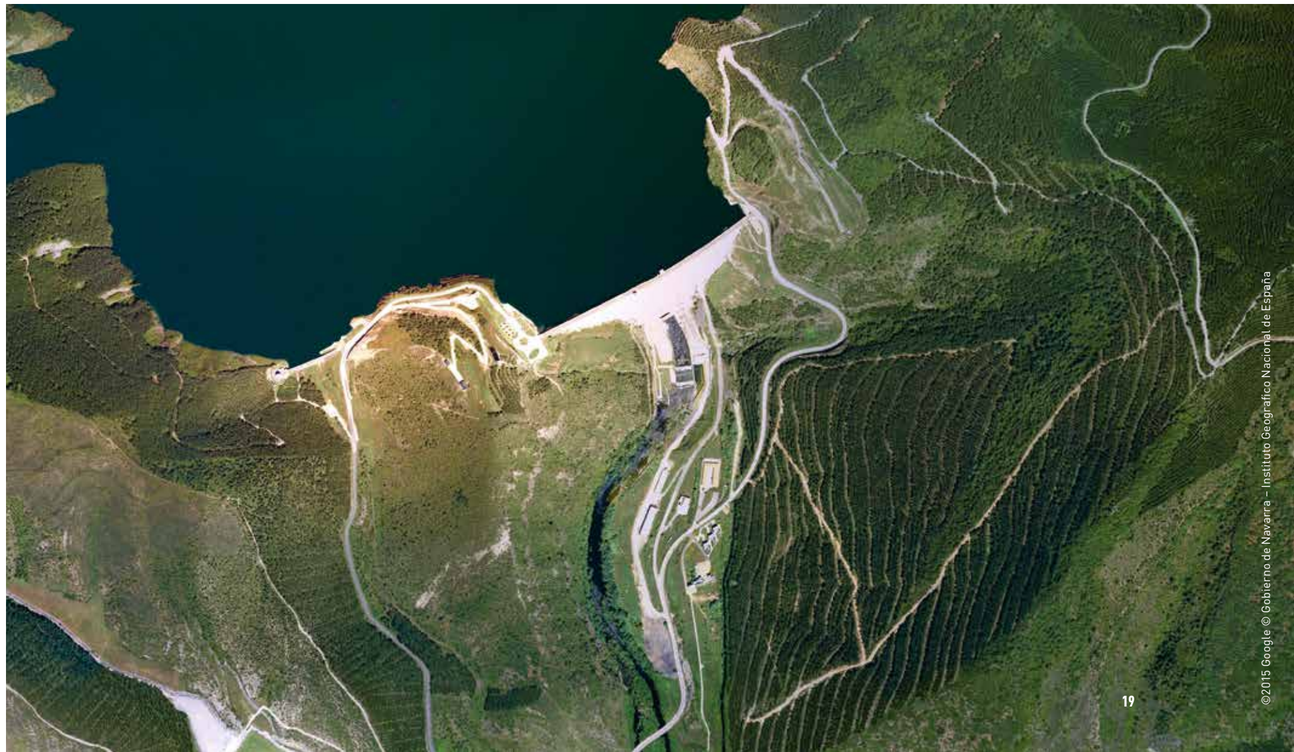
15,275

hectares of farm land in Navarra will benefit from modern and optimised irrigation.

"the Group's investment in Agri-Esprit will underpin our global strategy to contribute to a more efficient and more sustainable agriculture and agrifoods industry."

Data: one of the keys to cutting water consumption in agriculture

SUEZ environnement decided to support the development of Agri-Esprit to help farmers to only consume the water that their crops need. This start-up is specialised in the design and implementation of computerised systems for agriculture, and proposes innovative data management solutions that favour the continuous improvement of practices and performance. In addition to increasing the company's capital by €1 million, in association with the fund Demeter Partners, through the Group's investment fund Blue Orange, SUEZ environnement has also opened up its network to Agri-Esprit so that it can break into markets worldwide.



offering industry the levers to achieve sustainable performance

"SUEZ environnement has been present in the water and waste sectors in Australia for almost 20 years. By combining its technical and environmental expertise with the experience of MAILS, SUEZ environnement plans to seize the opportunities that exist in the industrial and mining sectors in Australia."

All over the world, industrial manufacturers are faced with increasingly stringent environmental standards. This regulatory pressure comes on top of the need to keep costs under control, to reduce consumption of water and raw materials and to secure their supply sources, so that they can carry on producing. Faced with these challenges, manufacturers must permanently optimise their means of production by increasingly taking the issue of rarefied natural resources into consideration. SUEZ environnement supports industrial manufacturers from all sectors in their drive to become more efficient, and more responsible at the same time. On the strength of our expertise, we can propose made-to-measure solutions adapted to the specific needs of each field of activity. For example, in Brazil we will supply the water to the gigantic installations of a future cellulose factory. In 2014, in Australia, Singapore and the Middle East, we acquired new, tight-fitting expertise that will enrich our offer for the mining industry and the oil and gas sector.

Integrated services for the mining industry

In April 2014, SUEZ environnement consolidated its already strong presence on the water and waste markets in Australia with the acquisition of Mining & Industrial Labour Services (MAILS). MAILS, which is established in the mining town of Kalgoorlie in south-west Australia, works mainly with companies that operate the gold mines in the Goldfields region, providing industrial cleaning, collection and transportation services, plus the disposal of the associated liquid waste. By combining its technical and environmental expertise with the experience of MAILS, SUEZ environnement plans to offer the industrial companies in the mining sector a range of integrated services to help them to take up the challenges they face, in terms of water resource management and the treatment of effluents.

"Process Group offers a broad range of end-to-end engineering and equipment supply capacities of production and treatment units for the oil and gas industry."

New skills and know-how for the oil and gas industry

In June 2014, SUEZ environnement acquired Process Group, a company specialised in the engineering, manufacturing and commissioning of equipment for the worldwide oil and gas industry. Located in Melbourne (Australia), Singapore and Abu Dhabi (United Arab Emirates), Process Group manages complex projects with high added value that demand high-tech solutions, such as gas dehydration, the softening and treatment of output water or sand management. With this acquisition, SUEZ environnement intends to extend is geographical presence and benefit from additional skills and know-how. This will allow the Group to offer a complete range of solutions and technologies to industrial manufacturers all over the world that are faced with increasingly strict environmental regulations.

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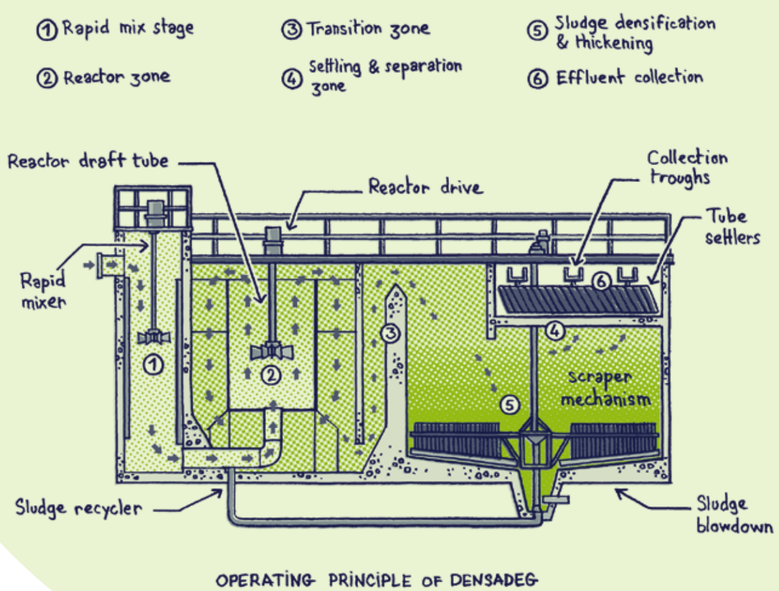


OPERATING PRINCIPLE OF DENSADEG

Previous page:
Aerial view of the Kalgoorlie mine, Australia

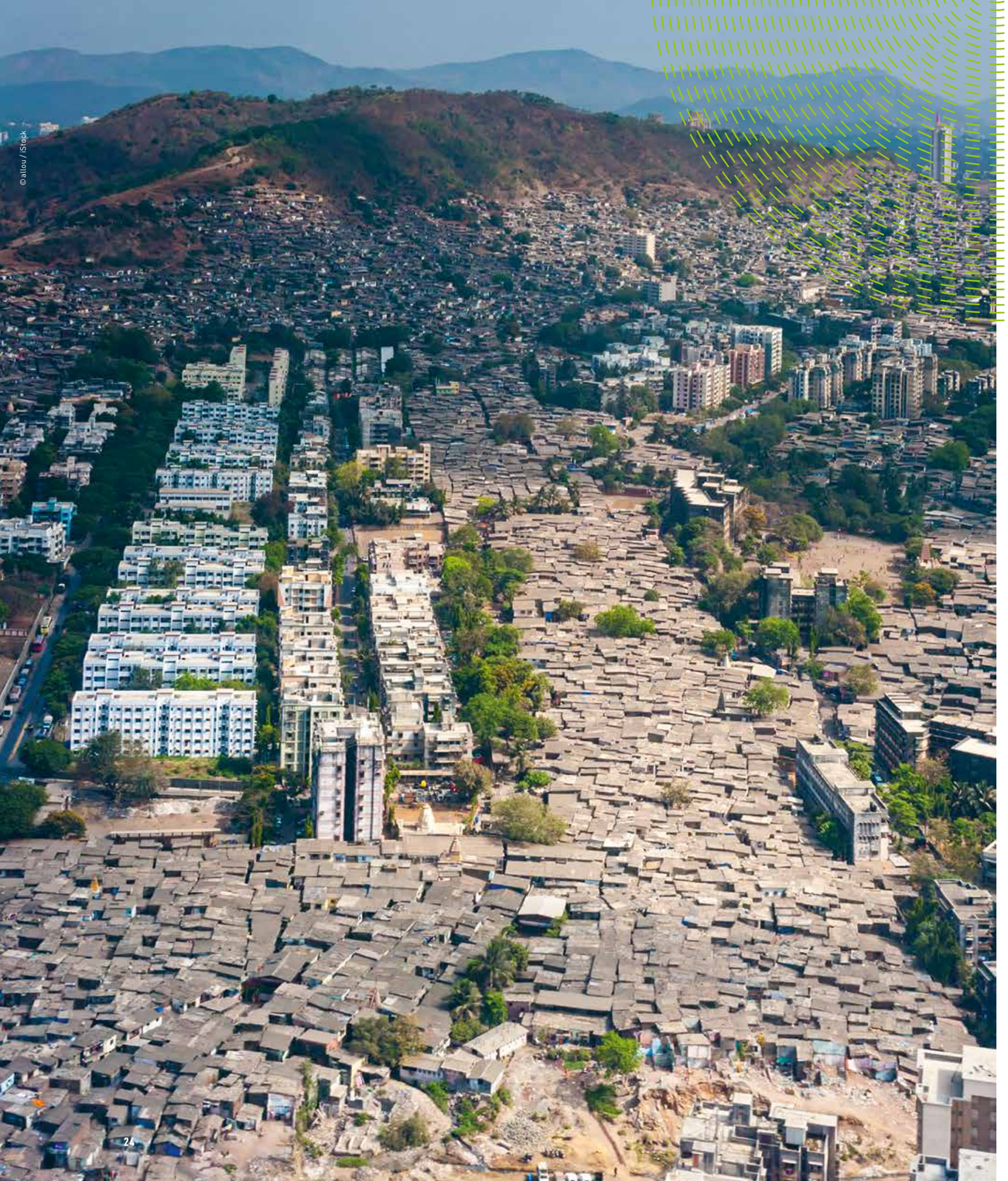
Left page:
FPSO Oil Platform

Above:
Operating principle of the Densadeg® technology

Supplying quality water to Brazil's leading paper maker

Industrial manufacturers in the paper industry need very large quantities of high-quality water to produce paper pulp and to supply the boilers used in the process. In July 2014, Klabin, which leads the Brazilian pulp and paper market, turned to SUEZ environnement for support with the construction, by 2016, of its future cellulose production plant in Ortigueira, Paraná state, with an annual capacity of 1.5 million tons.
The Group has been tasked with building a process water treatment plant with a capacity of 5,900 cubic metres per hour, fitted with Aquazur® filters and Densadeg® technology. Densadeg is a lamellar contact settling process that speeds up the physical-chemical treatment of water. SUEZ environnement will also build a plant fed with boiler water and equipped with the ion-exchange process.

Klabin is investing €2 billion in its new Ortigueira plant, which will double its annual cellulose production capacity.



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devising new water management models

If it is to preserve our resources, innovation must not be limited to technology alone. The challenges that certain countries and local authorities are facing also demand new contractual approaches. SUEZ environnement addresses this issue by adapting to the constraints and the needs of every single customer. By way of example, in Middletown in the United States, we signed a 50-year public-private partnership (PPP). In Mumbai, India, we have signed an innovative 5-year integrated service contract to support the city in its efforts to provide its inhabitants with 24-hour access to drinking water. Alongside the OECD, we are contributing to a water governance initiative that aims to deploy public water resource management policies all over the world.

a team of 300 professionals is delivering 10 specific services to supply the 12.5 million inhabitants of Mumbai with drinking water 24 hours a day and seven days a week.

Aerial view of Mumbai, India

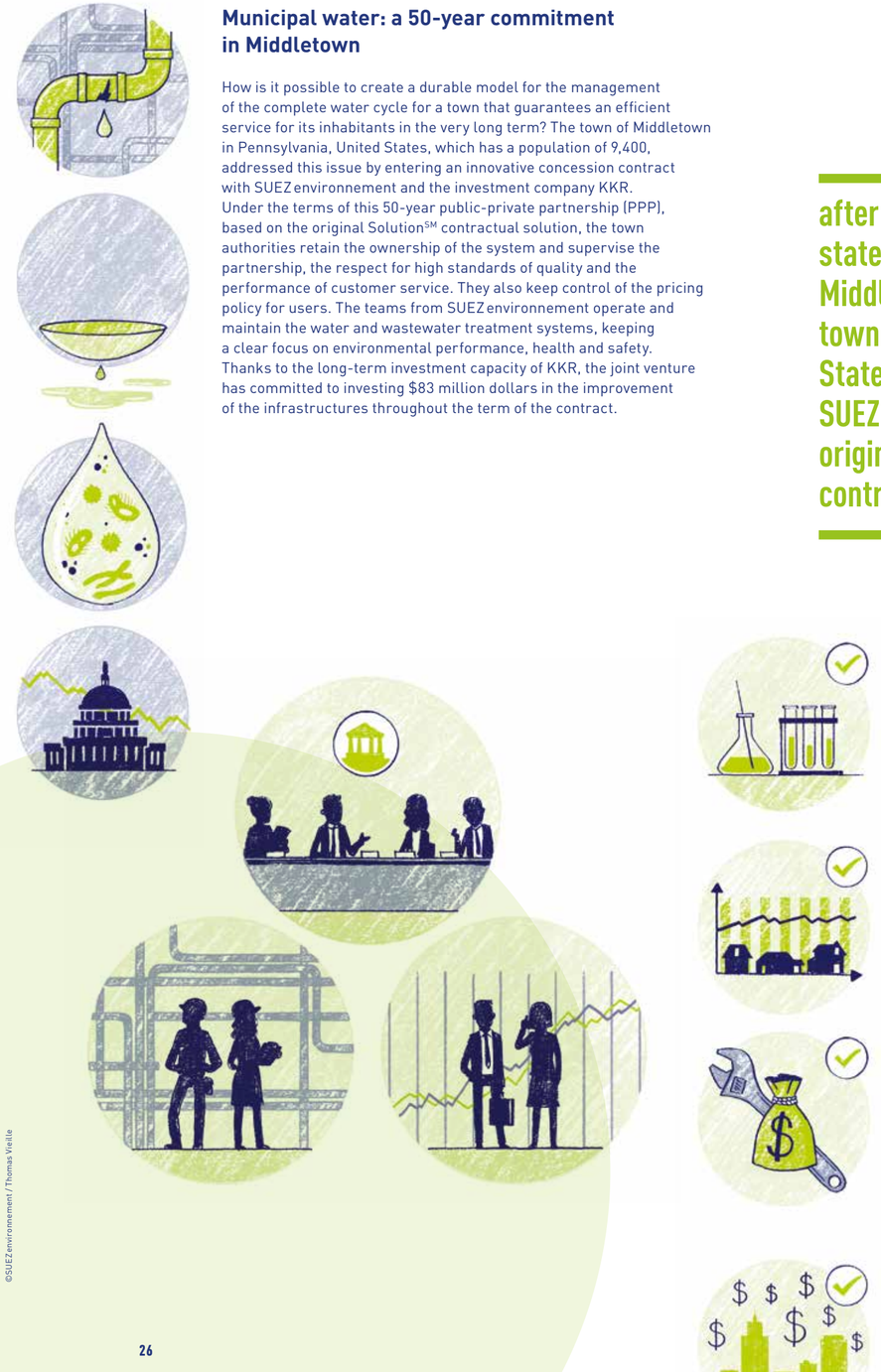
Facilitating access to water for the 12.5 million inhabitants of Mumbai

Water is one of central government's major concerns in India. In 2013, a vast programme was drawn up to develop the infrastructures that provide access to water, in response to demand for water consumption that will double by 2050. SUEZ environnement has signed an innovative integrated service contract with the authorities in Mumbai, India's second-largest city. Under the terms of this contract, we are dedicating a team of 300 professionals to the delivery of 10 specific services, while the city authorities retain the everyday control of the facilities. The goal of this project is to supply the 12.5 million inhabitants of Mumbai with drinking water 24/7, with a clear focus on the management of supplies to the city's slums. The contract also includes a training programme.

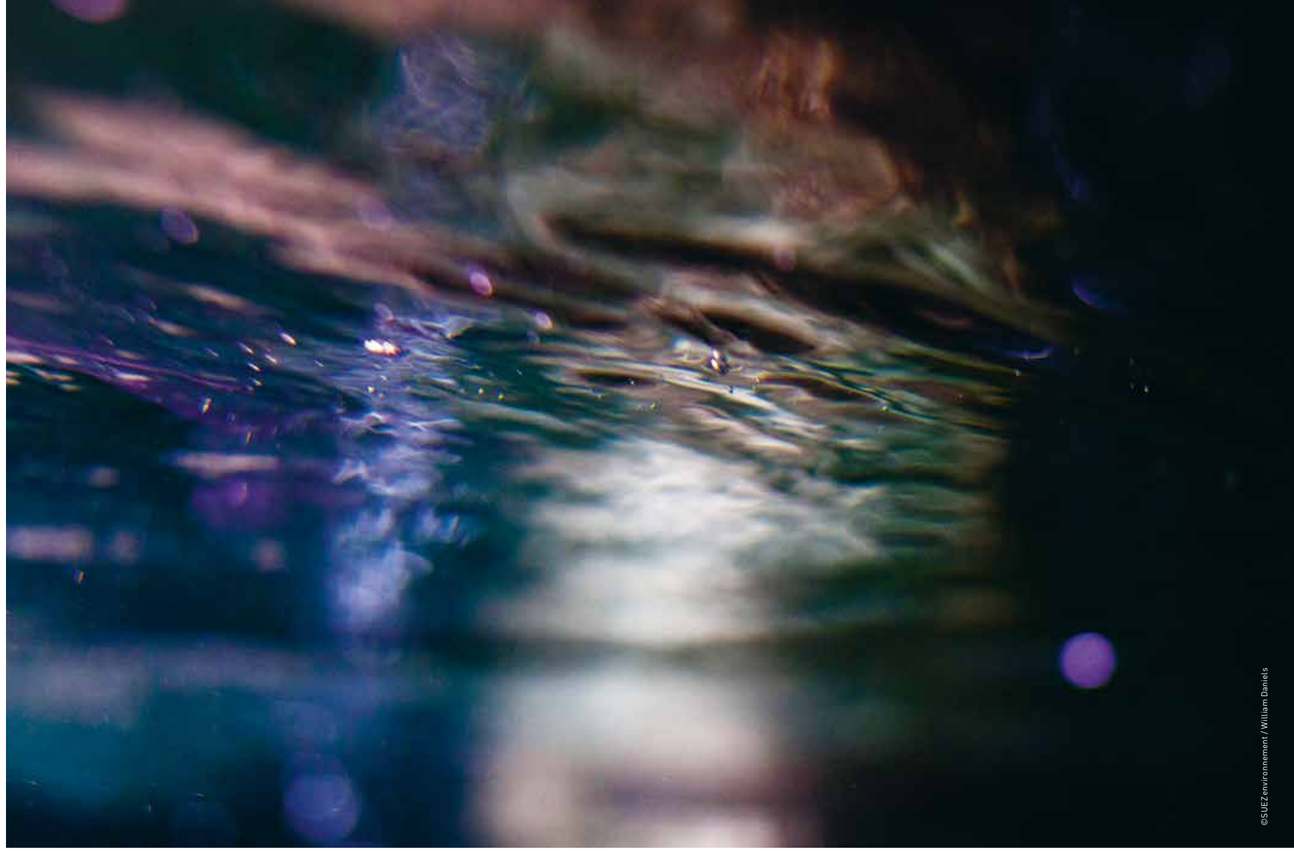
Municipal water: a 50-year commitment in Middletown

How is it possible to create a durable model for the management of the complete water cycle for a town that guarantees an efficient service for its inhabitants in the very long term? The town of Middletown in Pennsylvania, United States, which has a population of 9,400, addressed this issue by entering an innovative concession contract with SUEZ environnement and the investment company KKR. Under the terms of this 50-year public-private partnership (PPP), based on the original Solution[SM] contractual solution, the town authorities retain the ownership of the system and supervise the partnership, the respect for high standards of quality and the performance of customer service. They also keep control of the pricing policy for users. The teams from SUEZ environnement operate and maintain the water and wastewater treatment systems, keeping a clear focus on environmental performance, health and safety. Thanks to the long-term investment capacity of KKR, the joint venture has committed to investing $83 million dollars in the improvement of the infrastructures throughout the term of the contract.

after Bayonne in the state of New Jersey, Middletown is the second town in the United States to adopt SUEZ environnement's original Solution[SM] contractual model.



Drawing of the SOLUTION[SM] partnership



A better water governance: a main issue for SUEZ environnement

SUEZ environnement at the heart of a worldwide water governance partnership

The technical, financial and institutional solutions to the issues of the management of water resources in the face of climate change are already well known. But the real challenge is implementing these solutions by overcoming the poor governance that handicaps water policies. This observation has prompted the Organisation for Economic Cooperation and Development (OECD) to launch its Water Governance Initiative. This initiative is a network of public, private and non-profit players that meets twice a year in a public policy forum. The goal of this initiative is to further international discussions on the governance of water and to provide input for the exchanges in the worldwide water forums, the latest of which took place in South Korea in April 2015. In particular, the initiative includes a technical platform for the discussion of best practices. Its mission to help decision-makers takes the form of precise targets. On the strength of its expertise in the water sector, SUEZ environnement is one of the leading players. The Group is a member of the initiative's management committee, alongside six other partners, which include UNESCO and the International Office for Water.

7

Last April, Daegu in Korea hosted the 7th World Water Forum.

preserving resources through ingenuity

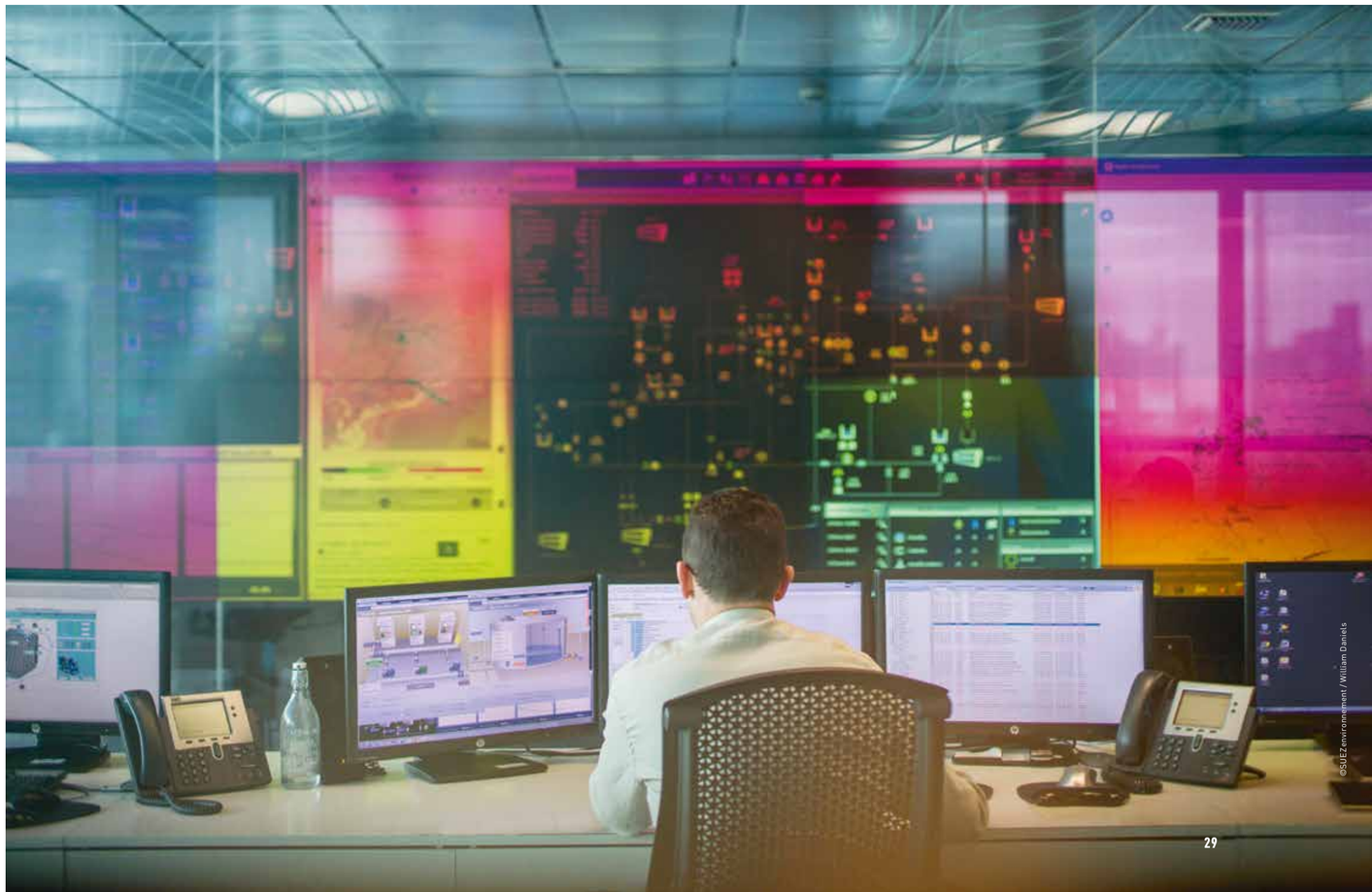
New solutions are necessary to optimise the management of water resources and to keep the cost of access to water under control. As an expert in the water sector, SUEZ environnement permanently challenges its own know-how in an effort to provide network controllers with innovative technology and original solutions. For example, with Aquadvanced™, city authorities can use sensors and software to control their network in real time and avoid waste. At Paris Orly, our teams are implementing a solution that is unique in the aeronautical sector that uses rainwater to keep the airport running smoothly. With the take-over of Derceto, we are helping local authorities to reduce the energy bill of their drinking water networks.

Aquadvanced™: an innovative solution that puts an end to the waste of drinking water

While the need for water worldwide increases as the population grows, 35% of the drinking water in water networks is lost. In two out of three cases, this waste, estimated at 49 billion cubic metres per year, is caused by ageing pipelines. In June 2014, SUEZ environnement launched the Aquadvanced™ solution at the Singapore International Water Week to address this problem. This software-based solution uses sensors that monitor the hydraulic behaviour of a drinking water network in real time in order to analyse and centralise all the performance indicators (flow rate, pressure, quality). In this way, water authorities have a permanent global overview of the performance of the network that allows them to detect and anticipate leaks, to control the quality of the water and to optimise their costs. Aquadvanced™ is a diagnostic and decision-support tool that allows for rapid intervention on the network. It offers numerous benefits to consumers: less frequent and shorter interruptions of the water supply, higher water quality and pressure and more effective customer assistance.

$14 billion

Every year, $14 billion go missing in drinking water networks all over the world due to leaks (33 billion cubic metres), fraud, malfunctioning meters or incorrect billing (16 billion cubic metres).



Smart Control Centre in Barcelona

already installed on some 20 drinking water networks in the United States, Canada, the United Kingdom, Spain and in Asia-Pacific, Derceto's solution can slash energy costs by up to 20%.

An application for more energy-efficient drinking water networks

Drinking water networks consume a lot of energy, which accounts for 40% of their operating costs, according to the United States Environmental Protection Agency.
In September 2014, SUEZ environnement took over the New Zealand-based company Derceto, in a step to help water authorities to reduce their energy consumption and costs. As the world leader in solutions to optimise the energy costs of drinking water production and distribution systems, Derceto proposes a high added-value application. This application, which is connected to the systems that supervise and control the drinking water facilities, accesses the electricity pricing mechanisms in real time and updates the forecasts of demand for drinking water. It uses this information to define an optimised pumping strategy for the next 24 to 48 hours that improves the economic efficiency of 24/7 drinking water supplies. Pumping alone accounts for up to 80% of a network's energy consumption.

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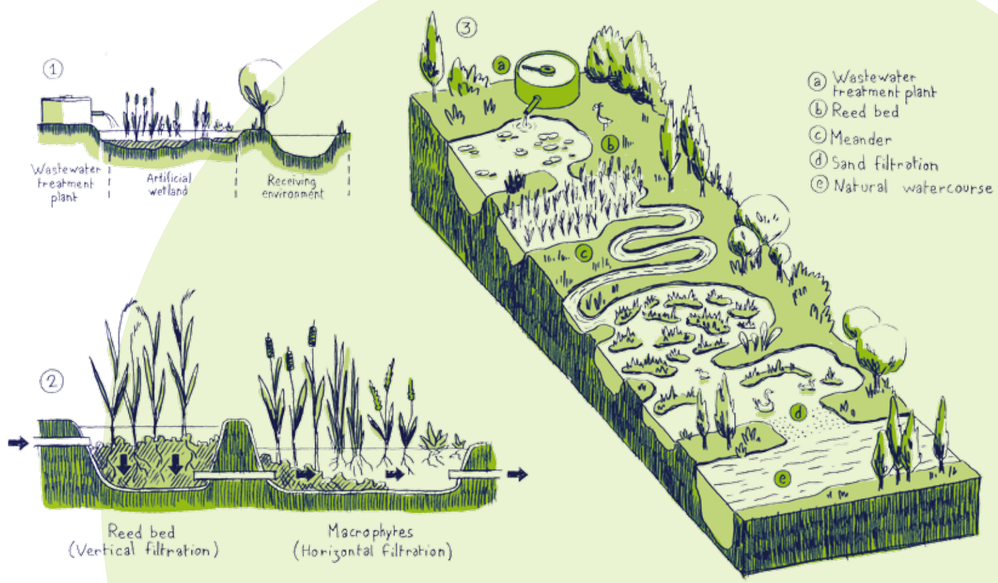
Intermediate pumping between the first and second filtration step

Paris-Orly airport: using reeds to filter run-off rainwater

Every year, the rainwater treatment system at Paris-Orly airport collects and treats 3 to 5 million cubic metres of run-off water. In the winter, this water, which is used to de-ice both aircraft and the runways, is essential to the smooth operation of the airport. Aéroports de Paris and SUEZ environnement teamed up to develop an innovative water filtration system to optimize the treatment of such large volumes that uses reeds planted in marshland. First, the water is collected and channelled to a new 13,000 cubic metre buffer tank, where the treatment process starts. It is then sent for filtering to the adjacent marshland, which measures 6,500 square meters and contains 34,000 reeds planted in sand and granulates. The water is purified by the sand, while the plants oxygenate the mineral filter. Measurements are permanently taken by sensors on the water as it leaves the marshland. If the quality of the water is sufficient, it returns to the natural ecosystem. If not, it undergoes a second treatment cycle. This system, which is operated by SUEZ environnement, is the first of its kind on an airport.

12

With twelve 500 square metre basins, the marshland contains 34,000 reed plants that have to be replaced every 8 to 10 years.



Operating principle of a humide artificial zone

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building more sustainable cities

By 2050, 6.4 billion of the planet's 9 billion inhabitants will live in cities. To cope with this sustained and continuous population growth, major cities all over the world must reinvent themselves in order to offer their inhabitants the quality of life they expect, while protecting resources and the environment at the same time.
SUEZ environnement is helping city authorities on all five continents to rise to this challenge by imagining made-to-measure solutions. By helping them to better manage and reuse their waste, like in Meknès and Casablanca in Morocco, by recycling the sludge from purification plants, like in Yangzhou, China, or by providing global technical assistance, like in Mandalay, Myanmar, we are contributing to the design of the sustainable cities of today.

Aerial view of Mandalay, Myanmar

the project launched by the Mandalay urban authorities and SUEZ environnement to turn Mandalay into a sustainable city has received support from the fund for studies and support for the private sector (FASEP), operated by the French Ministry of the Economy, Finance and Industry, which contributes to public infrastructure projects in developing countries.

Helping Mandalay to become a sustainable city

Faced with strong demographic growth and a rise in tourism, Mandalay, the second-largest city in Myanmar with 1.25 million inhabitants, launched its "Mandalay Green City Development Plan". In October 2014, the city council chose SUEZ environnement to support the project by providing technical assistance to the authority in charge of the city's urban services. The goal of this partnership is to conduct feasibility and optimisation studies, and to propose solutions that will turn Mandalay into a "smart city". The project covers a multitude of subjects, from access to water, waste management and the development of urban transport, to the energy efficiency or the environment performance of the city's departments. For the Group, this flagship project is in keeping with its ambition to use its multi-disciplinary know-how, so that emerging cities and territories succeed in reconciling growth with the sustainable management of resources.

Aerial view of Yangzhou, China

the plant in Yangzhou was designed to increase its capacity from 300 to 500 tons per day in order to keep pace with the economic and urban growth of the city over the next 30 years.

Casablanca and Meknès opt for sustainable development

SUEZ environnement has been supporting the city of Casablanca and its 5 million inhabitants in the management of its public cleansing services since 2004. In May 2014, the Group's contract was renewed and extended. The Group has invested in new, modern and high-performance facilities in order to achieve the sovereign's ambitions to turn the country's economic capital into an influential centre, committed to sustainable development. 137 new geolocalised trucks that meet the Euro V environmental standards have been dedicated to the city's collection and cleansing activities. The city has also been equipped with new collection points to increase containerisation capacity and computerised tools that keep track of services and equipment. The contract also has a social dimension that provides for the training of 2,200 employees and the integration of rag men and waste collectors in our collection organisation.
In January 2014, SUEZ environnement was also appointed by the city of Meknès (650,000 inhabitants) to manage the city's household waste. This 20-year contract provides for the creation and operation of a waste disposal and reuse centre and the rehabilitation of a large open-air landfill site. Just like in Casablanca, this contract also has a social dimension that provides for the retraining of the staff working at the landfill site and the creation of a cooperative for almost 150 people to sort the raw waste and recover any materials that can be reused (plastic, metal, glass, cardboard, etc.).

330,000

The waste treatment centre in Meknès will be capable of processing up to 330,000 tons of household waste per year.

Yangzhou transforms purification sludge into kilowatt hours

China's twelfth 5-year plan for 2011 to 2015 set some ambitious environmental targets, including a 70% to 80% increase in the treatment of sludge from purification stations by 2015. With its Hong Kong-based partner NWS, SUEZ environnement is helping the city of Yangzhou to achieve this target. A plant has been built to decontaminate and stabilise biological sludge. The sludge comes from the neighbouring plants that treat the wastewater produced by the city's 4.5 million inhabitants and the industry in the region. Once the sludge has been dried, it is sent to a nearby electric power station, where it is reused to generate energy. Ultimately, the treatment capacity will reach 500 tons of sludge per day.

understanding in order to innovate

The in-depth understanding of scientific issues and the development of new solutions are necessary to better preserve our resources in the future. SUEZ environnement has joined forces with numerous partners to achieve this ambition. By way of example, in 2014, we acquired a stake in Evatherm, which specialises in the treatment of industrial water by evaporation and crystallisation. We also signed a 2-year collaborative contract with Deinove to design a new process for the production of bioethanol from household waste. In Bordeaux, France, we took part in a research programme to reduce the conurbation's ecological impact on the fragile ecosystem in the Gironde estuary.

Preserving the Gironde estuary

Deficit of oxygen in the water, collapse of fishing activity, contamination of fish fauna, serious pollution by metals... While the Gironde estuary was considered to be preserved for a long time, over the years the effects of different phenomena, including the demographic pressure of the Bordeaux conurbation and climate change, have brought about a serious decline. A vast research programme was conducted between 2010 and 2014 to support the Bordeaux city authorities in their efforts to improve the protection of the biodiversity and the ecosystems in this fragile natural environment. The "Etiage" programme (integrated study of the effects of upstream and local inputs on the Garonne estuary) brought together public and private players, including SUEZ environnement and its Bordeaux-based laboratory specialised in water-related issues. This significant research effort, structured around four doctoral thesis, analysed the factors that determine the biogeochemical quality of the Garonne river. The upstream and local inputs of macro and micropollutants (organic and metal) were examined, as was the influence of the physical-chemical conditions (presence of the silt plug, seasonal variations in temperature and flow, etc.). The results of the programme allowed a global action plan to be drawn up that aims to reduce the conurbation's footprint on the estuary, in particular by optimising the existing wastewater treatment facilities and their control.

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Decarbonatation

Previous page:
Aerial view of the Gironde estuary, France

"this investment in Evatherm illustrates SUEZ environnement's strategy to grow on the industrial market and its commitment to providing a best-in-class portfolio of solutions to industrial customers all around the world."

Improving the recycling of industrial water through innovation

The oil and gas, chemical, energy and mining industries are all faced with the two-edged challenge of rarefied resources and environmental protection. They must adopt innovative methods and processes that favour the recycling and recovery of derived products, the reuse of wastewater and the reduction of their water consumption.
In July 2014, SUEZ environnement acquired a stake in Evatherm, a Swiss engineering company specialised in evaporation and crystallisation technologies, to help these industries address these issues. These technologies are key stages in the elimination of salt from effluents and can reach water recycling rates in excess of 90%. The combination of Evatherm's expertise and SUEZ environnement's know-how in water treatment will allow us to propose new, high added-value applications to industry that will save water and achieve zero liquid discharge (ZLD).

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SUEZ environnement and Deinove sign a R&D partnership to turn organic urban waste into ethanol

Transforming urban waste into ethanol

Today, organic waste is reused mainly by composting and methanation. But the abundance of this source of carbon, its cost and its composition that is conducive to the growth of micro-organisms open the way to other applications. This is the reason why SUEZ environnement has teamed up with Deinove, a company operating in the cleantech sector, by entering a collaborative research and development contact. This 2-year partnership, signed in June 2014, aims to design a new process to transform waste into bioethanol thanks to the action of deinococcus type bacteria, which offer a high capacity to degrade all types of biomass.

1 kilo

We are able to produce 1 litre of biofuel from 1 kilo of plastic.

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