



sustainable development annual report 2007 - 2008

SUEZ ENVIRONNEMENT - sustainable development annual report 2007 - 2008



sustainable development annual report 2007

2008

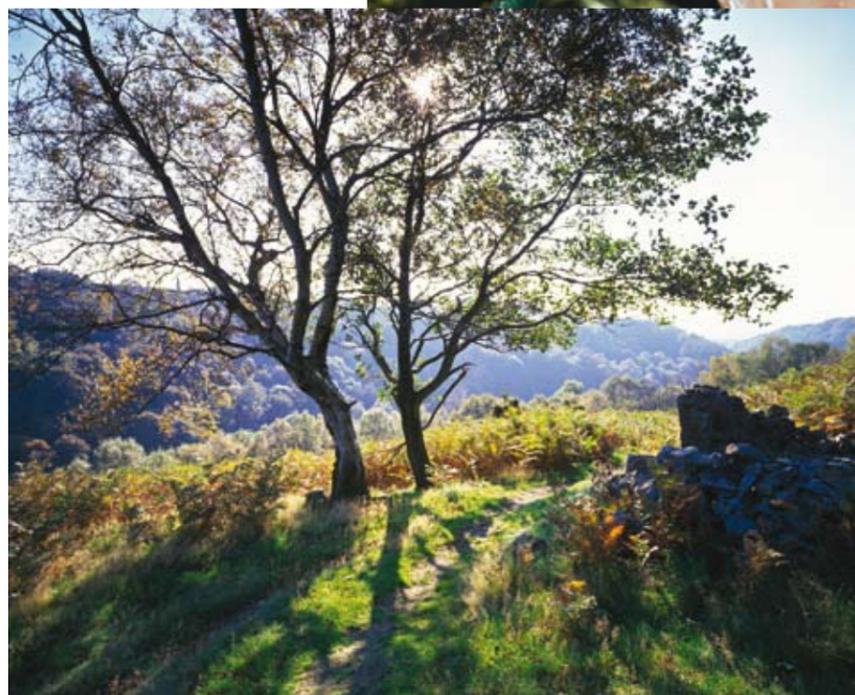
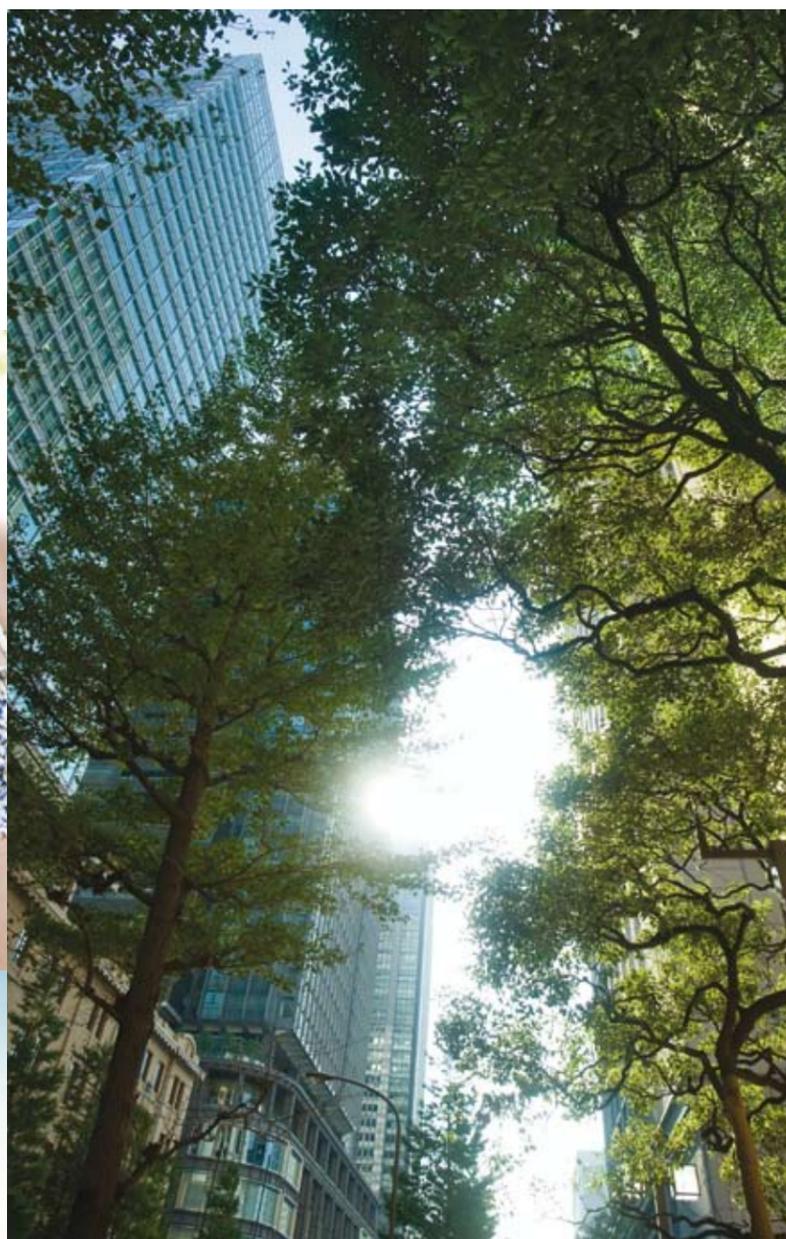
sustainable development annual report 2007 - 2008

Eurawasser
Sino French Water
Macao Water
AGBAR
United Water
Lyonnaise des Eaux
Ondeo Industrial Solutions
Degrémont
Ondeo Services Hungary
PALYJA
Acque Toscane
Nuove Acque
LYDEC
Aguakan
Bal Ondeo
Ondeo Czech Republic
SEAAL
Aquasystems

Safege
Terralys

SITA Deutschland
SITA Environmental Solutions
SITA Belgium
SITA Flanders
Swire SITA
Trashco
SITA Finland
SITA France
Novergie
Teris
Sita FD
Epalia
Geodeve
Fairtec
STAR
SITA El Beida
SITA Nederland
SITA Polska
SITA Czech Republic
SITA UK
SITA Slovensko
SITA Sverige









Gérard Mestrallet
Chairman

« **Shaping the world of tomorrow, together**

2008 marks a rebirth for our companies. Two exciting adventures are just beginning: the creation of GDF SUEZ, a world leader in energy, and the stock market listing of SUEZ ENVIRONNEMENT, a world leader in environmental activities.

Both these events involve meeting the challenges of the start of the new century: combating global warming, reducing greenhouse gases, issues of the safety of energy supplies, the protection of resources, particularly water and waste management, and sustainable development, as well as the need to invent real growth. Never have the destinies of energy, the environment and humanity been so closely linked.

At the heart of these challenges: GDF SUEZ Group's businesses and teams, who design and implement solutions and develop the most innovative technology for energy and the environment.

It's a daily commitment: shared progress at the service of our customers.

It's an ambition: to be a major player, so that our work is recognised as a genuine project for human society.

SUEZ ENVIRONNEMENT brings together all its assets to play a high profile role: the quality of its positioning, the strength of its model on growing markets, and the expertise of its management. Being a part of GDF SUEZ is an additional advantage, with many technical, commercial and managerial synergies.

SUEZ ENVIRONNEMENT benefits from unrivalled experience. We have always been pioneers in technical terms, but also on new markets and in the field of environmental and social responsibility. Our development model favours profitable growth and creation of sustainable value for our shareholders.

Together, let's write a new page in history.



« Working for humanity and the environment

2008 is an historic year for SUEZ ENVIRONNEMENT. The company is entering a new era; our business activities are taking on a new dimension.

SUEZ ENVIRONNEMENT has been listed on the stock market thus giving it increased visibility in the water and waste management business, both vital for sustainable human development. Our approach, based on acting locally and understanding local challenges, integrates the idea that natural resources are not infinite and that in order to continue to grow and develop we have to work for the planet, i.e. for man and his environment.

SUEZ ENVIRONNEMENT is benefiting from favourable development conditions as the need for environmental solutions is recognised as being ever more pressing. Today, SUEZ ENVIRONNEMENT is the only world player solely committed to the environment and whose business activities anticipate how the world will look tomorrow, by developing solutions for a circular economy.

SUEZ ENVIRONNEMENT has the technical, financial and human resources to seize these opportunities. Our strategy is to achieve profitable and sustainable growth in the water and waste sectors, based on an investment programme of €4.5 billion over the period 2008-2010 and a model that is primarily industrial. Our aim is to maintain the overall equilibrium of our business portfolio and our position on the water and waste markets.

SUEZ ENVIRONNEMENT is a company that is quite different from any other. We are already successfully meeting an ambitious challenge, which is to work efficiently to serve humanity and the environment. Our aim is simple: to use our expertise in the water and waste sectors to enable our partners to successfully meet their own environmental challenges.



Jean-Louis Chaussade
Chief Executive Officer



Executive Committee of SUEZ ENVIRONNEMENT

FROM LEFT TO RIGHT: Diane **d'Arras** Technology and Research Vice President - Jacques **Blein** Senior Executive Vice President Investments, Projects and Risks - Jean-Marc **Boursier** Senior Executive Vice President Finance - Isabelle **Kocher** Chief Executive Officer Lyonnaise des Eaux - Henry **Saint Bris** Senior Vice President Corporate Marketing - Dominique **Pin** Senior Executive Vice President - Institutional Relations, Strategy and Sustainable Development - Thierry **Mallet** Chief Executive Officer - Degrémont - Adriaan **Visser** Chief Executive Officer SITA News - Eric **Gheballi** Executive Vice President, International Development - Bertrand **Camus** Director of Internal Audit - Frédérique **Raoult** Senior Executive Vice President Communications - Tony **Harding** Vice Chairman and Chief Executive Officer - United Water - Per-Anders **Hjort** Chief Executive Officer of SITA UK - Chairman of the board in SITA Sweden - Erik **De Muyck** Senior Executive

Vice President in charge of China, India and Japan - Bernard **Guirking** Senior Executive Vice President Water Europe - Marie-Ange **Debon** Senior Executive Vice President General Secretary - Denys **Neymon** Senior Executive Vice President Human Resources - Christophe **Cros** Chief Operating Officer, Chief Executive Officer SITA France - Jean-Louis **Chaussade** Chief Executive Officer - SUEZ ENVIRONNEMENT.

ABSENT FROM THE PHOTOGRAPH: Jean-Marie **Gauvain** Vice President and General Counsel - Dominique **Mangin D'Ouince** Chief Executive Officer Central Europe, Mediterranean, Middle-East - Angel Simon **Grimaldos** Chief Executive Officer AGBAR Group.

Transparent and balanced corporate governance

With a diverse and stable shareholder structure, allied with governance rooted in best practices, SUEZ ENVIRONNEMENT* is ideally placed to continue in its aim to deliver value over the long-term.

A strong sustainable shareholder base

A shareholder pact has been designed to ensure shareholder stability, bringing together GDF SUEZ, which holds 35% of SUEZ ENVIRONNEMENT, and the five major SUEZ shareholders (Groupe Bruxelles Lambert, the Caisse des Dépôts et Consignations, Areva, CNP Assurances and Sofina) representing some 12% of capital.

This 3-year pact provides for (should a member wish to dispose of their shares) a right of pre-emption in favour of the other four major shareholder signatories, then in favour of GDF SUEZ, and finally to the advantage of SUEZ ENVIRONNEMENT which may, if necessary, buy back its own shares.

In line with the principle of international standards for good governance, the company Memorandum and Articles

of Association of SUEZ ENVIRONNEMENT stipulate one vote per share. There are double voting rights and no ceiling on voting rights.

A governing body of high-profile, experienced individuals

The SUEZ ENVIRONNEMENT governance is in line with the practices of good corporate governance and also the integration of SUEZ ENVIRONNEMENT into the GDF SUEZ Group. The Board of Directors is made up of four committees with responsibility for reporting on certain specific issues: the Strategic Committee, the Audit and Accounts Committee, the Ethics and Sustainable Development Committee, the Appointments and Remunerations Committee. It is comprised of professionals from the environment

sector and individual recognised for their varied expertise.

Four nationalities are represented. Subsequent to the mixed General Meeting of 15 July 2008, 18 Directors assist the SUEZ ENVIRONNEMENT Board of Directors:

- 9 representatives of GDF SUEZ, including the chairman who holds the casting vote where voting is tied;
- 4 independent directors, appointed jointly with the parties to the pact, on a proposal by the Chairman of the Board of Directors;
- 5 directors representing the other pact shareholders: GBL (2), Areva (1), CNP (1) and Sofina (1).

The Board of Directors will appoint the Chairman on the proposal of GDF SUEZ and the CEO on the proposal of the Chairman.

**This is the description of SUEZ ENVIRONNEMENT Company whose shares are listed on the stock market.*

SUEZ ENVIRONNEMENT Board of Directors

G rard Mestrallet

59 years old, French
Chairman and Chief Executive Officer of GDF SUEZ.

Jean-Louis Chaussade

56 years old, French
CEO of SUEZ ENVIRONNEMENT.

Jean-Fran ois Cirelli

49 years old, French
Vice-President and CEO of GDF SUEZ.

G rard Lamarche

46 years old, Belgian
Executive Vice-President and Chief Financial Officer of GDF SUEZ.

Alain Chaigneau

56 years old, French
Director of Strategy and Sustainable Development, GDF SUEZ.

Dirk Beeuwsaert

60 years old, Belgian
Assistant Director of the Europe & International Energy Division of GDF SUEZ.

Val rie Bernis

49 years old, French
Director of Communications and Financial Communications, GDF SUEZ.

J r me Tolot

56 years old, French
Director of the Energy Services Division, GDF SUEZ.

Angel Simon Grimaldos

50 years old, Spanish.
CEO of AGBAR
Chairman of CETaqua (Spain).

Amaury de S ze

62 years old, French
Chairman of the Supervisory Board of Carrefour and Vice-President of Power Corporation of Canada.

Olivier Pirotte

41 years old, Belgian
Director of Contributions and Investments, Groupe Bruxelles Lambert.

G rard Arbola

60 years old, French
Chief Executive Officer of Areva.

Gilles Benoist

61 years old, French
Chief Executive Officer, CNP Assurances.

Harold Bo l

43 years old, Belgian
Director of Union Financiere Bo l, Finasucro, SODAVI, Domanoy, United World Colleges and BMF Participation.

Nicolas Bazire

49 years old, French
Chief Executive Officer, Arnault SAS Group.

Lorenz d'Este

52 years old, Belgian
Managing Partner of E. Gutzwiller & Co
Advisor to the General Management of BNP Paribas.

Guillaume Pepy

50 years old, French
Chairman and CEO of the SNCF.

Ezra Suleiman

65 years old, US nationality
Professor of Political Science at Princeton University (United States),
Board Director of AXA, and AXA Finance.

Strategic Committee

7 members:
2 independents
3 representatives of GDF SUEZ
2 representatives of other shareholders and the pact

Ethics and Sustainable Development Committee

3 members:
2 independents
1 representative of other shareholders and the pact

Audit and Accounts Committee

5 members:
3 independents
1 representative of GDF SUEZ
1 representative of other shareholders and the pact

Appointments and Remunerations Committee

3 members:
2 independents
1 representative of other shareholders and the pact



Shanghai • Casablanca • Perth • Jakarta • Dijon • Barcelona • Algiers • Indianapolis • Newcastle

Budapest • Dubai • Hong Kong • Cannes • Anvers • Bordeaux • Rostock • Milan • Lyon • Bristol

Europe is the birthplace of SUEZ ENVIRONNEMENT'S historical development and remains its area of reference (81% of its turnover). Taking advantage of this solid foundation, SUEZ ENVIRONNEMENT is mobilising its expertise and skills to adapt them to the international stage. Shanghai, Casablanca, Perth, Jakarta, Barcelona, Algiers and more... So many major world cities have entrusted SUEZ ENVIRONNEMENT with the management of their water, wastewater treatment, their waste management and even with the construction of their main water treatment infrastructures.

One history, one ethic

SUEZ ENVIRONNEMENT is built on strong French foundations, with Lyonnaise des Eaux, SITA and Degrémont. From the outset, it was these companies that were entrusted with providing public services and took part in the rapid expansion of public-private partnerships in France by taking on the primary responsibilities for public services in water and waste management. Such industrial expertise in the public health and environment sectors is written into the company's genetic code. SUEZ ENVIRONNEMENT employees know that their task is essential to the lives of their fellow citizens, that they are providing a service to local communities and their local inhabitants.

To this spirit of public service, we can now add another ambition: to innovate for the good of all. A taste for innovation drove Ferdinand de Lesseps to create the Compagnie Universelle du Canal de Suez in 1858 to finance his plans. The Saint-Simonian beliefs of Ferdinand de Lesseps allied with his spirit of enterprise and energy left their mark on his time. Ferdinand de Lesseps *"has the genius of determination"* said Jules Verne, and Ernest Renan elected him to the French Academy stressing that he had marked out *"the location of the great battles of the future"*. A tradition of public service, faith in progress, and spirit of enterprise form the trademark of SUEZ ENVIRONNEMENT, and are embodied on a day-to-day basis in our work and projects. SUEZ ENVIRONNEMENT continues to lay claim to the humanist values it has championed since it was founded. It is aware of the nature of its role and its responsibility to society. This ethic is shared by all its employees throughout the world.

1869 1869 Inauguration of the **Suez Canal**

1880 Creation of **Société Lyonnaise des Eaux et de l'Éclairage**

1919 Creation of **SITA**

1971 Lyonnaise des Eaux takes shares in SITA and becomes a majority shareholder in **Degrémont**

1974 The Suez Financial Company becomes majority shareholder of **Lyonnaise des Eaux**

1991 Partnership with **General de Aguas de Barcelona (AGBAR)**, founded in 1867

1997 Lyonnaise des Eaux merges with the Suez Financial Company thus forming **SUEZ Lyonnaise des Eaux**

1999 Majority holding in **United Water (USA)**, founded in 1869

2000 SUEZ Lyonnaise des Eaux takes over 100% of **SITA**

2002 **SUEZ** business rationalised to water, waste and energy

2007 Overall ownership of **AGBAR** shares (SUEZ ENVIRONNEMENT and Caixa Holding)

2008 Stock market listing of **SUEZ ENVIRONNEMENT**

january 07

Corbeil-Essonnes, France Renewal of the public service contract for water for a period of 12 years (Lyonnaise des Eaux).

Montargis, France Renewal of the public service contract for water for a period of 10 years (Lyonnaise des Eaux).

Marseille, France Operating contract for the new installations at the Marseille sewage plant for 6 years (Degrémont).

february 07

New-York, USA Purchase of Aquarion New York (United Water).

Toulouse, France Contract with Toulouse-Blagnac airport for building and running the rainwater treatment plant for 18 years (Lyonnaise des Eaux).

New York • Indianapolis • Marseille • Toulouse • Le Havre • Valenciennes

march 07

United Arab Emirates Cooperation agreement with creation of a joint venture 50/50 with the Al Qudra Corporation to meet development opportunities in water and sanitation projects in the region (SUEZ ENVIRONNEMENT).

Renault SA, Cléon, France Renewal of the contract for managing all waste on the Cléon site (SITA Solving).

april 07

Spain Public tender proposal for all AGBAR shares (SUEZ ENVIRONNEMENT and Caixa Holding).

Perth, Australia Inauguration of the largest seawater desalination plant in the Southern hemisphere. Design and construction of the plant carried out by Degrémont. Operating accorded for 25 years.

Penrith, Australia Contract for collecting and treating waste for the town of Penrith to the west of Sydney (SITA Environmental Solutions).

Liverpool, Australia Contract for constructing and operating for 10 years the waste treatment plant for the city of Liverpool (SITA Environmental Solutions).

may 07

Le Havre, France Contract for building a new sewage plant (Degrémont).

United Kingdom Purchase of Easco, specialising in metal recycling (SITA UK).

june 07

United States Purchase of AOS Operating which supplies operating and maintenance services to local authorities in six US states (United Water).

Tarbes, France Creating the first subsidiary set up to dismantle end-of-life aircraft, christened Tarmac Aerosave (SITA France).

Spain Contract for the design, construction and operating of a seawater reverse osmosis desalination plant to supply drinking water to the towns of Campello and Mutxamel near Alicante (Degrémont).

Oran, Algeria Contract for managing water and sewage services for the 1.5 million inhabitants of Oran, for a period of five and a half years (AGBAR).

july august 07

Chennai, Inde Inauguration of one of the largest drinking water plants in India at Chennai (formerly Madras) to supply nearly 4 million inhabitants (Degrémont).

Montpellier, France Contract for operating for 10 years a bio-methanisation and green energy production plant able to treat 203,000 tonnes a year (Novergie).

Valenciennes, France Renewal of the domestic waste collection and sorting for 5 years (SITA France).

september 07

Merger of SUEZ and Gaz de France The boards of directors of Gaz de France and SUEZ approve the new terms for the merger, leading to concomitant distribution to SUEZ shareholders of 65% of the capital of SUEZ ENVIRONNEMENT.

Grasse, France Renewal of the public service contract for sanitation for 20 years (Lyonnaise des Eaux).

october 07

Valencia, Spain Acquisition of 33% of the capital of the Spanish company Aguas de Valencia SA (AVSA) in charge of managing waste for 3 million people in the Valencia region (SUEZ ENVIRONNEMENT).

Lyon • Valencia • Oran • Bombay • Grasse • Cairo • Dubai • Cincinnati

november 07

Indianapolis, USA Renewal for 9 years of the public-private partnership with the town of Indianapolis for collecting and treating wastewater (United Water).

Alès, France Contract for the design, construction and operating of a mechanical and biological sorting centre for domestic waste with the *Syndicat mixte* (public-private) in charge of managing waste for the region of Alès for a period of 22 years (SITA France).

december 07

Nîmes, France Contract for collecting and cleaning domestic waste for a period of 7 years (SITA France).

Greater Lyon, France Renewal and extension of the collection contract for domestic waste for 435,000 inhabitants in Greater Lyon for a period of 5 years (SITA France).

Carrières-sur-Seine, France Contract for operating the Energy Enhancement Waste Centre for a period of 15 years (Novergie).

Egypt Contract for the design, construction and operating of a sewage plant in Gabal El Asfar, to serve a father 1.8 million inhabitants (Degrémont).

Dubai Contract for the design, construction and operating for 10 years of a plant for reusing waste water from the real estate programme at Jumeirah Golf Estates (Degrémont).

United States, Canada Contracts in Cincinnati (USA) and Pickering (Canada) for supplying and installing incineration ovens for liquid bed sludge (Degrémont Technologies).

january 08

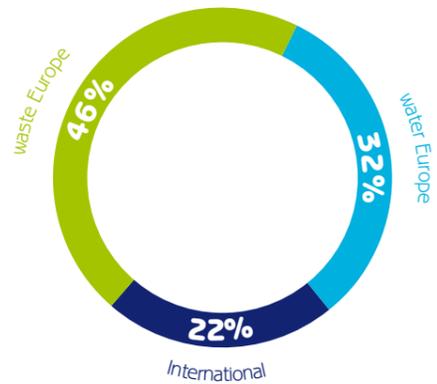
Greater Lyon, France Contract for the design, construction and operating of a new sewage plant at La Feyssine for 3 years (Degrémont).

Bombay, India Contract for the design, construction and operating of a drinking water production plant for 4 years (Degrémont).

Isle-sur-la-Sorgue, France Renewal of the public service contract for sanitation for a period of 15 years (Lyonnaise des Eaux).

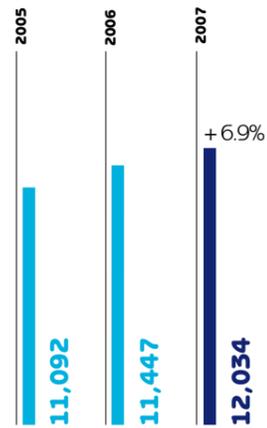
Carpentras, France Renewal of the public service contract for sanitation with the town for 12 years plus the construction of a new sewage plant (Lyonnaise des Eaux et Degrémont).

12,034 million euros
Turnover
 +6.9% gross growth on the stabilised perimeter



Turnover by activity

SUEZ ENVIRONNEMENT's business is based on two balanced activities: a solid and growing European base as well as an international platform geared towards profitable and growing markets.

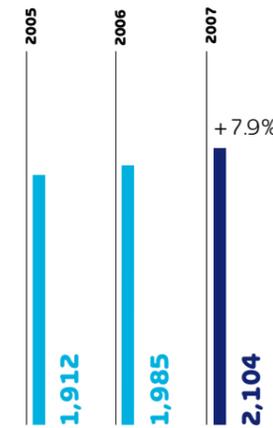


Consolidated turnover (in €M)

SUEZ ENVIRONNEMENT achieved an overall turnover of €12 billion in 2007, growth of 6.9% over 2006, on the stabilised perimeter*. On average, the increase in turnover was 7.1% over the last three years on the stabilised perimeter.

*The stabilised perimeter corresponds to the scope of longstanding combined accounts, adjusted for the disposals of Teris LLC, Northumbrian Water Group, SITA Canada, the Brazilian and Bolivian subsidiaries, and deconsolidation of the business in Argentina.

2,104 million euros
Gross Operating Profit (GOP)
 +7.9% gross growth on the stabilised perimeter

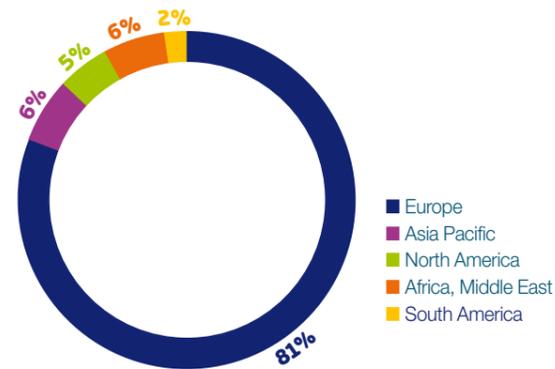


Gross Operating Profit (in €M)

Gross operating profit for 2007 amounts to 2.1 billion Euros, i.e. an increase of +7.9% compared to 2006. Since 2005, the company's operating profit has continuously improved.

Net debt / GOP
 2.56 times

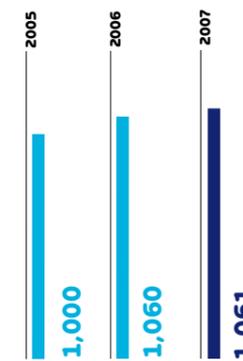
a policy of profitable sustainable growth • reconciling growth and protection of resources



Turnover by geographical area

The diversity of SUEZ ENVIRONNEMENT's international positions is the result of a selective strategy aimed at seizing opportunities for profitable growth.

a policy of profitable sustainable growth • reconciling growth and protection of resources



Current Operating Income (ROCE) (in €M)

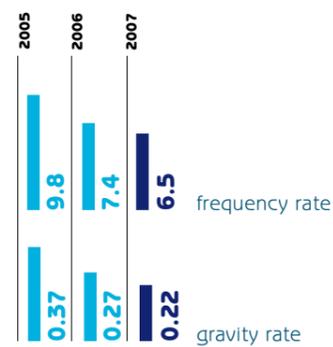
Since 2005, the current operating profit has increased by 6.7% on average per year to reach 1.060 billion Euros in 2007. This increase has been more substantial over the last 2 years for the Waste Europe and International segments.

ROCE
 9.7%

68 million inhabitants
supplied with drinking water

more than
10,000
water treatment plants
built in
70 countries

Accidents at work - Water



Water and wastewater treatment

1,729 drinking water production units
1,597 sites for treating wastewater
3.2 billion m³ water distributed
5 billion m³ drinking water produced
2.6 billion m³ wastewater treated
 Nearly **200,000 km** of drinking water distribution networks

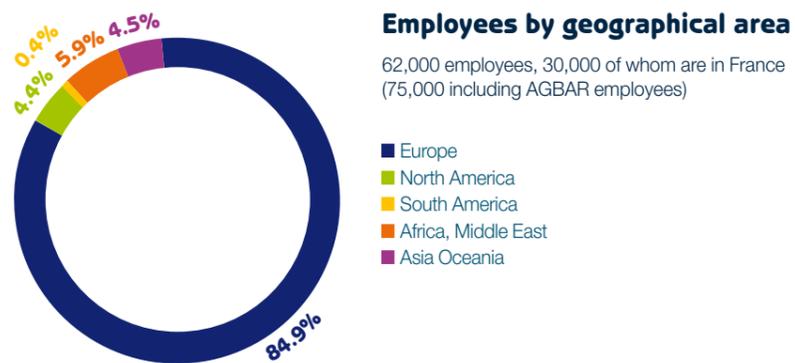
Waste collection and treatment

over **400,000 customers** in services and industry
42 millions tonnes of waste treated
1,024 waste treatment and operational sites including:
 252 sorting centres
 146 open dumps (118 for non-dangerous waste, 16 for inert waste, 12 for dangerous waste)
 116 composting platforms
 133 dangerous waste platforms
 48 non-dangerous waste incinerating units
 11 dangerous waste incinerating units
 9 care business treatment sites
 312 transfer stations

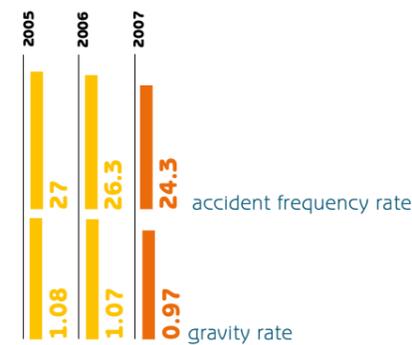
46 million inhabitants benefit from the SUEZ ENVIRONNEMENT waste management services

a policy of profitable sustainable growth • reconciling growth and protection of resources

a policy of profitable sustainable growth • reconciling growth and protection of resources



Accidents at work - Waste



44 million inhabitants benefit from the SUEZ ENVIRONNEMENT wastewater treatment services

Building a relationship of trust with all our

Listening, dialogue, and consideration of our stakeholders are essential to public-private partnerships, such as provided the original basis for SUEZ ENVIRONNEMENT's economic model: these principles all contribute to good management. Our stakeholders are all those who are taking part in any way in our development: employees, suppliers, local authorities, final customers and, of course, our shareholders.

Since being listed on the stock market, SUEZ ENVIRONNEMENT has sought to develop a close dialogue with its new shareholders (employee shareholders, individual shareholders and institutional investors). Our communication system is in line with the best practices of the largest listed companies; it aims to provide regular and accurate information as well as to involve shareholders in corporate life as much as possible. The company is committed to creating a relationship of trust with shareholders, and to perpetuating the SUEZ shareholding culture.

In a bid to improve our knowledge of individual shareholders, facilitate relations and to understand expectations, SUEZ ENVIRONNEMENT formed a Shareholders' Club, following in

the footsteps of the majority of large listed companies: membership of the Club is free. However, it is only open to those with a minimum holding of 25 shares (nominative and bearer shares). Club members automatically receive Shareholders Letters, the Practical Guide for Individual Shareholders, as well as other information and news items; they receive invitations to shareholders' meetings, invitations to take part in site visits and conferences (on SUEZ ENVIRONNEMENT activities, as well as on general water issues and the environment) and may take part in stock market training.

Finally, they may benefit from discounts on cultural and sports events organised all over France. Naturally, shareholders who are not members of the Club can receive

the various printed documents and attend the meetings organised in different towns in France and Belgium. Simply call the number provided or go to the website.

SUEZ ENVIRONNEMENT also organises information meetings for the wider financial community, for the business community and financial journalists when the annual and bi-annual results are published. The company also maintains ongoing contact with financial analysts and institutional investors around the world, particularly when holding road shows, to provide investors with more information on SUEZ ENVIRONNEMENT and its business development. All these opportunities are in strict compliance with the rules on transparency and equal access to information.

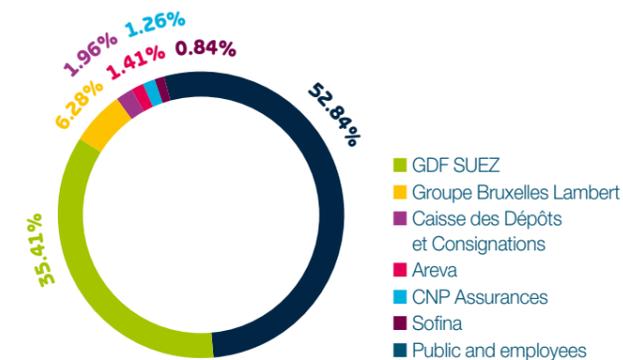
shareholders

Shares

On 22nd July 2008, the date SUEZ ENVIRONNEMENT was first listed on the stock market, the capital was divided into 489 699 060 shares with a nominal value of €4 each.
ISIN Code: FR 0010613471
Mnemonic: SEV (Euronext Paris) and SEVB (Euronext Brussels)
Where listed: Euronext Paris (compartment A) and Euronext Brussels
SRD eligibility: yes

Breakdown of capital on 07/22/2008

Shareholder stability of SUEZ ENVIRONNEMENT is ensured by a shareholder pact agreed for 5 years, allowing its strategy to be further consolidated. GDF SUEZ plays a dominant role in this pact, since it holds overall control of SUEZ ENVIRONNEMENT with 35.41% of the capital.



Calendar

- 28 August 2008:** First half-year 2008 profits.
- 21 November 2008:** Shareholders' meeting in Paris, Salon Actionaria (blue room), 11.45am-12.45pm.
- 3 December 2008:** Shareholders' meeting in Lyon, Centre congrès.
- 27 January 2009:** Shareholders' meeting in Brussels, Palais des Beaux-Arts.
- 7 April 2009:** Shareholders' meeting in Lille, Grand Palais.
- 3 June 2009:** Shareholders' meeting in Bordeaux, Palais des congrès.

For more information about the Club membership conditions, see web site www.suez-environnement.com / heading Finance or ask for the Club brochure on 0800 207 207.

Contacts

Financial communication

Éléonore de Larboust
com-fi@suez-env.com
+33 (0) 1 58 18 40 95

Shareholder's Relations

- In France:
Florent Gautron
florent.gautron@suez-env.com
N° Vert 0 800 207 207

- In Belgium:
Natascha Massez
actionnaires.belgique@suez-env.com
N° Vert 0 800 120 35

The first major world player entirely
dedicated to the environment business



p 32

Realistic growth
is ecological growth



p 42

Complete control of the water
and waste cycles



p 54

Assuming responsibilities



p 74

Our commitments in figures

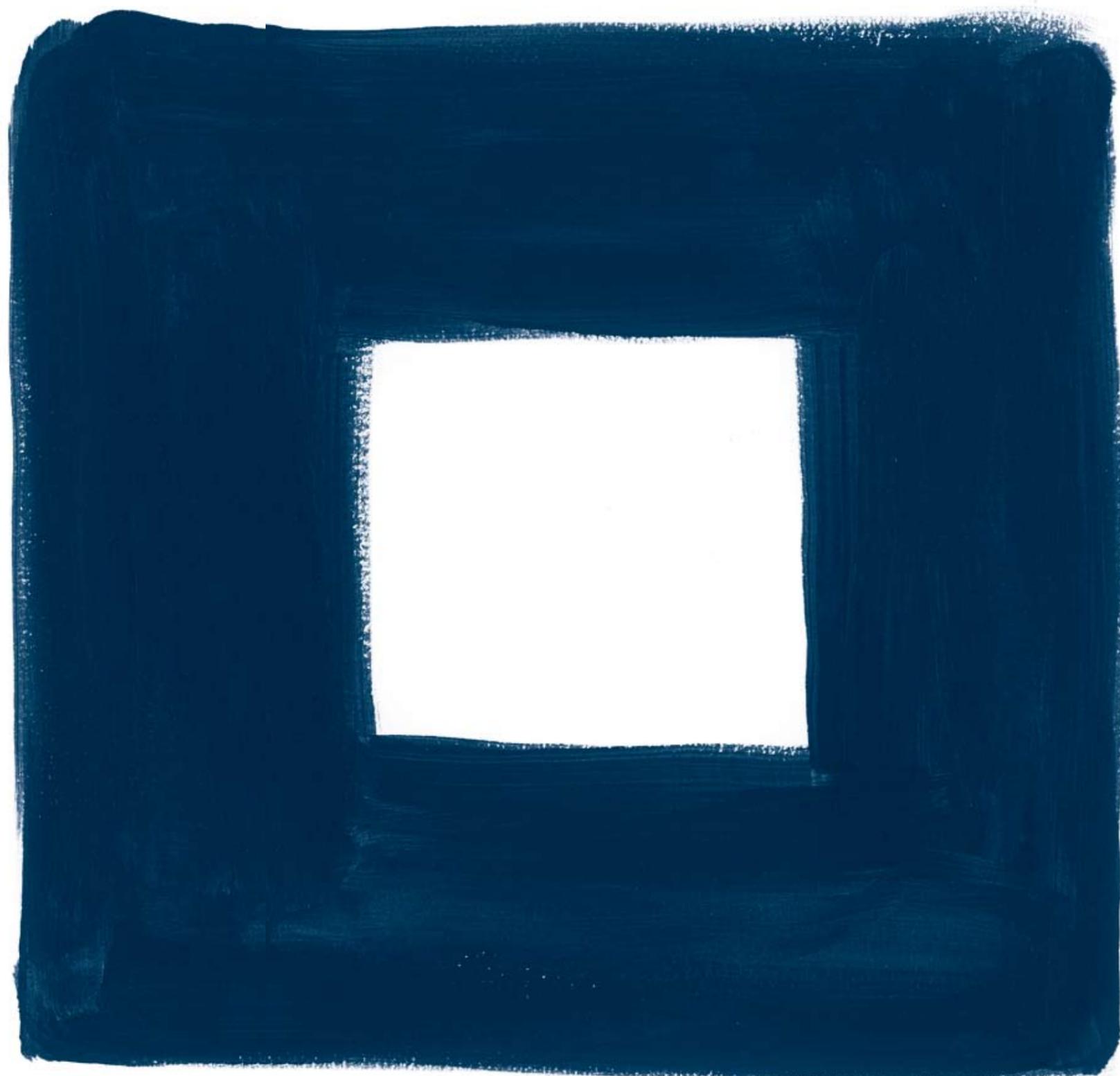


p 88

Results



p 96



**The first major world player entirely
dedicated to the environment business**

p 36 **The profitable, sustainable model of SUEZ ENVIRONNEMENT**

Galloping urbanisation, increasingly stringent environmental regulations, soaring raw materials markets and the absolute need to control CO₂ emissions, are all challenges for SUEZ ENVIRONNEMENT's businesses.



The **first major world player**
entirely dedicated to the **environment**
business

SUEZ ENVIRONNEMENT's work is entirely dedicated to the water and waste activities. Every day, the 62,000 men and women who work in the company are faced with a unique challenge: to create value while reconciling profitability and the protection of man and his environment.



According to demographic forecasts, the world's population is expected to reach 7.9 billion in 2025 and 9.3 billion in 2050.

much in the minority when compared with central and local authorities, private initiatives contribute innovation, technology, know-how, customer/consumer service and the economies of a scale necessary to support these developments. The SUEZ ENVIRONNEMENT business model is built around six key growth factors which enable it to be fully in tune with the attractive environment markets.

Six key factors for success

Our business model is based on expertise in the complete water and waste value chain.

In the water sector, our subsidiaries are present from the consulting stage and the modelling of water resources or networks, up to wastewater collection and treatment. They also provide design and construction services for water treatment plants, and the production and distribution of drinking water to public authorities and industries.

In the waste sector, value chain expertise allows the right kind of management, from collection to disposal of ultimate waste, through treatment and sorting, while encouraging and promoting recovery and recycling with the aim of converting waste into secondary raw materials. This expertise in the water and waste cycles enables SUEZ ENVIRONNEMENT to be the forerunner when it comes to environmental solutions, and offer other customers the benefits of energy recovered from waste disposal or treatment sludges, or even the creation of innovative recycling solutions (end-of-life vehicles, electrical and electronic equipment waste, etc.).

Galloping urbanisation, increasingly stringent environmental regulations, soaring raw materials markets and the absolute need to control CO₂ emissions, are all challenges facing SUEZ ENVIRONNEMENT'S businesses.

The profitable, sustainable model of SUEZ ENVIRONNEMENT

Changes to the water and waste activities have always been closely linked to changes in society, from "direct to sewer" and "waste dumping", to the most sophisticated wastewater treatment techniques and selective waste sorting. SUEZ ENVIRONNEMENT and its subsidiaries have been active in environmental fields for over 140 years. But, in these challenging times, their expertise has become particularly

valuable, with environmental protection at the heart of political agendas on all continents. The environment has without doubt assumed a greater place in the world's economies, to such an extent that countries enjoying booming growth, such as China, have understood the need to base their development on a true environmental policy. China's 10th five-year plan (2001-2005) therefore devoted 1.5% of GDP to environmental protection.



AGBAR tower, Barcelona.

However, the environment is no longer the preserve of a few like-minded States, and has become a global economic issue. Henceforth, companies, local authorities and individual citizens are all becoming aware of the importance of changing their habits and attitudes in order to preserve natural resources and protect the environment. Against this backdrop, resorting to the private sector for managing water and waste infrastructures is becoming a wise option, and one which involves SUEZ ENVIRONNEMENT, in order to seize the growth opportunities linked to the development of an economy that has resolved to work for humankind and the environment. Although still very

SUEZ ENVIRONNEMENT also offers its customers an evolving integrated service through environmental R&D structures that are unique in the world.

The combination of water and waste activities generates significant synergy,

and gives SUEZ ENVIRONNEMENT an incomparable competitive edge. In France and in Europe in general, SUEZ ENVIRONNEMENT is developing commercial synergy through a commercial division that is common to its various business sectors. Outside Europe, a number of subsidiaries manage both sectors, enabling combined commercial savings to be made, for example for the SCIP (see box). The water and waste commercial teams are in contact with the same customers, public authorities and industries, which are faced with the same environmental protection concerns. SUEZ ENVIRONNEMENT is also developing technologies combining its expertise in both sectors. Its subsidiary Terralys for example, offers skills in the fields of composting, methane fermentation, heat treatment of sludges and waste, and so on. Experience and knowledge sharing networks have also been set up. They are built around common research programmes concerning our two business sectors: treatment of odours, energy recovery, dryer/incinerator technologies, etc. SUEZ ENVIRONNEMENT has also set up support functions which can share central and management costs in the following areas: finance, strategy, human resources, IT, communication and project analysis. Finally, research and innovation programmes are run across the group by the Activities and Research Division. Every year a conference brings together the water and waste research players so that they can discuss their experiences and share their good practices.

SUEZ ENVIRONNEMENT relies on long-term partnerships with local players to strengthen its development.

Public-private partnerships are the keystone of our business model: in France, SUEZ ENVIRONNEMENT thus took part in the very first delegated public service contracts. Several forms of partnership can be envisaged: from total management of the service to simple technical assistance or transfer of know-how. Each local authority has specific needs and SUEZ ENVIRONNEMENT adapts its response to local requirements. Public Private Partnerships (PPP) provide an appropriate response to specific local environmental issues; one such example is the PPP signed between Lyonnaise des Eaux and Toulouse-Blagnac airport to install a storm water treatment facility and, in time, to expand its waterproof area by 140 hectares. SUEZ ENVIRONNEMENT is above all an operator of assets relying on partnerships in order to strengthen its development. Partnerships with local companies and investors are a way of offering the most appropriate response to the needs in each location. In Spain, for example, the growing participation of SUEZ ENVIRONNEMENT in the AGBAR company was made possible by the financial partnership with La Caixa bank. SUEZ ENVIRONNEMENT also relies on operational partnerships, as in China with Swire and New World, for the creation of joint ventures. SUEZ ENVIRONNEMENT in fact derives numerous benefits from this partnership strategy: a local network of relations to help tailor the response to the surrounding culture and encourage faster growth; the possibility of sharing the initial risks

and investments; the ability to penetrate certain markets and carve out market share faster, and the construction of a sustainable, long-term presence.

The success of our strategy is based on the excellence of our industrial project, combined with a strong culture of innovation.

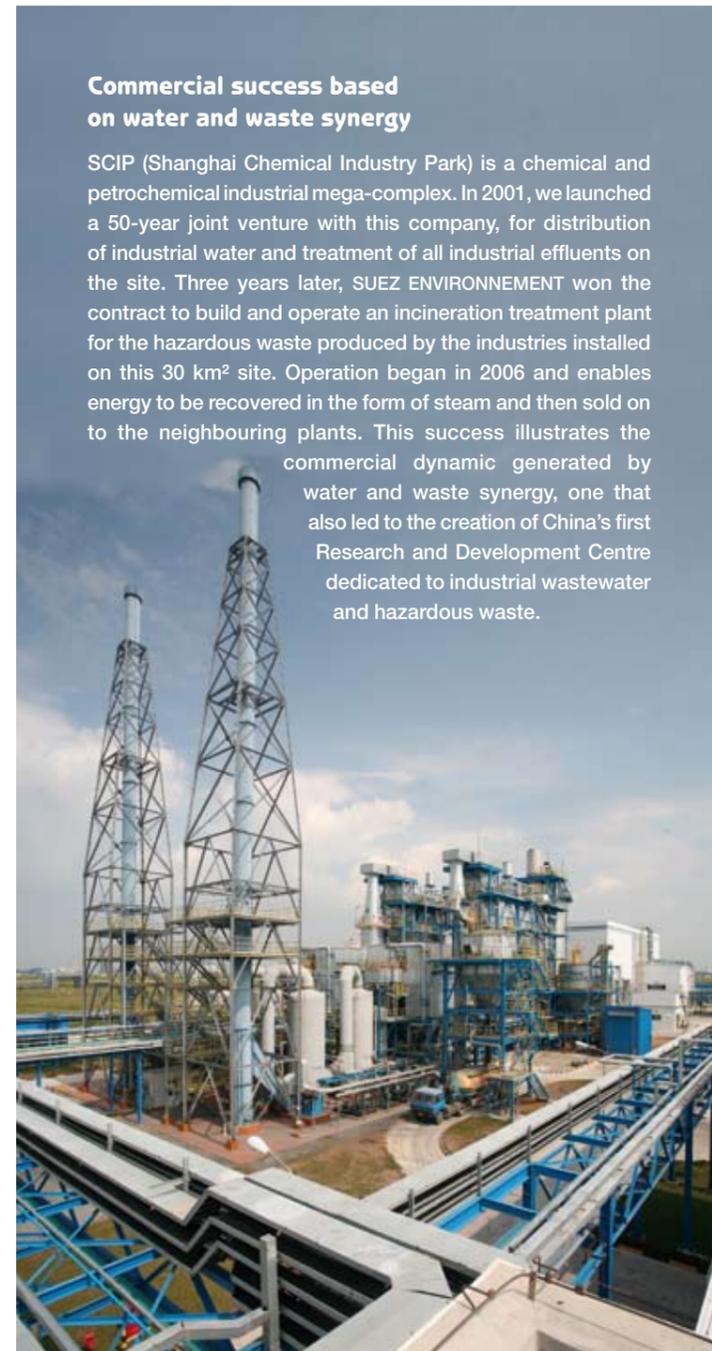
SUEZ ENVIRONNEMENT has a large and global technical and scientific network, consisting of expertise centres and research laboratories. Whilst representing an essential advantage for increasing the company's research potential, this is also a means of acquiring key methods and technologies for the services of tomorrow. SUEZ ENVIRONNEMENT is aware that technological leadership is also a key factor in standing out from the competition, and in 2007 invested 65 million euros in research and development. The financial efforts made over many years have enabled SUEZ ENVIRONNEMENT to achieve a large number of commercial successes, such as in 1985 with the first seawater desalination project in Riyadh (Saudi Arabia) or in 2005, with the discovery of new network leak detection processes. In the field of waste treatment, the first aircraft dismantling projects began in 2007. Innovation also contributes to industrial excellence, for example with the creation of new waste collection route planning tools, using on-board computers, giving SITA a very real competitive edge.

Sustainable development is at the centre of SUEZ ENVIRONNEMENT'S activities and practices.

The concept of sustainable development, which appeared a number of years ago, is enjoying unprecedented growth in developed countries. Many ecological, economic, demographic or other events have obliged companies to look again at their behaviour and their practices and think about ways of producing differently.

Commercial success based on water and waste synergy

SCIP (Shanghai Chemical Industry Park) is a chemical and petrochemical industrial mega-complex. In 2001, we launched a 50-year joint venture with this company, for distribution of industrial water and treatment of all industrial effluents on the site. Three years later, SUEZ ENVIRONNEMENT won the contract to build and operate an incineration treatment plant for the hazardous waste produced by the industries installed on this 30 km² site. Operation began in 2006 and enables energy to be recovered in the form of steam and then sold on to the neighbouring plants. This success illustrates the commercial dynamic generated by water and waste synergy, one that also led to the creation of China's first Research and Development Centre dedicated to industrial wastewater and hazardous waste.



Aware of its responsibility and the role it could play in this new global movement, SUEZ ENVIRONNEMENT has set itself 4 priorities, comprising 12 commitments: - to build our development with all our stakeholders; - to preserve resources and promote a circular economy; - to innovate in order to face the environmental challenges; - to make our personnel players in sustainable development. In 2006, SUEZ ENVIRONNEMENT defined a roadmap setting precise and measurable objectives to be reached by 2011.

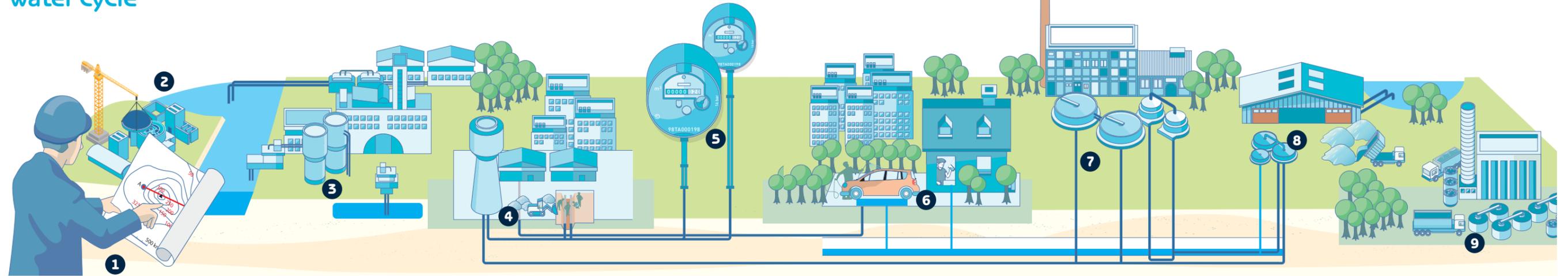
The factors in our success could not be considered complete without the commitment and expertise of our staff.

Our Human Resources policy therefore aims for excellence in this field. SUEZ ENVIRONNEMENT's main driving force is the motivation of its personnel, its 62,000 staff worldwide, including 300 experts responsible for training and strengthening the local teams when new contracts are launched. Because our Activities are essentially local, we attach the greatest importance to multicultural diversity and compliance with local specificities, which are at the very core of the SUEZ ENVIRONNEMENT human resources management system. Furthermore, in order to enhance and enrich the skills of its staff, SUEZ ENVIRONNEMENT has backed up its policy with the formation of technical committees, annual conferences and know-how exchange networks between entities worldwide. The actions we have developed in this way, but also the way in which we manage our human resources, constitute the bedrock of our corporate culture and its strength.

SUEZ ENVIRONNEMENT provides complete control

of the water and waste cycles

water cycle



1 Studies, master plans and project management
SUEZ ENVIRONNEMENT engineers provide technical solutions to distribute, treat, and remove pollutants from water resources.

2 Engineering and construction of water treatment plans
New units, extensions or rehabilitating, SUEZ ENVIRONNEMENT designs and builds all types of water treatment plants, for the production of drinking water, desalination of sea water, wastewater treatment, etc.

3 Withdrawing water from the natural environment
SUEZ ENVIRONNEMENT withdraws water from the natural environment and treats it so that it is safe for consumption. Sometimes water is withdrawn from the sea, then desalinated before being transformed into drinking water.

4 Storage and distribution
The drinking water is stored and then distributed through a network of mains pipes which requires continual monitoring and maintenance.

5 Consumption
The drinking water routed through the mains is tallied and invoiced to the various customers by means of meters and readers in conjunction with the customer services.

6 Domestic uses of water
SUEZ ENVIRONNEMENT recovers wastewater for local authorities, before routing it to wastewater treatment plants.

7 Industrial uses of water
A great deal of water is used for industrial processes. The water is recovered and any pollutants are removed before it is released back into the collection drains for municipal wastewater.

8 Wastewater treatment
Wastewater is routed to wastewater treatment plants. The water can then be released back into the natural environment or re-used for watering, irrigation, or industrial processes.

9 Recovery of sewage sludge
The sludge produced by wastewater treatment is recovered and treated for use as compost in agriculture and gardening.

waste cycle



1 Street cleaning and waste collection
SUEZ ENVIRONNEMENT ensures the upkeep of public areas (street sweeping, poster removal, beach cleaning, snow clearance) and collects waste of all types (domestic and industrial, common or hazardous).

2 Sorting-Recycling
Waste produced by selective sorting is conditioned according to its re-use as secondary raw materials.

3 Incineration and Energy-from-waste recovery
Incineration plants transform unsorted refuse from municipal and industrial waste collection into energy. The fumes are treated and the blast-furnace slag recovered.

4 Hazardous waste treatment
Hazardous industrial and hospital waste is incinerated in the furnaces of cement factories and recovered as energy-from-waste or stabilized and confined.

5 Landfilling and Energy-from-waste recovery
In certain cases, unsorted waste is buried in lined cells specially designed for this purpose. The stored waste decomposes and produces biogas which is recovered and recovered in the form of heat or electricity. Any water polluted by waste is recovered and treated.

6 Composting
Green waste and the fermentable fraction of domestic waste are transformed into compost by a technologically assisted natural process. The compost is then used as manure in agriculture and gardening.

7 Soil remediation
Soil contaminated by the former activities of old industrial plants must be treated as hazardous waste. The pollutants are removed from the soil and groundwater, the factories are dismantled, and the sites rehabilitated. Former industrial wasteland can then be used for new activities.

8 Treatment and advanced recovery of technological waste
SUEZ ENVIRONNEMENT ensures the treatment, dismantling and advanced recovery of complex waste such as WEEE, and end-of-life vehicles, aircraft, and ships.



Realistic growth is ecological growth

p 46 Reconciling growth and protection of resources

This ecological emergency could actually be avoided and another form of growth is possible, one that will enable living conditions to be improved planet-wide, while reducing man's environmental impact.

p 50 Realistic solutions for improved productivity of resources

The arrival of environmental awareness in western societies has led to a major change in behaviour, which is altering practices in the water and waste services professions.



Realistic growth is ecological growth

Human development has an impact on the planet. From the earliest days, human societies have caused significant environmental changes.

But today, the consequences of human activity are becoming critical because the stresses man is exerting on the planet are no longer localised, but have become global.

If humanity is to continue to progress and develop, it must change its attitude towards the Earth and must reconcile growth with preservation of the environment.

SUEZ ENVIRONNEMENT's activities lie at the very heart of this challenge.

Reconciling growth and protection of resources

This ecological emergency could actually be avoided and another form of growth is possible, one that will enable living conditions to be improved planet-wide, while reducing man's environmental impact.

Environmental issues, which are assuming ever-greater importance, are now a permanent feature of media, political and economic agendas. The ever-greater attention given to these concerns, including in the developing countries, bears witness to the growing understanding of the importance of the issues involved, because action must be taken now if ecosystems, ways of life and the overall economy of our planet are to be preserved.

Extreme pressure on traditional economy

Of the major environmental issues, one directly concerns how the economy currently works. This is the growing

pressure exerted by man on natural resources. Demographic expansion, combined with a constant rise in production since the beginning of the industrial revolution, has led to over-exploitation of the natural resources that lie at the heart of all production processes. They are becoming increasingly rare and costly and we run the risk of polluting more and more in order to find and exploit new sources of these materials. Our current economic model is based on unlimited use of natural resources as if they were infinite. This wastage today exists at all levels along the production/consumption chain and the system is now beginning to show signs of breaking down. Industry, with its extremely low resource productivity (only 7% of the resources used can be found in the finished products¹), is clearly the world's leading polluter. Paradoxically, at a time when economic development depends on industrialisation, the challenge now is to meet economic demands while at the same time reducing the consumption of materials and energy (today 99% of the materials contained in goods sold become waste after six weeks²). It we wish to avoid endangering our environment, and thus our lives, the very nature of growth must change: ecological, eco-responsible growth must gradually be put into place. The key element in this new growth is the definition

of a new relationship between humanity and natural resources.

Towards a new resource economy

In the many economic growth models, productivity gains in work, capital or even innovation are considered to be the driving forces behind the growth of wealth but for a very long time, the productivity of the natural resources utilised in the production processes was ignored. There is thus a considerable reserve of growth to be gained from improving this productivity, which has risen only very little in the past 50 years. The example of energy alone is an illustration of the savings and wealth to be gained from optimising the use of a resource. If nothing had been set in motion to make

¹ Dominique Bourg and Nicolas Buclet "L'économie de fonctionnalité" *Futuribles*, November 2005, p. 28.

² Allenby Braden "The greening of industrial Ecosystem" national Academy of Engineering, 1994.



Only 7% of resources used are found in the final product.



In 2006, SUEZ ENVIRONNEMENT opened its first vehicle-processing site at Romorantin.

« Professor Dominique Bourg

Director of the Institute of Land Use Policies and Human Environment, University of Lausanne

How would you diagnose the current raw materials crisis? Will it blow over or does it herald a more widespread "resource crisis"?

Without any doubt, a crisis is looming. Quite simply because it really looks like we're in the process of reaching the planet's limits in all respects. We have built up greenhouse gases in the atmosphere to the extent that we are dangerously and irrevocably curtailing a climatic period that was highly favourable to us. We are probably very close to peak oil, that will be followed by gas and then coal although with a slightly

longer time frame. The underlying geological logic – an extraction peak followed by an annual depletion rate of 2 to 8% - also applies to mineral resources. For many precious metals, reserves at constant consumption range from 10 to 50 years. We are also close to worldwide agricultural production capacity limits, given the foreseeable demographic growth, the continued increase in artificial products in the soil, soil degradation (inputs and compaction), water shortages and the upward trend in the food chain in order to feed the middle classes in the emerging countries. Species erosion is running out of control and by the end of the century the disappearance of 30 to 60% of all living species is a very real fear;

hence major ecological services are increasingly fragile or may even collapse (supply, regulation and culture). The picture is bleak and the notion of systemic risk, put forward forty years ago in the Club of Rome/Meadows report (1972), is looking less and less absurd.

A number of economic models are beginning to become popular, such as the circular economy or the functionality economy. Are they realistic and applicable on a large scale?

If we look at the curves representing our activities, their substrate in terms of flows of materials and energy and their consequences in terms of various disruptions, then things could not be clearer: they are all exponential. We could continue to hope for the best, but that

would be increasingly hazardous. The diagnosis and prognosis are equally clear: we must inverse these curves. The problem is to do it without destroying the social machinery. The circular economy, which is the strategy of the 3 "Rs" (reduce, reuse - remanufacture, recycle) and the functionality economy (opt for sale of use of the goods rather than sale of the goods themselves, for environmental reasons), are strategies for dematerialising the substrate of economic activities, that should help us out of this dead-end. The functionality economy enables financial flows to be maintained, while maximising the period of material support for a given service. This would be one of the rare means of enabling certain economic activities to continue in periods of shortages.

Recycling wastewater in a large housing project in Dubai

In many regions of the world, the development of infrastructures is hindered by the nagging issue of the shortage of available water. Given the stakes involved, desalination offers access to an infinite reserve of water, oceans, while reuse allows improved freshwater productivity through recycling. Its expertise in this second technique enabled SUEZ ENVIRONNEMENT, through its subsidiary Degrémont – a world specialist in water treatment – to win the Palm Water contract for the design, construction and operation for 10 years of the wastewater recycling plant for the Jumeirah Golf Estates real estate programme. This housing project, located 22km south west of the Dubai business centre, is a truly new town, combining residential areas and golf courses. SUEZ ENVIRONNEMENT was able to adapt its bid to create a plant capable of treating 220,000 m³/day of wastewater, for an eventual population estimated at 900,000. The plant is notably equipped with the world's largest membrane biological reactor and innovative sewage sludge treatment technology. The treated water will be of such high quality that it will be usable for sprinkling the new town's golf courses and green spaces. Reuse of the Palm wastewater will also minimise freshwater intake while protecting the environment, as pollution will be completely removed from the water.



savings, twice as much energy would be needed today for the same level of production. To increase the productivity of natural resources, the market cannot act on its own: governments and international institutions have to implement ambitious regulatory incentives. Even if regulation is one of the key points in the transition towards a new resource economy, the economic stakeholders also have an active role to play, through anticipation and innovation, both in terms of their technologies and processes and their economic behaviour. The "dematerialisation of production" now offers an answer that can reconcile production growth with environmental protection. To dematerialise the economy, there are two solutions: the circular economy (or industrial ecology) and the functionality economy (or service economy). The circular economy is the opposite of our current "linear" economy which depletes resources and discards the waste, with no control over the volumes or the resulting release of pollutants. On the contrary, it promotes the control of each flow so that the process on the whole mirrors the quasi-cyclical working of ecosystems. The principle of the functionality economy is to replace the sale of a product by the sale of a service in order to break the link between increased turnover and an increase in the underlying flows. These two ways of dematerialising the economy are complementary: the first more particularly addresses the need to reduce raw materials wastage during production, while the second notably

deals with the problem of the increased volume of waste resulting from consumption.

A strategic role for SUEZ ENVIRONNEMENT

SUEZ ENVIRONNEMENT has a key role to play in this process of change. In order to build a new resource economy, innovative solutions for natural resource management are needed. The water and waste activities are directly concerned by these issues.

In the waste sector, the subsidiaries of SUEZ ENVIRONNEMENT are setting up recycling facilities that are increasingly specialised and tailored to the "waste" they collect. In the water sector, SUEZ ENVIRONNEMENT is proposing and promoting technological solutions limiting waste or enabling wastewater to be reused. A company such as SUEZ ENVIRONNEMENT finds itself with a key role to play in the new resource economy today being created.

Major ecological challenges

There is no disputing the urgency and globalisation of the ecological challenges faced. The impact of human activity is constantly intensifying. If they are to be resolved, environmental issues require mobilisation on the part of all members of society and the deployment of appropriate environmental know-how and technologies.

1 Climate change

The latest report from the Intergovernmental Panel on Climate Change (IPCC) confirmed humanity's impact on recent climatic changes. The main consequences include:

- rising temperatures with the resulting melting of glaciers and rising sea levels;
- probable increased frequency and severity of extreme phenomena: flooding, drought, and tropical storms.

The forecasts stress that climate change and its effects are accelerating.

2 Soil protection

The main threats to soil are: erosion, reduction in organic content, contamination, impermeabilisation, settling, reduction in biological

diversity, salt infiltration, along with flooding and landslides. All these processes are caused or aggravated by human activity and some have worsened in recent decades. The economic consequences and the cost of remediating the threats to which soils are exposed, are extremely significant.

3 Biodiversity

Biodiversity decline and the subsequent environmental changes are accelerating. The main factors behind these phenomena are habitat transformation, over-exploitation of natural resources and pollution and even the proliferation of invasive foreign species. Recent climate changes further compound these impacts

in certain regions. The decline of biodiversity creates problems for food security and health, soil quality, vulnerability to natural disasters.

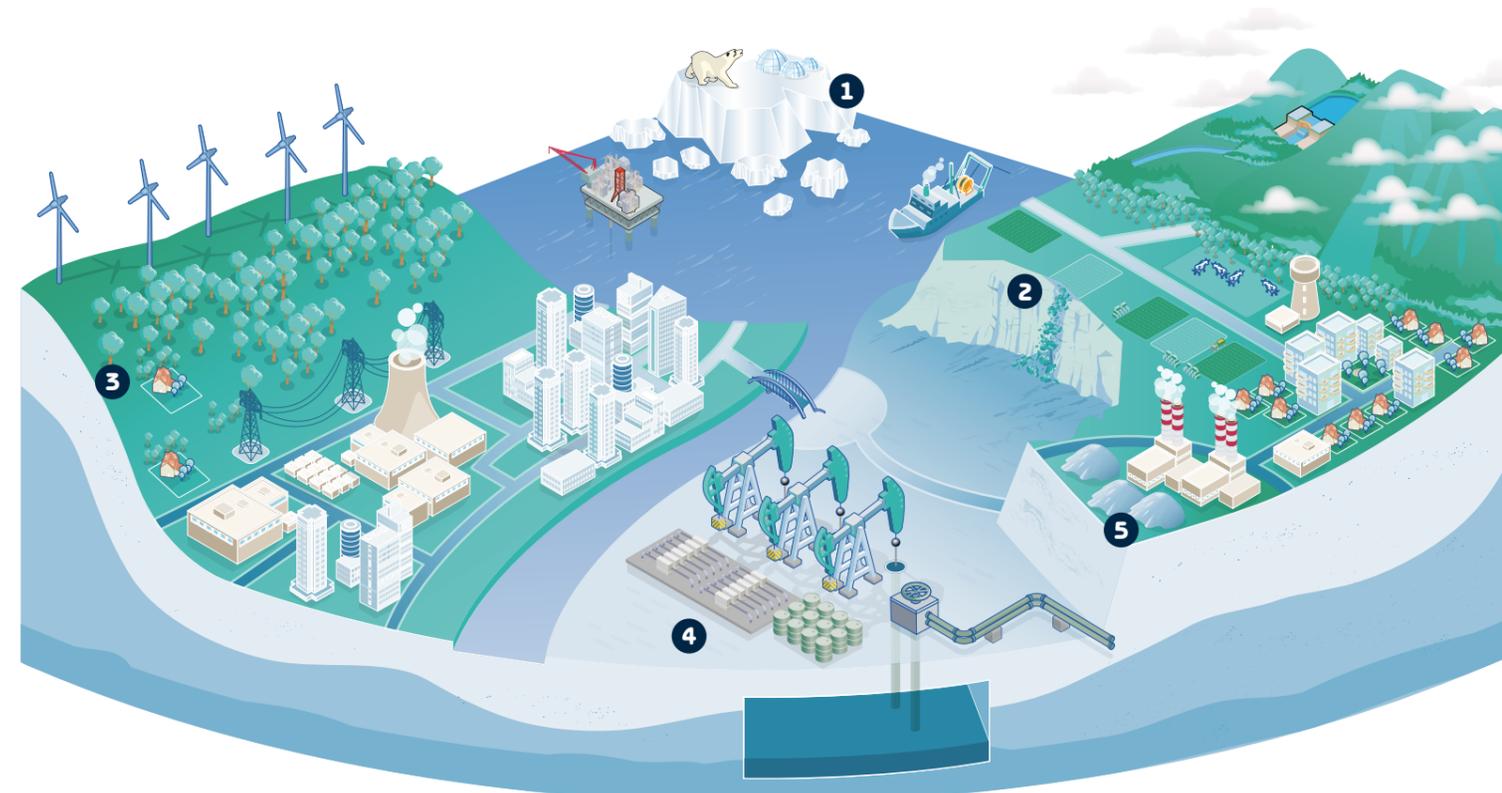
4 Increasingly rare resources

The two-fold economic and demographic growth of our planet is exerting considerable pressure on all natural resources. Never have raw materials been the subject of such tension. In January 2008, oil reached 100 dollars a barrel for the first time, after regular price rises in recent years. Since then, it has continued to spiral upwards and some experts predict a price of 200 dollars a barrel by the end of 2009. Raw material prices also

soared in 2007, driven by the demand from developing and industrialised nations alike. The planet is also experiencing localised hydric stress situations, when the demand for water exceeds the available quantity for a certain period, or when use is limited by the poor quality of the water available.

5 A rising tide of waste

Rising living standards, smaller households and the success of pre-packaged, ready-to-eat food products have led to a significant rise in the volume of waste produced. In France in 1960, each inhabitant produced about 200 kg of waste per year. Today, this figure stands at more than 460 kg.



Realistic solutions for improved productivity of resources

The arrival of environmental awareness in western societies has led to a major change in behaviour, which is altering practices in the water and waste services professions.

Traditionally, water and waste activities were based primarily on management (processing of waste, distribution of water, etc.) for which remuneration was based on the product (quantity of waste processed, quantity of water distributed, etc.). Today's need to reconcile profitability and ecology means that the water and waste activities are asked to welcome the principle of a service approach (recycling of waste, reuse of wastewater, etc), for which remuneration is justified by the provision of solutions (method for reuse of waste, water treatment technology, and so on). Technical skills, transfer of know-how and partnerships then become the keys to the new growth models for private operators.

Optimised water resource management

Improved water management is an issue which needs to be tackled differently in each region. It can range from the fight against drought, improved preservation of water resources against pollution, or rationalised agricultural and industrial use. Agriculture consumes about 70% of the fresh water available on the planet. This is primarily due to irrigated agriculture, which occupies about 17% of cultivated land but accounts for 40% of agricultural production worldwide (the rest being

accounted for by rain-fed agriculture). Irrigated land area has practically doubled around the world since 1960. For its part, industry is responsible for about 20% of the world's freshwater consumption and has risen considerably since the 1950s. Water is in fact essential for many industrial processes and is used to cool, wash and lubricate. 80 litres of water are needed to produce 1 kg of steel, 1,250 litres are needed for 1 kg of aluminium and 8,600 litres to produce a six-inch memory chip. Finally, domestic consumption (for drinking, cooking, personal hygiene and so on), represents merely 8 to 10% of the planet's total consumption, but remains the priority because it concerns human health and requires the most stringent quality standards. We must therefore take a new look at our relationship with natural resources, through existing or future technological solutions, but also through more efficient management solutions. SUEZ ENVIRONNEMENT has initiated technologies and complete service packages designed to optimise the natural water cycle and, on a case-by-case basis, address the impacts of human activity or climate on the resource and the complexity of water demand. In regions where fresh water is scarce, seawater desalination is an increasingly sought after solution, even if it remains



Irrigation represents 70% of the global consumption of fresh water.



Desalination of seawater is an increasingly popular solution to water shortages.

costly. This technology enables drinking water to be produced from the inexhaustible supply of seawater. As for wastewater, once treated it is discharged into the environment. Thanks to technological advances in sanitation (ultrafiltration, UV disinfection, etc.), this water is sufficiently well treated to be suitable for agriculture or industry. Reusing wastewater thus enables less water to be taken from the natural environment while meeting the needs of these large freshwater consumers, which by far outweigh the needs of human consumption.

The "seven lives" of waste

For a long time, waste was considered to be the final product in the cycle, right at the end of the consumption chain. The only problem for local authorities was



Dominique Lorrain
 Research Director at the CNRS (Cems-Ehess), Member of the FAC (SUEZ ENVIRONNEMENT Foresight Advisory Council)

Does a sustainable town have to be a "new" town?

The main analyses do effectively deal with new spaces – Shanghai project on Chongming Island, towns in the Persian Gulf. By 2050, two-thirds of the demographic rise, about 2.5 billion human beings, will be in cities, so thinking of ways to make "new" towns sustainable makes sense. But we must not however lose sight of what already exists. More than three billion people already live in towns and cities. So introducing respect for the environment into the existing urban fabric is an immediate and major challenge. The town will have to be transformed if it is to become more environmentally friendly.

Does the sustainable town imply specific governance?

Towns and their technical components – urban networks, housing, public equipment, and business areas – are managed according to specialisation. Different organisations manage the various building blocks of the town. The reasons for this were both simplicity and the search for efficiency.

One notable exception is the Stadtwerk type multi-sector public enterprise. The sustainable town will require improved coordination between its constituent parts and if we analyse it like a living system, then reducing energy consumption and environmental impacts presupposes better management of the exchanges taking place. In a democratic society, this role of optimising the relations between the basic building blocks lies with the urban government.

What role can a water and waste services operator like SUEZ ENVIRONNEMENT play in the sustainable town?

A major network operator can act at two levels. Its personnel can help reduce energy consumption, optimise processes, reduce leaks from water networks, increase the wastewater treatment ratio and exploit methane emissions from waste disposal sites. An operator, active on several networks and builds on experience from around the world, is also qualified to step outside its sectorial boundaries and propose new forms of coordination. However, the problem will be an institutional one. In our current system, the public authority "controls" the operators. The search for "environmental"

optimisation implies a minimum degree of organisational cooperation and even integration. The aim is to find a new model, for which the rules will need to be defined.

Is the sustainable town purely environmental?

Sustainability can be described in terms of resilience, the ability to withstand shocks. The first condition is to build in safety margins. As the old country saying goes, "too strong is never weak". In the world of networks, this means that the scale of the investments has to be big enough – rainwater drainage network, long-distance electricity transmission network. The extra cost involved must be offset against the cost of a disaster. The margins also apply to the operators. They must be able to develop on the basis of sound economic principles, allowing long-term investment. This is a very real change in attitudes. For about thirty years now, the industrial nations have grown by reducing the share of food and essential goods in the household budget, while the share of consumer goods and "futile" items has grown. To transform respect for the environment into actions we need to accept that we must spend a bit more on things that are essential and sustainable.



How to rehabilitate an industrial site thanks to waste?

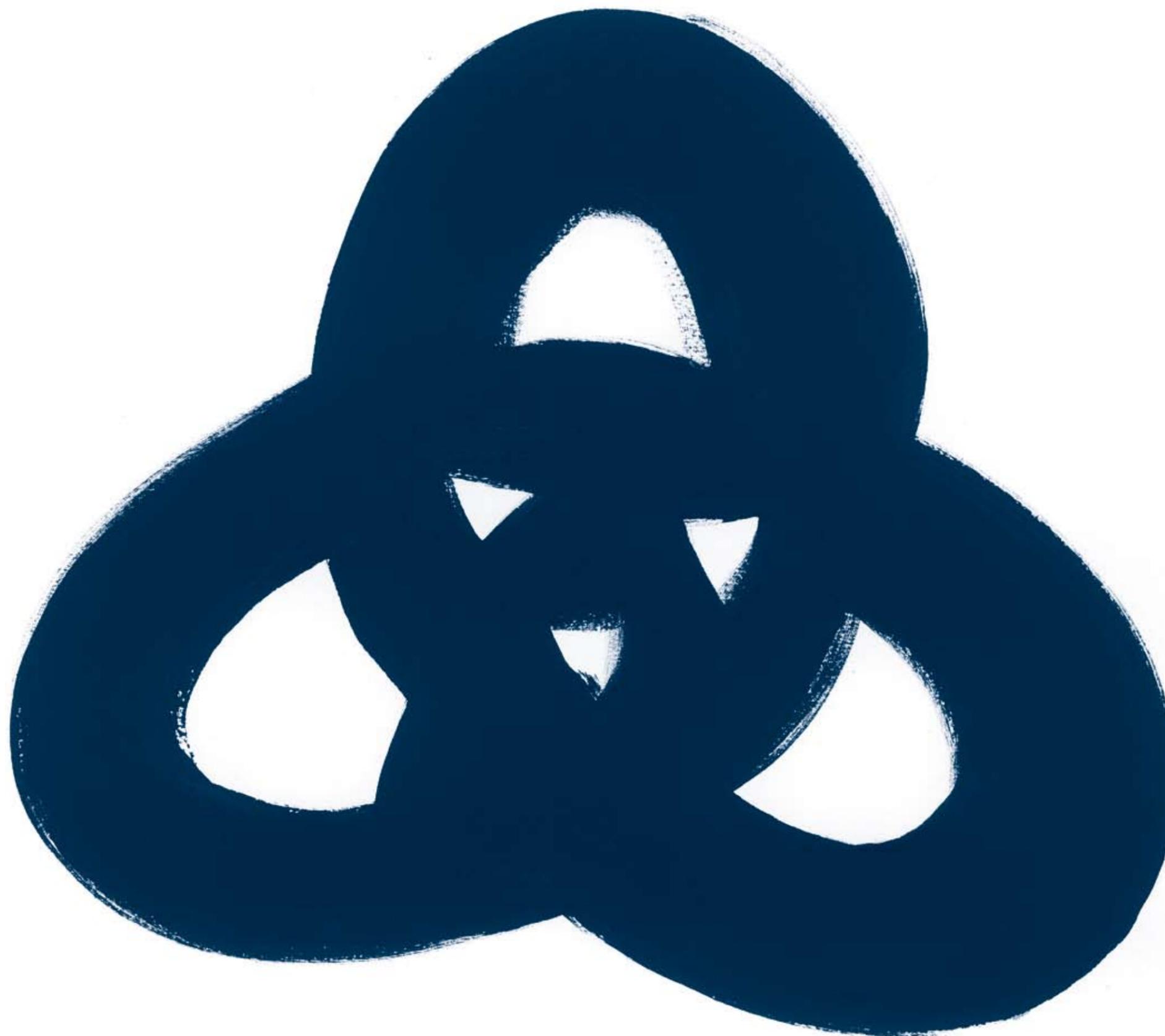
Thanks to its expertise in waste recovery, SITA France has developed a model for the conversion of an industrial site. The company recently signed a partnership with Michelin for the conversion of the Kléber site in Toul, scheduled for closure in 2009. The project, named CAMPUS, will be built around two main activities close to Michelin's own business activities, but nonetheless focused on waste: the reuse of end of life products (rubbers, metals, plastics, etc.) and the creation of an R&D and training centre devoted to the reuse, recovery and recycling of raw materials. This project thus covers the creation of a plant for dismantling end of life vehicles in order to comply with European regulations that require 95% recovery and recycling of vehicles by 2015. The purpose is to produce secondary raw materials: rubber granules usable for the manufacture of sports hall flooring, insulating materials, road coatings. CAMPUS will also take part in the economic and industrial redeployment of the site and create several hundred jobs.



then to dispose of it. Today, thanks to major technical advances in reuse and recovery, waste is increasingly being considered as a source of secondary raw materials or energy, that cannot be ignored. The development of recycling and the growing awareness of the increasing scarcity of raw materials have encouraged the expansion of this new industrial sector that cannot be relocated and creates jobs close to the source of the waste that

needs to be recycled. Waste recovery enables the production of plastic, bottle glass, aluminium, lead, copper, and so on. In France, practically one third of the waste treated by SUEZ ENVIRONNEMENT is reused as secondary raw materials. As well as this material recovery, energy recovery from waste is also enjoying significant expansion. The progress achieved in the fields of incineration and disposal means that waste can today be

treated with the aim of extracting energy from it: the heat produced by the incinerators is reused and the biogas produced by the decomposition of dumped waste is collected and can be put to use when conditions allow. The waste services activity at SUEZ ENVIRONNEMENT thus produced 3.4 TWh in 2007, the equivalent of the annual domestic electricity consumption of a town of some 2.8 million inhabitants (1,200 kWh per inhabitant).



Complete control of the water and waste cycles

p 58 **Stimulating innovation by transmitting knowledge**

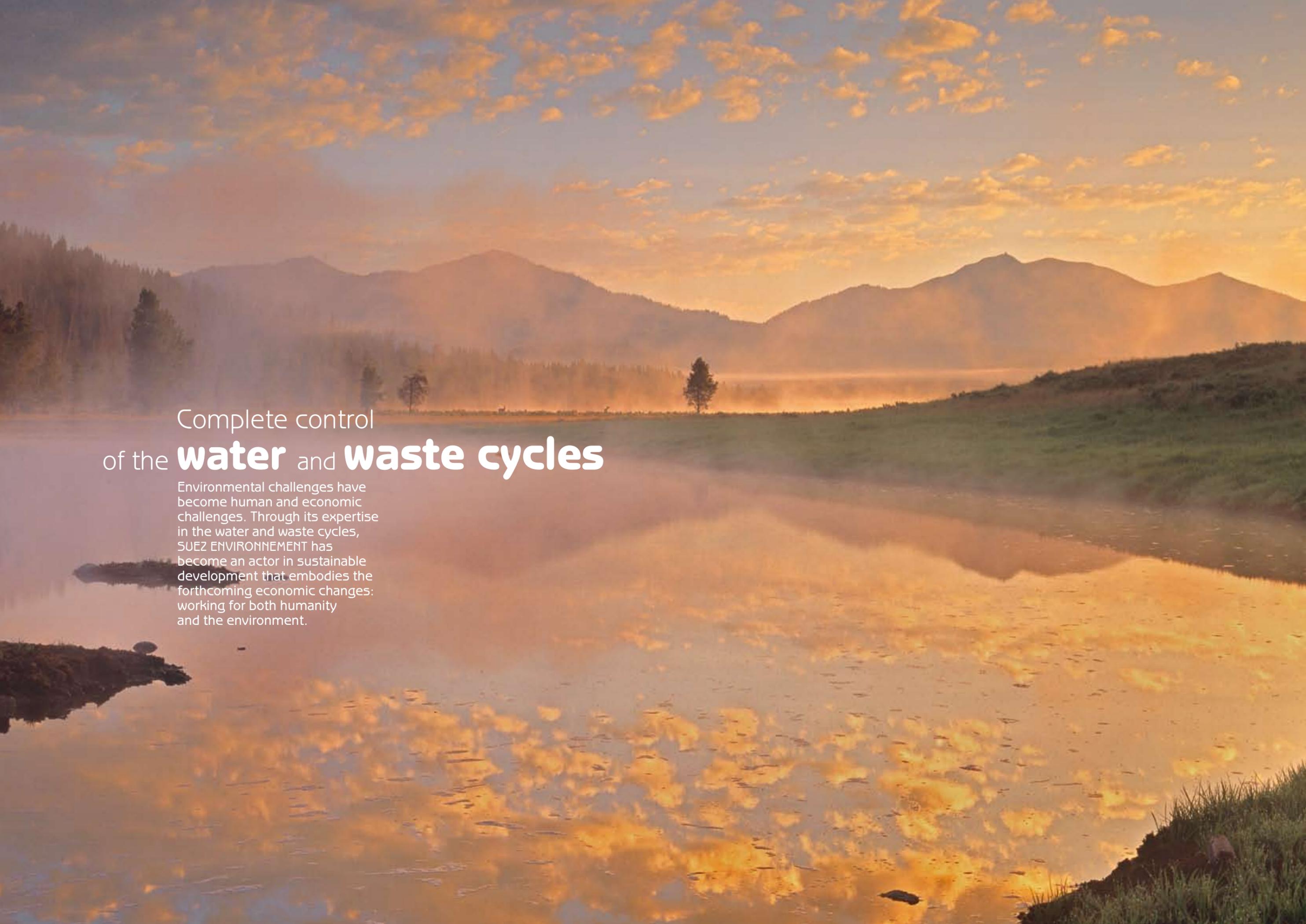
SUEZ ENVIRONNEMENT can call on a global technical network to boost its research potential and develop the key methods and technologies of tomorrow.

p 64 **Managing water at all levels**

For SUEZ ENVIRONNEMENT managing water at all levels means mastering the entire water cycle and proposing human and technical solutions for all the problems that can affect water resources on the local scale.

p 69 **Managing waste as a resource**

Managing waste as a resource has the double advantage of limiting the environmental impacts of our society while at the same time producing reusable resources.



Complete control
of the **water** and **waste cycles**

Environmental challenges have become human and economic challenges. Through its expertise in the water and waste cycles, SUEZ ENVIRONNEMENT has become an actor in sustainable development that embodies the forthcoming economic changes: working for both humanity and the environment.



In 2007, SUEZ ENVIRONNEMENT invested 65 million euros in R&D.

research laboratories, carry out three main activities: technical assistance, research and development and knowledge management. *"We are organised into networks of teams located in the different countries in which the company is present, explains Diane d'Arras, Activities and Research Director at SUEZ ENVIRONNEMENT. These centres are specialised but share common rules for dialogue with the aim of building on the competence of the personnel linked to the expertise in the country and the local entities. This is a means of improving how know-how is distributed and shared. It is by building on the strengths of each individual that performance as a whole is improved. SUEZ ENVIRONNEMENT provides a local service whose strength stems from the international sharing network."* The main expertise centre is the CIRSEE (international water and environment research centre located at Le Pecq in France), concentrating on the fields of water treatment, sanitation and specialist sectorial analysis and data processing. The CIRSEE provides more than 7,000 days of technical assistance per year. CERDEG and DENARD,

the Degrémont research centres (Croissy-sur-Seine, France and Richmond, United States) specialise in water and wastewater treatment. Their aim is to develop products that are economically, socially and environmentally acceptable. The SCIP Water Research Center (Shanghai, China) is working on the treatment of industrial water. The AGBAR group's Laboratorio Aigües de Barcelona (Barcelona, Spain) for its part specialises in water analysis, while the NWTC (Northumbrian Water Technical Centre - Newcastle, United Kingdom), specialises in distribution and sanitation networks. Finally, the Lyonnaise des Eaux Centre Technique de Distribution (Distribution Technical Centre) in Nanterre specialises in distribution technologies and the development of leading edge remote metering technologies, which have been successfully implemented in Paris. The operation of the SUEZ ENVIRONNEMENT technological support network received ISO 9001 certification three years ago. This qualification ensures optimum management of the network, giving pride of place to research and technical assistance. What about the major topics of the future? *"Management and*

Stimulating innovation by sharing

SUEZ ENVIRONNEMENT can call on a global technical network to boost its research potential and develop the key methods and technologies of tomorrow.

With Lyonnaise des Eaux, Degrémont and AGBAR, SUEZ ENVIRONNEMENT is a long-standing contributor to the innovation of the water sector. R&D is the cornerstone of the company's growth strategy and major discoveries made by the SUEZ ENVIRONNEMENT teams have always enabled us to stand out from the competition. SUEZ ENVIRONNEMENT has developed revolutionary technologies such as the ultrafiltration membranes, which today have a major and positive impact on the environment (see box). This dynamic R&D policy is based on a structured research network and the diversity of SUEZ ENVIRONNEMENT expertise, but goes far beyond traditional innovation policies.

SUEZ ENVIRONNEMENT is also investing in managerial and contractual innovation by developing research quality-management technologies, and by creating original public-private partnerships. In the field of waste, we are witnessing an increasing sophistication of the value chain, entailing the use of increasingly complex technologies that SUEZ ENVIRONNEMENT and its subsidiaries are deploying through an ambitious policy of innovation.

Water: innovation based on sharing

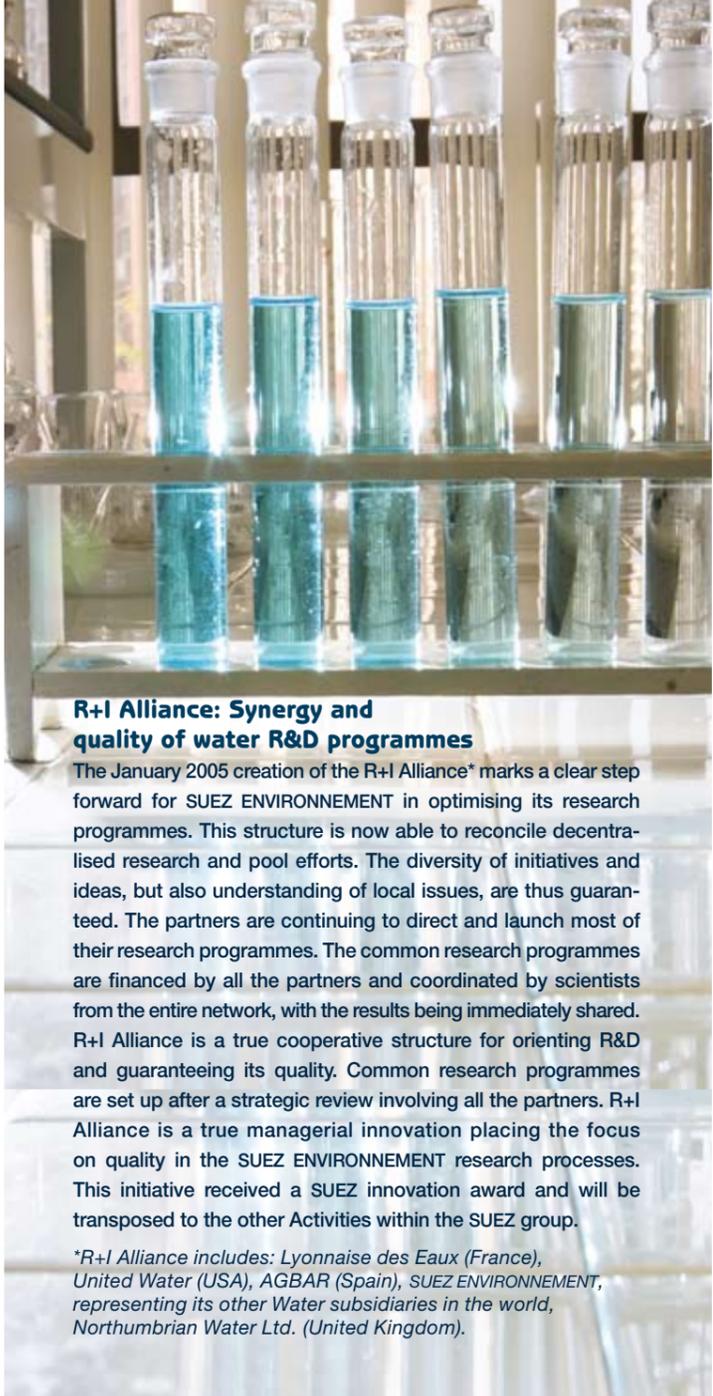
launches about a hundred research programmes every year. The international network of researchers and experts, comprised of centres of expertise and

knowledge

Ultrafiltration membranes: 20 years of research for enhanced environmental protection

To deal with the decline of water resources and to comply with increasingly stringent environmental protection standards, research began into ultrafiltration membranes in 1985 at Lyonnaise des Eaux. In 1988, the town of Amoncourt was the first in the world to apply this technology to build a drinking water treatment station, and in 1992, ultrafiltration membranes were approved by the Ministry of Health for the purposes of water clarification and disinfection. This technology, developed at the CIRSEE (SUEZ ENVIRONNEMENT research centre) and currently manufactured and marketed by Aquasource, demanded investment of more than 30 million euros. The process uses no chemical products and is thus environmentally friendly. Since its launch, nearly 200 plants in France and around the world are producing more than a million cubic metres of ultra-filtered drinking water, every day. Today, the association between ultrafiltration membranes and osmosis or nano-filtration membranes has broadened the scope of application, to the pre-treatment of seawater or brackish water, and also for the wastewater treatment.





R+I Alliance: Synergy and quality of water R&D programmes

The January 2005 creation of the R+I Alliance* marks a clear step forward for SUEZ ENVIRONNEMENT in optimising its research programmes. This structure is now able to reconcile decentralised research and pool efforts. The diversity of initiatives and ideas, but also understanding of local issues, are thus guaranteed. The partners are continuing to direct and launch most of their research programmes. The common research programmes are financed by all the partners and coordinated by scientists from the entire network, with the results being immediately shared. R+I Alliance is a true cooperative structure for orienting R&D and guaranteeing its quality. Common research programmes are set up after a strategic review involving all the partners. R+I Alliance is a true managerial innovation placing the focus on quality in the SUEZ ENVIRONNEMENT research processes. This initiative received a SUEZ innovation award and will be transposed to the other Activities within the SUEZ group.

*R+I Alliance includes: Lyonnaise des Eaux (France), United Water (USA), AGBAR (Spain), SUEZ ENVIRONNEMENT, representing its other Water subsidiaries in the world, Northumbrian Water Ltd. (United Kingdom).

optimisation of the underground assets, surveillance of health risks, energy independence of our wastewater treatment stations and improving the ecological footprint of our environmental activities, states Diane d'Arras. We are also working on reusing water for industrial purposes and on urban rainwater management to avoid flooding. This implies upstream control of the flows by installing water storage buffer zones." SUEZ ENVIRONNEMENT is also permanently innovating by developing original public-private partnerships in all the countries in which the group is active. On the international stage, SUEZ ENVIRONNEMENT is different in that it calls on local investors, suppliers and subcontractors. SUEZ ENVIRONNEMENT puts together tailor-made bids with exactly the right level of service for meeting the goals and objectives set by the customers, public authorities or industrial firms. Within SUEZ ENVIRONNEMENT, R&D therefore has a two-fold ambition to launch a true virtuous circle: innovate technologically by developing ambitious industrial research programmes and innovate at a human level by implementing innovative management systems that are synonymous with quality (R+I Alliance), proximity and performance (original public-private partnerships, transfer of know-how, etc.).

Transfer of know-how: a competitive edge

The SUEZ ENVIRONNEMENT story reads like a remarkable build-up of expertise.

From the first missions in France, more than a century ago, to its international contracts (Buenos Aires, Djakarta, Macao, and so on) it has built up a unique water management and environmental expertise base. This accumulation of knowledge and its transmission today contribute to creating added value for SUEZ ENVIRONNEMENT. In emerging countries, water and sanitation services often act as the motor for local economic development. Aware of this strategic advantage, the company decided to make transfer of know-how one of the flagship products of its commercial range. SUEZ ENVIRONNEMENT is thus capable

of responding to international calls for bids for management contracts, in other words contracts comprising an investment programme borne by the local community, with a joint commitment to improve the quality of service through training of the local employees.

WIKTI: when the immaterial becomes tangible

WIKTI, Water International Knowledge Transfer Initiative, was developed by SUEZ ENVIRONNEMENT to standardise and give a concrete framework for transfer of know-how. This methodology



Laila Farah
Head of the SEAAL central laboratory and Activity coordinator in Algiers

What is your background? How long have you been working at SEAAL?

I am an industrial chemical engineer specialising in process engineering. I joined ADE, Algérienne des Eaux 9 years ago. With the arrival of SUEZ ENVIRONNEMENT 2 years ago, it became the SEAAL company.

I am currently in charge of the central laboratory which employs 28 people. We are responsible for analysing the quality of the drinking water produced as well as that of the treated water discharged into the environment.

What is your role as Activity coordinator in terms of the transfer of know-how set up within SEAAL?

As Activity coordinator, I have access to SUEZ ENVIRONNEMENT

know-how via training in Algeria and France and through my participation in the company's technical committees. I am responsible for disseminating this to the laboratory employees with regard to methods and organisation. It is my duty to transfer the knowledge I have gained and to draw up training programmes for my own staff.

What is your main motivation in this role of Activity coordinator? What do you think

has been the main impact of knowledge transfer?

Since the arrival of SUEZ ENVIRONNEMENT, I believe that water management is better organised in Algiers. The quality of services we provide has improved. At a personal level, I think that my work is more open. As an Algerian, I would like to see SEAAL become a cutting edge company and that gives me all the motivation I need.



has received ISO 9001 certification and is built around mapping of 36 professional processes. For each process, a sector coordinator is tasked with diagnosing the level of expertise and deploying the transfer by means of a "professional kit", consisting of appropriate pedagogical tools. WIKTI proposes the expertise of a world leader through tailor-made solutions, local empowerment and a system of traceability using robust indicators. For the Algiers contract signed in 2006, WIKTI proved its ability to respond to the demand for the transfer of know-how. Its deployment in Djakarta,

in China and recent calls for bids confirm that it is commercially attractive. At the end of 2007, SUEZ ENVIRONNEMENT won the Jeddah bidding (United Arab Emirates). WIKTI was proposed for this call for bids as it meets the expectations of modern public-private partnerships and both involves and persuades the supervisory authorities. Public-private water and sanitation partnerships today represent less than 5% of all worldwide services. The issue for the project is therefore to find new forms of cooperation, enabling the expansion of these public-private partnerships in developing countries.

and the objective is therefore to collect and dispose of waste. In transitional countries, in which the waste market is developing, emphasis is beginning to shift to managing the environmental impacts of waste and simple disposal is no longer enough. Finally, in countries with mature waste markets, a resource management approach is adopted and emphasis is placed on reuse and recycling. Waste services R&D must provide innovative solutions to deal with a dual and often complementary problem: limiting impacts and developing waste reuse and recycling solutions.

SUEZ ENVIRONNEMENT has a vast network of scientific research and expertise throughout the world.



Meeting the new waste services challenges

The waste services sector is undergoing considerable change, as it constitutes one of the keys to environmental protection and to the creation of a sustainable economy (see below "managing waste as a resource"). This change in the waste services sector is dependent on the level

Limiting impacts

Limiting impacts means ensuring that throughout the entire waste cycle, there is no source of pollution and environmental damage. A disposal facility is qualified as eco-compatible when its impact on the natural environment is acceptable and leads to neither foreseeable or identifiable dysfunction, nor any significant variation in its ecological equilibrium. Certain regulations, particularly those in France and the United Kingdom, require an absolute minimum long-term surveillance period of 30 and 50 years respectively. This concerns effluents, settling, quality of groundwater and water runoff. However, studies concerning the estimated duration of stabilisation of an ISDND showed that certain parameters reached acceptable threshold values before the 30-year period, while others only reached them afterwards. Furthermore, depending on the individual

of economic development of each country and the more mature the market, the greater the sophistication of the waste value chain. This is what makes waste services so specific, in that they are adapted to the needs and means of each country, of each territory. Therefore, in the countries with developing economies, the sole priority is public hygiene



Algiers, a "know-how" contract

The Algerian authorities wanted to improve the drinking water and sanitation services in the Algiers Wilaya, in particular in terms of continuity of service, water quality, network management and subscriber service. They called on the services and expertise of SUEZ ENVIRONNEMENT. This cooperation led to the creation of a new entity: SEAAL. The goal of this contract is to transfer know-how to the local employees (4,100 staff), to improve management of the water and sanitation service, in order to give permanent water access to the entire population (3.3 million inhabitants, 3,800 km of drinking water networks, 200 million m³ of water produced per year) to avoid blockages which frequently lead to sewer overflows (2,500 km of sanitation network) and flooding with sometimes dramatic consequences. To rise to this challenge, 27 expatriate international experts are on site. The originality of this partnership is to position experienced SUEZ ENVIRONNEMENT executives directly at the heart of the operational structure. This there-

fore avoids the superposition of an operating company and a consultant (which is the traditional solution) but two teams being merged to create an original corporate culture.

The aim is to ensure local transfer of our knowledge, so that the SEAAL company becomes independent before the end of the contract in 2011.



SUEZ ENVIRONNEMENT manages technologies for energy recovery (heat, electricity), material recovery and biological recovery. Disposal installations are now an essential and controlled link in the waste disposal chain. They involve natural biodegradation phenomena and are gradually becoming true "bioreactors" the management of which must be optimised. Since 2001, researchers at SUEZ ENVIRONNEMENT have been conducting extensive work to speed up waste degradation. This can be achieved by boosting the humidity of the waste disposed of, either by injecting raw leachates, which results in faster

production of biogas, which is then captured and used to produce electricity, or by recirculating nitrified leachates, which has the converse effect of inhibiting biogas production. Current and future R&D programmes aim to optimise bioreactor management, with the goal of finding the right strategy, the optimum cost/environmental benefit compromise, and the control of the various steps from treatment to stabilisation of the waste. This programme involved tests in the laboratory by Cemagref and BRGM, validated in full-scale SUEZ ENVIRONNEMENT pilot centres. The results obtained mean new recommendations can be issued

to the managers of disposal centres, and enhanced energy recovery from biogas. Another area of waste recovery, the recovery of materials, is expanding continuously thanks to constant innovation. Reuse of worn tyres is an interesting example of new recycling channels opened up by innovation. SITA France, a major operator in the "traditional" recycling technologies in France (wood-pallets and paper-cardboard), recently set up a recycling hub which now comprises 35 industrial units covering 9 recycling channels (5 for materials plus 4 emerging areas: electrical and electronic equipment waste (DEEE), end-of-life vehicles, end-of-life aircraft, end-of-life ships). One of the channels for materials is the recycling of worn tyres, leading to the production of rubber granules (used in the manufacture of sports fields, sports hall flooring, wheels and urban furniture), metal scrap (used in steel making) along with a certain amount of textiles. In 2005, Norvalo, a subsidiary of SITA France, in partnership with the CIRADE and the Université Picardie Jules Verne, initiated a research project into a new, long-term and innovative outlet for worn tyres. This project was co-financed by SUEZ ENVIRONNEMENT and ADEME, and concerned the use of a mixture of textile fibres, rubber granules and a cellular matrix (lightweight concrete). The results confirmed the potential of this new material (concrete/textile/rubber) which offers extremely interesting physical/mechanical properties, resistance to acid attack and fire. An experimental project involved the construction of a waste drop-off centre building using concrete/textile/rubber panels. It will be operated by a subsidiary of SITA France.

susceptibility of the ISDND environment, the residual impact acceptability criteria are not the same. In order to optimise the long-term surveillance of an ISDND, the CIRADE began a new R&D programme in 2006 with the aim of assessing and optimising implementation of a methodology to determine the functional stabilisation condition of a non-hazardous waste disposal installation, including a risk assessment-based approach. Another example of innovation from SUEZ ENVIRONNEMENT to limit the environmental impact of waste treatment is the development of a decision-making tool christened "Waste ecological footprint". In June 2006, SITA France launched the first free-access and free of charge website dedicated to calculating a waste ecological footprint. This true evaluation tool enables local authorities to assess the environmental impact of their household waste collection service. This calculator was inspired by the work of Mathis Wackernagel, an American university professor,

and is the fruit of a research programme involving SITA and three partners: the Global Footprint Network, the Angenius Institute and Médiation & Environnement. It offers an immediate diagnosis to compare the impact of various collection projects and identifies potential areas for reductions. In addition to raising awareness, the Waste Ecological Footprint is a means of looking at various alternatives and thus bringing out the best practices and most judicious technical choices. Since the site was launched, 1,200 calculations have already been carried out.

Developing solutions for waste reuse

Innovation in the waste services sector is today being driven by the demand for increasingly advanced solutions for waste recovery and recycling, as this is becoming one of the fundamental preconditions for ensuring a transition to a sustainable economy. The field of waste recovery and recycling is vast.



SUEZ ENVIRONNEMENT operates two of the biggest, most modern, and most monitored waste dumps in Hong Kong: WENT and NENT

Managing water at all levels

For SUEZ ENVIRONNEMENT managing water at all levels means mastering the entire water cycle and proposing human and technical solutions for all the problems that can affect water resources on a local scale.

Global demographic growth and constantly increasing production mean ever-increasing consumption of water, an omnipresent resource that is vital not only for life but also for industry and agriculture. By good fortune, water is a renewable resource and its global availability is not threatened. However it is also a local resource, unequally distributed over the surface of the planet and largely dependent on human activity as regards both its quantity and quality. Water problems must be solved locally according to the conditions specific to each region. There is no need to be fatalistic about things. Technical solutions

exist, and when combined with strong political will, they always bring success, even in the regions hardest hit by water shortages. SUEZ ENVIRONNEMENT masters the entire water cycle, that is to say all the technologies and know-how necessary for the rational management of the resource. These technologies and know-how consist first and foremost in monitoring and protecting the resource. Once the resource has been identified and protected, optimum and constant quality of the distributed water must be ensured. Lastly, one of the major challenges consists in treating wastewater – a serious source of water pollution in the past – without causing deleterious effects. The shortcomings in sewerage systems

The largest seawater desalination plant in the Southern hemisphere



Built by Degrémont and inaugurated in April 2007, the Perth plant (140,000 m³/day) is the largest reverse osmosis seawater desalination plant in the Southern hemisphere. The aim was to rapidly provide the city of Perth with an increased drinking water production capacity in a context of severe shortage of traditional fresh water resources. The plant will supply water to about 17% of Perth's population, i.e. about 250,000 people.



Managing water in different ways means ensuring a real safety margin in the drinking water supply.

in the developed countries are only just starting to be solved, which means that the challenge facing the majority of the inhabitants of our planet remains enormous. SUEZ ENVIRONNEMENT also develops solutions adapted to the specific needs of industries that consume process water of varying qualities and are obliged to specifically treat the wastewater from their production processes.

Monitor and protect the resource

Managing water differently means ensuring a real safety margin in the drinking water supply. The reuse of wastewater, the desalination of seawater, the artificial recharging of water tables and, of course, the optimisation of the distribution networks by using leak-detection systems, are some of the solutions available today through which municipalities can commit themselves to the protection of their water resources.

Knowing the hydraulic functioning of the resource enables changes in its quantity and quality to be foreseen. A computer tool for the management of accidental pollution of the River Seine. The model is used in real time in crisis situations to simulate the propagation of pollution as soon as it is detected and measured. It makes it possible to predict the periods during which the passing of the slick of pollution will prevent samples from being taken in the Seine.

As another example, limiting leaks enables significant volumes of water to be saved and thereby optimises samples from the resource. Different techniques are used: they are based on the use of ultrasounds or, more recently, gaseous helium. Lyonnaise des Eaux has put in place an innovative leak-detection system in Dijon,



The compact nature of water treatment plants reduces nuisances.

France, called permanent pre-localisation: 165 acoustic sensors are installed on the network, which is constantly monitored. The information is transmitted by GSM technology, which allows for a very fast reaction when a leak is detected.

Artificial recharging of water tables

To support groundwater recharging, good quality water can be injected via boreholes. This can be done using natural resources (watercourse outside flood period) or artificial resources (treated water from wastewater treatment plant). At Dunkirk, huge pumps take in 25,000 m³ of water every day for recharging. Cleared of its impurities, the water is filtered through ozone and carbon then discharged into a large open-air basin where it flows into the water table as though it was passing through a coffee filter. It then undergoes the natural filtration process through the soils and the water table is maintained at a controlled level.

Reuse and desalination offer new resources

As transporting water over long distances is very costly, certain regions have had to rethink the management of their water resource. Today, out of the 165 billion m³ of wastewater collected and treated across the world, only 2% is reused. The development of processes using ultrafiltration membranes produces treated water of satisfactory quality for reuse for agricultural and industrial purposes. Such processes reduce by as much what is drawn from the natural resource, thus saving it for human consumption. 40% of the world's population lives less than 100 km from the sea. Out of 70 cities

counting over 1 million inhabitants with direct access to additional fresh water resources, 42 are situated on a coast. Rendered accessible thanks to the lowering of production costs, reverse osmosis desalination is a solution that requires less and less energy and is now compatible with renewable energy sources such as that provided by wind turbines. Formerly reserved for arid countries, desalination is being used increasingly in countries that have to face up to repeated drought situations. Spain provides an emblematic example: two-thirds of the population of the Canary Islands consume desalinated seawater. In June 2006, Degrémont with Agbar won a contract for the design, construction and 2 years' operation of Barcelona's future desalination plant. With a capacity of 200,000 m³/day, it will be the largest desalination plant in Europe. Degrémont has been present on this market for 30 years now and has built more than 250 desalination plants worldwide.

Controlling the quality of water

Ensuring the production and distribution of quality drinking water obviously means providing water that presents absolutely no risk to human health, but it also means providing water that is pleasant to drink, clear, and contains balanced proportions

Vallauris Golfe Juan, an integrated and nuisance-free wastewater treatment plant

The processes developed and implemented by Degrémont in Vallauris Golfe Juan are extremely efficient, allowing the construction of a relatively small plant with respect to its treatment capacity. The majority of the new plant will be under ground and therefore invisible to the neighbouring population. The fight against olfactory pollution will consist essentially of confining as much as possible all facilities likely to produce nauseating odours. The sludge will be evacuated in sealed trucks and will therefore have no impact on air quality.

of mineral salts. Drinking water, one of the most closely monitored food products in the world, has to meet quality requirements set by regulations. It must, for example, be free of any substance or organism whose presence could lead to a health risk for the consumers. Controlling water quality, whether bacteriological or physical-chemical, represents a priority mission in our activity as a drinking water producer.

To guarantee this absence of risk, preventive risk analysis procedures are implemented and governed by the standard ISO 22000. Today this certification is accompanied by a risk prevention tool called "HACCP" (Hazard Analysis Critical Control Point). The HACCP method was developed in the 1960's and is used in the agri-food industry. The procedure consists of a hazard analysis that allows the identification of critical points to control. The drinking water production and distribution processes are similar in many ways to those of the agri-food industry: continuous production and distribution, presence of different operators throughout the process. The implementation of HACCP in SUEZ ENVIRONNEMENT's operations calls upon its technical know-how and capacity to innovate. From now on, the control of water quality must include the notion of comfort or pleasure. Even though water may be perfectly fit for consumption, it can nevertheless be highly calcareous or smell unpleasantly strongly of chlorine, and pose problems in domestic or industrial use (scaling of machines, excessive consumption of washing powders, etc.). Communities can now choose technologies that reduce the limescale content, thus improving the quality of the water supplied.

ISO 22000 certification for the drinking water production plant of Morsang-sur-Seine

The ISO 22000 standard relative to "Food Safety Management Systems", dating from September 2005, aims at putting forward – for the production of drinking water - the best practices in terms of food safety taken from companies in the agri-food industry. The Morsang-sur-Seine plant, one of the largest water production centres in the South Parisian region, has just received this ISO 22000 certification, a major step in water quality control. This certification required an exhaustive analysis of the hazards that could threaten water quality and of the methods of verification. It is the result of the work of the national group coordinated by the Water Technical Department of Lyonnaise des Eaux, involving several of its subsidiaries and the SUEZ ENVIRONNEMENT research centre (CIRSEE), in close collaboration with the Essonne Department of Health and Social Services. Lyonnaise des Eaux has thus become one of the first drinking water producers to obtain this certification at national level.



Treating wastewater without deleterious effects

Guaranteeing the correct functioning of the collection networks and the wastewater treatment plants means guaranteeing the preservation of the natural environment and

the comfort of the users.

SUEZ ENVIRONNEMENT's know-how covers the entire pollution-control chain. In 2000 the European Union adopted a framework directive aiming at improving the ecological condition of ground water and surface water by 2015. This directive makes it compulsory for municipalities and industry to treat their wastewater in order to avoid having polluting waste.

SUEZ ENVIRONNEMENT proposes suitable and varied solutions for this. Wastewaters can be of extremely different natures and each polluted effluent must undergo appropriate and efficient treatment.

The wastewater typology service identifies and develops the most effective technical solutions. The "Virtual Treatment Plant" Service can design treatment facilities at virtual level and predict the operation of the plant with different technological choices. This enables municipalities to optimise the choice of equipment according to their needs. The NOSE Service (No Odour for SUEZ ENVIRONNEMENT) proposes a global approach aiming at characterising the odours to control olfactory pollution. It involves a participatory approach that calls upon the olfactory senses of juries of local residents.

Treating and reusing sanitation by-products

The by-products from wastewater treatment, and sludge in particular, constitute one of the major challenges of sewerage and sanitation. Today these by-products can be recovered and reused. SUEZ ENVIRONNEMENT proposes cutting-edge solutions ranging from agricultural recycling (composting) or thermal recovery (drying) to incineration.

Meeting the specific needs of industry

European industry is responsible for a little over half of Europe's water consumption. The utilisation of water for industrial purposes increases with a country's

A process water production unit carried on an oil platform



Ondeo Industrial Solutions is specialised in the construction of reverse osmosis desalination units for industry. The contract signed in 2005 with Total is for the design of a process water production unit for an oil platform off Angola. The contract is characterised by the technical quality of each item of equipment assembled, which must withstand the operating conditions of an offshore

platform. The scale of the unit is impressive: 9 metres wide, 15 metres long and 7 metres high for a total weight of 140 tonnes and a treatment capacity of 90m³/h. Built in Belgium, it was transported by a special truck to the Meuse river where it was transferred to a barge and shipped to Rotterdam. From there it was transported by cargo ship off the Angolan coast where it was delivered and installed on the oil platform.

revenue: it ranges from 10% in low-to moderate revenue countries to 59% in high-revenue countries. Satisfying increasingly strict environmental requirements, treating pollution, preserving resources, optimising costs and enhancing the reliability of the production equipment are all challenges facing today's industrial players.

Water can be inherent to the industrial process itself, being used for washing, cooling facilities (70 to 80% of the volume consumed) or running boilers.

The water quality requirements differ according to its usage. The "multi-services" proposed by SUEZ ENVIRONNEMENT for industry are tailored to meet the specific needs of the industrial sites: optimisation of the water resource, network maintenance, fire water management, reuse of storm water, energy budgets, etc. For example, the O'Mobile® technology developed by

Ondeo Industrial Solutions is a compact and flexible solution that proposes a demineralised water production station carried on a semi-trailer. This enables production to continue during maintenance work on the factory's demineralised water production lines. Off-site treatment of effluent is a solution much appreciated by small and medium production sites, because such sites do not always have sufficient quantities of effluent to justify having a wastewater treatment plant. As for large industrial sites, they can have peaks in their effluent discharges that make them need a temporary effluent evacuation solution. The Ecoflow™ service developed by Ondeo Industrial Solutions provides a response to both these situations, by proposing a complete off-site treatment line, which goes from storage of the effluent on the source site through to the complete characterisation and treatment of the wastewater on the destination site.

Managing waste as a resource

Managing waste as a resource has the double advantage of limiting the environmental impacts of our society while at the same time producing reusable resources.

Breakdown of material recycled by SITA in France in 2007



The future looks good for the waste services sector. The current production system is based on ever-increasing consumption of non-renewable natural resources, whether for energy needs (oil, natural gas, uranium) or for material needs (ores). Furthermore, the consumption of resources, that in principle are renewable, is so great that production levels are not sufficient to satisfy all needs. In this context, the economies in developed countries are gradually becoming aware of how precarious their situation is. The economic system functions on credit: it borrows the resources necessary to maintain current growth from future generations. Waste services are amongst the solutions available to economic and political players to alter our approach to growth. One of these solutions entails improving the productivity of the natural resources used in the production-consumption processes. To increase that productivity, that is to say to maximise the use made of that resource, recycling is a fundamental option. Another way of improving the productivity of natural resources is to recover their energy potential. Decomposing waste produces biogases that can be used to produce heat or electricity; incinerators also

SITA AGORA, the first example of sustainable rehabilitation for the benefit of eco-industries

The aims of the project to remove pollution and rehabilitate the former Metaleurop Nord site, launched in November 2003 by the public authorities and other actors in the region, were: removal of pollution at the 50-hectare site, setting up eco-industries to create an industrial site to serve the environment and support the local economy, and the creation of 190 permanent jobs. This challenge mobilised the expertise of many subsidiaries of SITA, and today has been crowned with success, since on 31 December 2007 the SITA Agora site counted 420 employees divided between the eco-industrial zone (treatment and recycling of polluted soils,

recyclable waste sorting/transfer platform, industrial maintenance, etc.) and the tertiary zone. The economic redeployment will continue in 2008 with the installation of: an organic waste treatment and recovery centre, a recoverable materials sorting centre, a plant for the deconstruction and recycling of end-of-life vehicles, a pallet recycling platform. The SITA Agora eco-cluster has enabled the region to become the showcase of a new mode of economic and social development. More than 100 million euros have been invested by SITA for the reconditioning and economic redeployment of the site.



Early 2008, French President Nicolas Sarkozy paid a visit to Metaleurop to highlight the rehabilitation of industrial sites.



produce heat and electricity. Waste must no longer be considered as a mere residue of our consumer society, that must be treated for public health reasons, but also as a possible source of raw materials and renewable energy. The waste services sector can thus make a decisive dual contribution to future economic systems: waste services represent one of the keys to the transition to a sustainable economy, obeying the imperatives of protecting the environment, while making a practical contribution to combating climate change.

Enabling the transition to a sustainable economy through recycling

Recycling activities provide a means of putting resources, present in waste that was previously treated without being reused, back into the production circuit. Recycling, or material recovery, is a key factor in SUEZ ENVIRONNEMENT's technical expertise. Furthermore, it has the advantage of strengthening local economies by recruiting locally for the jobs created. Lastly, through their experience in recycling, the waste services

activities can provide eco-design solutions at an early stage to industrial players wishing to create products that optimise the productivity of the resources engaged, enabling easy dismantling and recycling.

Recycling a solution, a specialism

Sorting is an increasingly popular option with municipalities for the treatment of household waste. Some countries have legislation that imposes recycling rather than another solution. In Germany,

for example, at-source waste sorting is mandatory. Recycling is easier to envisage if municipalities and industrial customers engage in an at-source sorting process. This practice has developed in France since the law of 1992, but in 2004 only 13% of French household waste was sorted and recycled (source ADEME).

Creating a recycling eco-industry

SUEZ ENVIRONNEMENT contributes to the development of a true modern recycling industry in developed countries, capable of meeting the growing needs for high-quality recycled raw materials. This recycling industry, established by SUEZ ENVIRONNEMENT in strategic areas, often former industrial basins, plays a part in revitalising the regional economy and redeploying industrial jobs. This is the case in France for the former site of Metaleurop in Noyelle-Godault (see box), the Romorantin basin, with the installation of Re-Source Industries, and the project to revitalise the Toul basin with the installation of an industrial unit for recycling tyres and rubber-based products on the Michelin site. This conversion of former industrial sites

TARMAC, a subsidiary for recycling end-of-life aircraft

In 2007, TARMAC AEROSAVE, the first structured French firm for dismantling end-of-life aircraft was created by six industrial partners, namely Airbus France, SITA, Snecma, Equip'Aero, TASC Aviation and Aeroconseil. TARMAC AEROSAVE follows on from the pilot project PAMELA (Process For Advanced Management of End of Life of Aircraft), co-financed by the European Union, and in fact materialises its industrial phase. As of 2006, PAMELA had allowed the testing of deconstruction and recovery procedures, demonstrating that by the year 2015, 85% of the elements of an end-of-life aircraft could be reused or recycled in an environmentally-friendly manner. At the beginning of 2009, TARMAC AEROSAVE, which is based at the Tarbes-Lourdes Pyrénées airport, will have a deconstruction and recycling platform.

is possible thanks to SUEZ ENVIRONNEMENT's expertise in soil depollution and professional reintegration. Just like the recovery of resources, polluted soils can be "reused" after treatment that calls upon complex technologies.

A strategy of industrial partnerships

SUEZ ENVIRONNEMENT and its subsidiary SITA are creating industrial partnerships with large enterprises such as Airbus, Michelin and Renault, with the aim of finding the best recycling solutions for the raw materials used in their products. SITA has adopted a forward-looking logic that has already enabled it to test and industrialise innovative deconstruction and recycling processes, thereby remaining a step ahead of the regulations. Above and beyond the new recycling units dedicated to plastics, tires or cables, this know-how also extends to complex products such as end-of-life aircraft, boats and vehicles, as well as waste electrical and electronic equipment (WEEE).

Combating climate change

The fight against climate change is one of the environmental issues calling for an urgent and large-scale response. The ecological danger it represents directly threatens the living conditions of millions of people. And once again the waste services sector can provide interesting solutions aimed at reducing greenhouse gases. Recycling is one of the key options for the recovery of resources present in waste. However, energy recovery (thermal and/or electrical) from waste is also a very worthwhile option for municipalities and industry (cement works). SUEZ ENVIRONNEMENT,

which designs, builds and operates waste incinerators and storage centres, is also building its own energy recovery units. Recovering energy from waste constitutes an essential renewable source of energy for a society that seeks to be carbon-conscious. To meet these challenges, incineration and methanisation are, undeniably, additional solutions.

Incineration, a reliable means of energy recovery

The 130 French incineration sites produce 9 million thermal or electrical MWh per year,

putting this process in 2nd place for the production of renewable energy, according to the DGEMP-DIDEME 2004 report. Today, SUEZ ENVIRONNEMENT provides light and heating for 2.8 million people in France, through energy recovery from waste. SUEZ ENVIRONNEMENT operates 46 sites across the world that transform waste into energy. In 2007 these sites treated 6 million tonnes of waste producing 8,700 GWh of heat and 2,600 GWh of electricity. Incineration is imposing itself as a complementary solution to sorting and recycling. Germany actively demonstrates



A world benchmark in the production of food-grade recycled plastic

In December 2008, SITA will launch France Plastique Recyclage, which will have the largest plastic bottle recycling capacity in France, with the best available technologies. This project, which requires an investment of over 30 million euros, will allow the production of recycled polyethylene terephthalate (PET) pellets intended for food contact. The unit will thus constitute a world reference in the reuse of PET from old bottles to make new bottles - a "bottle-to-bottle" process.

It will employ 75 people on the site of Limay (Yvelines) and will recycle 40,000 tonnes of plastic bottles per year, coming primarily from household consumption. The accessibility of the site, which is directly connected to the river Seine and rail, will favour the transportation of the bottles.

the complementary nature of sorting and heat recovery, since it has one of the highest sorting / recycling percentages in Europe (40%), with the doubling of its incineration capacity in 20 years. Furthermore, incineration is a reliable solution with very limited environmental impacts. The new European standards applicable since 31 December 2005 aim to guarantee that new incinerators have no environmental impact, as was reiterated in a report published

in October 2004 by the Committee of Prevention and Precaution, a body attached to the Ministry of Ecology and Sustainable Development.

Methanisation, technology for the future

Methanisation can be envisaged as a complementary process to energy recovery by incineration, or as an alternative to it, depending on the installation site and

the types of waste treated.

Today the process can be applied to the majority of organic waste materials:

- municipal: food waste, newspapers, packaging material, textiles, green waste, urban sanitation by-products
- industrial: sludge and effluents from the agri-food industries, transformation waste from vegetable and animal production industries, fermentable fraction of non-hazardous industrial waste
- agricultural: animal manure, solid vegetable substrates.

Methanisation is particularly suitable for large urban areas and densely populated areas because the footprint is reduced and nuisance risks associated with the waste treatment are controlled.

After treatment by a methanisation unit, the waste is transformed into compost, and biogas composed of 60% methane, which offers various energy recovery possibilities. A methanisation unit that treats 15,000 tonnes of waste per year can (with self-consumption deducted):

- cover the fuel consumption of about 100 waste-collection trucks or 60 urban buses
- heat 700 houses or provide hot water for 3,500 houses,
- provide the electricity consumed by 1,300 houses and hot water for 2,000 others.

Methanisation produces a renewable natural gas and is doubly helpful in reducing greenhouse gas emissions, because the combustion of methane, which is a very powerful greenhouse gas, prevents the gas from escaping into the atmosphere, and its use avoids recourse to fossil fuels. Methane could come from waste storage centres which produce biogas naturally, or from units specifically designed to produce it.

A methanisation unit in Montpellier

The Montpellier urban area has decided to invest in a methanisation unit capable of transforming household waste into green energy. This state-of-the-art unit will be an exemplary facility in the domain of biological waste treatment. With a treatment capacity of 203,000 tonnes per year, the unit is to receive two types of waste on separate treatment lines: 170,000 tonnes of residual household waste (waste that cannot be recycled directly), and 33,000 tonnes of bio-waste collected at source (kitchen, restaurant waste, etc.). This unit will recover the organic fraction of the waste as compost and biogas. The compost will be recycled chiefly in agriculture as an organic soil conditioner. The biogas produced by the fermentation of waste can be used to produce electrical or thermal energy, equivalent to 30,000 MWh of electricity that can supply almost 25,000 inhabitants.





Assuming responsibilities

p 78 **Good environmental practices**

SUEZ ENVIRONNEMENT constantly improves its practices in order to minimise the impact of its activities.

p 80 **Employee esteem and protection**

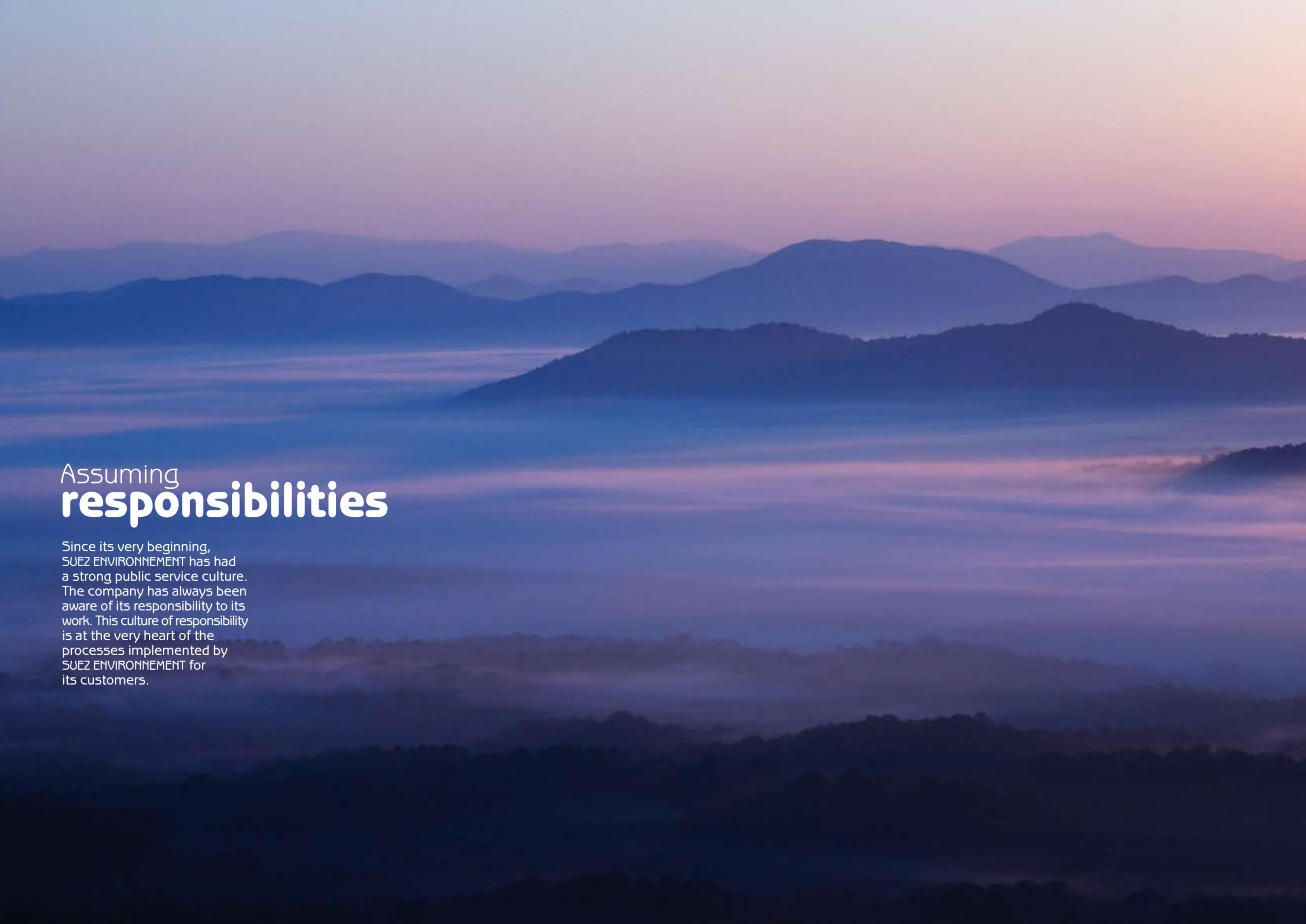
Conscious of its duties and responsibility, SUEZ ENVIRONNEMENT is developing a human resources policy that values its employees, and a health and safety policy with ambitious objectives and means.

p 83 **Placing stakeholders first**

For the delegated management of public services, over many years SUEZ ENVIRONNEMENT has fashioned a culture of listening, dialogue and cooperation with all the company's stakeholders.

p 86 **Actions to do even more**

SUEZ ENVIRONNEMENT is conscious of the fact that it is a stakeholder in the communities in which it works and, as such, must be heavily involved in the economic and social development of all its operating areas.



Assuming **responsibilities**

Since its very beginning, SUEZ ENVIRONNEMENT has had a strong public service culture. The company has always been aware of its responsibility to its work. This culture of responsibility is at the very heart of the processes implemented by SUEZ ENVIRONNEMENT for its customers.



In 2006, SITA France developed a tool for classifying the environmental sensitivity of its waste storage sites and incineration plants which takes biodiversity into account.

Good environmental practices

SUEZ ENVIRONNEMENT constantly improves its practices in order to minimise the impact of its activities.

SUEZ ENVIRONNEMENT is a global player entirely dedicated to environmental activities: economic performance depends directly on environmental performance. The company devises, proposes and deploys technical and human solutions to help companies and municipalities successfully take up their environmental challenges in the domains of water and waste. All this means that the company itself must be exemplary when it comes to protection of the environment. Having a sustainable development policy means that it commits to a process of analysis and optimisation of practices within the company to minimise the environmental impact of its activities.

Water losses

As part of its sustainable development policy, Lyonnaise des Eaux will have saved the equivalent to the drinking water of a town of 700,000 people by 2010. A "distribution" technical centre specialised in leak detection has been

set up to serve the company as a whole. The monitoring of network flow rate tracking has been stepped up with wider supervision. Numerous remote detection systems have been deployed, in Dijon, Corbeil and Orleans in particular. 250 priority contracts have been established with objective criteria (such as network efficiency for example) and are closely tracked, with the aim to have zero priority contracts by 2010. Lastly, the employees receive special training in how to combat water losses.

Control fuel consumption

SITA News is developing river and boat transport as a cleaner alternative to road transport for the transportation of large volumes of wood, paper and sand. In spite of the increase in quantities transported, greenhouse gas emissions have been reduced, falling from 73.9 kT in 2005 to 72.9 kT in 2006. In Holland, SITA has also introduced on-board computers in the waste collection vehicles that have resulted in a 10% reduction

in the number of kilometres travelled and therefore a virtually proportional reduction in fuel consumption. In 2007 in France, 17 instructors were deployed in all the regional subsidiaries to train the heavy vehicle drivers in economical driving. A software programme (INFO MAX) is installed on the lorries and enables the instructors to analyse the way the vehicles are driven (number of revs per minute, braking times, number of gear changes), the aim being to achieve a 10% reduction in fuel consumption.

Protect sensitive areas

In the field of fundamental research, SUEZ ENVIRONNEMENT is conducting several programmes with the Cemagref and the Genoscope with the aim of listing and identifying the polluting elements present in the natural environment and the micro-organisms present in sludge. The CIRSEE and CETAQUA (SUEZ ENVIRONNEMENT research laboratories) are also implementing a research programme over 2008-2010

that aims at establishing methodologies for measuring the biological status of the continental aquatic ecosystems and thus will obtain essential information for the preservation of biodiversity. This research work will serve to develop recommendations concerning the quality of water and the protection of aquatic life.

butterfly (*Lycaena dispar*) have been created on the landscaped zones. SITA has also initiated partnerships with beekeepers to install hives on three sites: Villeparisis, Mont-Saint-Sebastien and Donzère. The presence of hives helps sustain the declining bee populations and encourages pollination. The way the apiary functions also provides a means of checking the quality of the environment.



Limit the environmental impact of waste treatment sites

Each time a new waste treatment site is opened, SITA carries out an impact study. In 2006 the company added a new tool to its belt, for classifying the environmental sensitivity of its waste storage sites and incineration plants. This tool takes into account the respect of biodiversity and evaluates site sensitivity by means of mapping and a multi-factor assessment grid. Action plans are deployed on the sites classed as sensitive to prevent or reduce the impacts on the natural environment. On the site of Fontaine

Les Clerval, for example, the obligation to preserve biodiversity has been integrated into the project from the design stage. The biotopes favourable to the Water Shrew (*Neomis fodiens*) have been preserved by maintaining the dry pond and its wet herbaceous plant groups. In addition, the existing reed bed has been enlarged to enhance the site's potential for harbouring wetland birds. Instead of having ornamental species, grasslands favouring the "Large Copper"



Incinerator at Kirklees, England. Good practices help protection of the environment.

An ambitious sustainable purchasing policy

SUEZ ENVIRONNEMENT has set up a common sustainable purchases policy for its Water activities in France (Lyonnaise des Eaux, Degrémont, Ondeo Industrial Solutions). Concrete actions have thus been implemented in different contracts and regional centres. Among the significant results of this policy is a reduction in the overall environmental footprint of the treatment products, made possible in particular by the development of new equipment for controlling the consumption of polymers and the recovery of chemical industrial residues as a substitute for coagulants. These measures have resulted in a 15% reduction in the consumption of chemical products, a reduction in supply logistics movements, increasingly homogenous sludge quality resulting in improved skip fill, which in turn means fewer rotations, lower CO₂ emissions and better recovery of the sludge as standardised compost. In March 2008, SUEZ ENVIRONNEMENT won first prize in the Trophy of the Company of Directors and Buyers of France in the category "Purchasing and Sustainable Development".

In 2007, SUEZ ENVIRONNEMENT recruited 15,000 employees, 5,000 of which in France.

Employee esteem and protection

Conscious of its duties and responsibility, SUEZ ENVIRONNEMENT is developing a human resources policy that values its employees, and a health and safety policy with ambitious objectives and means.

SUEZ ENVIRONNEMENT is an international company employing 62,000 people. By virtue of the nature of its activities, it is a strong local employer, representing almost 90 nationalities. The cultural diversity of its workforce is one of SUEZ ENVIRONNEMENT's strengths. In all the countries in which it is present, priority is given to local employment, enabling the constitution of teams that are in line with the needs of the users of the services delivered. The dynamism of SUEZ ENVIRONNEMENT in terms of human resources is also illustrated by the vigour of recruitment. In 2007, SUEZ ENVIRONNEMENT recruited 15,000 employees, 5,000 of these in France, compared with 12,000 in 2006. SUEZ ENVIRONNEMENT's human resource management is decentralised.

It is ensured within each entity. SUEZ ENVIRONNEMENT implements general policies, corresponding to the objectives it sets as part of its sustainable development policy. The entities are then free not only to set themselves higher targets than those defined for the company as a whole, but also to put in place the policies best suited to their specific circumstances. The SUEZ ENVIRONNEMENT human resources policy complies with the requirements for equal opportunities and fighting exclusion. SUEZ ENVIRONNEMENT undertakes to give each person – man or woman, regardless of nationality, religion or culture – equal opportunities for recruitment, employment and personal and professional development. Working for man and the environment by providing goods and environmental services essential

for life also necessitates the preserving of employee health and safety. In the safety domain SUEZ ENVIRONNEMENT is considered exemplary.

Actions to combat exclusion

Enabling people with disabilities to find their place in the company is a priority aspect of the human resources policy. SUEZ ENVIRONNEMENT provides logistic and relational assistance (use of coaches) to employees who have suffered industrial accidents or illnesses that gradually worsen throughout their career. Lyonnaise des Eaux, for example, calls upon specialist consultants to identify the positions that are compatible with a disability. At Degrémont, collaboration with associations is set to increase in order integrate a larger number of disabled people, particularly in the design offices. SITA France has

conducted a disability audit resulting in a specific action plan: 25 employees having encountered disability problems will be reclassified by the end of 2008. Lyonnaise des Eaux created ESSOR in association with the APF (the French association for the disabled) in Marly les Valenciennes to cover all customer service administrative tasks. The centre created 15 jobs. Another priority theme: fighting exclusion and precarious situations. SITA Rebond is a subsidiary of SUEZ ENVIRONNEMENT that organises the professional reintegration of people in precarious situations such as the long-term unemployed, people on the RMI (French income support system) or unqualified young people, while at the same time providing social support. An extensive network of industrial and institutional partners has been set up to train employees while favouring stability by putting in place personalised support. This support concerns vocational training,

accommodation, health and over-indebtedness. Work-based learning is another means that SUEZ ENVIRONNEMENT uses to favour professional integration. In the context of its sustainable development commitments, Lyonnaise des Eaux has been developing a work-based learning programme since 2004. 180 work-based learning contracts per year were signed between 2004 and 2007. Between now and 2010, Lyonnaise des Eaux plans to sign 1,000 new contracts.

Training: enhancing employees' professional experience, promoting university partnerships

Another priority aspect of the SUEZ ENVIRONNEMENT human resources policy is training. This represents a strong commitment made by the company, adapted to suit each subsidiary and entity. United Water in the United States has

developed an ambitious training plan for all those fulfilling a management role in water-related activities. Known as "front line leadership", the programme comprises training courses that are 70% related to employee well-being and 30% to know-how. In 2006 this programme was proposed to the union representatives so that they could benefit from the same training as the managers. In the waste domain, SITA France has developed a training policy called "Trajectoires" (Trajectories) that in 2006 enabled about 150 hours of training to be dispensed to 80% of the operating personnel. As an international company, SUEZ ENVIRONNEMENT intends to contribute to the development of students and their preparation for professional life. This commitment is based on two lines: making environmental activities better known, and academic support. Each year,



SUEZ ENVIRONNEMENT's activities call upon a wide variety of skills.



SUEZ ENVIRONNEMENT and its entities propose case studies to support the lectures of numerous engineering schools, such as *AgroParisTech*, *Centrale Paris* and *Ponts et Chaussées*. Numerous employees participate in university courses as lecturers. SUEZ ENVIRONNEMENT supports the students and proposes study bursaries at *Sciences Po Paris* and to the students of *Paris Tech* (in partnership with the University of Tongji). SUEZ ENVIRONNEMENT recently helped create an enterprise chair at the *École du Génie de l'Eau et de l'Environnement de Strasbourg* (Strasbourg Water and Environmental Engineering School) (see interview) and sponsors the Processes and Environment option at the *École Centrale Paris*. The human resources policy implemented within SUEZ ENVIRONNEMENT and its entities aims to take advantage of the strong local foundations of the company's activities to make progress in the field of integration and fighting exclusion. Lastly, it is hallmarked by the priority given to training, which has always been one of the strong points of SUEZ ENVIRONNEMENT, for whom the employees and their knowledge constitute its prime source of wealth.

Continuous health and safety efforts

Since its creation in 2003, SUEZ ENVIRONNEMENT has developed a safety policy characterised by a strong objective: to eliminate all controllable causes of accidents. To reach this objective, SUEZ ENVIRONNEMENT has deployed substantial human, technical and operational means. Examples include the technological modernisation of facilities, the establishment of an extensive network of high-level safety and insurance experts, and the development and updating of safety indicators specific to frequent sampling, enabling optimum responsiveness and therefore high-quality reporting. SUEZ ENVIRONNEMENT's activities of often involve industrial processes. The company operates a great number of plants of all types (sorting centres, wastewater treatment plants, etc.);

it also manages numerous work sites involving substantial earthworks and construction work (laying of pipes, construction of plants, etc.). These activities are by nature more hazardous than those of the tertiary sector. The handling of very heavy concrete items, or the compacting of waste, for example, are risky activities. Yet these risks are quantifiable and it is possible to minimise them through the deployment of an appropriate safety policy. It is a question of instilling in the daily routine of all employees the awareness of the risks they run in the normal course of their work, and the means that exist to protect themselves against these risks. Having rules and obeying them is one of the bases of the safety policy. Tragic accidents have shown that simply complying with the EC safety standards is not enough. Hence, SUEZ ENVIRONNEMENT requires specifications from its suppliers far in excess of EU conformity requirements. The special safety rules of SUEZ ENVIRONNEMENT are improved on the



SUEZ ENVIRONNEMENT requires specifications from its suppliers far in excess of EU conformity requirements.

basis of feedback from experience. All accidents form the subject of an in-depth investigation conducted at all levels under the supervision and evaluation of the SUEZ ENVIRONNEMENT Serious Accidents and Investigation Commission. Each investigation must be concluded with an assessment of how the results can be extended across the whole company. In practice, this means that the rapporteur must ask whether a general lesson can be learned from the event, and if so, this could lead to the introduction of an additional rule.

A unique culture of employee protection

It is necessary to establish a safety culture in the company as a whole. It is thus obligatory in all the SUEZ ENVIRONNEMENT facilities to have a dedicated safety notice board that is updated on a daily basis with information such as the number of days passed without an accident, to maintain concentration on day-to-day safety. The SUEZ ENVIRONNEMENT safety policy is also integrated in the assessment of managers, whose performance in this respect is rewarded or penalised by 10% of their annual bonus, through objective indicators adapted to each subsidiary. SUEZ ENVIRONNEMENT's health and safety results are good. However, marginal progress demands an ever-increasing effort, and above all the accident frequency and gravity indicators provide only a partial image of the progress made. Because today the safety culture of SUEZ ENVIRONNEMENT – shared by all its employees whether they work in China, Indonesia, Morocco or France – has become part of the company's know-how. The company is acknowledged the world over for its commitment in this respect, through the safety compliance attitude of its employees which is present at all levels: evaluation of the managers, safety instructions, setting equipment standards, etc.

This know-how represents a vital asset for SUEZ ENVIRONNEMENT and sets it apart from all the competitors in the sector.



In the interests of efficiency and good governance, SUEZ ENVIRONNEMENT's offer is tailored to the diversity of its territories.

For the delegated management of public services, over many years SUEZ ENVIRONNEMENT has fashioned a culture of listening, dialogue and cooperation with all the company's stakeholders.

SUEZ ENVIRONNEMENT is a socially-responsible company, proactive in the areas in which it works. It adapts the services it offers to the specific characteristics and diversity of the area, while striving for efficiency and good governance. It promotes participation in local development as part of its responsibilities, working with all stakeholders. SUEZ ENVIRONNEMENT has developed practices and methods to ensure an understanding of the context, to promote its anchorage in the local area, to provide social engineering training for its teams and to ensure knowledge transfer. Backed by its experience, the company is a player on the international

Placing stakeholders first

stage to promote better governance of our water resources and transparency of services management. It is committed to being an active participant in global institutional think-tanks on priority issues (contractualisation of the right to water, rate fixing, etc.). As part of its responsibilities, the company also plays its part to reach the Millennium Development Goals with other actors committed to achieving these goals.

SUEZ ENVIRONNEMENT and its stakeholders: a structured dialogue

The social responsibility of SUEZ ENVIRONNEMENT is distinct, as it is linked with its business of providing public service and water as a resource. Reflecting its commitment to the distinctive nature of this responsibility, the company has established the resources it needs through a process of dialogue with stakeholders. The objective is to improve the fit between our company

strategy and the needs of civil society, to inform our debates and our commitments to Sustainable Development. Several years ago, SUEZ ENVIRONNEMENT created a permanent forum for dialogue, the Foresight Advisory Council (FAC) with 25 members from all continents: universities, representatives of associations, international civil servants and former government members, all of whom are experts on the environment and development issues. The FAC contributes to helping SUEZ ENVIRONNEMENT in its plans. It meets twice annually to freely debate the company's strategy, research and initiatives in the water and waste sectors. Having first of all prepared the ground through a process of identification and dialogue with a number of actors, SUEZ ENVIRONNEMENT also initiated meetings designed to listen to stakeholders. The meetings were held in Paris and New York in April and May 2007 and January 2008. The purpose of these meetings is to examine the company's water

Water Stories: valuing successful partnerships

When SUEZ ENVIRONNEMENT signs a contract, it delivers more than just services. To strengthen local development, its subsidiaries work with local suppliers and respond to the specific challenges of local employment areas. SUEZ ENVIRONNEMENT has produced a unique collection of publications to explain the history of its contracts and to report on its knowledge-transfer policies: **Water Stories**. The first issue in this collection is dedicated to the LEMA management contract, a SUEZ ENVIRONNEMENT joint venture to manage the water services for Amman, the capital of Jordan.

The Amman contract is one example of a successful public-private partnership in a country counted amongst the 10 poorest in terms of water resources. The end of 2006 saw SUEZ ENVIRONNEMENT hand back management of Amman's water to the Jordanian government. The Minister for Water Resources acknowledged the improvements made to the service, ranging from water quality, management of rationing and customer service to transfer of know-how. Issue two covers Casablanca where the teams in Lydec, a SUEZ ENVIRONNEMENT subsidiary, have worked for the past 10 years to achieve continuous improvements in the water, sanitation and electricity services. By opting for a delegated management system, the local authority retains ownership of its assets and the responsibility for setting the major objectives, while the private sector takes on responsibility for the necessary investment and management of the service. These contracts reflect the values and spirit of partnership that are central to SUEZ ENVIRONNEMENT. Our water business activities bank on local skills. When a contract has run its term, our policy of knowledge transfer ensures the sustainability of the services over time.



and sanitation activities, focusing on two major priorities:

- Fairness and universal access to water and sanitation services;
- Information and consultation: balance of power with stakeholders.

This process of dialogue is also reflected in the internal company structure, according to the various business lines and territorial subsidiaries, and takes the form of mobilisation projects and social engineering training. The process is led by the Executive Committee, which validates developments on a regular basis and monitors the progress of actions.

Public-private partnerships: be proactive

Public-private partnerships (PPP) serve the public sector and provide a means to implement innovative and ambitious projects. Access to drinking water is a fundamental right. As such, ultimate responsibility for water and sanitation services lies with government,

the guarantor of the public good, regardless of the management method implemented. Public authorities play a fundamental role in the context of a PPP: they are the decision-makers. They define the framework conditions of the contract (prices, scope, etc.) and control its performance. Released from the operational management of services, they are free to concentrate on formulating water policy. The private operator brings to the table the technical expertise and capacity for innovation to implement the policy on the ground. There are two types of situation for a public services company providing water and sanitation services:

- universal access for the entire population to a service that meets international standards. This situation prevails in all the so-called industrialised countries and in certain large agglomerations in developing countries;
- universal access to the service does not exist for the whole population, and the service does not meet international standards.

In the latter scenario, reinforcing the concept of public service and the emergence of relations with users based on a principle of rights and responsibilities calls for the implementation of a 15 to 30-year process, depending on the size of the system and its condition at the outset. No contractual model can cover the total duration of the process required for the management of the service to become autonomous and sustainable. In this type of situation, SUEZ ENVIRONNEMENT proposes to focus on process logic. It offers new forms of public-private partnerships based on flexible legal frameworks, the participation of institutional clients in decision-making, a robust policy of knowledge transfer (WIKTI) and more extensive use of local companies.

Dialogue with elected representatives

Environmental activities are distinctive in that they are both industrial and local. SUEZ ENVIRONNEMENT is a public service

operator deploying heavy industrial solutions, including drinking water plants, wastewater treatment plants, incinerators, sorting centres and landfill centres. It provides services to inhabitants on a daily basis, i.e. it supplies drinking water and wastewater and waste collection services. The singular nature of its business requires ongoing dialogue to ensure optimum integration of the company's activities into the local economic fabric. The front line of contact for SUEZ ENVIRONNEMENT is local representatives. As they have long involvement at all levels of the community, they are in a position to precisely identify the needs of the populations served. Their comments and expectations are always constructive and enable the company to develop an intelligent service offer. Relations with elected representatives are permanent.

SUEZ ENVIRONNEMENT takes part in many initiatives led by associations of elected representatives. Dialogue with local authorities is also central for SUEZ ENVIRONNEMENT internationally and this dialogue is frequently facilitated by the presence of local partners. SUEZ ENVIRONNEMENT deliberately chose to associate with local investors who are familiar with the operating conditions that its teams will encounter. These partnerships ensure greater understanding and contract stability, as well as providing reassurance to public authorities regarding the intentions of the company, no longer perceived as a dehumanised multinational but rather as a local actor. In China, partnerships with New World for the water sector and with Swire for waste management have not only ensured optimum funding of the investments required, but also ongoing, high-quality dialogue with

the authorities, which guarantee the success of the projects.

Protect residents, listen and convince users

Dialogue with residents and users is the key to success for SUEZ ENVIRONNEMENT. First and foremost, the company is determined to protect them from potential site nuisance, especially olfactory nuisance. SUEZ ENVIRONNEMENT developed the NOSE programme (No Odor for SUEZ ENVIRONNEMENT), a cross-sector initiative that combines a technical and human approach. Upstream, it aims to minimise the amount of odours produced by focusing on the procedures used. Downstream, it works to isolate and break down the sources of odours, to detect odorous molecules and either destroy them biologically or neutralise them chemically. The parallel human level is vital to evaluate olfactory nuisance, and is for the most part entirely subjective. The human sense of smell perceives certain very low-concentration compounds and can describe the odour, classifying it as pleasant or unpleasant.

In addition, a more general High Environmental Quality approach constitutes another protection for residents. As part of its Sustainable Development commitments, SUEZ ENVIRONNEMENT carried out a visual assessment of all its sites in France to determine priority sites for environmental integration work. For example, the site at Entraigues-sur-la-Sorgue (France), deeply marked by quarrying activities, was designed by SITA Sud to create a platform incorporating all the essential links in the chain at the one site: sorting - recycling - processing of final waste. The French Forestry Authority (ONF) carried out a landscape guideline study at the site. The resulting proposals were submitted to the local authority and a planting programme drawn up in the context of the scheduled rehabilitation of the storage facility. Using the compost produced by the plant reduced fertiliser needs from 1,300 to 200 kg per hectare.



For SUEZ ENVIRONNEMENT, dialogue with residents and users is a key condition for success.



Jérôme Assez

Jérôme Assez is sector head for Lyonnaise des Eaux at Chalon-sur-Saône. He took part in the Aquassistance mission at Muang Long in September 2007. He is due to take part in the next mission to supervise the installation of the drinking water distribution network

Tell us how you became a volunteer for Aquassistance?

I joined the SUEZ group in 2001, working in the energy branch at Ineo. I was already a specialist in pipe networks. I moved to Lyonnaise des Eaux in 2005. I discovered Aquassistance through the Group's Intranet site and was interested in the accounts of the mission and the concrete and sound actions

undertaken by it. I joined in 2003. In 2007, I became a member of the Board of Directors and took part in my first mission in Muang Long in Laos.

What are the skills required to successfully undertake this type of mission?

The work revolves around three fundamental areas. You must have solid technical skills to assess the precise needs of the population and define solutions, such as the dimensions of the network, for example. Next comes the ability to assume technical responsibility for the action. Volunteers also need competence on the ground to supervise the works and to give

good instructions to local workers, who are often the inhabitants of the village. It is a question of transferring our expertise on the ground, while assuming a management role. Finally, we have to set up the local water service, decide who will read the meters and make sure that the network is maintained. This requires a lot of teaching and diplomacy to identify the right people to ensure that the service will be sustained when we leave.

What motivates you?

Money can't buy everything. It can't buy technical skills and know-how. In SUEZ ENVIRONNEMENT we are lucky that many of us possess

the essential expertise required to set up drinking water and sanitation services. Instead of donating money, I want to give my time and my skills to help poor communities, because I feel that I can be of more use by teaching others and transferring the expertise that I have gained from my training and years of experience.

Have you a particular message you would like to communicate?

Yes, a very simple message. For us, drinking water just flows from the tap, every day, 24 hours a day. However, this is not the case for many people on this planet and we have to fight to provide drinking water for everybody.



Actions to do even more

On a daily basis, SUEZ ENVIRONNEMENT carries out public service missions on behalf of local authorities. This day-to-day relationship with local elected representatives and their departments has profoundly influenced and marked our corporate culture, one of the cornerstones of which is commitment for the good of the community. SUEZ ENVIRONNEMENT considers it normal to provide support for local authority initiatives in the context of regional development, as well as for social initiatives or decentralised cooperation actions. One such example is the Scientipôle Initiative. The initiative originated in the Île-de-France region with the initial support of the *Île de Science*, the Essonne Chamber of Commerce and Industry, the *Communauté d'Agglomération du Plateau de Saclay*, the Île-de-France Region and the *France Initiative Réseau*. The aim of *Scientipôle* is to closely associate business and technological resources to promote the emergence of innovative projects and support their development. The association grants interest-free loans to creative individuals and mobilises technological and

SUEZ ENVIRONNEMENT is conscious of the fact that it is a stakeholder in the communities in which it works and, as such, must be heavily involved in the economic and social development of all its operating areas.

business skills to sponsor and support company start-ups. SUEZ ENVIRONNEMENT and other large companies present in the Île de France region support this initiative. The group contributes some €75,000 to the fund to finance the interest-free loans. In participating in this initiative, the company contributes more than just finance; it also participates indirectly in the initiative created by local public actors in the Île-de-France region to foster innovation. SUEZ ENVIRONNEMENT shows its solidarity with the economic fabric of a region where the company is present. The support projects chosen and implemented by SUEZ ENVIRONNEMENT are consistently subject to a rigorous selection process to ensure they have a real impact and yield concrete outcomes for the inhabitants of the region where the company works. SUEZ ENVIRONNEMENT has also invested alongside the French University in Egypt.

This young university offers quality training in general and technical subjects for young Egyptians. The company contributed €50,000 and has created a vigorous momentum to obtain support from French companies also present in Egypt to source the funding required for the university's structural investments

Water for Muang Long

Muang Long is a town of 2,500 people northwest of Laos, not far from China and Burma. Every day the people of Muang Long are reduced to boiling water to cater for their domestic needs, because the containers of drinking water sold at \$10 per square meter are beyond their means (the average price in France is €3 per m³, IFEN 2004). The inhabitants have very limited resources and live mainly from their crops (rice and vegetables) and animals. Action Against Hunger is very active in the

What is Aquassistance?

SUEZ ENVIRONNEMENT is involved in providing public utility services that are essential to the daily lives of communities for health and environmental reasons. Access to drinking water and wastewater treatment are basic needs that should not be dependent on wealth or the community's ability to pay. The creation of Aquassistance dates back to the autumn of 1994 following the dramatic events in Rwanda. At the time, French water distributors had put together an emergency operation to build a pumping station in Goma (Zaire) and connect it to the network, benefiting hundreds of thousands of refugees, and to restore the treatment plant and distribution network in the town of Synagogue (Rwanda). Volunteers from Lyonnaise des Eaux who participated and helped to make the operation a success, along with many others who had closely monitored the situation, were convinced that the action was effective and decided to get together to provide help to populations in difficulty. They formed a specialist humanitarian association, Aquassistance, open to all SUEZ ENVIRONNEMENT employees willing to use their expertise to help those most in need.



region around Muang Long and alerted Aquassistance to the urgent need for a supply of drinking water in Muang Long. The first mission began in 2005 aimed at assessing needs and feasibility, followed by a preliminary project to put together the financing and organise the action itself. Institutional partners came on board with financial support. SEDIF (Water Syndicate of the Ile-de-France Region) the Dunkirk Region Water Supply Syndicate and the Artois Picardy Water Board have joined the initiative and contribute financing. The works are due to start in 2008 and the aim is to start civil engineering works before the return of the rainy season. Included in the works are catchworks on streams, the installation of reservoirs, laying of PVC piping and more than 500 individual connections with meters. All inhabitants will then enjoy 24 hour supply of quality water throughout the year. The synergy created by the supply of the equipment and expertise by Aquassistance, the financial solidarity of the decentralised cooperation structure and the spirit of initiative embodied in Action Against Hunger all contribute to the planning and completion of a sound and constructive humanitarian project which will make real changes in the lives of this community. The long-term success of projects such as these and their clear and major impact on peoples' daily lives are vital motivating factors for the volunteers working for Aquassistance.

p 90 Four priorities for a sustainable performance

p 92 Environment reporting methodology

p 93 Environmental performance indicators

p 95 Human resources indicators



Four priorities for a sustainable performance

SUEZ ENVIRONNEMENT intends to be the benchmark company in the water and waste sectors for the new resource economy of the 21st century. Our policy of Sustainable Development also incorporates meeting the company's financial objectives. The high stakes involved mean that municipal and industrial customers demand the best, committed professional expertise. The SUEZ ENVIRONNEMENT business activities contribute to quality of life and the protection of the environment, and in the water, sanitation and waste management sectors, we offer a quality

of service that is beyond reproach, in line with the expectations of consumers and customers. We must also guarantee a high level of environmental protection, in particular by ensuring that the plants and services managed by the company comply with the burgeoning requirements of health and environmental regulations. But from now on, SUEZ ENVIRONNEMENT also intends to do its job, meeting the sustainable development expectations of populations, to:

- provide good management of water and waste cycles, taking global challenges into account;

- promote circular economy to ensure reasoned management of resources (optimisation of water resources, recycling and recovery of waste, and regeneration of wastewater);
- reduce the environmental impact of our activities, in particular the impact resulting from greenhouse gas emissions. Sustainable Development is one of the key drivers of performance. Against this backdrop, SUEZ ENVIRONNEMENT has set four priorities, broken down into 12 commitments, as a tool to pursue economic and environmental performance.

4 priorities ● 12 commitments

- Conserve resources and promote the circular economy**
 - - Optimise the rate of recycling and recovery of waste
 - Increase the technical efficiency of drinking water networks
- Innovate to meet environmental challenges**
 - - Reduce greenhouse gas emissions
 - Improve energy efficiency
 - Increase production of renewable energies
 - Incorporate biodiversity into site management
- Make our employees Sustainable Development actors**
 - - Develop professional expertise
 - Continuous improvements in work safety
 - Commit to diversity
- Build our development with all our stakeholders**
 - - Pursue active dialogue with stakeholders
 - Be an actor in sustainable local development
 - Provide regular and accessible information on our Sustainable Development actions

1. Conserve resources and promote the circular economy

Optimise the rate of recycling and recovery of waste

...by increasing the proportion of the waste we manage that is reused, recycled or recovered in the form of new materials to minimise life cycle impacts. For example, our objective for France is to achieve at least 35% by 2012.

Increase the technical efficiency of drinking water networks

...and reduce leaks to prevent waste of a precious resource, especially in regions where water is at a premium.

2. Innovate to meet environmental challenges

Reduce greenhouse gas emissions

...of the vehicle fleet and technical plant we use to carry out our jobs, and also by increasing the amount of emissions avoided thanks to our activities (net reduction in greenhouse gas emissions).

Improve energy efficiency

...by reducing the amount of power required by our operations (consumption of fossil fuels, consumption of non-renewable primary energy, etc.).

Increase production of renewable energies

...from energy recovery plants, sludge re-use or discharge biogas.

Incorporate biodiversity into site management

...by implementing action plans at sensitive sites.

3. Make our employees Sustainable Development actors

Develop professional expertise

...by a sustained training effort and by providing employees with the means to become involved in improving our Sustainable Development performance.

Continuous improvements in work safety

...through a determined risk-reduction policy and by reducing the frequency and gravity of accidents. In the six-year period from 2001 to 2007 we succeeded in cutting the work injury frequency rate by 3, across all business activities.

Commit to diversity

...by fighting against disability, against exclusion and by promoting gender equality.

4. Build our development with all our stakeholders

Pursue active dialogue with stakeholders

...by regularly organising relevant dialogue meetings at all levels with a view to improving the appropriateness of the company's strategy for the requirements of civil society.

Be an actor in sustainable local development

...by actively participating in the economic and social life (employment, retraining, etc.) of the community in which we have a presence and by acting as a partner to local authorities in their Sustainable Development policies relative to our activities.

Provide regular and accessible information on our Sustainable Development actions

...backed up by reliable and verified data.

Environmental reporting methodology

2008 report on the 2007 data

For the «environmental responsibility» part, the SUEZ ENVIRONNEMENT document covers the period from 01/01/2007 to 12/31/2007 and 92% of its turnover: 96% of the turnover from its Sanitation business and 86% of that from its Water business.

All the data from the previous years, except the «management» data (HR, security, etc.) were updated to correspond to the scope of 2007 as described below.

This report takes 100% of the data according to the operational scope of the SUEZ ENVIRONNEMENT activities.

Sanitation sectors: the report covers the subsidiaries based:

- in Europe: Belgium, Czech Republic, Finland, France, Germany, Great Britain, Luxembourg, Netherlands, Poland, Sweden, plus the activities of Teris (hazardous waste);
- in the Asia-Pacific region: Australia, China (Hong Kong and Macao), Taiwan, Reunion Island, Mauritius, Seychelles, United Arab Emirates;
- in North Africa: Morocco.

As compared with 2006, the United Arab Emirates entity was incorporated into the 2007 document.

Water sectors: the main activities covered by the report are drinking water management, waste and rainwater treatment, recovery and reuse of sludges, operation of treatment plants.

In 2007, the following contracts were incorporated into the reporting:

- For Degremont: Viveros de la Villa (Degremont Spain), Kemet (Degremont Portugal), Perth (Degremont Australia);
- For China: Chongqing, Changsu;
- For the United States: (United Water): Durham, Stonington, Orange, Phillipsburg, Manchester, Reidsville;
- For AGBAR: Bristol (United Kingdom);
- Trencin (Slovakia);
- Algiers (SEAAL, Algeria).

Environmental performance indicators

Greenhouse gas emissions (in Mt eq CO²)

Sector	Type of emission	2006	2007
Waste	Direct	5,576,644	5,661,287
	Avoided	16,299,189	12,107,672
	Indirect	211,651	299,654
	Processed and reduced	6,312,620	6,977,567
Water	Direct	178,769	191,936
	Avoided	18,407	38,932
	Indirect	1,167,563	1,275,451

Drinking water production

	2005	2006	2007
Number of treatment stations	1,128	1,389	1,729
Annual volume produced (Mm ³)	4,218	4,406	5,036
Network length (km)	175,419	178,678	197,555

Wastewater collection and treatment

	2005	2006	2007
Network length (km)	74,341	76,408	81,745
Annual volume treated - secondary treatment (Mm ³)	2,153	2,271	2,603
Annual pollution eliminated - BOD (T)	439,693	443,855	522,632
Annual tonnage of sludge reused	262,750	271,251	264,400
Total number of treatment stations	1,452	1,453	1,597

Electricity consumption for water treatment

	2005	2006	2007
Ratio of electricity consumption per m ³ of drinking water produced (Wh _e / m ³)	385.3	379.8	392.3
Ratio of electricity consumption per m ³ of wastewater collected and treated (Wh _e / m ³)	458	500	524

Human resources indicators

Energy recovery from incinerated waste

	2005	2006	2007
Tonnage incinerated	5,546,733	5,863,570	6,091,840
Quantity of electrical energy produced (MWh _e)	2,076,908	2,364,149	2,626,480
Quantity of thermal energy produced (MWh _{th})	8,795,845	8,594,758	8,742,434

Landfill processing and energy recovery from biogas

	2005	2006	2007
Total tonnage in class 2 landfills (household/general industrial waste)	17,64,2949	16,018,746	16,826,632
Quantity of leachates (not recirculated) treated internally and externally (m ³)	3,187,588	3,075,266	4,051,361
Methane emissions (m ³)	195,499,428	160,851,213	199,785,040
Share of landfills equipped with a biogas collection and treatment system	Not available	97.50%	93.37%

Materials recycling - (Household/general industrial waste)

	2005	2006	2007
Outgoing tonnage of sorted paper and cardboard	2,105,484	2,272,000	2,676,322
Outgoing tonnage of sorted plastics	181,586	236,372	261,619
Outgoing tonnage of sorted glass	318,667	507,656	644,708
Outgoing tonnage of sorted wood intended for material recovery	861,245	486,665	895,785
Outgoing tonnage of sorted metals	673,857	280,008	519,829
Sorted outgoing tonnage	5,393,644	6,573,555	7,660,072

	2007
Workforce per division	
Water Europe	11,213
Sanitation Europe	37,022
International	13,135
Head Office	545
Total all companies together	61,915
AGBAR	13,787
Total including AGBAR	75,702

	2005	2006	2007
Workforce per geographical area			
Europe	47,340	48,571	52,555
North America	3,261	2,244	2,704
South America	15,548	581	231
Africa - Middle East	3,255	3,552	3,646
Asia - Oceania	2,726	2,498	2,779
Total	72,130	57,446	61,915

	2005	2006	2007
Workforce management/ non-management breakdown			
Management	6,783	7,091	7,766
Non-management	65,347	50,355	54,149
Total	72,130	57,446	61,915

	2005	2006	2007
Share of women in the group			
Men	58,801	47,115	50,593
Womens	13,329	10,331	11,322
Total	72,130	57,446	61,915

	2005	2006	2007
Training			
Percentage of workforce trained	59.8	58.6	60.0
Number of hours training per person	23.1	24.8	25.3

	2005	2006	2007
Safety at work			
Number of fatal accidents (employees)	4	4	6
Frequency rate	21.50	21.89	18.47
Gravity	0.87	0.83	0.74

p 98 Combined financial situation for the years ending on 31 December, 2005, 2006 and 2007

p 101 Financial glossary

p 102 Activities glossary



Combined financial situation for the years ending

on 31 December, 2005, 2006 and 2007

Combined balance sheets

in millions of euros	31 december 2007	31 december 2006	31 december 2005
Non-current assets			
Net intangible assets	1,712.9	1,721.5	1,764.3
Goodwill	2,720.2	2,244.2	2,005.0
Net tangible assets	5,918.6	5,689.6	5,414.6
Securities available for sale	1,143.6	827.7	655.8
Loans and debts at amortized cost	312.7	425.9	471.0
Financial derivatives (including commodities)	58.2	45.0	40.7
Investments in affiliates	237.7	220.9	256.0
Other assets	55.1	45.5	102.7
Deferred tax assets	574.0	673.7	781.2
Total non-current assets	12,733.0	11,894.0	11,491.3
Current assets			
Financial derivatives (including commodities)	14.9	12.4	10.8
Loans and debts at amortized cost	188.6	145.4	69.7
Customers and other debtors	3,147.5	3,083.9	3,157.0
Inventory	242.5	245.9	272.8
Other assets	765.5	685.0	659.0
Financial assets evaluated at real value by result	179.5	53.5	57.4
Cash assets and equivalents	1,466.2	1,994.8	1,923.9
Total current assets	6,004.7	6,220.9	6,150.6
Balance sheet – total assets	18,737.7	18,114.9	17,641.9
Equities, Group share	3,643.9	3,547.0	3,243.1
Minority interest	613.0	1,120.1	793.1
Total combined shareholder equity	4,256.9	4,667.1	4,036.2
Non-current liabilities			
Provisions	955.2	1,025.6	977.2
Financial debt	4,722.6	3,335.8	3,235.2
Financial derivatives (including commodities)	16.1	17.4	31.1
Other financial liabilities	2.3	2.6	1.1
Other liabilities	246.8	121.5	148.3
Deferred tax liabilities	561.1	605.3	568.5
Total non-current liabilities	6,504.1	5,108.2	4,961.4
Current liabilities			
Provisions	341.2	354.0	570.8
Financial debt	2,350.1	2,598.9	2,581.7
Financial derivatives (including commodities)	5.4	6.3	29.3
Suppliers and other creditors	3,714.7	3,852.9	3,847.0
Other liabilities	1,565.3	1,527.5	1,615.5
Total current liabilities	7,976.7	8,339.6	8,644.3
Total combined shareholder equity and liabilities	18,737.7	18,114.9	17,641.9

Combined income statements

in millions of euros	31 december 2007	31 december 2006	31 december 2005
Turnover	12,034.1	11,446.6	11,092.0
Purchases	(2,210.1)	(2,384.4)	(2,224.7)
Payroll	(3,140.1)	(2,967.4)	(3,007.8)
Amortizations, depreciations and provisions	(754.9)	(679.8)	(694.6)
Other products and operational charges	(4,867.6)	(4,354.6)	(4,165.1)
Operational income	1,061.4	1,060.4	999.8
MtM for operational financial instruments	(5.7)	(1.9)	0.4
Depreciation of tangible, intangible and financial assets	(35.4)	(53.9)	(209.1)
Restructurings	(12.3)	1.0	(26.6)
Disposal of assets	181.4	149.7	509.3
Income from operating activities	1,189.4	1,155.3	1,273.8
Financial charges	(365.7)	(331.5)	(423.4)
Financial income	103.0	167.5	147.9
Financial balance	(262.7)	(164.0)	(275.5)
Taxes on profits	(273.5)	(276.1)	(241.1)
Affiliates' share of income	22.6	20.7	18.8
Combined net income	675.8	735.9	775.9
Minority interest	184.1	162.1	116.5
Income, Group share	491.7	573.8	659.4
Net income (Group share) per share	1	1.17	1.35

Combined cash flow tables

	31 december 2007	31 december 2006	31 december 2005
Combined net income	675.8	735.9	775.9
- Affiliates' share of combined income	(22.6)	(20.7)	(18.8)
+ Dividends received from affiliates	16.4	21.8	25.7
- Net allocations for provisions, amortizations and depreciations	762.9	753.8	854.0
- Net income on transfers	(181.4)	(149.7)	(509.3)
- Other elements without accounting consequences	37.0	4.5	12.3
- Taxes	273.5	276.1	241.1
- Income	262.7	164.0	275.5
Total current assets before financial income and taxes	1,824.3	1,785.7	1,656.5
+ Taxes paid	(351.2)	(260.9)	(249.9)
Variation in cash flow needs	(11.2)	40.2	138.6
Flows deriving/(used) from operational activities	1,461.9	1,565.0	1,545.2
Tangible and intangible investments	(1,132.9)	(1,004.0)	(1,025.5)
Acquisitions without accounting effects, and equivalent in acquired funds	(467.5)	(345.3)	(38.8)
Acquisitions of securities available for sale	(268.6)	(103.6)	(123.6)
Transfers of tangible and intangible assets	50.7	68.3	45.7
Transfers of entities without accounting effects and equivalent to cost	245.4	130.7	725.4
Transfers of securities available for sale	4.6	1.6	26.8
Interest received on non-current financial assets	3.3	57.1	19.6
Dividends received for non-current financial assets	33.7	28.0	19.9
Variation in the company's and others' debts and credits	(3.7)	(14.3)	13.4
Flows deriving/(used) from investment activities	(1,535.0)	(1,181.5)	(337.1)
Dividends paid out	(549.7)	(502.3)	(564.4)
Repayment of financial debt	(527.0)	(573.7)	(710.7)
Financial assets evaluated at real value by result	(125.2)	(14.4)	(43.1)
Financial interest paid out	(301.1)	(291.1)	(316.8)
Financial interest received, in cash terms, and equivalents in cash terms	51.9	72.5	58.4
Increase in financial debt	1,006.7	947.3	617.2
Increase in capital	5.7	29.2	381.7
Flows deriving/(used) from financing activities	(438.7)	(332.6)	(577.6)
Effect of exchange-rate variations, and other	(16.8)	19.9	24.1
Total flows for the period	(528.6)	70.8	654.6
Cash flows, and equivalent cash flows, at opening	1,994.8	1,923.9	1,269.3
Cash flows, and equivalent cash flows, at close	1,466.2	1,994.8	1,923.9

Financial glossary

Adjusted quoted market price: the market price of a share, taking transactions modifying the amount of the company's capital into account (the creation of new shares, share split, etc.). The adjustment is to compare the development of the share price over time.

AMF (Autorité des Marchés Financiers): public independent institution responsible in France for establishing the regulations governing the markets and the ethics of regulated markets, as well as for monitoring the markets and protecting investors and shareholders.

Capital employed: the capital in use, equal to the financial resources mobilised by the company for its development. It represents the sum of total owner's equity, minority interests and net indebtedness.

Capital increase: increase in a company's registered capital, by either a new share issue or by increasing the nominal value of the existing shares.

Current operating income: the difference between turnover and the costs associated with the manufacture, distribution and sale of the products, as well as amortization of the company's investments. It is an indicator of the company's capacity to achieve the margin required for its operation and development.

Deferred Settlement Service: in return for a fee, this service allows investors to defer payment orders or delivery of securities until the last trading day of the month. It applies only to the most liquid shares. To be eligible for Deferred Settlement Service, the shares must meet the following criteria:
- their capitalisation must exceed €1 billion;
- the daily volume of transactions must exceed €1 million.

Dividend: the share of the company's net profits distributed to shareholders. The Annual General Meeting of Shareholders may only decide to distribute a dividend after it has approved the financial statements for the period and verified the existence of the amount for distribution.

Earnings Per Share (EPS): EPS is the net earnings of the company divided by the number of shares comprising the company's capital.

EBITDA (earnings before interest, taxes, depreciation and amortization): equal to income before payment of interest on loans, taxes, provisions (depreciation, etc.) and amortization. It is close to the French concept of "excédent brut d'exploitation".

Euronext Paris: exchange group involved in trading on the Paris market that organises, manages and develops the stock market.

Float: the proportion of a company's share capital that can be traded on the stock exchange. The larger the float, the higher the share's liquidity.

Goodwill: the difference between the purchase price of an acquired company and the value of its existing owners' equity when acquired by the group.

IFRS (International Financial Reporting Standards): international accounting standards effective beginning January 1, 2005 to facilitate comparison of companies' financial statements.

Income: the net profit or loss obtained by the company, calculated by adding current operating income, other operating revenue and charges, the net cost of financial indebtedness, other financial revenue and charges, the share of net income of companies accounted for using the equity method, the tax net income for activities either abandoned or in the process of being disposed of, and by deducting corporation tax and the share of minority groups.

Liquidity: ratio between the volume of shares traded and the total number of shares constituting the company's capital. The liquidity of a share expresses the ease with which an investor can swiftly find counterparty for a large order, regardless of whether buying or selling, without causing a significant variation in the share price.

Market capitalisation: the value of a company at market prices at a given time. This value is equal to the number of shares issued multiplied by the market price per share.

Minority interests: included in the consolidated accounts, minority interest represents the proportion of owners' equity or net income of the subsidiaries consolidated according to the full consolidated method owed to the minority shareholders of these subsidiaries and not to the parent company.

Net income: positive balance on the income statement (see also *Income*)

Net income per share: consolidated net income divided by the number of shares constituting the company's capital.

Nominal value: the nominal value of a share is the share of the company's capital represented by the share. The company's capital is the product of the nominal value of the share multiplied by the number of shares.

Owners' equity: the company's capital belonging to the shareholders comprising capital subscriptions, reserves and retained income for the period.

PER (Price Earnings Ratio): this is the ratio of the share price to the earnings per share of a company. It expresses the price of a company in numbers of years of earnings.

Pre-emptive subscription right: a negotiable right whereby each shareholder has first refusal to purchase any new shares on a pro rata basis, when there is a new share issue with pre-emptive right.

Profit warning: an announcement to the stock market by a company warning that profits will fall short of the levels expected by the financial community.

Redemption of shares: the process by which a company can redeem its own shares, up to 10% of its capital, after the authorisation of its shareholders has been obtained during a General Meeting of Shareholders.

Return: ratio corresponding to the ratio between the dividend per share and the quoted market price of the share.

Return on Capital Employed: ratio of net income before interest expenses and after taxes to the average capital employed. It indicates the profitability of the funds invested by the shareholders and those loaned by the banking and financial system.

ROE (Return On Equity): ratio of net income to shareholders' equity. It is a measure of the profitability of the funds invested by the shareholders.

Self-financing capability or self-financing: cash flow from the company's operations intended to be reinvested or distributed to shareholders (dividends). This cash flow is equal to the sum of income after taxes, plus depreciation and minority interests.

Self-regulation: the company is responsible for its own supervision through one or more other companies it controls directly or indirectly.

Share: a negotiable security representing a fraction of the capital of a company. The share gives the bearer the right to attend Annual General Meetings of Shareholders, the right to information and to a share of the proceeds in the event of liquidation.

Share split: a split in the nominal value of a share with a view to improving liquidity. A share split is an operation involving the reduction of the unitary value of a share by dividing its nominal value, and consequently multiplying the number of shares composing the capital.

Volatility: the extent to which the price of a share varies over a given period. This is a risk indicator: the greater the volatility, the greater the risk.

Activities Glossary



Biogaz: gas resulting from the fermentation of landfilled waste in the absence of air (methane/carbon dioxide).

Biological recovery: organic waste processing technique using composting or methanisation techniques.

Biolysis®: procedure to restrict sludge production by 30 to 80% at purification stations. Deployed at the biological basin, Biolysis® (translated into 2 products) causes a chemical or enzymatic "stress". Two actions that make part of the sludge biodegradable, and restrict the development of the others.

Catchment: the diversion of a water resource. With in the strict sense, refers to any structure commonly used to exploit surface or underground water.

Clarification: the separation of sewage sludge from water purified by decantation.

Connection rate: the ratio between the number of people effectively connected to the water and/or sanitation supply and the number of people using it.

DW (Domestic Waste): waste resulting from household consumption and collected by traditional or selective collection.

DWIP: Domestic Waste Incineration Plant (or incinerator).

EEEW: Electrical and Electronic Equipment Waste. Equipment which functions thanks to an electrical or magnetic current (excluding vehicles and other equipment governed by specific regulations). This electrical and electronic equipment is present in our private and professional environment: telephony, audiovisual, IT, robotics, office automation equipment, communication, measuring systems etc. When this equipment becomes unused or unable to be repaired, it becomes EEEW.

Energy recovery from waste: recovery of calories contained in incinerated waste, allowing thermal or electrical energy to be generated.

Groundwater: all water located underground in direct contact with the ground or the subsoil and which transits more or less quickly (day, month, year, century, millennium) via cracks and voids in a saturated environment or otherwise. Directive 80-68-EEC of 12/17/79.

Groundwater table: the first water encountered when digging a well. The table is generally free, i.e. its surface is at atmospheric pressure. It can also be under pressure if the cover material is not very permeable. It circulates, when it is free to do so, in an aquifer with an unsaturated zone near ground level.

Industrial wastewater: wastewater resulting from an industrial or commercial activity.

Inert waste: waste which is unlikely to evolve physically or chemically (non toxic, non biodegradable,

very low solubility in water, non-oxidisable), for example: backfill, rubble.

Landfill (European terminology): storage facility requiring an authorisation, which is affected by various regulatory operating constraints aiming to control the impacts of this waste treatment technique on mankind and on the environment (water, air, soil, noise, etc.). The technical layout of sites depends on the type of waste treated (DW/NHW, hazardous or inert waste, etc).

Leachates: water loaded in organic or mineral pollutants following contact with landfilled (or composted) waste.

Material recovery: waste processing technique, allowing reemployment, reuse and recycling (eg: waste resulting from selective collection which is recycled, bottom ash recovered for use in roadway capping layers).

Membrane: a more or less porous selective barrier used to separate the various components of a liquid.

Methanisation: methanisation is based on the recovery of gas produced by the degradation of organic matter buried in landfills, a form of biological fermentation caused by bacterial flora. It facilitates the recovery of a gas that otherwise would simply escape into the atmosphere. It also reduces the proportion of final waste in landfills and improves control of the pollution and environmental nuisance caused by the treatment of household waste. Once recovered, biogas can be used to produce electricity or heat, or be used as a clean fuel.

Nanofiltration: a separation process by membrane retaining particles from 1 to 10 nanometers in size and used to produce extremely pure drinking water. pure.

Nitrification: the first phase of the biological elimination of nitrogen, performed in sewage plants in particular. Nitrification involves the treatment of wastewater designed to transform ammonium (NH₄) into nitrate (NO₃) by oxidation by bacteria.

Out-of-use vehicle: an out-of-use vehicle is an end-of-life, a "worn" or a crashed vehicle. Such vehicles are considered as hazardous waste if they do not undergo treatment as they contain solid and liquid waste considered to be harmful (fuel, used oils, brake fluids, steering fluids, lead batteries, etc.). These vehicles are only considered to be non-hazardous following treatment.

Potable Water Supply (PWS): all the equipment, services and actions enabling, from raw water, the production of water compliant with the currently applicable potability standards, for distribution thereafter to consumers. There are 4 distinct stages in supplying water: withdrawal and catchment, treatment to make the water potable, adduction (transport and storage), and distribution to the consumer.

Processing: reduction, within controlled conditions, of the initial pollutant potential of waste and/or waste volumes before landfill.

Recovery: generic term encompassing the re-employment, reuse, recycling or regeneration of waste.

Regeneration: physical or chemical procedure, which provides waste with the necessary characteristics needed to allow it to be used as a replacement for a new raw material. For example: recycled paper re-generated by de-inking.

Reuse: use of waste for a similar purpose (for example, returnable bottles) or a different purpose from that for which the material was originally intended (for example, using tyres to protect the hull of trawlers).

Reverse osmosis: a filtration process which consists in exerting on water a pressure higher than the osmotic pressure, in order to force it through a semi-permeable membrane, in the opposite direction of the natural process of osmosis. This technique is used, for example, in the production of drinking water from salt or brackish water. It retains particles from 0.01 to 1 nanometers in size.

Sanitation: all the techniques involved in the collection, transport, and treatment of wastewater and rainwater in a conurbation (collective sanitation), an industrial site, or a private plot of land (on-site treatment) before their release back into the natural environment. The elimination of sewage sludge produced by treatment appliances is part of sanitation.

Sewage sludge: commonly refers to the waste sediment resulting from the treatment of wastewater. The sludge can be urban or industrial.

SIOM: *Syndicat Intercommunal des Ordures Ménagères* – Inter-communal Union for Domestic Waste (France).

Sorting at source level: separation of waste per type of material, carried out by residents in their homes or by companies.

Sorting centre: specific sorting and waste regrouping facility to which waste may be sent following collection. Also referred to as a Material Recycling facility.

Ultrafiltration: a separation process by membrane retaining particles from 0.001 to 0.1 micrometers in size, enabling the production of drinking water with a very high level of purity.

Waste landfill site: terminology used in official regulations, synonym for a controlled landfill.

Wastewater (raw water): untreated sewage discharged after domestic or industrial use. Also called residual water.

Design and creation: **ByTheWayCreacom**
Art direction: Cécile Regard
Coordinating editor: Michel Zelvelde (MZ ÉDITIONS)
SUEZ ENVIRONNEMENT authors/editors: Anne-Christine Béon, Jean Lorcy
Financial/shares section: Capitalcom

Photos credit

p.6: Steve Cole / Getty Images; Hiroshi Watanabe / Getty Images; Jon Sparks / Corbis; Ashley Cooper / Corbis - p.7: The Irish Image Collection / Corbis; Digital Vision / Getty Images - p.10: Jean-François Deroubaix / Gamma - p.13-15: Jean-Christian Bourcart / Interlinks - p.20: 1, Association du Souvenir de F. de Lesseps et du Canal de Suez; 2, SE; 3, SE; 4, Th. Duvivier Trilogi'c - p.21: 1, SE; 2, SE; 3, SE; 4, Ch. Guibbaud / Abacapress / SE - p.34-35: Martin Riedl / Getty Images - p.36: Masterfile - p.37: SE - p.39: SE - p.40-41: illustration: Jean-Marie Lagnel - p.44-45: Marco Simoni / Getty Images - p.46: Ch. Guibbaud / Abacapress / SE - p.47: Ch. Guibbaud / Abacapress / SE - p.48: Philip.Plisson - p.49: illustration: Jean-Marie Lagnel - p.51: Pete Starman / Getty Images; Gamma Eyedea / SE - p.52: Pierre Crie / SE; Peter Ginter / Getty Images; SE; Mathias Kobusinski / SE - p.53: Yves Soulabaille / SE - p.56-57: Tim Fitzharris / Getty Images - p.58: Greg Pease / Getty Images - p.59: Perre-François Moizan / SE - p.60: SE - p.61: SE; Ch. Guibbaud / Abacapress / SE; SE - p.62: SE - p.63: SE - p.64: SE - p.65: ZenShui/Michele Constantini / Getty Images - p.66: A Chezière / SE - p.67 SE - p.68 SE - p.69: BTWC; Mathias Kobusinski / SE; Image source / Getty Images; Pierre Crie / SE; Th. Duvivier / Trilogi'c; Tim Kiusalaas, Nathan Blaney / Getty Images - p.70: Ammar Abd Rabbo / Abacapress / SE - p.70-71: Yves Soulabaille / SE - p.72: Ryan McVay / Getty Images - p.73: SE - p.76-77: Tim Kiusalaas / Getty Image - p.78: Steve Winter / Getty Images - p.79: Images Shop./ Corbis; Gilles Bassignac / Gamma / SE - p.80: Th. Duvivier / Trilogi'c / SE; SE - p.81: SE - p.82: SE - p.83: A. Chezière / SE - p.85: SE - p.86: SE - p.87: SE.

“The prospectus concerning the admission of SUEZ ENVIRONNEMENT Company shares for trading on the Euronext Paris market received visa number 08-127, dated 13 June 2008. The prospectus, as well as the certificate of approval from the Financial Market Authority, established on the request of the company, have been communicated to the Belgian Banking, Finance and Insurance Commission as provided for by Directive 2003/71. The prospectus is available free of charge, namely from SUEZ ENVIRONNEMENT Company and SUEZ Head Offices, as well as on the following Internet sites www.suezenvironnement.com, www.suez.com and www.amf-france.org. SUEZ ENVIRONNEMENT would like to draw the public’s attention to the “risk factors” section which features in the prospectus.

This brochure does not constitute a sale, an exchange, a purchase or exchange offer, a sale offer or an incentive to acquire security in any country (including in the United States, Germany, Italy, Australia or Japan) in which such a sale, exchange, offer, sale offer or incentive would be forbidden by law. This brochure or its distribution can, in certain countries, be restricted by the law or by the regulations applicable. Consequently, all persons receiving this brochure must be aware of any such restrictions and comply with them. Insofar as the law in force permits, SUEZ ENVIRONNEMENT Company and its affiliates do not accept any responsibility or acknowledge any blame for the violation of these restrictions.”