

THE POSITIVE IMPACT MAGAZINE

# PLUS



**PLUS** is the positive impact magazine created and published by SUEZ.

This journal is intended for our teams and for everyone keen to bring about positive change in water management and waste recovery.

With them, we bring new practices and new energies to life.



For each of our main global regions, we have imagined different covers with garments made out of dustbin bags, plastic bottles and aluminium.

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**Sabrina Soussan**  
Chairwoman & CEO

**In this issue,  
I enjoyed...**

I enjoyed this spotlight on our pioneering spirit with this unprecedented industrial desalination project in China. (pages 10-11)



I enjoyed reading about the passion of our teams, explained so candidly and sweetly to their children. And I equally liked the innocence of the questions. (pages 14-17)



I enjoyed delving into this overview of the tensions surrounding water today. The stakes are enormous, and our profession is on the front line. (pages 30-35)



# PLAYING OUR PART

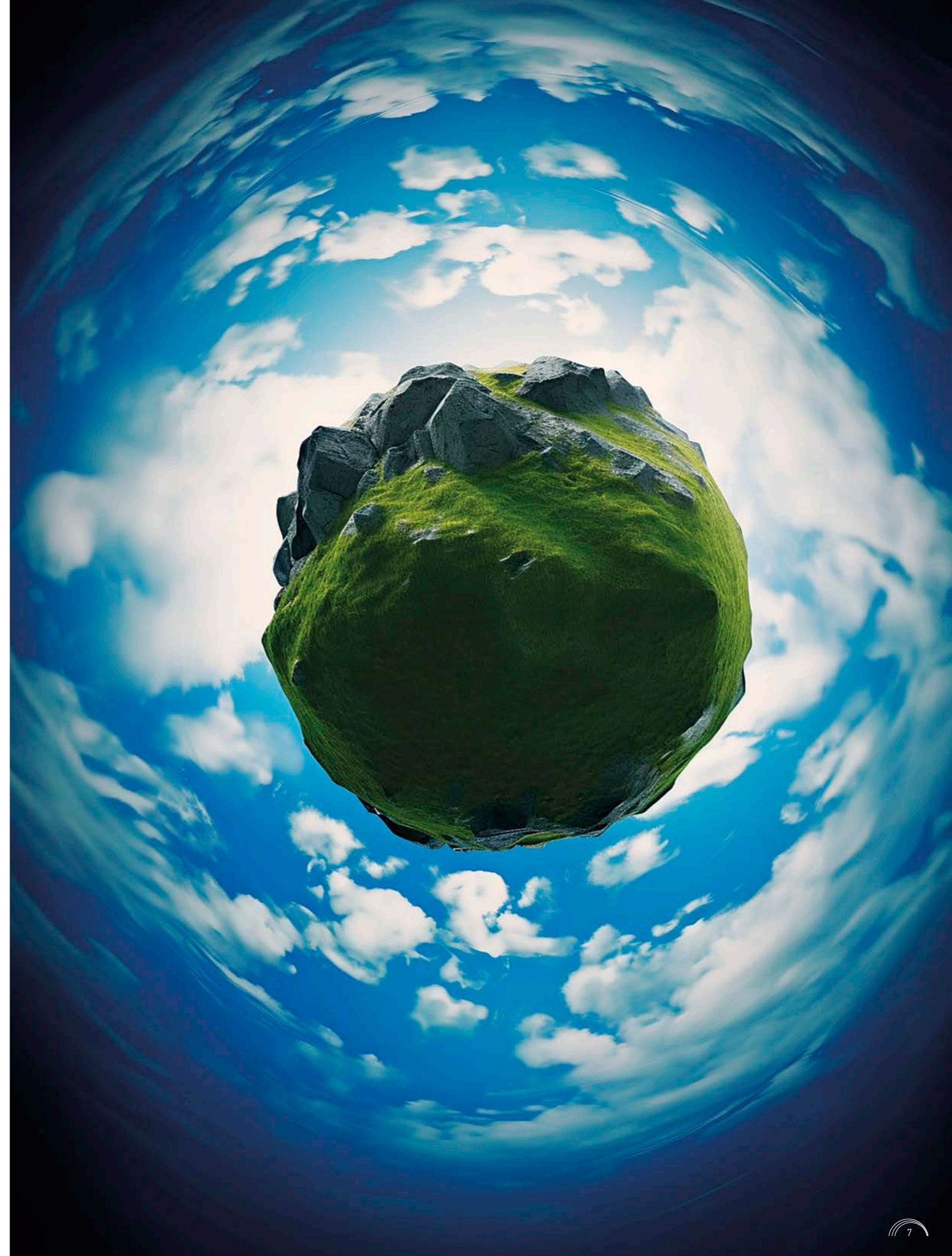
**Acting to conserve our resources is a bit like scaling a mountain.  
It's an inspiring challenge, but one that requires patience and enthusiasm.**

In Europe, how can we map out new paths with local authorities concerned  
with reducing their consumption or waste?

In China, how can we reinvent desalination and give it another dimension?

In Senegal, how can we facilitate access to water, and as a result, to better living conditions?

**Discover these adventures in which SUEZ's teams play their part with dedication and humility.**





# How do we help authorities reduce their footprint?

Reducing quantities of water withdrawn, lowering waste tonnage or improving recycling rates: here are four examples of initiatives led by SUEZ alongside proactive local authorities. In Brive, Montauban, Lunel-Viel and Manchester, our performance-based contracts<sup>1</sup> deliver tangible and measurable solutions.



## Management of public water and wastewater services

Bassin de Brive (Cantal, France)

 Our goal: **reduce the quantity of water withdrawn from the natural environment by 21% in 7 years.**

- Our actions:
- Deployment of remote metering to enable users to track their use in real time, reduce it and detect possible leaks.
  - Introduction of a customisable application to help reduce consumption, in conjunction with remote metering.
  - Leak prevention with more pipes replaced and shorter lead times for repairs.

## Reduction of waste intended for energy-from-waste plants


Lunel-Viel (Hérault, France)

 Our goal: **reduce the production of waste and lower the tonnage sent for energy recovery by 25% in 10 years.**

- Our actions:
- Extract biowaste from household refuse through the distribution of individual and collective composters, awareness actions and farm composting.
  - Promote the donation, reuse and repair of bulky items and reduce the quantity sent for energy recovery at end of life (awareness of users in household waste recycling centres, introduction of an extra sorting platform, fixed and mobile second-hand stores and repair workshops).
  - Sort more recyclable household packaging, and improve sorting.
  - Deployment of "Mon Service Déchets" app for information on waste management and offer tips and advice on sorting and reducing waste.

## Waste prevention, reduction and reuse

Grand Montauban (Tarn-et-Garonne, France)

 Our goal: **reduce the production of waste in the region by 10% in 10 years.**

- Our actions:
- Shredding of green waste by households.
  - Distribution and installation of more than 200 composters.
  - Deployment of "Mon Service Déchets" website and app.
  - Installation of smart waste meters in dustbins.
  - Collection and recovery of biowaste, differentiated by housing type and activity.
  - Opening of a second-hand store to encourage the donation of unused items, their repair and reuse.
  - Count of household refuse and recyclable waste bins to support residents in dealing with their waste.

## Household waste disposal

Greater Manchester (United Kingdom)

 Our goal: **improve recycling rates over 7 years and avoid sending more than 96% of household waste to landfill.**

- Our actions:
- Operation of 41 facilities over 24 sites (including 4 mechanical treatment and Rail Head reception facilities, 20 household waste recycling centres, 8 transfer loading stations, a thermal recovery plant and a materials recovery facility).
  - Optimisation of recycling facilities to process more waste.
  - Reuse initiatives in aid of the Mayor's Charity to help the homeless.

<sup>1</sup> Performance-based contracts are a new business model that takes stakeholders into account and shares out the profits: consideration of the impact of performance on the total management cost, payment of a bonus or levying of a penalty depending on the achievement of a minimum performance target, award of a share of the bonus to the partners associated with the contract.

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# In China, we make fresh water

Fresh water only makes up 2.5% of all water resources on Earth. For nearly 50 years, SUEZ has been a pioneer in desalination technology. Our expertise has recently been acknowledged in Penglai District, Yantai City, Shandong Province, where our teams have been awarded the largest desalination project in the Group's history – the first for an industrial client.

China's National Development and Reform Commission and Ministry of Natural Resources have unveiled an action plan to promote the large-scale utilisation of desalination technology. Following on from this initiative, **SUEZ has been selected by its Chinese partners<sup>1</sup> to design and build a seawater reverse osmosis desalination plant** (see box) in Penglai District, Yantai City, Shandong Province.

## Producing 36 million m<sup>3</sup> of fresh water per year!

In this project, our team's end goal is to **turn seawater into an additional water source for a chemical industrial complex**. The project will contribute to **protecting the environment by preserving scarce and precious local freshwater resources**, thereby helping Wanhua and its industrial partners to progress in their ecological transition journey. This desalination plant will produce more than 36 million cubic metres of freshwater per year.

In a circular approach, the desalination plant will treat water discharged by the direct cooling system of a neighbouring power plant, where nearby seawater is used as part of the cooling system. As a result of this process, **heated seawater will help cut electricity consumption through reverse osmosis, and carbon emissions will therefore be lower than if water had been drawn directly from the sea.**



### How does reverse osmosis desalination work?

This is a process that separates water from dissolved salts using semi-permeable membranes under pressure (54 to 70 bars to treat seawater). These membranes let water molecules through, but capture particles, dissolved salts and organic molecules measuring more than 10<sup>-7</sup>mm.

## Contributing to China's green transition

This contract marks a **new milestone in SUEZ's cooperation with Wanhua Chemical Group**. Four major water and wastewater treatment projects had already been awarded between 2017 and 2022. This new collaboration illustrates our **shared ambition of building a greener industry in the perspective of more sustainable development**. It also demonstrates the commitment of all stakeholders to working together to support the ecological transition of the world's second largest economic superpower. This is also why this project has earned attention from government. The contract was signed in the presence of high-level officials from China and France during President Macron's visit to China earlier this year.

The Penglai plant is a new major reference in the desalination domain for SUEZ, and the **first project of this type (and on this scale) for an industrial client**. "We are keen to turn this collaboration into a new standard of excellence in environmental cooperation between France and China", declared Sabrina Soussan, Chairwoman and CEO of SUEZ. "We have a long and distinguished track record in desalination, which is a solution for the future that can help secure a stable water supply in regions affected by water stress."

Elsewhere in the world, **SUEZ has already established itself as a major player in the creation of circular solutions for water**. The development of the Melbourne reverse osmosis desalination plant in Australia provides a good illustration of this, as it is one of the largest in the world. Also in Australia, SUEZ is behind the construction of Perth seawater desalination plant, which provides over two million people with more than 45 billion litres of drinking water each year.

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<sup>1</sup> Wanhua Chemical Group (Wanhua) and China Railway Shanghai Engineering Bureau Group (CRSH). Wanhua Chemical Group is one of the world's 20 largest chemical corporations.



# Changing thousands of lives...



**+ 6,000 PEOPLE (INCLUDING 1,440 SCHOOLCHILDREN) WILL BENEFIT FROM THE INSTALLATION OF SANITATION FACILITIES**

In rural areas of Senegal, being able to wash your hands or use proper toilets at home is not something to be taken for granted. 54% of households do not have a handwashing point in their home. The Fondation SUEZ has teamed up with Gret<sup>1</sup>, an international charity, to improve the living conditions of the most vulnerable through the project “Soutoura<sup>2</sup>” and reduce waterborne diseases. This is much more than a technical project: it’s a project to promote equality and development.

Decent sanitation is not widespread in Senegal. In 2020, only 46% of the rural Senegalese population had access to improved sanitation. There are significant disparities from one region to another. Tambacounda, the largest city in eastern Senegal, is one of the hardest-hit zones in the country in terms of poverty and lack of access to water, sanitation and personal hygiene.

**+ 720 SCHOOLGIRLS WILL BE EDUCATED IN MENSTRUAL HYGIENE PRACTICES**



**+ 15,000 PEOPLE (INCLUDING 2,400 SCHOOLCHILDREN) WILL BE EDUCATED IN PERSONAL HYGIENE PRACTICES**

## Massive needs in rural areas

Alongside other financial partners, the Fondation SUEZ is taking action to improve the living conditions of the inhabitants of Tambacounda through the Soutoura project. Women and young people are the main beneficiaries of this development programme. In practice, the aim is to offer families access to wastewater services and promote menstrual hygiene through the development of a local economic activity. Following its launch in November 2022, this action will run until October 2024.

At the end of this 24-month period, Gret and its local partners will have delivered projects including installing sanitation in households. Six hundred autonomous sanitation devices are currently being produced by local private operators. Sanitation and hygiene in schools is also a priority, in particular with the installation of eco-designed toilet blocks (using local materials) that are both accessible and gender specific.

A mini-drinking water supply system<sup>3</sup> is also currently being built for 400 inhabitants, while an awareness raising campaign is underway focussing on good sanitation and hygiene practices, and menstrual hygiene kits are being promoted and distributed in schools. As part of this programme, local public and private players will be able to build their skills through training and coaching.

The Soutoura project is not an isolated initiative. It follows on from two other projects led by Gret and its local partners since 2017. These have made it possible to make detailed assessments, fine-tune the means of aid and ultimately achieve significant quantitative results. With Soutoura, the aim is to consolidate the progress made, then build upon and extend the programme. While this project will change the lives of all inhabitants, the most striking improvement will be to the living conditions of girls and women.



## The Fondation SUEZ supports concrete actions

In developing and emerging countries, this is materialised through improved access to essential services (water, sanitation and waste disposal). In the space of 10 years, the foundation contributed to the accomplishment of 572 projects providing six million people with access to water and sanitation.

To achieve greater impact, the Fondation SUEZ supports and collaborates closely with its major partners:

- Aquassistance, the ONG run by current and former employees of SUEZ,
- The AgroParisTech “SUEZ - Water for All” academic chair, a unique course in the management of urban water and sanitation services in developing and emerging countries, aimed at leaders from developing and emerging countries.

In France, the Fondation SUEZ supports social inclusion projects for people cut off from the job market and disadvantaged young people in priority action or rural areas.

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<sup>1</sup> Gret works in 28 countries, notably to provide access to drinking water, sanitation and solid waste disposal. The NGO has been established in Senegal since 1984.

<sup>2</sup> “Dignity” in Wolof, the local language.

<sup>3</sup> A technique to pump water from its source to its place of use.



# WHAT DO YOU DO, MUMMY? WHAT DO YOU DO, DADDY?

OUR CHILDREN ARE CURIOUS, OUR JOBS ARE TOO.

Explaining your job to children is far from a simple task...  
And it's harder still when you're a leak detection technician,  
a health and safety risk prevention officer, a waste sorting  
ambassador or a sociologist!

Whatever their profession, all our teams put their talent  
to use for the benefit of the environment. Issues that matter,  
both today and for the future. That must be worth a quick  
explanation!



**For today** There are miles of pipes beneath our feet that discreetly carry the water we need. And yet every year, hundreds of thousands of cubic metres of drinking water are lost from the network. Because of what? Because of leaks! We can't always see them, but they're there. My job is to hunt them down using different techniques. Sound is the one we use the most. Using acoustic sensors, I can identify where they are so we can repair them quickly. We can also sectorise areas, breaking the network down into smaller parts, to find out more about changing flow rates – particularly at night – which is a good indicator to measure leakage. That way, we can “pre-locate” leaks and arrange searches on the ground, concentrating on specific parts of the network.

**For tomorrow** It's estimated that 3,500,000 m<sup>3</sup> of water are lost every year due to leaking pipes. Water is a fragile resource that we have to protect. As a leak detection technician, I make my own small contribution to avoid this wastage.

**MASSIMILIANO**  
Leak detection technician  
in Italy

WHAT DO YOU DO, MUMMY, WITH OUR DUSTBINS?

**For today** Every day I work to protect our employees' and subcontractors' lives and health on our worksites. My job is really exciting, because has a lot of different facets. I am always enthusiastic about discussing our safety procedures with workers, supervisors and engineers. I especially offer expertise on the risks associated with our jobs. On the ground, I raise awareness, encourage dialogue, and deploy actions and share feedback. I am also there to support managers and the company leadership with whom I share field information. That way, all together, we can continue to improve.

**For tomorrow** By contributing to the reduction of accidents and their severity, I also contribute to providing a calmer, easier working environment. I also help people, including our subcontractors, become aware of the biggest risks. I have a clear mission: change everyday behaviours, make sure everyone obeys SUEZ's safety rules, work in safe conditions and aim to achieve zero serious and fatal accidents.

WHAT DO YOU DO, MUMMY, FOR LOCAL AUTHORITIES?

**VISHAL**  
Health and safety risk  
prevention officer  
in India

**EVE**  
Waste sorting ambassador  
in France

**MANON**  
Sociologist

WHAT DO YOU DO, DADDY, FOR SAFETY?

WHAT DO YOU DO, DADDY, WITH OUR WATER?

**For today** All year, I communicate with users on how to properly sort and reduce their waste. I go and talk to the general public, schools, local authorities and companies. People come and ask me questions – a lot of questions! In addition to my job of providing information, I also check that waste is properly sorted into the recycling bins. If it's not, I tell the users, so they can rectify what they do and adopt the right reflexes.

**For tomorrow** Since I've been in this job, I've seen growing awareness among users and improvements in their habits. I am pleased to support these changes, both in the new waste sorting areas like biowaste, and in the progress made in recycling with a wider range of materials accepted.

**For today** As part of LyRE<sup>1</sup>, I advise local authorities and SUEZ's business lines in the more eco-friendly, social and supportive management of waste and water resources. I survey and study the complexity of user behaviour. My job consists of understanding changes in the environment, but also and more importantly in society. Because if we want water to be accessible to everyone, including for the most vulnerable populations, and if we want to reduce and recycle our waste and therefore lower our environmental impact, we need both structural change and efficient prevention. And to do that, it's crucial to accompany public policy making and behaviours.

**For tomorrow** A society is made up of times of crisis and reconciliation, problems that arise with greater or lesser degrees of acceptability and intensity. It is important to monitor them and detect the future needs of local authorities and citizens, so that we can propose suitable solutions whose impacts we can then measure.

<sup>1</sup> SUEZ research and innovation centre.

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# WHY SHOULD WE SORT BIOWASTE?

Starting on 1 January 2024, all local authorities in France will be obliged to offer all households a solution to sort biodegradable waste. Made up primarily of peelings, cooking products and meal leftovers, biowaste accounts for more than 30% of household refuse. It is therefore essential to sort it apart and extract value from it.

## What is biowaste?

According to article L541-1-1 of the French Environment Code, biowaste is defined as "non-hazardous biodegradable waste from gardens or parks, food or cooking waste from households, offices, restaurants, wholesale, canteens, caterers or retail outlets, as well as similar waste from food processing factories."

### WHAT ARE THE SUPERPOWERS OF BIOWASTE?

Once it is sorted, biowaste can be reused to help produce renewable energy and improve soil health and fertility.



#### ANAEROBIC DIGESTION

Anaerobic digestion converts organic matter into methane (biogas). The process happens in a digester, which is a sealed tank in which the organic matter is digested by bacteria, without the presence of oxygen (therefore anaerobic) and heated to 38°C.

#### COMPOSTING

Composting is an entirely natural biological process that consists of fermenting matter with the assistance of moisture and oxygen. This process increases the matter's temperature to 55/65°C, which destroys the undesirable microorganisms and transforms the various inputs (garden or food waste for example) into a homogeneous product, compost, which has soil fertilising and improvement qualities.



## Who produces the most biowaste in France



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# HOW DO YOU CLEAN WATER AND RETURN IT TO THE ENVIRONMENT?

Each of us consumes an average of 150 litres of water per day. Once it has been discharged into the sewer system, it is collected and treated, before returning to the natural environment. This invisible action is particularly essential. It is one of our lines of business.

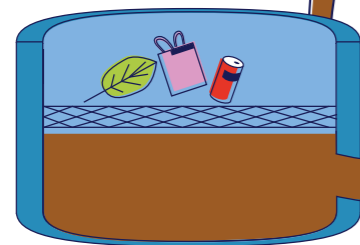
## 1 We collect wastewater

Domestic wastewater, rainwater and some industrial wastewaters are collected by a drainage network that takes them via main sewers to a wastewater treatment plant.



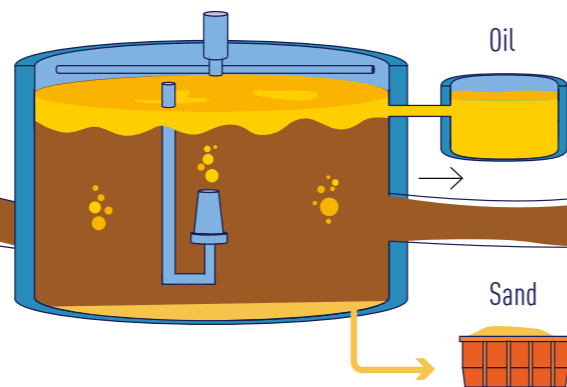
## 2 We take any solid waste out of the water

What do we mean by solid waste? Branches, leaves, various plastics, cans, etc.



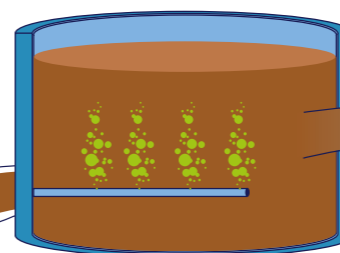
## 3 We remove the grease and oils

The water is cleansed of these contents that float to the surface, and of sand and grit that sink to the bottom of the tanks. They are sucked up and disposed of.



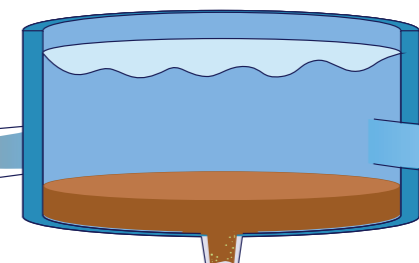
## 4 We perform a biological treatment

In an aerated tank, we grow microbes (bacteria) that feed on the pollutants dissolved in the water. This activated sludge process reproduces the same self-purifying system that exists in the natural world.



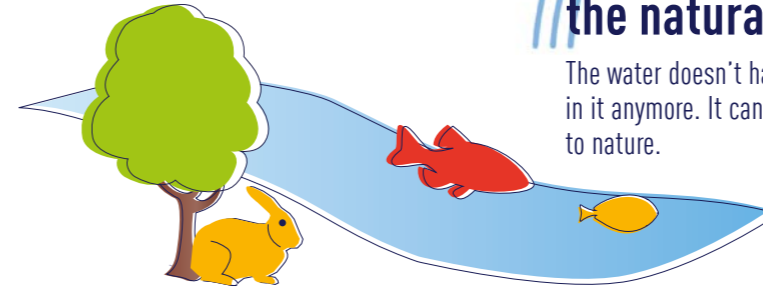
## 5 We separate the purified water from the sludge

This last step is carried out with a clarifier.



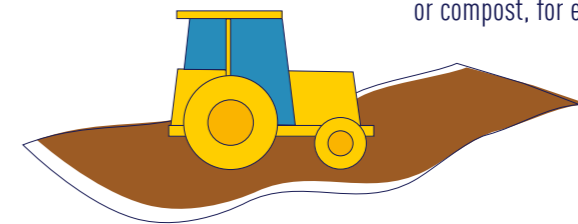
## 7 We return the water to the natural environment

The water doesn't have any pollutants in it anymore. It can therefore be returned to nature.



## 6 We make use of the sludge

It will be reprocessed for use in farming (fertiliser or compost, for example).



# THE DAY AN IDEA IS BORN...



... and becomes a project, it takes on innovative and beneficial effects.

Taxonomy is a word you may not be familiar with. Learn more about it and observe the impact it will have on our lives. In Nice, we couldn't have hoped for a more striking backdrop than the Promenade des Anglais to take a stroll into the future. Rejecting the temptation of pessimism and working pragmatically to welcome and integrate refugees into our teams, here again we are fulfilling our mission as a responsible company.





# The taxonomy puts greenwashing out of fashion for good.



**The EU taxonomy profoundly alters the definition of company performance. Charlotte Migne, sustainable development director at SUEZ, deciphers the impact of this new regulation, what it means for our financing and how it is transforming the work of our teams.**

## Can you give us a simple definition of the EU taxonomy?

It is actually quite simple! The European Union has introduced the taxonomy as part of the Green Deal, meaning the ambition to become the first climate-neutral continent by 2050. In practical terms, the aim is to channel financial capital towards activities that contribute the most to the green transition, by drawing up a list of criteria through which companies can be compared. We therefore obtain a common and standardised vocabulary.

## So the taxonomy is a matter for both companies and investors?

Yes, that's right. Companies, because they have to publish a report on their activities and their proportion of green business. And investors, because they need to justify the use of their capital.



**The taxonomy entails a lot of work from our sustainable and finance teams, and even as far as our various sites.**

## Who does the taxonomy apply to in practice?

It applies to all European companies with more than 500 employees. But it covers the totality of their activities, including those outside the European Union. Six objectives have been set by the European Union. Up until now, we only had to report on the first two, relating to the climate (climate change mitigation and climate change adaptation). Now we have to analyse the four new ones (sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems) and identify the activities that contribute to them.

## What criteria are used to qualify an economic activity as sustainable?

It's a matter of eligibility and alignment. At SUEZ, most activities to do with water, together with waste collection and recycling, are eligible. You are eligible once you contribute to one of the six objectives. Next, activities are qualified as being aligned if they are exemplary from an environmental standpoint with regard to one of the six objectives, without doing any significant harm to the five others, and while respecting basic human rights. For example, for the production of drinking water, environmental performance is calculated by looking at how much energy per cubic metre our plant uses. In due course, all European companies with more than 500 employees will have to report on the six objectives, in terms of eligibility and alignment, and be audited by a third party.

## Would you say the taxonomy is a remedy for greenwashing?

Yes, because we have common indicators that will allow companies to be compared and set a framework for the communication on sustainable development. At the moment we're in a transitional phase, but everything is moving in the right direction. The taxonomy offers a global approach. Up until now, companies were focussed on the climate topic, following the impulsion given by the IPCC<sup>1</sup> and because impact is easier to measure. The taxonomy invites companies to approach the green transition in a more systemic way.

## Why did SUEZ immediately embrace the subject?

Through our activities and our pioneering culture, it was important to be among the first to display our commitment. Our roadmap follows a similar thrust, with as much consideration for nature and social issues as for the climate. We have a very didactic approach, based on very precise indicators.

## In what way is the taxonomy becoming a lever for economic and environmental performance for SUEZ?

Environmental performance can nurture economic performance. By directing capital towards activities that contribute the most to the green transition, the taxonomy will help attract new investors to SUEZ because our tangible contribution is clear for all to see. We will be able to tell a brand new story around our group and its environmental credentials.



**By creating a roadmap based on climate, nature and social pillars, SUEZ is adopting the same logic as the taxonomy.**

## Today, how is SUEZ doing in terms of alignment and eligibility?

Currently 40% of our activities are not eligible, but 60% are. Among these, 24% are eligible and aligned, meaning that 36% are eligible but not aligned. In the sector of energy providers and environmental players, the figures are similar. Through our own cautious interpretation of the law, we have a lot of room for progress on aligned activities. In due course, companies' non-financial performance will be just as important as their financial performance. This is an essential notion that everyone has to understand.

<sup>1</sup>The Intergovernmental Panel on Climate Change is an intergovernmental body tasked with assessing the scale, causes and consequences of ongoing climate change.

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# In Nice, a walk into the future



The Promenade des Anglais is an address steeped in history. With SUEZ, it is set to become the address of the future. Here, we are going to build Haliotis 2, a resolutely innovative wastewater treatment plant. It will produce reusable water, biogas and electricity, all independently. It is designed to be impressive in its results but discreet in appearance. In fact, it will produce four times more energy than it consumes today, and will avoid the emission of 15,000 TCO<sub>2</sub> per year.

Haliotis 2 is a story of a remarkable facility installed on one of the most beautiful coastal bays in the world. It is also **an adventure for our team!** They worked for two years to win this contract which constitutes our largest wastewater project in the last 15 years. **More than 100 SUEZ employees were involved in the bid.**

This contract is above all **a collective accomplishment**, with collaboration between operational and administrative disciplines, between local teams and head office, and between the various entities mobilised (Construction France, Construction International, Water France and cross-group support departments). All of which offers proof that solidarity between all our entities and their respective areas of expertise can deliver performance.

## The first infrastructure of this size in Europe!

Our teams will lay the first stone in this iconic project in July 2024. **When it comes onstream in early 2029, the new plant will process the wastewater of 26 municipalities.** Haliotis 2 will filter out 90% of microplastics and will be fitted with an industrial micropollutant<sup>1</sup> treatment demonstrator running at 150 m<sup>3</sup>/h. These beneficial processes will offer further protection to the Mediterranean and biodiversity.

As early as 2028, the Greater Nice area will have a treated wastewater reuse unit capable of **recycling more than 5 million cubic metres of water per year.** According to Mathieu Delahaye, a resource conservation expert at SUEZ, "one of the major impacts of climate change is the increasing scarcity of water resources. Haliotis 2 will meet the challenge by reusing treated wastewater." This will supply all the water required for green space irrigation and street cleaning in Nice.

## A "resourceful" plant

With Haliotis 2, our teams have created a project that rises to the challenge of the energy transition. The plant will generate **475MWh of green electricity** thanks to a solar farm, and **43GWh/year of biomethane** through the processing of sludge. What does that mean in practice? The biomethane will be reinjected into the GRDF<sup>2</sup> network to **heat approximately 11,000 housing units or supply the equivalent of 290 buses** with biofuel. The electricity generated, meanwhile, will make the administrative building self-sufficient.

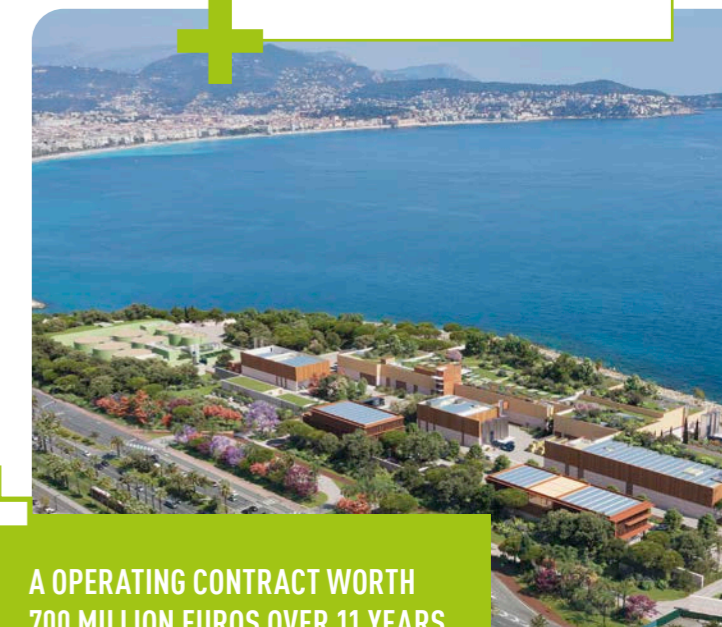
In parallel, the recovery of calories and frigories<sup>3</sup> following the treatment of wastewater will also **feed into a heating network supplying 6,500 housing units.** "Haliotis 2, by becoming the producer of an energy mix, will be able to adapt to market conditions", explains Christelle Metral, renewable energy market specialist at SUEZ. "In the future, it could even contribute to the Greater Nice Council's hydrogen plan and also produce synthetic methane."

### LISTEN TO THIS ARTICLE



<sup>1</sup> Endocrine disruptors, emerging substances.  
<sup>2</sup> France's leading natural gas distribution operator.  
<sup>3</sup> Unit of measurement equivalent to the calorie in the refrigeration industry.

540 MILLION EUROS INVESTED



A OPERATING CONTRACT WORTH 700 MILLION EUROS OVER 11 YEARS

## Less impact on ecosystems

The site will also be substantially rewilded, thanks to a design that will see the de-sealing of soil and the planting of 600 trees and hedges (30% additional permeable surface area). **Green spaces will span 4.5 hectares:** a genuine pool of biodiversity at the heart of Nice. According to Mark Wilson, associate architect and director of Groupe 6, "What's exciting about this project is to develop a space that will be loved by the people of Nice. There isn't another wastewater treatment plant in the world with a setting like this."



# Talent has no language and no colour

They have travelled across borders and seas. They had a profession, an area of expertise and know-how. Why should they forgo them when seeking refuge in France? SUEZ has taken the initiative of training these women and men, then hiring them. It's quite simply a win-win deal.



Since 2019, we have increased our action to help refugees. Following the HOPE programme which saw **12 refugees become truck drivers**, the LOTUS year group was created in 2021 in the truck mechanic category.

LOTUS offers refugees, people under subsidiary protection and stateless people a comprehensive course to integrate them socially and professionally with the aim of earning a professional qualification through a work-study scheme. **Nine people came to work for 17 months in our workshops, and in December we made seven firm job offers.** We are proud of the achievements of the people we have supported, and started a new group in September 2022 in pipe installation and maintenance.



## No green transition without the inclusion of the most fragile

The major challenges of **creating more employment and fulfilling the environmental transition require more efficient collaboration between public, private and non-profit players, prompting us to develop alternative and supportive economic models.** This is one of the reasons that led SUEZ in 2019 to create a Social Innovation Department within its Human Resources Department, whose mission is to enable SUEZ in France to offer inclusive and low-carbon circular economy solutions by developing collaboration with organisations working in social integration, employment and the social and solidarity economy.

Within the Inclusive Recruitment unit of the SI Department, we have chosen to focus on operational professions offering a multitude of job opportunities (mains workers, maintenance technicians, truck drivers, etc.). **All our actions are co-constructed** with the Human Resource teams, the operations teams of sites, and with national or local employment, integration and training partners. The *Antennes Innovation Sociale (Maison pour Rebondir<sup>1</sup>)* play a key role.



**For 2023, three new year groups** have been launched (pipe maintenance, waste recycling centre maintenance, truck maintenance) with **26 positions to be filled at the end.** These new employees from distant horizons represent a powerful lever **to enhance SUEZ's positive impact.** By training them, we offer them the chance to be effective from the outset and settle down for the long term.



## SUEZ joins the collective Refugees Are Talent

A business collective working to help refugees into jobs in companies, Refugees Are Talent is associated with Tent partnership for refugees, an NGO that we also support. Our undertaking is to support 50 women refugees between 2022 and 2025. The purposes of the initiative are to share best practices, increase team awareness and facilitate the integration process of refugees.

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<sup>1</sup> Les Maisons pour Rebondir play the role of the "SUEZ one-stop shop" on issues relating to integration through work and the Social and Solidarity Economy (SSE) in their allotted regions. They deploy our social innovation policies on the ground. Their teams support our subsidiaries, mobilise our people in support of inclusion, and promote collaboration with the SSE.

# “PEOPLE ARE **ALREADY** FIGHTING **FOR** WATER.

**SADLY, THEY'LL BE DOING IT EVEN MORE IN THE FUTURE.**



**Franck Galland** is acknowledged as one of the leading French specialists on water resource security matters. The author of four acclaimed books (*Guerre et eau*<sup>1</sup>, *Le Grand Jeu : chroniques géopolitiques de l'eau*<sup>2</sup>, *Eau & conflictualités*<sup>3</sup>, *L'eau : géopolitique, enjeux, stratégies*<sup>4</sup>), he has also written more than 50 articles and analyses on strategic water resource issues, published in several international relations and defence journals.

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<sup>1</sup> pub. Robert Laffont, March 2021.

<sup>2</sup> pub. CNRS Éditions, March 2014.

<sup>3</sup> pub. Éditions Choiseul, January 2012.

<sup>4</sup> pub. CNRS Éditions, September 2008.



Your latest book is entitled *Guerre et eau. (War and water)*. Is fighting wars around water a new thing?

F.G.: No, but sadly the subject is growing in importance. During the two world conflicts, the combatants waged war both using water (defensive flooding) and against water (targeted bombing of hydraulic infrastructure). More recent events, like those of the Kakhovka Dam across the Dnieper River<sup>5</sup>, have brought the notion back to the fore, with devastating consequences on people, and what could be termed a real ecocide. In Syria and Iraq, the Islamic State also attacked life-essential infrastructure. In fact, ever since ancient times and through to the present day, people have regularly fought using water as a weapon. But in the past 20 years, what's new is the occurrence of conflict caused by water. Cross-border and regional conflicts arise, but also conflicts of use, between water for farming, industrial or domestic use. In some parts of the world, people are already fighting for water. Sadly, they will be doing it even more in the future due to the increasing scarcity of the resource and global warming.



## The pressure on resources, climate change and rapid demographic growth are the main reasons behind conflicts around water.

### Are there other reasons for these conflicts?

F.G.: Yes: demographic growth. With nearly 110 million inhabitants, Egypt for example is obliged to defuse a demographic time bomb while its available renewable water resources are diminishing. At the same time, its large upstream neighbour Ethiopia is beginning to display its water ambitions with the construction of the Renaissance Dam. The 74 billion cubic metre reservoir will be the largest in Africa, and will effectively be perceived as a threat to the security and sovereignty of Egypt further downriver. The Ethiopians began the fourth phase of filling the reservoir during the summer, without any hydro-diplomatic solution having been found, even if positive signals emerged on the fringe of the regional discussions around the crisis currently hitting Sudan. But the question will remain: how can Egypt cope with the growth of its population and guarantee food security, given this new water insecurity brought about by the Renaissance Dam and the consequences of climate change? This explains why the United Nations Security Council receives regular representations from Egypt on this issue, in an attempt to achieve shared regional management of infrastructure on the Nile.

In your various books, you regularly refer to the “diagonal thirst line”. Are there other currently or potentially affected countries?

F.G.: Starting in Morocco, this diagonal extends southwards, and notably towards the Sahel. In the G5 Sahel states<sup>7</sup>, 150 million people have seen their water resources diminish by 40% since the year 2000. To compound the problem, this population is set to double between now and 2030. The diagonal is also intensifying. We can take the example of India, the most populous country in the world, ahead of China, with 1.4 billion inhabitants. Its water management has not yet been sufficiently reformed. Sixty percent of its agriculture and 85% of its water for domestic use is dependent on pumping from underground reserves. But today water table levels are dropping dramatically in certain Indian provinces. With the climate change and rainfall patterns that have become erratic, the problem is getting worse. As a result, India is encountering increasing difficulties in getting access to raw water.

### So is this diagonal line not a permanent one?

F.G.: No, absolutely not. Contrary to India, China, through technology and an alternative water supply, is attempting to tackle the issues relating to scarcity. It is true that the growth of this country has happened through water, and all the leaders of modern-day China since Mao have had a relationship of power towards water. Following the diversion projects on the Yangtze River, the “Blue River”, China is now turning to desalination. In the next ten years, the country will become one of the five largest users of this technology. The world champion in terms of installed capacity is currently Saudi Arabia. In Europe, the leader is Spain, which stands fifth globally. China is also going to increasingly adopt, like Singapore and Israel, the reuse of wastewater to increase its water supply even further. Therefore, while China remains a part of this diagonal thirst line, it is strategically attempting to mitigate its effects.

## The diagonal thirst line is extending and even intensifying, in particular in India. China is stepping up efforts to mitigate its effects.

### Is China an exception, or have other countries also reacted?

F.G.: The other good example is Morocco. When King Hassan II came to the throne in 1961, water immediately became his strategic priority. Thirty years later, 100 dams had been built thanks to a particularly effective administration and talented engineers. Public private partnerships were also signed to good effect. This country thus invested massively, in the belief that water was both a security-related and a political issue. HM Mohamed VI is carrying on the work of his father but adding his personal touch in terms of resilience and modernity. Today, with climate change, rainfall is less frequent in Morocco and the reservoirs are only 20 to 30% full. Consequently, Morocco too is turning to desalination and wastewater reuse. From one extremity of the diagonal to the other, the examples of China and Morocco prove that nothing is inevitable, and all is not lost.



<sup>5</sup> The Kakhovka hydroelectric dam was destroyed overnight on 6 June 2023 during the invasion of Ukraine by Russia.

<sup>6</sup> This vast area encompasses North Africa, the Middle East, the Indian subcontinent, part of central Asia and the northern half of China.

<sup>7</sup> The G5 Sahel is a strategic and military alliance of countries formed to fight Islamic terrorist organisations. They include Mauritania, Niger and Chad.

**In 2016, global investment in savings on water supply and treatment only accounted for 2.6% of the 455 billion dollars devoted to the fight against climate change<sup>8</sup>. Why this lack of interest? Has there been any improvement since 2016?**

F.G.: Since 2016, the improvement has been insufficient. Today, given the challenges ahead, you would need to multiply by ten or even 100 the sums that are being spent! Adopting desalination or the reuse of wastewater calls for massive investment, with the goal of increasing the supply of water. What costs money is both to work on demand, with the renovation of water mains for example, which in France costs €315 per linear metre for a buried pipe, but also to increase the available supply in regions that need it. These investments will undoubtedly require higher water prices, which in France are about the same as the European average.

**The “water pays for water” model must unquestionably be revisited, because mass investment must be planned.**

In our country, the debate around water too often focuses on simply the price of water, whereas a concession holder or public operator must be able to perform its job in conditions that allow them to manage existing infrastructure properly and conserve the resource effectively. Too many regions find themselves at breaking point through lack of vision and commitment. Due to an absence of master plans and investment programmes, operators do not always receive the sufficient resources: lack of interconnections, little new infrastructure, the bare minimum in leak reduction programmes, etc. This is all down to the failings of policymakers.

Let's be frank and realistic: awarding the operation contract to the lowest financial and technical bidder is no longer a feasible option, given the increasing scarcity that we are experiencing. Furthermore, the “water pays for water”<sup>9</sup> model must unquestionably be revisited, since we are facing massive investment needs aimed at preserving resources but also fighting extreme climate events. There is much talk of drought and heat waves in France. But let's not forget that climate change also brings about exceptional rainfall events, as illustrated by Storm Alex in October 2020.

Robust infrastructure is today necessary to better cope with floods from rainfall and their severe consequences on towns and cities. Our model of urban resilience must be seriously redesigned without neglecting any technical or technological solutions. But what is the most “dramatic” for the profession is that water is only visible when there is too little or too much of it.

And yet, behind water management, there is a whole engineering discipline and human know-how of which we can be proud, but which must be better and more often highlighted.

**So we need to explain more extensively that water isn't something to be taken for granted: that behind this resource there are essential and increasingly complex jobs?**

F.G.: The profession must show its true value and its essential and vital role for populations. In addition, there is a big challenge in terms of new recruitment, with a large workforce set to retire between now and 2030. We must therefore give a better image to jobs in water, their technical and intellectual utility, and their critical function. The subjects of training and job appeal also remain more crucial than ever. Even by reforming and massively investing in water, without the men and women to operate, the equation will be impossible to solve.



**Even by reforming and massively investing in water, without the men and women to operate, the equation will be impossible to solve.**

**You just referred to reusing wastewater. In France, the figure is below 1%. Why the disparity? Which countries are doing the best on this subject?**

F.G.: The most active countries are those which were confronted very early on with the increasing scarcity of water resources, and which have found a way to adapt. In this area, Israel is number one. Ninety percent of wastewater is reused and reinjected in closed-circuit for agricultural watering, human consumption, industrial use, etc. Singapore is just behind them. In 1960, when it gained independence, this country relied on Malaysia for 100% of its water supply. Singapore therefore developed an alternative water supply, mainly based on reusing wastewater. In 2060, for the centenary of its independence, Singapore expects to be self-sufficient. The city-state will get 50% of its water from reused wastewater, 25% from desalination, and 25% from its own water resources (rainwater storage, groundwater, surface water). Meanwhile in Europe, 15% of Spanish wastewater is reused. Italy stands at 8%. So why are the French lagging behind? It's down to political, regulatory and technical reasons. Our networks have not been designed for this purpose. In France, we treat wastewater, then we return it to nature clean. We also have very high sanitary standards with an administration that has shown itself to be very (too) cautious on the subject. If we had reacted earlier with adequate infrastructure, such as ReUse modules added to wastewater treatment plants, we would be well above our current wastewater reuse rate of 1%.

**What are the dangers if countries do not address this question of access to water? Are you optimistic about this awareness?**

F.G.: Generally speaking, people seem more concerned about 5G than about visible and buried hydraulic infrastructure. I think that's a big shame. With very few exceptions, we lack the political vision for infrastructure, its maintenance in operational condition, and its development. It's a clear-sighted but somewhat bitter assessment that I offer, if we compare ourselves with what happened during the *Trente Glorieuses* (three decades of financial prosperity in France, c. 1945-1975). But since ambition is in the method, we need a lot of voices to speak out to raise water to the status of a strategic priority. Policymakers must believe in it as such, and embrace the subject. Just take a look at what has been done by other European countries such as Spain, Holland or Belgium. There has been massive investment in Flanders and Wallonia in the past 20 years, where regional water highways have been created with the financial support of the European Investment Bank. It therefore merely requires political willpower and financial capacity. With the resources that they will be allocated, groups such as SUEZ have the ability to put into action the public decisions taken. But optimism should not come at the expense of reason. Human resource management remains the prerequisite for our future. If tomorrow, we get the green light for action but lack the skills to fulfil it, we will remain stuck in the mud. It is therefore urgent to offer an HR outlook to engineers, electro-mechanics and control technicians, which we need so flagrantly today and will need even more tomorrow.



*Guerre et eau*, pub. Éditions Robert Laffont

**From the First World War to the present day, *Guerre et eau* is the first essay aimed at a general public readership on the strategic importance of water resources in warfare. Drawing on unprecedented military archives and diplomatic sources, Franck Galland offers both a new insight into the conflicts that have affected and continue to affect our world, and a better understanding of the geopolitical issues that natural resources embody.**

<sup>8</sup> United Nations World Water Development Report 2020.

<sup>9</sup> Through their water bills, users pay for most of the spending relating to the management of the water they consume. The budgets of municipalities, for water and wastewater services, must be self-sufficient, with income balancing out expenditure.



# In the UK, our teams help in the fight against cancer

One person in two will contract cancer at some point in their lifetime. Many people in the teams at SUEZ recycling and recovery UK have had first-hand experience of this illness with someone close to them.



For the past ten years, they have therefore been raising funds in aid of Macmillan Cancer Support<sup>1</sup>, a choice supported by the entire workforce.

Following the Big Ride<sup>2</sup>, the Rio Roadshow<sup>3</sup>, the Big Walk<sup>4</sup> and the Big Climb<sup>5</sup>, the UK team has set itself a new challenge in 2023: the Big 10 at 10!

The goal: collect 10/10/10 (i.e., £101,010) for the 10th anniversary of its partnership with the charity. All employees are invited to do a sponsored activity between now and the end of the year: walking, running, rowing – anything goes! Whether it's solo or in a group, the most important thing is making a contribution. And in the interests of inclusivity, there is no obligation for the activity to be physical.

Every year the campaign receives massive support, including from the UK management team.

August 2023 for example, eight members of the team cycled from Maidenhead to Paris.

"We're so proud of how much everyone gets involved.

In the space of ten years, we've raised £500,000!" says Joanna Burlow, Senior Brand Manager at SUEZ Recycling and recovery UK.



These initiatives go beyond just fundraising.

They are a great way of bringing employees together behind a cause, building awareness about the disease and pointing them in the direction of Macmillan if they need help. Big 10 at 10 was launched on 15 June 2023 and will continue until the end of the year. There's still time to get involved!

<sup>1</sup> Macmillan Cancer Support help people affected by cancer. They offer a range of services at every stage of the disease (physical, psychological, administrative and financial support).

<sup>2</sup> A cycle relay from Scotland to Cornwall stopping at over 100 SUEZ sites along the way.

<sup>3</sup> Row, Run or Ride the distance from London to Rio de Janeiro, where the 2016 Olympics were held.

<sup>4</sup> Team or solo walk aiming to cover as many miles as possible

<sup>5</sup> Climbing mountains, hills or simply stairs.

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# In India, a rally combining clean streets and soft mobility

The city of Lucknow certainly lived up to its name on this day in June 2023!

Situated in the middle of the Ganges River plain, the city was indeed "lucky" to welcome an original cycling event organised by SUEZ India. Leading the pack were SUEZ employees, sewer cleaning workers and young girls from the Girl Icon programme orchestrated jointly by the Milaan Foundation<sup>1</sup> and SUEZ India.

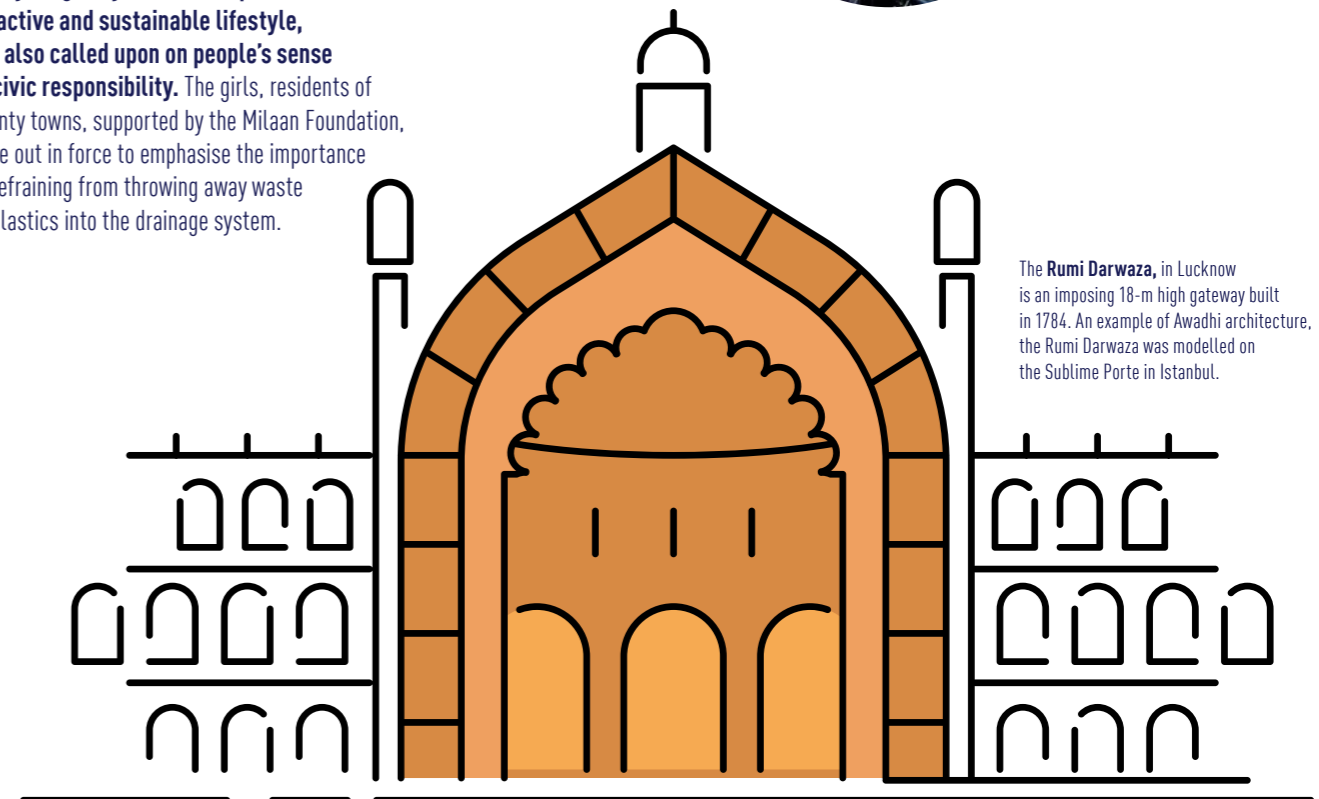
With the backdrop of World Bicycle Day, the cycling rally intended to promote an active and sustainable lifestyle, but also called upon on people's sense of civic responsibility. The girls, residents of shanty towns, supported by the Milaan Foundation, were out in force to emphasise the importance of refraining from throwing away waste or plastics into the drainage system.



"Through events like this, we want to promote sustainable behaviour, discourage people from disposing of garbage in open drains and manholes, but also encourage a sense of the community's shared responsibility towards the environment", explains Rajesh Mathpal, project director.

This initiative is part of the programme "SUEZ India Force for Good" which focuses on group employee wellbeing.

Three key themes were defined by the Communications and Human Resource teams following a staff consultation process: financial and environmental wellbeing and mental health.



The Rumi Darwaza, in Lucknow is an imposing 18-m high gateway built in 1784. An example of Awadhi architecture, the Rumi Darwaza was modelled on the Sublime Porte in Istanbul.

<sup>1</sup> This foundation, of which SUEZ is a partner, advocates for adolescent health and the secondary schooling of girls, and combats child marriage and gender-based violence.

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# We climb to new heights with exceptional champions

While we have been the joint sponsor of the FDJ-SUEZ women's cycling team since 2022, we are now also an official partner of the Tour de France Femmes avec Zwift. Our commitment goes beyond the sporting realm, as we contribute to improving the environmental footprint of this legendary race.

In supporting the only French team in the Women's World Tour, we have chosen to express our attachment to **a sport that combines health and ecology, but also highlights team spirit and women-driven performance.** A commitment intended to convey meaning and emotion, but also spark innovation.

Indeed, women's pro cycling is still a sport of pioneers. The Women's World tour launched by the international federation UCI is only eight years old! Today's thirty events take place all over the world, from Australia to Spain, from the United Arab Emirates to Sweden, and from Norway to China!

Among them, the Tour de France Femmes avec Zwift has pride of place in the international calendar. This year, the race took the pack on a week-long journey (from 23 to 30 July) from Clermont-Ferrand to Pau. In total, the riders covered more than 960 kilometres at an average speed of over 38 km/h for the winner, Demi Voellering. The FDJ-SUEZ team distinguished itself in the race by finishing fourth fastest team and posting a seventh place finish in the general classification for the volcanic Danish champion Cecilie Uttrup Ludwig. This performance heralds a bright future, much like last year's Under 23 time trial world championship title won by the young Italian rider Vittoria Guazzini.



Out of the fifteen professional cyclists in the FDJ-SUEZ team, eight are French, and their list of distinctions is getting longer each year. Stephen Delcourt, the team manager, detects fertile ground for new vocations. "I hope that the young girls watching from the roadside, like at last year's Tour where there were so many spectators, ask their parents for a bike [...] that will be our finest achievement."<sup>1</sup>

Thanks in particular to the support provided by SUEZ, the team has gained a more professional backroom organisation which today has 32 staff members: technicians, a doctor, a physio, a cook and a dietician, among others.

**Our commitment illustrates our dedication to women's sport,** of which we are one of the leading sponsors in France, supporting 200 elite women competitors. These actions are an extension of **our actions in aid of inclusion, diversity and gender equality.**

<sup>1</sup>From *L'Équipe*, 21 July 2023.

<sup>2</sup>This mobile app provides detailed information on water all over France and at any time (fountains, quality, bathing areas, etc.).

## CHAMPIONS WITH AN IMPRESSIVE LIST OF TITLES!

- **Loes Adegeest:** eSport world champion in 2022 and 2023
- **Grace Brown:** world no. 12, Australian national time trial champion in 2023
- **Marta Cavalli:** world no. 18, 2<sup>nd</sup> place in Giro Donne (Italy), 2022
- **Clara Copponi:** four world championship medals in track cycling
- **Eugénie Duval:** 4<sup>th</sup> in Paris-Roubaix 2023
- **Marie Le Net:** 2<sup>nd</sup> in French national road race championships in 2023
- **Cecilie Uttrup Ludwig:** world no. 13, Danish national road race champion in 2022
- **Évita Muzic:** 2021 French national road race champion
- **Gladys Verhulst:** 2<sup>nd</sup> in French national road race championships in 2022
- **Jade Wiel:** Winner of French road race championships in 2019 and 3<sup>rd</sup> in 2023



## We help the Grande Boucle reduce its impact



Our recent partnership with the Tour de France Femmes avec Zwift was an opportunity to **highlight our know-how in the areas of water and waste, but also help to decarbonise a leading sporting event.**

The Tour de France Femmes avec Zwift wished to do away with single-use cups in all its public areas. We therefore installed water fountains, eco-designed bottles and reusable cups. We also provided the public with full information on the quality of water and its access points in the application "Mon Eau"<sup>2</sup>.

This scheme was welcomed by Marion Rousse, director of the Tour de France Femmes avec Zwift, who said: "I am thrilled to see a major Group such as SUEZ signing up to support us [...] Coming a year after the partnership struck up with the FDJ-SUEZ women's cycling team, this support will enable us to grow the event even further while controlling its impact on the environment".

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Installation View for Terre Vulnerabili, Hangar Bicocca, 2011 - Photo: Agostino Osio - © ADAGP, 2023 - Courtesy of the artist and Galleria Continua

# PASCAL MARTHINE TAYOU

## PLASTIC BAGS

With his creation *Plastic bags*, the Cameroonian contemporary artist **Pascale Marthine Tayou** works with his pet medium. A symbol of growing globalisation, consumerism and itinerancy, this everyday object brings to mind today's society. For the artist, this huge sculpture made of netting and bags is emblematic of the condition of contemporary mankind, enslaved within a system of repetitive actions. Disposable plastic bags are today prohibited by law, and should no longer place the global ecosystem in jeopardy. This giant installation offers an original use and interpretation of them, transforming them to become a work of art.

