

# Activity Report 2019-2020



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AN EXCHANGE WITH

# PHILIPPE BLOCH

General Director



# PHILIPPE BOURDEAUX

President



**How would you sum up the past two years, 2019 - 2020, and what impact has the Covid-19 crisis had on Seureca?**

**Philippe Bloch:** Seureca celebrated 60 years of existence in 2019, expanding on its solid expertise in the Water sector, along with over 10 years in the fields of Energy and Waste Treatment and Recovery.

2019 was a year of consolidating the Engineering Division's position within the Veolia Group, stabilizing turnover, and reinforcing our development strategy in regions and in activities where we had as of yet little presence.

This momentum was interrupted in the first quarter of 2020 by the onset of the sanitary crisis. Given that more than 80% of our turnover is generated outside the French market, the restrictions on international travel significantly slowed our activities.

Our first and foremost priority was to protect the health of our employees, clients, and partners. To this end, we quickly set up the necessary sanitary protocols and safety measures, while we adapted to new working methods.

Despite a drop in activity, this unprecedented crisis created an opportunity that Seureca's staff was quick to grasp - they showed real solidarity and cohesion at all levels of the company - accelerating our digitalization and optimizing our tools and work methods. In spite of the adverse conditions, we managed to maintain continuity in our services and remained fully mobilized to accompany our clients in their priority projects, whether remotely or on site, while respecting the strictest safety guidelines.

Our clients, including those the least prepared for this type of crisis, surprised us with their flexibility and adaptability. Working jointly with them, we were able to ensure the continuity of vital water, sanitation, and environmental projects. For instance, in the Dominican Republic, our assistance to INAPA<sup>1</sup> at San Cristobal enabled them to maintain their service standard to the population, and in Ivory Coast and Cameroon, with our development projects to increase drinking water supplies to large cities in these countries.

I'd like to take the opportunity here to express my warmest thanks to all Seureca's employees, both in the operational and support services, for their steadfast commitment during this period.

We came out of this crisis stronger than before, despite the hardships. In the end, we were able to immediately resume a growth trend in 2021, thus confirming the resilience of our business model.

<sup>1</sup>The National Institute of Drinking Water and Sanitation.

### What conclusions can you draw from this?

**Philippe Bloch:** We owe much of this success to the diversification strategy we've pursued over several years now. This strategy and our geographical coverage, coupled with a close relationship with our clients, aided us to manage the crisis period and bounce back so quickly. We'll continue this course to balance our portfolio of activities and our areas of operation.

Other factors such as reactivity and adaptability have been decisive. Our teams took full advantage of an acceleration of digitalization and the deployment of Remote Engineering, which are now both firmly rooted in our work methods and project management.

### What is your view regarding Seureca today?

**Philippe Bourdeaux:** From my viewpoint, Seureca is a fully-fledged Veolia entity. An entity capable of providing consulting engineering and strategic assistance while guaranteeing operational efficiency. Whether it be expertise in our three core activities - Water, Waste, and Energy - experience in a wide range of countries, involvement with a large number of public and private clients, or the capacity to adapt and withstand health crises, we possess assets that are particularly valuable during these pivotal moments in the Group's history.

Projects such as support to operations, those linked to works management and project management are springboards to garner operational performance and success in the zone of Africa and Middle East. Seureca is also evolving to establish itself in promising growth sectors for the Group, such as in hazardous waste management and plastics recycling. This opens up new opportunities.

### Veolia is taking the lead in ecological transformation. How does Seureca fit into this trend?

**Philippe Bourdeaux:** Combining forces can be a game-changer to address the ecological urgency. Veolia's - hence Seureca's - strength is the ability to tackle the issues of climate change, pollution, depletion of resources, and decline in biodiversity throughout the world.

We are all very excited about the idea to establish, through Veolia, a global leader boosting ecological transformation. We're ready to tackle this tremendous challenge together in Africa and the Middle East. Our goal is to pool best practices to better serve the portfolios on behalf of our public and private clients and to successfully bolster the ecological makeover.

Seureca's international scope will help us to achieve this and a sustainable future is in store, filled with great prospects.

### After the rebound and looking ahead: what are Seureca's medium to long-term prospects?

**Philippe Bloch:** Seureca's outlook for the future is bright and very promising.

We'll continue to develop our presence, covering all geographical areas, with a particular focus on high-potential regions where we are yet less present, such as Latin America and Asia.

Seureca is proud to assume the role as the Consultant Engineer and providing Strategic and Operational Assistance for the world leader in ecological transformation. We fully intend to carry out and develop this role in a new Veolia resulting from our merger with Suez. It includes continuing to reinforce certain of our competencies to better underpin Veolia's Impact 2023 strategic plan, be this in the sectors of municipal and industrial waste, services to industry, energy, or operational performance of water and wastewater services.

We are all convinced that it is essential to work collectively and effectively to preserve the planet. In light of the urgent need to protect the environment and the resulting social and human consequences, we ensure that our projects contribute to the urgent fight against climate change. The resilience of our territories is an integral component in our projects, complying with the demands from our clients and international donors, as with our Group's multi-faceted performance objectives.

In conclusion, on the strength of what we have proven over the past few months, I am very confident in our ability to continue along the route mapped out in 2021 and in our development dynamics within the Impact 2023 strategic plan.



**MEETING ENVIRONMENTAL  
CHALLENGES**



# A KEYNOTE ON SEURECA

Seureca is the Consulting Engineering and Strategic and Operational Assistance division of the Veolia Group. Our experts design solutions for public authorities, industries, and the tertiary sector, adapted to meet the issues of providing access to vital services, sustainable resource management, environmental protection, and performance improvement.

Striving for ecological change, we assist our clients in their transition towards a more sustainable economy and a positive footprint.

Our teams are actively involved from the initial concept phase through to operational implementation including a variety of services covering audits and studies, design and project management, strategic and operational assistance, as well as training and skills transfer.



## WATER

- Drinking water networks and treatment
- Wastewater networks and treatment
- Process water treatment



## WASTE

- Collection and treatment of household waste, standard industrial and hazardous waste
- Recycling and recovery
- Energy recovery



## ENERGY

- Electricity production and distribution
- Heating and cooling networks
- Energy efficiency
- Renewables

SEURECA  VEOLIA



## GENERAL STUDIES

- Master plans
- Feasibility studies
- Load forecast
- Resource management
- Technical audits
- Technical modeling
- Optimization studies
- Definition and planning of investments
- Socio-economic and tariff studies
- Environmental and regulatory studies



## DESIGN AND WORKS SUPERVISION

- Project and program management
- Preliminary design
- Detailed design
- Preparation of tender documents
- Tender evaluation
- Works supervision
- Works acceptance tests
- Commissioning assistance
- Follow-up during warranty period



## STRATEGIC AND OPERATIONAL ASSISTANCE

- Organizational and institutional audits
- Strategic plans and financial models
- Asset management and risk analysis
- Customer management and additional revenues
- Metering and reduction of losses
- Energy performance improvement
- Maintenance optimization
- Environmental performance
- Information systems
- Digital transformation
- Change management
- Training and skills transfer

# COMMITTED TO SUSTAINABLE DEVELOPMENT

Convinced that businesses have a role to play and usefulness in response to society's expectations, Veolia was one of the first French companies to have clearly defined its vocation, led by Antoine Frérot, CEO, who argued that "a company is successful because it is useful, not the other way around".

Keeping this vision in mind, in 2020 we conducted a collective reflection to define Seureca's Corporate Social Responsibility (CSR) policy and commitments. We chose to focus on three axes:

1

To be exemplary within our company, both individually and collectively

Reduce our carbon footprint, with the creation of our first Carbon Footprint Assessment in 2021;  
Provide for the quality of worklife, health, and security of our employees;  
Maintain high-level qualification of staff through our skills development plan;  
Contribute to the development of our host regions by creating jobs and partnerships with local stakeholders.

2

Being proactive from the outset in preparing our offers, striving to adopt an "eco-engineering" tactic

Incorporate the three facets of CSR in our offers: environmental, social, and societal;  
Propose innovative and sustainable solutions to our clients.

3

Conduct our projects responsibly, seeking the best impact balance for our clients and the territories in which we work

Assist our clients in applying the principles of CSR to their projects;  
Exercise our engineering profession with sobriety and generate a positive footprint, whether it be water, climate, or digital.

## AN ENGINEERING CHARTER FOR THE CLIMATE

In 2020, we confirmed our commitment to the climate by signing a charter drawn up by our trade federation, Syntec-Ingénierie, for all its members.

In signing this Engineering Charter, we have pledged to implement concrete actions:

- Within our company: by reducing business air travel, setting up measures to stimulate an eco-friendly use of digital tools, and by grading our carbon footprint, which has since become an internal expertise at Seureca.
- Through our projects: offering our clients sustainable solutions and accompanying them in the conservation of resources.

Striving for a positive footprint, we are focusing our efforts on three axes: to **reduce** and **avoid** emissions linked to our activities and projects, and **where necessary, counterbalance** them. To this end, in partnership with Reforest'Action<sup>1</sup>, we have contributed to two reforestation projects in France and in Kenya between 2019 and 2020.

Discover the projects we are backing on the following website: [www.reforestaction.com/seureca](http://www.reforestaction.com/seureca)



# OUR EXPERTISE REFLECTED IN OUR PROJECTS



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## OVERVIEW ON PLASTIC WASTE IN THE RIVERS AND SEAS OF SOUTH ASIA

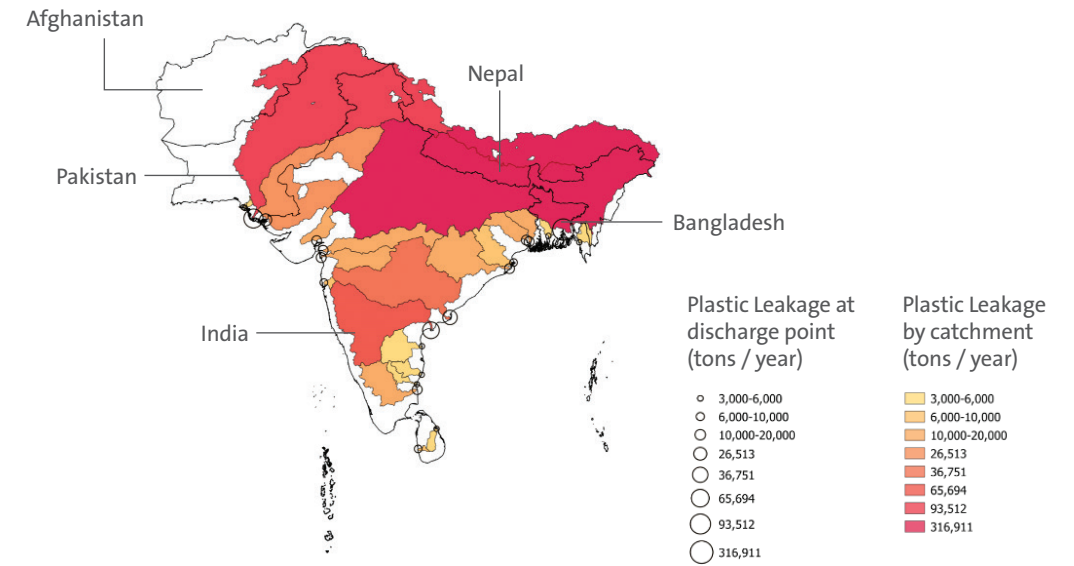
The South Asian region (Afghanistan, Bangladesh, Bhutan, India, Maldives, Pakistan, Nepal, and Sri Lanka) is the third largest source of plastic waste pollution in the world. This pollution significantly affects the region.

Seureca, in partnership with IMC, was contracted by the World Bank to conduct a plastic pollution survey for this region's rivers and seas in order to outline a more harmonized monitoring, management, and policy model for plastic waste reduction, and ultimately propose a more circular economy model for plastics.

To assess the amount of discharged plastic waste and to better identify pollution sources, our teams conducted:

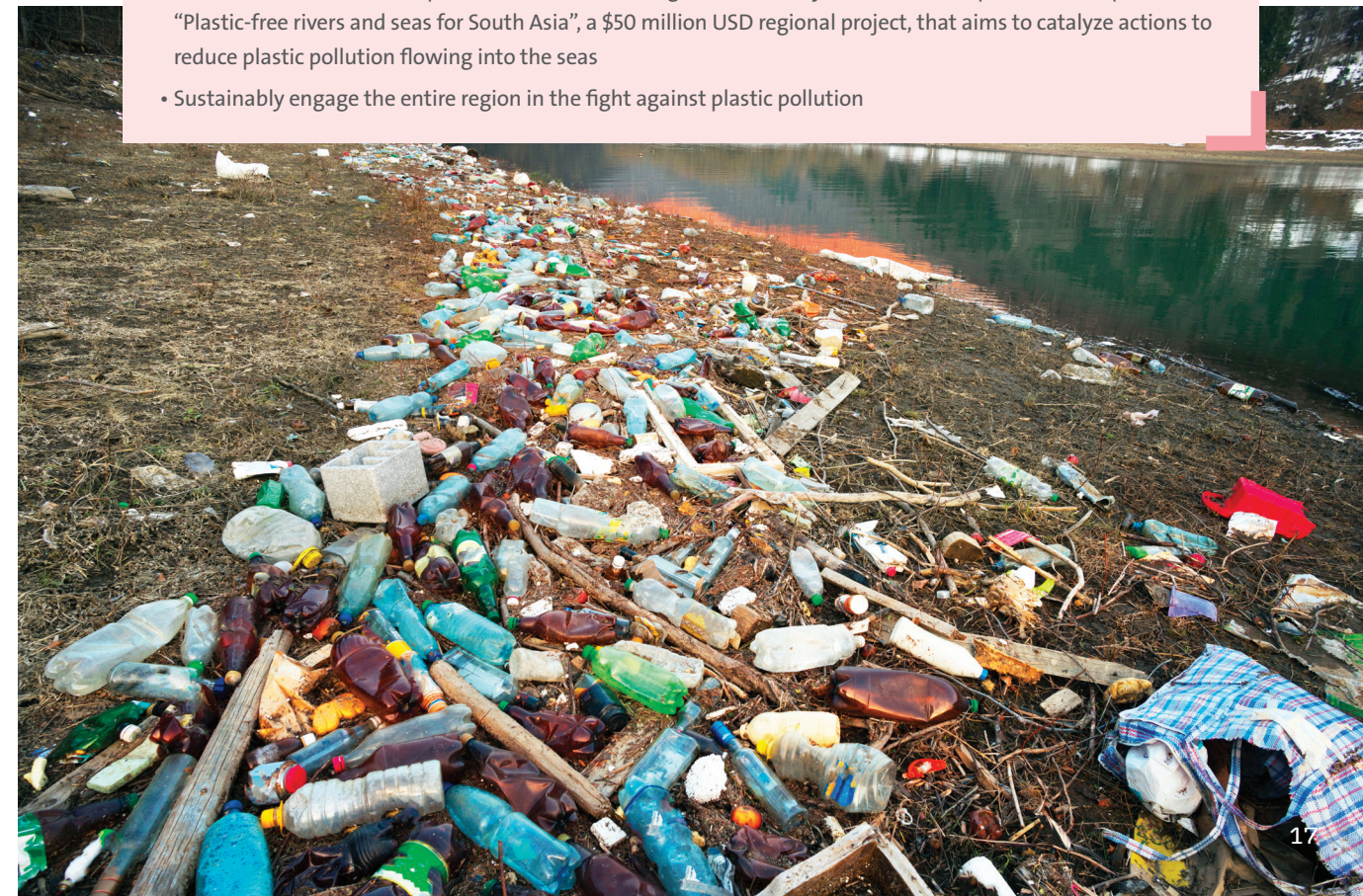
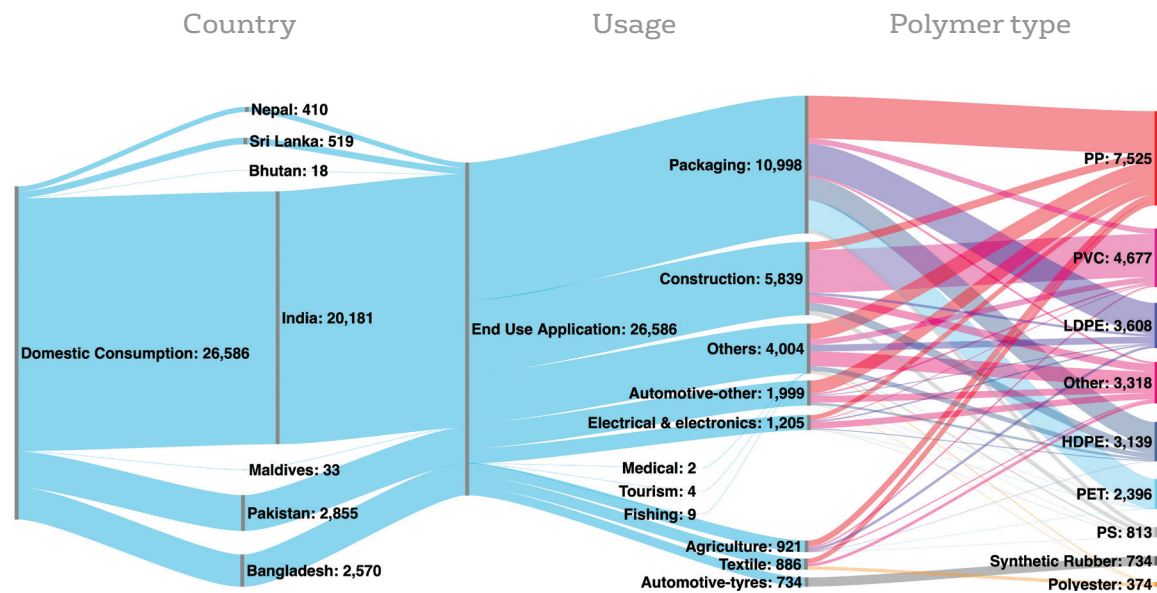
1. Flow analysis for plastics (from import or production through to use, the generating of plastic waste, its recycling, recovery, landfilling, and discharge into the natural environment);
2. Analysis of the policies and regulations governing the plastic chain;
3. Stakeholder analysis (a cartography of the different active players in the plastic chain and understanding their relationships and dynamics);
4. Analysis of risk zones for plastic pollution (the identification and mapping via GIS tools of the critical pollution zones).

## South Asia - Plastic Pollution



### Key Points

- Enable the World Bank to enrich its current work on the understanding of plastic pollution and to help in the decision-making process for the region's future investment programs
- Provide the South Asia Cooperative Environment Program with study results to underpin the development of "Plastic-free rivers and seas for South Asia", a \$50 million USD regional project, that aims to catalyze actions to reduce plastic pollution flowing into the seas
- Sustainably engage the entire region in the fight against plastic pollution



## PERFORMANCE DIAGNOSIS FOR THE WATER COMPANIES OF LAHORE AND FAISALABAD / PAKISTAN

The Punjab province in Pakistan is experiencing high population growth, particularly in two of its largest cities, Lahore and Faisalabad. Against a background of ever-increasing water demand and poor performance, the Water and Sanitation Authorities (WASA) of Lahore and Faisalabad are faced with an alarming situation regarding water resources and their service delivery.

Under a multi-country framework contract with the AFD, Seureca is responsible for carrying out a strategic and operational diagnosis to assist the WASA for each city in developing its action program for performance improvement and capacity-building.

### ⊕ Key Points

- Optimize the use of water resources and reduce energy consumption by improving the WASAs' operational performance
- Improve the water supply and sanitation services for the inhabitants of both cities - in quantity, quality, and price
- Identify capacity-building needs and outlining technical assistance to underpin the expansion of the service provider

Seureca's expertise concentrated on these issues:

- **The maturity assessment of the public utilities:**
  - An organizational and institutional review;
  - Analysis of the economic and financial performance, including tariffs and sustainability;
  - Co-evaluation of the key processes' situation via participatory workshops to identify the strengths, weaknesses, and principal improvement levers;
  - The benchmarking of performance indicators.
- **The development of a comprehensive action plan to revamp these public utilities:**
  - Joint definition of the 3 to 5-year analysis;
  - Prioritizing actions and integrating these into a transition roadmap for the public services - including a focus on digitalization - and development of a 5-year technical assistance program to accompany the utilities' restructuring.



## INTEGRATED SOLID WASTE MANAGEMENT FOR JBM ENVIRONMENT MANAGEMENT / INDIA



JBM Environment Management Pvt. Ltd. is setting up an integrated solid waste management facility that includes: collection, transportation, sanitary landfill, and waste-to-energy conversion in the town of Sonapat, in Haryana State.

In order to set up the installation, JBM Environnement Management Pvt mandated DESL, a subsidiary of Seureca, for the following missions:

- Engineering services - mechanical, civil, electrical, monitoring, instrumentation, etc;
- Assessment of the quantity and quality of available solid waste;
- Combustion technology for steam and power generation;
- Tender documents preparation and procurement assistance;
- Development support, quality control, and project management;
- Technical assistance in obtaining the necessary permits and authorizations;

- Day-to-day monitoring of site progress, including coordination of the various participants, troubleshooting assistance, and performance guarantees.

The facility processes 600 tons per day of municipal solid waste and has an energy production capacity of 9 MW.

### ⊕ Key Points

- Capacity-building to deal with an increasing volume of waste
- Recovery of energy and by-products, such as compost
- Improve health conditions and economic growth in the region
- Creation of employment for up to 100 people and indirect employment opportunities for thousands in the district



## ASSISTANCE TO THE MINSK WATER COMPANY BELARUS

The municipal utility company, Minsk Vodokanal, provides water and wastewater treatment services for the Belarusian capital with its two million inhabitants.

**With financial support from the EBRD, Seureca provides assistance to the water utility in reinforcing its organizational, operational, and financial capacity, plus aids the company in its strategy development by using a two-phase program:**

1. A financial and operational performance improvement program (FOPIP) that includes:
  - a. An assessment of the existing situation - operational practices, operating costs, risk analysis, management and billing-collection systems, etc.;
  - b. Recommendations for an efficient organizational structure, effective governance, and a comprehensive approach and strategy to improve the company's public relations.
2. A social assistance program, examining the existing mechanisms and proposing the adjustments needed for its implementation.

### ⊕ Key Points

- Development of an environmental action plan to reduce energy consumption, leakage, and infiltration in the wastewater network
- Combat precariousness - the design of a social assistance program for low-income households
- Improve working conditions and safety
- Reinforcement of the skills of employees

## WATER ASSESSMENT AND DESIGN OF THE WASTEWATER TREATMENT SYSTEM AT A CENTER FOR WASTE SORTING AND STORAGE IN WANDRE / BELGIUM

Renewi is a leading company in the waste recovery market. In Belgium, the Wandre site sorts, shreds, and stores waste for recovery purposes. At present, run-off and process waters are discharged into the wastewater collection network with no prior treatment; as a result, the client plans to build a wastewater treatment plant.

Epas International, a subsidiary of Seureca, is assisting Renewi to improve its environmental performance at the Wandre site.

After having carried out a comprehensive assessment and drawn up an optimal management scenario for the site's water in 2020, Epas International is designing and dimensioning the treatment and discharge systems, verifying feasibility through analyses and tests in its laboratory, and drawing up a cost estimate for the equipment and the CAPEX / OPEX estimates.

### ⊕ Key Points

- Reduction of the discharge of pollutants into the environment
- Diminish the on-site and local flooding risks by improving the collection and discharge of run-off water
- Ensure compliance and optimize the water management on site, a necessity for this growing company that is creating employment



## COMPREHENSIVE ASSESSMENT OF THE RENEWAL NEEDS FOR THE DRINKING WATER DISTRIBUTION NETWORKS OF GREATER SAINT-ETIENNE / FRANCE

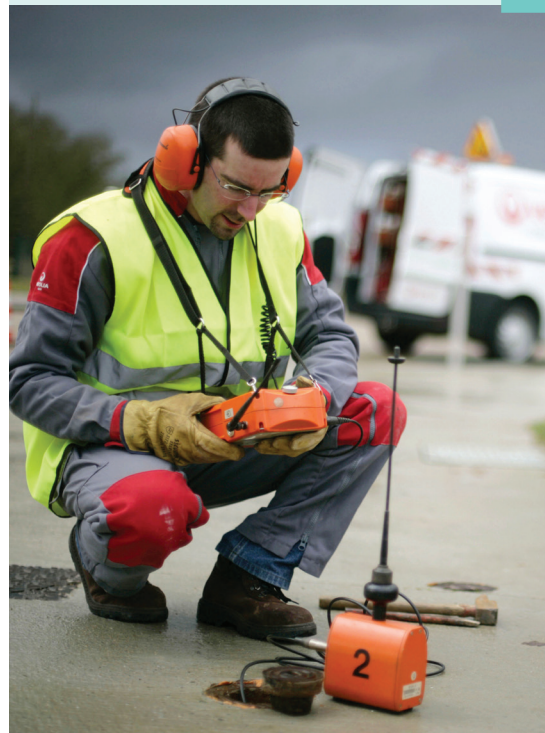
The Saint-Étienne Métropole, an intercommunal structure, is responsible for the provision of drinking water throughout its territory. This collectivity commissioned Seureca for assistance in drawing up a 15-year priority investment program, as of 2023, to renovate its water distribution pipelines, and to prepare an operational action plan for reducing water losses. This plan is meant to meet the efficiency targets set by the Grenelle II law.

**For this project covering 14 municipalities including the city of Saint-Etienne, Seureca's services covered:**

- Statistical and spatial analysis of the leak repair history and identification of the sectors with the most critical annual breakage rates;
- Analysis of the commercial database, losses evaluation due to under-counting, and preparation of a meter renewal program;
- Evaluation of the CAPEX / OPEX required for 100% coverage in remote reading of the project area;
- Comprehensive review of the existing sectorization and pressure management schematics optimization program;
- Preparation of two scenarios for an annual roadmap prioritizing the renewal of distribution pipes with budget and worksheets.

### ⊕ Key Points

- Progressively decrease the consumption of surface water resources, and also energy and chemical reagents
- Ensure a long-term supply of drinking water to all customers in the 14 municipalities affected by the project
- Optimizing investment costs pertaining to the renovation, with a view to stabilize water prices billed to customers



## AN INNOVATIVE URBAN COOLING SYSTEM IN GREATER BORDEAUX / FRANCE

With climate change, the frequency of heat waves is expected to increase. One of the aims in dealing with this problem is to guarantee a sustainable environment conducive to the well-being of inhabitants by anticipating the consequences of global warming.

As the delegate for the city of Bordeaux, SABOM, with assistance from Seureca, proposed to test an urban cooling system in an innovative approach to sustainable development. The operating principle of this system is based on using rainwater.

**Seureca was entrusted with the following missions:**

- Pre-feasibility studies (micro-climatic modeling, multi-scenario dimensioning, multi-criteria analysis, and cost estimates);

- Project outline - dimensioning, cost estimates, drafting contractual documents, etc.;
- Project management for coordinating the work;
- Accompanying the operation of the system;
- Monitoring the performance indicators.

### ⊕ Key Points

- Preserve resources and the recipient environment by limiting discharge into the stormwater network
- Participation in a circular economy approach by reusing water locally.
- Creation of a space for residents to meet and exchange
- Improving the exterior thermal comfort of users given increasing heat waves resulting from climate change



## ENERGY RECOVERY OPTIMIZATION BETWEEN A WASTEWATER TREATMENT PLANT AND AN ENERGY RECOVERY FACILITY / FRANCE

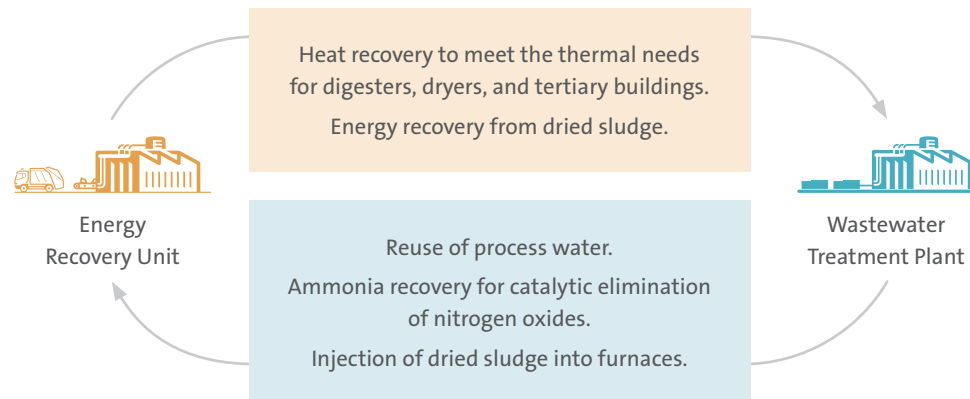
The Interdepartmental Syndicate for the Sanitation of Greater Paris (SIAAP) and the Intercommunal Syndicate for the Destruction of Urban Residues (SIDRU) both operate in the Paris area. Given the geographical location of the Seine Grésillons wastewater treatment plant, operated by the SIAAP, and the Azalys waste-to-energy plant, managed by the SIDRU, the two syndicates signed an agreement for cooperation.

In this agreement, the signatories have taken steps to identify the potential synergies between their activities, such as heating SIAAP's sludge digesters with the surplus energy from SIDRU's household waste incineration.

Seureca participated in this project, carrying out a feasibility study on the technical, economic, and regulatory aspects to enable the two organizations to assess the opportunity to go further in implementing possible synergies.

### Key Points

- Generate a circular economy model
- Conserve resources: reuse of water and reduced consumption of natural gas by reutilizing fatal or surplus energy



## STRUCTURING AND IMPROVING THE SEWAGE SLUDGE TREATMENT SECTOR IN OUAGADOUGOU AND BOBO DIOULASSO / BURKINA FASO

The “National Wastewater and Fecal Sludge Treatment Program” is part of the Burkina Faso National Water Plan, whose aim is to achieve the sustainable development goals set by the United Nations, namely the goal of “Ensuring access to water and sanitation for all and guaranteeing a sustainable management of water resources”. This program aims to provide the population with sustainable treatment of the wastewater and septage by 2030.

To this end, the National Office of Water and Sanitation (ONEA) has obtained funding from the French Development Agency (AFD) for a feasibility study and the project management for designing a program to organize and improve the fecal sludge management sector in the cities of Ouagadougou and Bobo Dioulasso.

Entrusted to Seureca, the goal of this study is to:

- Determine the feasibility of a development program to create structured, sustainable fecal sludge management and to improve the use of autonomous sanitation services;
- Initiate preliminary studies and monitor the construction work for four fecal sludge treatment and recovery units in these two cities.

### Key Points

- Improvement of the population's sanitary conditions by reducing, then eliminating, a release of untreated fecal sludge into the recipient environment
- Increasing the treatment capacity to reprocess sanitation effluents to meet the current and future needs of the population
- Structuring the fecal sludge management sector by improving the performance of the various professions involved



## WASTEWATER TREATMENT PLANT DESIGN FOR THE OQ MAF REFINERY IN MUSCAT / SULTANATE OF OMAN

Located in Muscat, the MAF refinery was commissioned in 1982 and was the first one built in Oman. Its capacity has been increased over the years and now reaches 106K BPSD<sup>1</sup>. The existing wastewater treatment facility is outdated, and not adapted to handle the flows generated by the refinery. Hence, the need for a complete overhaul to ensure the quality of effluents leaving the site and compliance with environmental discharge standards.

In 2019, Seureca conducted a feasibility study to define the implementation of a new, compliant, and safe effluent treatment facility.

Based on this successful outcome, Seureca was awarded the Front End Engineering Design (FEED) study in 2020 to prepare a turnkey EPC package for the deployment of this urgent solution for environmental protection.

**The project's novel context entails specific challenges for which Seureca's expertise, as well as the Veolia Group, stands apart:**

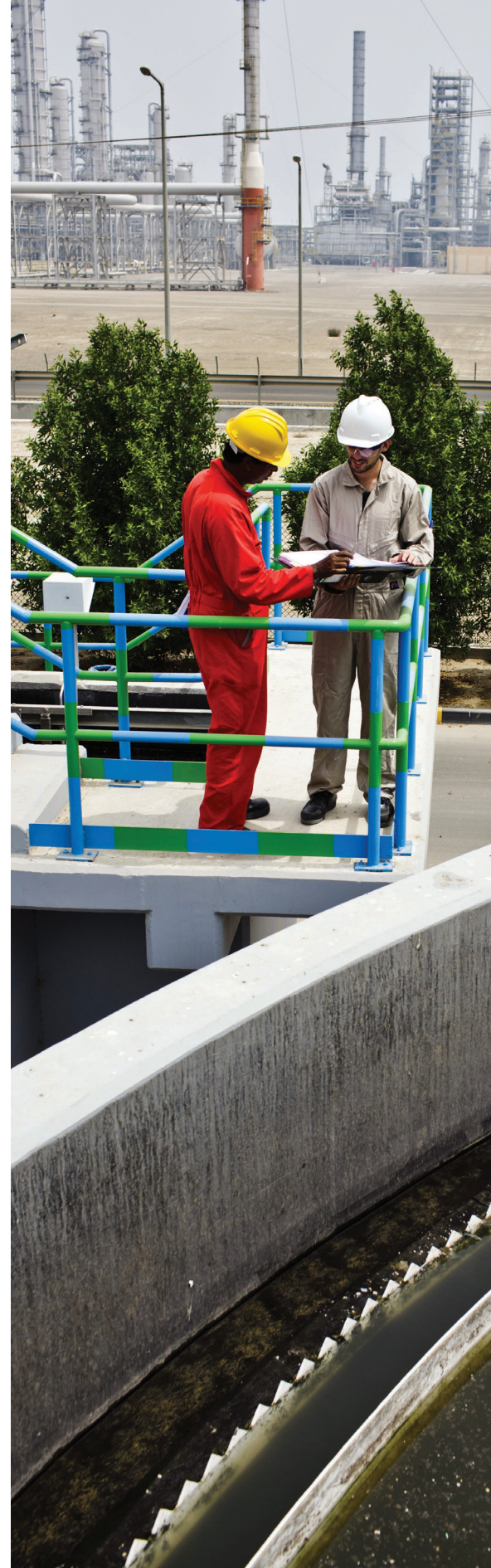
Designing the plant in an extremely limited footprint, on a very busy industrial site;

Defining the project's development without impacting the refinery's continuity of services nor the discharge of effluents;

Combining multiple engineering disciplines into a single package.

### Key Points

- Protection of the environment, marine life, and biodiversity of Muscat's coastal regions
- Safeguarding tourism and the local economy linked to beach access and other water-based activities
- Enhancing technical skills, through continuous training and skills transfer, of local engineers provided by the client



## PLASTIC WASTE MANAGEMENT STRATEGY FOR ARAMCO / SAUDI ARABIA

As part of the Saudi Government's bold vision for the future of the Kingdom by 2030, Saudi Aramco, the national Saudi Arabian hydrocarbon company, intends to adopt a circular economy strategy. In this context, Saudi Aramco developed a plastic waste management strategy aiming to minimize disposal in landfills and to increase opportunities for prevention, reduction, recycling, and energy recovery in five economic sectors - packaging, building and construction, automotive, oil and gas, and renewable energy.

**Seureca is assisting Saudi Aramco, in partnership with Frost and Sullivan, in developing this strategy on two axes:**

- In-depth analysis of the waste value chain for the above-mentioned zones, for both the local and global market:
  - Overview of the key phases of the waste chain for these five sectors;
  - Evolution and trend analyses in plastic waste management for local and global markets;
  - Identification of the applications and advantages of the various recycled polymers, and of potential clients and their expectations;
  - Analysis of the bioplastic market and its uses.

• **Outlining opportunities to develop circular economy models:**

- Development of a methodology for selecting products with circular potential and of strategic interest for Aramco;
- Identifying barriers and challenges to the implementation of circular loops for these products;
- Proposing circular economy models and action plan to Aramco to support the deployment of these models at local and regional levels.

### Key Points

- Deliver a consolidated and detailed analysis of plastic waste management for 5 key sectors
- Propose circular economy models to improve the management of plastic products
- Develop an action plan for ARAMCO to aid their engagement and investment in upgrading plastic waste management



*REINVENTING OURSELVES*

*TO MOVE AHEAD*

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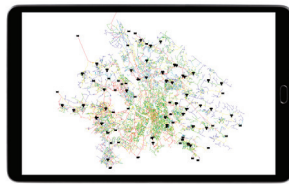
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# SOFTWARE ALGORITHMS FOR OPTIMIZING NETWORKS

## The underlying concept

Using genetic algorithms to improve the design, analysis and operations of water and wastewater networks.



## As an example, drinking water production and distribution systems are increasingly complex

Water network operators have to manage progressively large, complex, and interconnected systems. Operators must now have access to modern and upgradeable decision-support tools to meet the dual objective of reducing the carbon footprint and protecting water resources in an improved technico-economic framework.

## The need for optimization algorithms

Optimizing a network implies evaluating the largest possible number of combinations of the decision-making variables involved in a problem. This step can no longer be performed manually; experts rely on optimization algorithms to find the best solution.

The Optim'Hydro's genetic algorithm is able to find an optimal solution in only 24 hours of computer simulations.

## The Optim'Hydro tool has four main fields of use

### 1 Energy optimization

Modifying pump settings at plants and pumping stations.

### 3 Water network quality optimization

Modifying the settings or location of the re-chlorination stations.

### 2 Physical loss optimization

Altering the sectorization and pressure adjustment in relation to the height of the buildings.

### 4 Water resource optimization

Adapting withdrawal rates from the water source according to hydrological and tariff limitations.

## OUR EMBLEMATIC SUCCESSES

### GREATER TOULOUSE

Energy and physical loss optimization

#### KEY PROJECT DATA

- 449,000 inhabitants supplied
- 73,712 subscribers
- 1,196 km of linear network
- Current efficiency of 90.4%

**20%**  
in leakage prevention ≈  
**1500 m<sup>3</sup>/d**

#### THE SOLUTION PLAN

A study for the installation of two different pressure zones: one zone supplied by gravity from the Pech-David plant, and another one of reduced pressure, distributed from the Clairefont pumping station, plus two Pressure Reducing Valves from the Pech-David site. This hydraulic model is coupled with Optim'Hydro to evaluate the benefits and optimize the operation of the network-plant complex.

**5% in savings**  
on pumping costs ≈  
**1 950 MWh/yr**

**34 leak repairs**  
avoided each year

### GREATER LILLE

Energy efficiency optimization

#### KEY PROJECT DATA

- 62 municipalities
- 4,200 km of linear network

Between **15% to 20%** saved  
on pumping costs ≈ **308 MWh/yr**

#### THE SOLUTION PLAN

An optimization study for the network pumping stations and discharge of the two main plants. The reservoirs' filling schedules and filling rate are improved, based on the pumping directives from the principal discharge plants.

### GREATER TOULON

Resource optimization

#### KEY PROJECT DATA

- 12 municipalities
- 552,000 inhabitants supplied
- 27 M m<sup>3</sup> of water consumed (in 2018)
- 3 drinking water treatment plants
- 2 artificial reservoirs
- 3 acquisitions for the Société du Canal de Provence

**2 annual updates**  
of sampling scenarios

#### THE SOLUTION PLAN

The supply of raw and treated water to the Greater Toulon area is a complex balance between the territory's surface water resources and water production costs. The correct balance must be found between water levels available in the reservoirs, the purchase and treatment costs, and the season. Optim'Hydro enables us to identify optimal resource utilisation patterns on a daily basis to satisfy the water demand, especially in periods of drought.

between **1% to 20%** in savings ≈  
**45 k€** (in years of heavy rainfall )  
and **1,5M€** (in years of drought)



# ENVIRONMENTAL PERFORMANCE FOR A POSITIVE FOOTPRINT

## THE ENVIRONMENTAL CHALLENGES FACING US

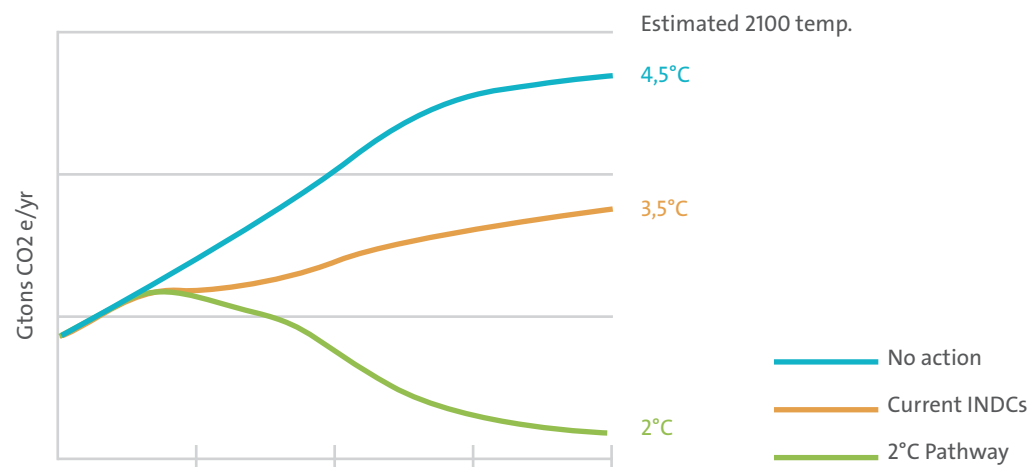
Environmental issues such as mitigation and adaptation to climate change, water resource management, biodiversity preservation, and air quality are becoming increasingly important in the decision-making process of public authorities and industrial entities who, with regard to these issues, are seeking to measure their impact and overcome their weaknesses.

## THE IMPACT OF CLIMATE CHANGE

The Paris Climate Agreement requires the signatory countries to prepare their Intended Nationally Determined Contributions (INDC) to a maximum trajectory of 2°C. It infers a willingness on the part of local authorities and industries to achieve carbon neutrality by 2050, necessitating the development of a roadmap to attain this target.

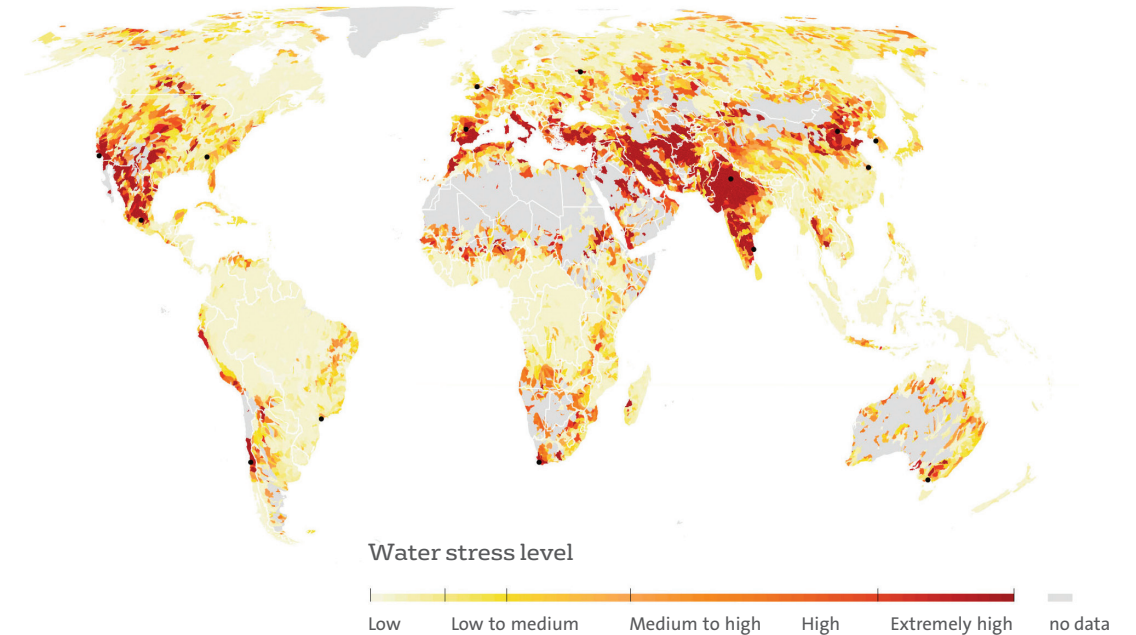
### Global Greenhouse Gas Emissions

Gtons CO<sub>2</sub> e/yr

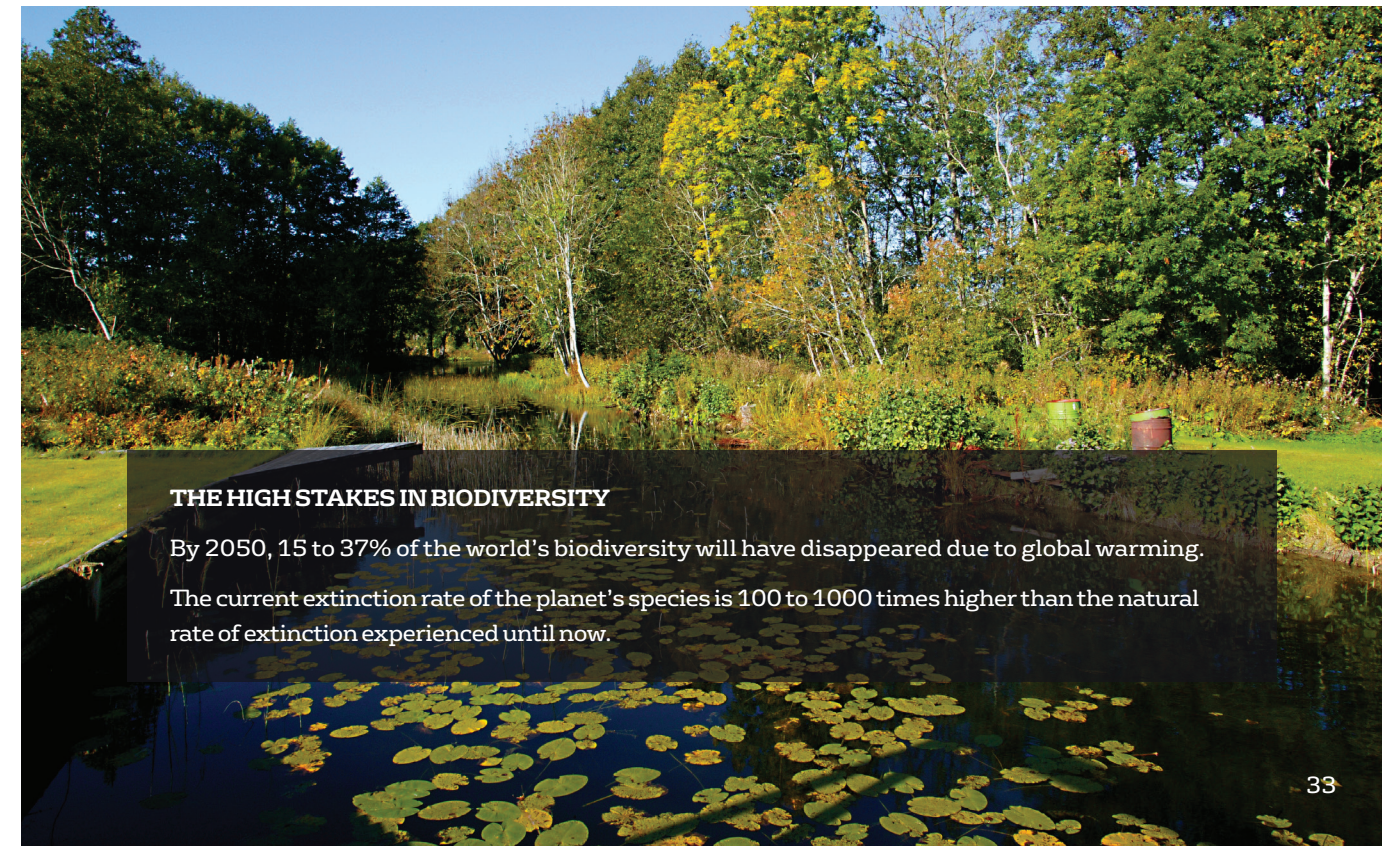


## THE ISSUE OF WATER RESOURCES

70% of the Earth's surface is covered by water, but only 1% of this water is accessible to users. By 2050, 70% of the world's gross domestic product (GDP) will be produced in regions suffering from water stress.



Source: Nytimes



### THE HIGH STAKES IN BIODIVERSITY

By 2050, 15 to 37% of the world's biodiversity will have disappeared due to global warming. The current extinction rate of the planet's species is 100 to 1000 times higher than the natural rate of extinction experienced until now.

## OUR CONSULTING OFFER FOR ENVIRONMENTAL PERFORMANCE

To provide our clients with answers to these issues, Seureca includes in its studies an analysis of the environmental performance of the project using a calculation tool developed by Veolia, GreenPath, to perform various analyses:

- Climate change impact via measurement of the carbon footprint;
- Freshwater resource impact through dimensioning the water footprint;
- Biodiversity impact by a biodiversity diagnosis of sites.

The methodology applied for each project includes:

- Diagnosis of the current situation;
- Identification of action levers;
- Identification of improvement measures and assessment of their environmental impact;
- Development of an effective action plan and / or roadmap.



## EXAMPLES OF POTENTIAL ACTION LEVRS FOR WATER RESOURCE MANAGEMENT

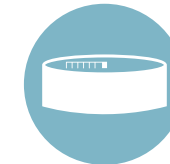
### WASTEWATER COLLECTION

- VOLUME: Control of network overflows - monitoring, redimensioning, increasing storage capacity, etc.
- STRESS: Ensure that all water is treated and reverted back to the source, and monitor stray clear water to avoid needless groundwater sampling.
- QUALITY: Improve the tracking and quality of collected water to avoid pollutant flows that are difficult to treat: network policy, connection regulations, H2S, etc.



### WASTEWATER TREATMENT

- VOLUME: Decrease the quantity of water needed by the stations and by-pass volumes - treating all incoming flows - and prevent discharges into the sea.
- STRESS: Give priority to the release of treated wastewater into a strained source and promote reuse solutions to reduce withdrawals from a water source.
- QUALITY: Reduce by-pass volumes and improve the quality of the effluent discharged into the natural environment.



### WATER PRODUCTION

- VOLUME: Reduce “factory needs”, e.g. by recycling wash water.
- STRESS: Favor the use of “less strained” sources and alternative resources.
- QUALITY: Favor the use of sources of a lesser quality.



### WATER DISTRIBUTION

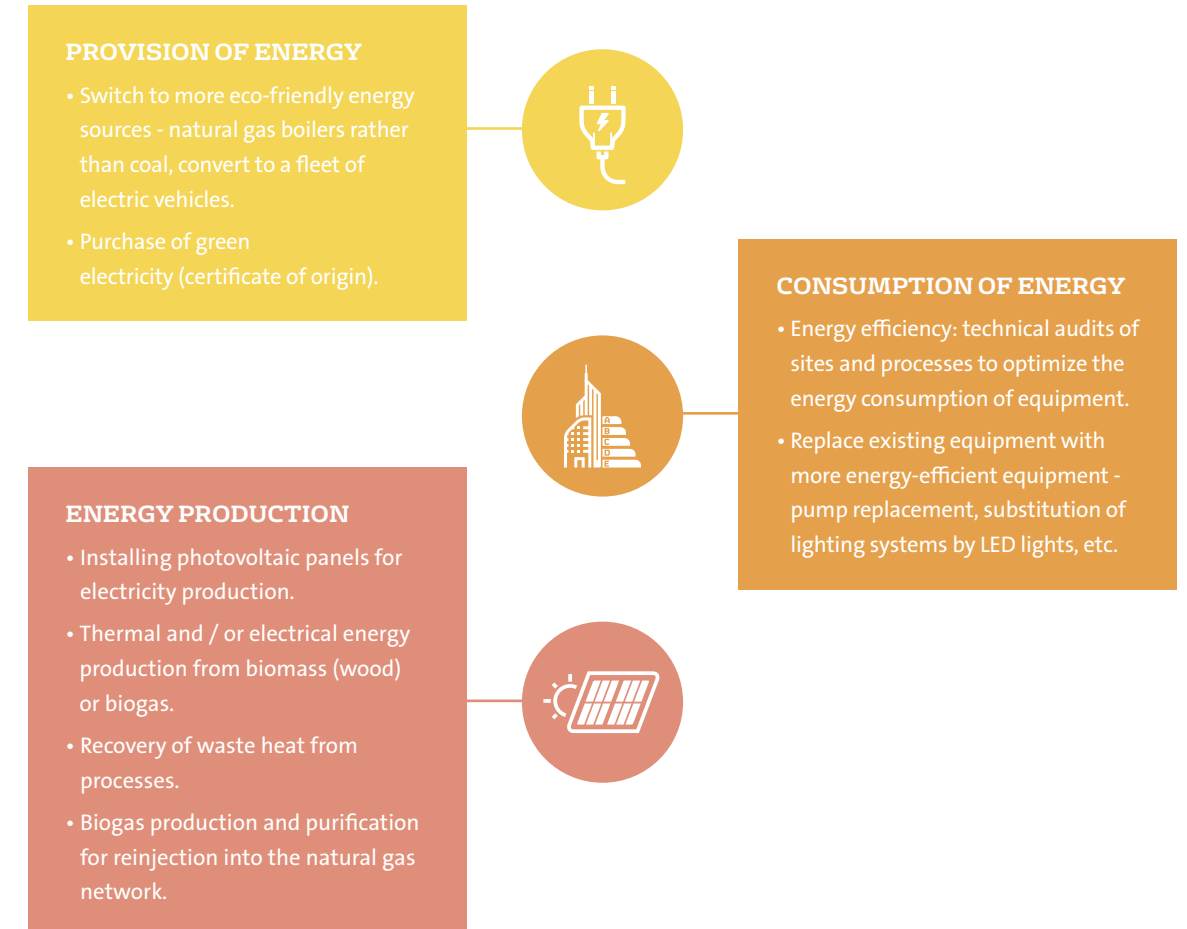
- VOLUME: Improve distribution efficiency - leak detection, network work, metering optimization - and promote better consumption control.
- STRESS: Optimize network management - encourage water distribution from the least stressed sources and prioritize the activity on those portions of the network that distribute water from a strained source, or from a good quality source.
- QUALITY: Manage the system efficiently - encourage distribution from lower quality sources.



## EXAMPLES OF POTENTIAL ACTION LEVERS FOR WASTE MANAGEMENT



## EXAMPLES OF POTENTIAL ACTION LEVERS FOR ENERGY MANAGEMENT



**GENERATING FAIR VALUE**

**FOR ALL OUR STAKEHOLDERS**

Clients

Partners

Employees

Stakeholders





# 2019 / 2020 IN FIGURES

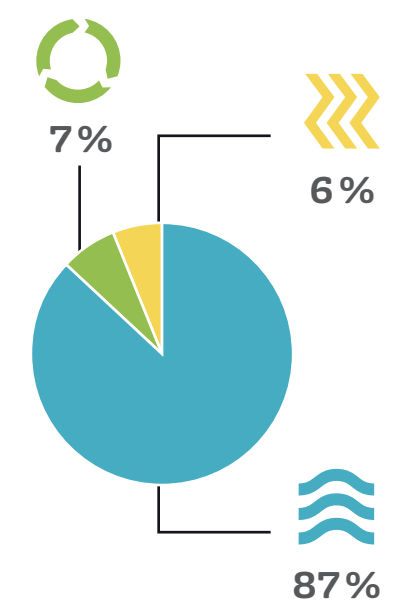


- We accompany our public sector clients in:**
- Optimizing the management of their services (water, sanitation, energy, waste) and their infrastructures;
  - Improving their environmental footprints.

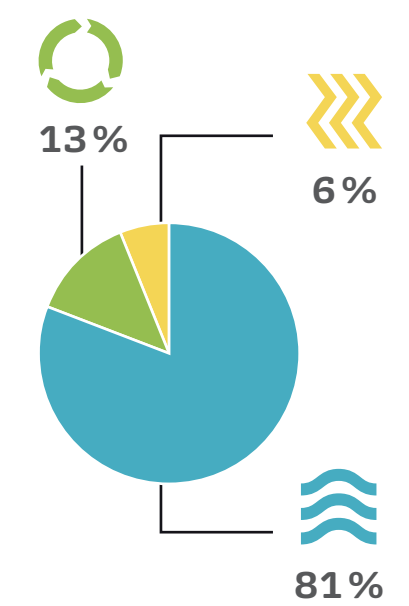


- We assist private sector companies in:**
- Improving their environmental and health performance;
  - Meeting regulatory requirements and optimizing their costs.

2019  
**€ 29 MILLION  
 IN TURNOVER**



2020  
**€ 24.6 MILLION  
 IN TURNOVER**

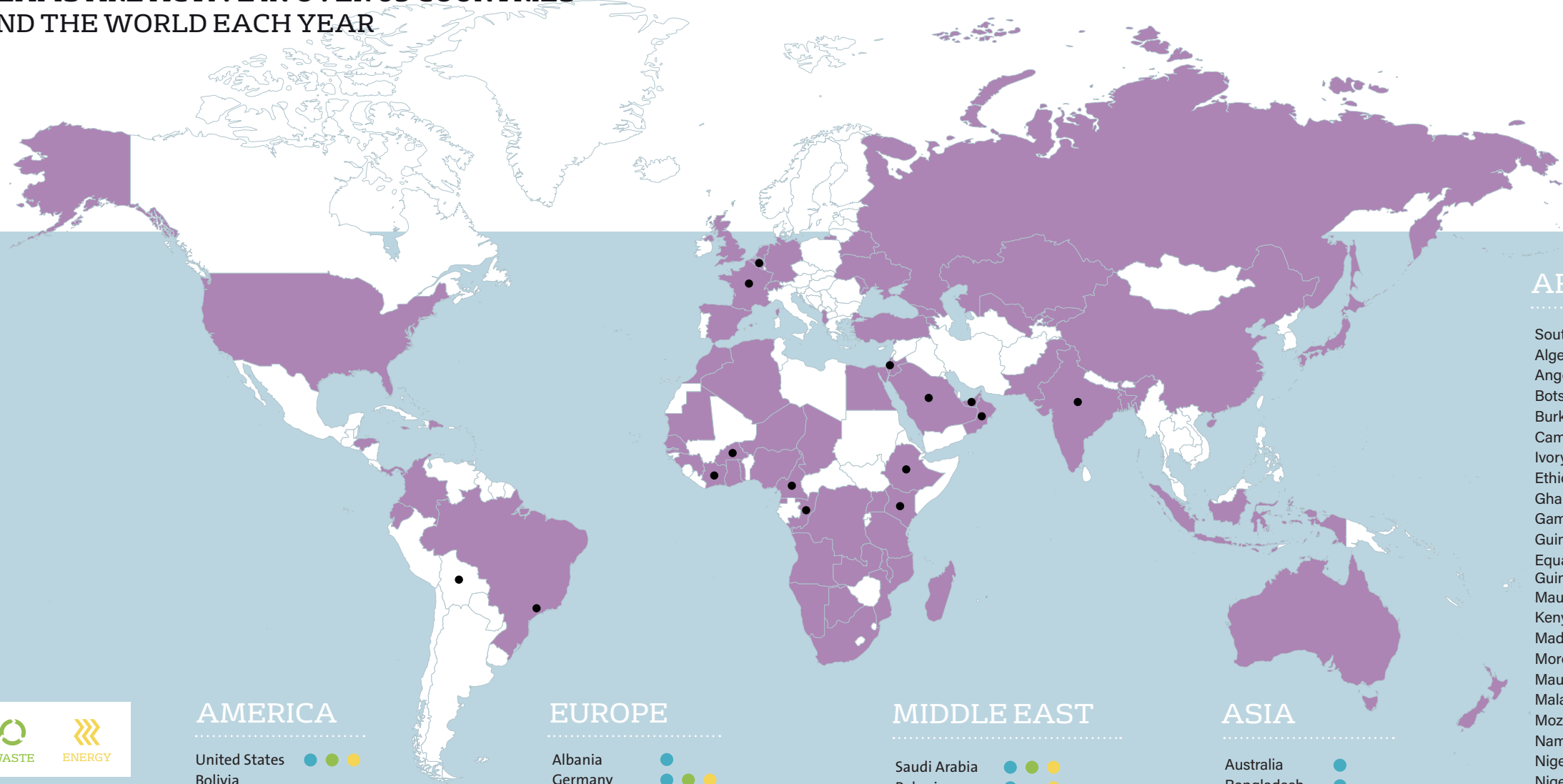


Despite the fact that the COVID-19 sanitary crisis impacted Seureca's activity and turnover, particularly with a significant slowdown in our projects outside France - our ability to adapt, combined with the diversification of our activities and our geographical areas of operation enabled us to rebound in 2021, thus safeguarding our medium to long-term activity.

\* Data valid for 2019 and 2020.

# OUR INTERNATIONAL EXPERTISE

OUR TEAMS ARE ACTIVE IN OVER 65 COUNTRIES  
AROUND THE WORLD EACH YEAR



● Permanent Offices  
■ Projects

## AMERICA

- United States ● ● ●
- Bolivia ● ● ●
- Brazil ● ● ●
- Colombia ● ● ●
- Dominica ● ● ●
- Ecuador ● ● ●
- Honduras ● ● ●
- Jamaica ● ● ●
- Panama ● ● ●
- Dominican Republic ● ● ●

## EUROPE

- Albania ● ● ●
- Germany ● ● ●
- Armenia ● ● ●
- Austria ● ● ●
- Belgium ● ● ●
- Belarus ● ● ●
- Spain ● ● ●
- France ● ● ●
- Georgia ● ● ●
- Moldova ● ● ●
- Netherlands ● ● ●
- United Kingdom ● ● ●
- Russia ● ● ●
- Ukraine ● ● ●
- Turkey ● ● ●

## MIDDLE EAST

- Saudi Arabia ● ● ●
- Bahrain ● ● ●
- Egypt ● ● ●
- United Arab Emirates ● ● ●
- Jordan ● ● ●
- Palestine ● ● ●
- Oman ● ● ●

## ASIA

- Australia ● ● ●
- Bangladesh ● ● ●
- China ● ● ●
- India ● ● ●
- Indonesia ● ● ●
- Japan ● ● ●
- Kazakhstan ● ● ●
- Kyrgyzstan ● ● ●
- Maldives ● ● ●
- New Zealand ● ● ●
- Pakistan ● ● ●
- Uzbekistan ● ● ●

## AFRICA

- South Africa ● ● ●
- Algeria ● ● ●
- Angola ● ● ●
- Botswana ● ● ●
- Burkina Faso ● ● ●
- Cameroon ● ● ●
- Ivory Coast ● ● ●
- Ethiopia ● ● ●
- Ghana ● ● ●
- Gambia ● ● ●
- Guinea ● ● ●
- Equatorial Guinea ● ● ●
- Mauritius ● ● ●
- Kenya ● ● ●
- Madagascar ● ● ●
- Morocco ● ● ●
- Mauritania ● ● ●
- Malawi ● ● ●
- Mozambique ● ● ●
- Namibia ● ● ●
- Niger ● ● ●
- Nigeria ● ● ●
- Uganda ● ● ●
- Republic of the Congo ● ● ●
- Democratic Republic of the Congo ● ● ●
- Seychelles ● ● ●
- Senegal ● ● ●
- Tanzania ● ● ●
- Chad ● ● ●
- Togo ● ● ●
- Zambia ● ● ●

# A FOCUS ON LATIN AMERICA: AN AREA IN FULL EXPANSION

**PRESENT IN LATIN AMERICA SINCE ITS CREATION OVER 60 YEARS AGO, SEURECA HAS GIVEN A NEW BOOST TO ITS ACTIVITY IN THE REGION WITH THE SETTING UP OF PERMANENT OFFICES.**

Seureca's first projects in Latin America focused on supplying drinking water to cities with a very high population growth rate. Via studies for long-term planning, we assessed the needs, infrastructure design, and investment planning. Subsequently for Seureca, participation in sanitation projects became a priority for these regions.

Since these times, our activity in Latin America has become much more diversified. Although the company initially operated in the water sector, it now covers all the activities of the Veolia Group - Water, Waste, and Energy. Today Seureca has expertise in a wide range of disciplines from short and medium-term consulting and engineering services, to long-term technical and strategic and operational assistance - performance, digitalization, asset management, skills transfer, etc.

Seureca works with bilateral and multilateral financial institutions in the region, such as the Inter-American Development Bank, the French Development Agency, the World Bank, and the European Investment Bank, with public financing in the various countries, and private financing - in the industry and service sectors, as well as on behalf of Veolia.

Present in the region before Veolia's arrival, Seureca has played and continues to play an important role in accompanying the Group's development, notably in

preparing tenders for service outsourcing, providing technical support for existing contracts, plus joint production on certain operations. We act on requests from Veolia's local Business Units or from Corporate departments, such as the Business and Performance Support Department or the Information Systems Department.

**Today, Seureca has a portfolio of references in most Latin American countries** and aims to consolidate its geographical proximity by extending its permanent local presence. Our activity will increase from deploying our know-how and bolstering our service offer to both public and private sector clients, in addition to the Veolia Group.

## OUR LOCATIONS IN LATIN AMERICA

In Brazil, Seureca acquired NG Infra in 2019. This engineering firm with more than 20 years of experience has permanent offices in the cities of São Paulo and Aracaju; NG Infra is well-known and highly regarded among the country's water sector operators. It has numerous references in assistance to Brazilian public and private water companies, especially in the technical and commercial water-loss reduction fields, and has developed its own water-loss management software, SISPER.

As of 2020, Seureca set up a permanent office in Bolivia for managing the Latin American zone and its commercial development.

In addition, Seureca has temporary offices with its numerous partners in various countries - the Dominican Republic, Honduras, Jamaica, Haiti, etc. - that are carrying out projects.



## OUR EMBLEMATIC SUCCESSES IN LATIN AMERICA

### BRAZIL

- Assistance in the environmental risk assessment of a domestic waste landfill in São Paulo.
- Audit services for water connections, updating commercial databases, and development of water-loss reduction action plans for cities in the three states of Maranhão, Goiás and Rio Grande do Sul, serving a total of 1 million inhabitants.

### CHILE

Preliminary studies for setting up a waste-sorting center for packaging in Greater Santiago, concerning a population of 7 million.

### DOMINICA

Technical assistance for the electricity and geothermal sectors. Seureca assists its client in exploiting the geothermal potential and the set-up of its environmental, social, human resources, and health and safety policies.

### ECUADOR

Technical analysis, overview, diagnosis, and solution proposals for developing a warning system and short, medium, and long-term measures in flood-risk reduction for the population and water infrastructure of the city of Guayaquil.

### JAMAICA

Diagnostic and optimization studies for the airport services of the Norman Manley International Airport in Kingston. Seureca accompanies its client with a multi-disciplinary expertise covering the water, energy, waste, and air quality systems. *(See page 49)*

### DOMINICAN REPUBLIC

Technical assistance by results and quick impact investments for the water supply system in the province of San Cristóbal. *(See page 47)*

An refurbishment project for Nuevo Domingo Savio's solid waste management, in the city of Santo Domingo.

### HONDURAS

Detailed design of the sewage interceptor and the wastewater treatment plant in the central district of Tegucigalpa and Comayagüela. *(See page 50)*

## TECHNICAL ASSISTANCE FOR INAPA IN SAN CRISTOBAL / DOMINICAN REPUBLIC



The National Institute of Drinking Water and Sanitation (INAPA) is the public agency responsible for the drinking water and wastewater services in most provinces of the Dominican Republic.

INAPA suffers from a deficit in its service quality, largely due to a difficulty in collecting fees from its users. Without sufficient revenues to adequately develop and maintain the infrastructure, the company depends primarily on government subsidies to sustain a minimum level of operation.

The technical assistance, carried out by Seureca in a consortium with the Société des Eaux de Marseille, AMBIGEST CCA, IECCA, and CONIDEC, aims to improve the quality of the drinking water service and management efficiency in its most important province, San Cristobal, with over 600,000 inhabitants.

The consortium focuses on the following points:

- Improve the sustainability and efficiency in the customer collection process;
- Implement a work program with a rapid and visible impact on service quality;
- Provide new technical tools - mapping via GIS, a metering network, hydraulic model, etc. - for improving the capacity to monitor and upgrade the service;
- Implement a “change management” strategy, based on the development of skills and a training program for INAPA's employees, the driving force behind the institution's sustainable change.

### ⊕ Key Points

- Strengthen the economic and commercial performance of the operator by revising and optimizing all of its processes
- Upgrading the know-how locally through training and skills transfer







## **OPTIMIZING THE UTILITY SERVICES AT NORMAN MANLEY INTERNATIONAL AIRPORT, KINGSTON / JAMAICA**

The Norman Manley International Airport is the chief airport for business travel and air cargo traffic to and from Jamaica. The airport plays a vital role in the country's economic development and is the main gateway to the capital, Kingston.

For the Airport Authority and the distributor, Seureca is carrying out an inventory of the existing situation and making proposals for the management efficiency in four key services: drinking water, indoor air quality, energy, and waste management.

**In total, four studies are being conducted in parallel, organized into three phases:**

- Phase 1: Data collection and analysis of the existing projects;
- Phase 2: Diagnosis of the current state of services;
- Phase 3: Outlining the future needs and the means to ensure optimum service performances at the airport and definition of their strategic management plans.

The overall goal is to provide sufficient information pertaining to the present situation to undertake a management and monitoring program to ensure the efficiency and sustainability of the operations and infrastructure over the next 20 years.

### **⊕ Key Points**

- Optimize water, energy, and resource management
- Monitor water quality
- Improve waste collection, transfer, recycling and / or disposal
- Ensure the sustainability of the infrastructure and its management methods

## REHABILITATION OF THE CHOLUTECA RIVER AT TEGUCIGALPA / HONDURAS

In 1998, Hurricane Mitch destroyed the main wastewater system of the Central Municipal District of Honduras, in the sister cities of Tegucigalpa and Comayagua. SANAA, Honduras' national water company, and the municipality of Tegucigalpa are working to rebuild and improve the district's sanitation system.

A Seureca-Tecnisa consortium is carrying out detailed studies for rebuilding the wastewater system as well as the principle wastewater treatment plant for domestic, industrial, and commercial wastewater in the Honduran capital.

### ⊕ Key Points

- Improve access to vital wastewater sanitation services - collection and treatment - and ameliorate the water quality of the Choluteca River
- Recovery and valorization of the natural environment along the river
- Improve the quality of life for the capital's inhabitants and those living near the river

### The expertise used to carry out these studies includes:

- Projection of the future sanitation needs - an update of the master plan;
- Assessment of different sites for locating a wastewater treatment plant;
- Environmental and social impact studies;
- Defining requirements for the dimensioning and design;
- Tecnico-economic analysis of alternative solutions;
- Geotechnical and topographical studies;
- Detailed technical and economic studies for the proposed infrastructure;
- Operation and maintenance manuals of the infrastructure.

In the first phase, the wastewater system under study will treat the wastewater of more than 1.5 million inhabitants as well as the industrial and commercial wastewater for a major portion of the twin cities.





## A SPOTLIGHT ON PROJECT MANAGEMENT

In 2019 and 2020, Seureca's activities in design and project management accounted for up to 25% and 36% respectively in turnover. This reflects the company's ability to work on major infrastructure projects in France and abroad, in external markets for local authorities and private sector companies, as well as in assisting the Veolia Group on its investment projects.

As of 2021, these activities are expected to account for more than 40% of turnover. This growth is largely due to the development of project management assistance and works management services with Veolia primarily in engineering, procurement, and construction (EPC) contracts. For instance, Seureca is a major participant in the Ivory Coast's EPC contracts involving its plan to reinforce the city of Abidjan's supply of drinking water from the La Mé river, its project for supplying water to the city of Bouaké, plus a strategy to upgrade the Akouédo landfill site. These are projects for which Seureca handles the complete design and project management.

Arrangements such as these are only possible through a solid local presence. They require on-going client support that takes into consideration the local particularities in all the types of services: project management -

assistance in works management, detailed studies, preparation of tender documents, procurement support, work supervision through to final acceptance, and assistance during operations.

**Design and development are present and amplifying in most regions where Seureca is active.** Through our numerous locations and partnerships, this is applicable whether in Africa - Kenya, Zambia, Ethiopia, Botswana, Cameroon, Ivory Coast, Niger, Congo, Burkina Faso, etc., or the Middle East - Oman and Bahrain, to name a few. Likewise for Europe - in Ukraine, Belgium via our subsidiary, EPAS, and Asia - in India via our subsidiary, DESL, or Latin America - such as Honduras, Dominica, as well as in France, for public authorities and to underpin Veolia contracts.

Seureca has developed efficient tools and methods to carry out these services, allowing it to establish a Quality and Organizational Plan on all its projects. This follows well-tested procedures to draw up the necessary information to ensure an effective control of the design and construction phases.

## OUR EMBLEMATIC SUCCESSES

### BAHRAIN

Studies, design, preparation of tender documents, work supervision for the water and electricity utility authority's new control center.

### REPUBLIC OF THE CONGO

Technical assistance and assistance to the works management for the SNDE, the national water company.

### IVORY COAST

- Refurbishment of the Akouédo landfill - Abidjan. (See page 52)
- Project management for the project to reinforce the water supply to Abidjan from the Mé River.
- Project management in the plan to improve the drinking water supply from the Bandama River to the city of Bouaké.

### CAMEROON

Project management in the strategy for supplying drinking water from the Sanaga River to the city of Yaoundé and its outskirts.

### ETHIOPIA

Studies and work supervision for the Chefe wastewater treatment plant at Addis Abeba. (See page 54)

### FRANCE

Project management for the development works of the Golf des Bordes - water, wastewater treatment, and energy services.

### HONDURAS

Detailed design of the wastewater interceptor and wastewater treatment plant in the central district of Tegucigalpa and Comayagüela. (See page 50)

### KENYA

- Long-term technical assistance to the Coast Water Development Agency to implement the Mwaché project, a plan to improve water supply and sanitation services for the population of Mombasa County, particularly in the Likoni area. (See page 55)
- Consulting services for preparing FIDIC Yellow Book-type feasibility studies - design, execution, and supervision for the detailed design and construction of the wastewater systems in the cities of Kapenguria, Makutano, and Chepareria.

### MALAWI

Water supply refurbishment assessment for the towns of Liwonde and Balaka and an energy recovery project from the Zomba dam.

### NIGER

Project management for setting up sanitation systems and treatment of waste related to infectious risk care activities and for improving the drinking water service in four public hospitals in the city of Niamey.

### SULTANATE OF OMAN

Front-end engineering design (FEED) for the wastewater treatment plant of the Muscat refinery. (See page 26)

## STUDIES AND WORK SUPERVISION OF THE WASTEWATER PLANT FOR THE CHEFE WATERSHED AT ADDIS ABABA / ETHIOPIA

To improve hygiene, reduce pollution in the receiving environment, and ensure that the 200,000 inhabitants of the Ethiopian capital have access to decent sanitation, the Addis Ababa Water and Sewage Authority (AAWSA) sought to upgrade the sanitation infrastructure at the Chefe watershed, thus complying with targets set by the World Health Organization (WHO).

To do so, AAWSA entrusted Seureca with the detailed design studies, preparation of tender documents, procurement support, and construction supervision for the sanitation infrastructure. The scope of work includes an expansion of 22 km of sewerage network, and the renovation and further extension of the wastewater treatment plant to an increased capacity of 25,000 m<sup>3</sup>/day.

### ⊕ Key Points

- Setting up compliance with the WHO's objectives for a wastewater plant
- Recover biogas and by-products from sludge
- Reduce pollution in the receiving environment by preventing the discharge of untreated water
- Improve the living conditions and health of 200,000 inhabitants through better hygiene conditions and increased awareness in the population
- Reinforcing the operator's capacities for the installation's operation via a transfer of skills and assistance, thus ensuring the investment's sustainability

**Seureca has revised the dimensioning of the existing system and has outlined an extension of the wastewater treatment plant, optimizing treatment processes, and proposed the following course of action:**

- Screens, degreasers and grit chambers, flow meter;
- UASB reactor with biogas production;
- Biological filters;
- Clarifiers;
- Drying bed for sludge to be used in agriculture.

An emphasis was put on establishing suitable specifications according to best practices for civil engineering, electrical and mechanical equipment, instrumentation, and monitoring the supplies and installation.

Work supervision was carried out over four years by Seureca, including during the Covid-19 period. Thus AAWSA's interests were ensured from the execution studies through to the acceptance operations and warranty period, including training and support for operation and maintenance.



## WORKS MANAGEMENT ASSISTANCE FOR INCREASING THE DRINKING WATER SUPPLY IN MOMBASA / KENYA

With over one million inhabitants, Mombasa is the second largest city in Kenya. The city is currently suffering from a serious shortage of drinking water, with demand vastly outstripping the supply, while climate variability, droughts, and floods are having a serious impact on the population.

To meet this need, Seureca is accompanying the Coast Water Works Development Agency (CWWDA) for a 5-year period in implementing the «Mwache» program. Jointly financed by the AFD and the World Bank, this program aims to provide the city and its outskirts with an additional 150,000 m<sup>3</sup>/d of drinking water. The program involves improvement of the city's drinking water and sanitation systems, construction of a new dam, a drinking water treatment plant and associated infrastructures, installation of transfer pipes, and technical and operational support for the operator, Mowasco.

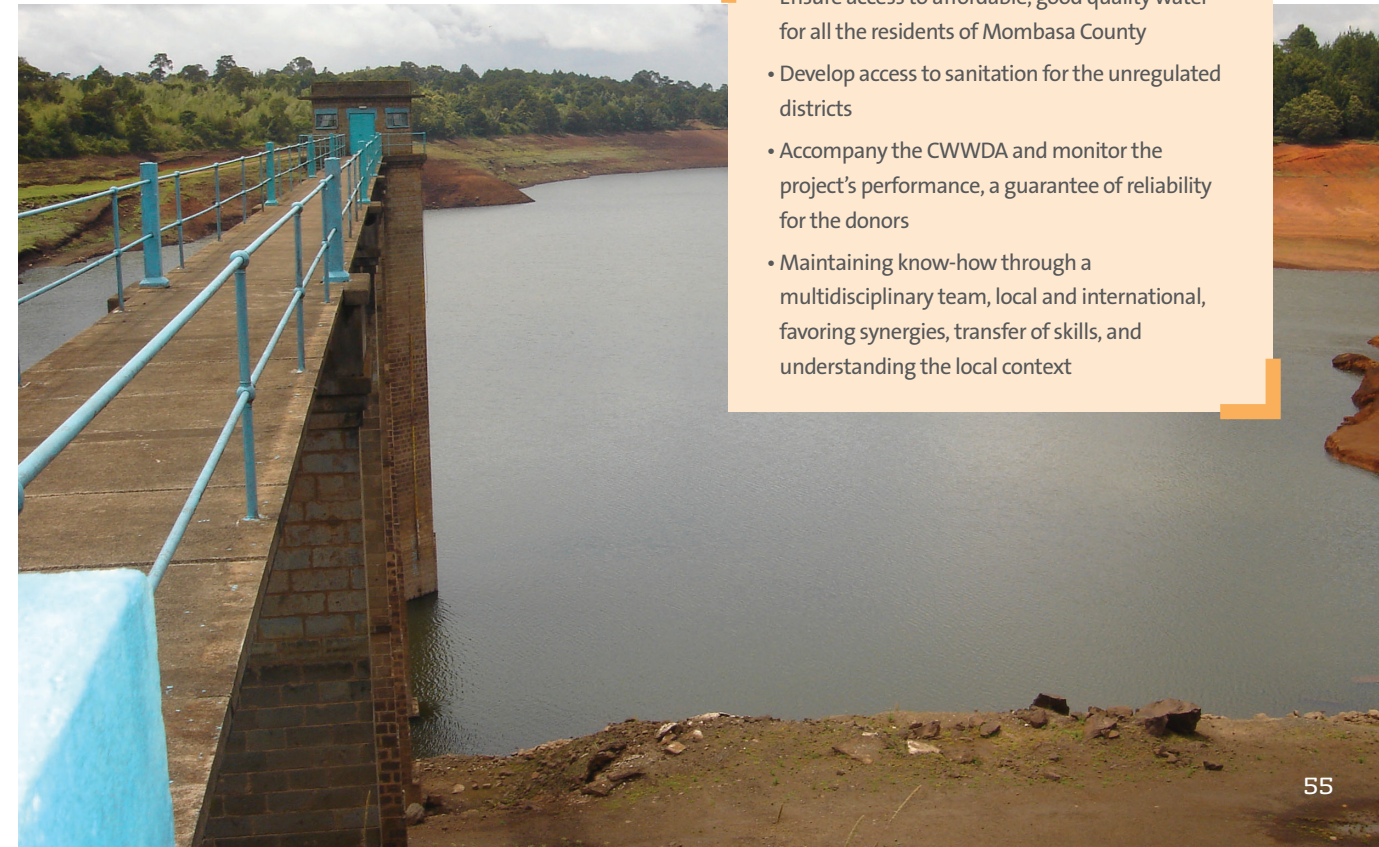
**Seureca is involved in the implementation and the technical and financial supervision of 11 work packages covering 15 studies and work contracts. The teams are implementing management and monitoring tools for the major infrastructure projects:**

- Project management manual, communication plan, establishing the project unit;
- Planning, monitoring, and updating the entire program;
- Procurement plan, budget control, disbursements and payments, and technical studies review;
- Skills transfer to ensure the sustainability of the operation.

A project management unit jointly composed of Seureca and CWWDA experts enables the program to be designed and developed with detailed quarterly follow-up and updating for the Kenyan Government and its funding partners.

### ⊕ Key Points

- Ensure access to affordable, good quality water for all the residents of Mombasa County
- Develop access to sanitation for the unregulated districts
- Accompany the CWWDA and monitor the project's performance, a guarantee of reliability for the donors
- Maintaining know-how through a multidisciplinary team, local and international, favoring synergies, transfer of skills, and understanding the local context



## PROJECT MANAGEMENT FOR THE REHABILITATION OF THE AKOUÉDO LANDFILL IN ABIDJAN / IVORY COAST

Under the initiative of the Ivorian Government, the public landfill of Akouédo was officially closed in December 2018 in order to renovate the site. Since the end of the 1960s, it had been the principal outlet for household waste in Abidjan. Approximately 18 million tons of waste was dumped directly onto the ground.

The closure of the landfill, a source of considerable pollution, was a result of both environmental consideration and a determined policy to improve the living conditions of the neighboring population, as well as those living downstream from this highly polluted site.

The rehabilitation project was awarded to PFO Africa, which is assisted by Seureca from the design phase through to completion, under a project management contract to rehabilitate some 90 hectares of land occupied by the landfill.

**The rehabilitation work began in 2021, aiming to enclose the entire mass of waste including:**

- Remodeling the landfill surface and slopes;
- Development of a watertight covering;
- Collection of water, leachate, and biogas;
- Treatment of leachate;
- Energy recovery from the biogas.

This project is in keeping with a social support strategy concerning the population living near the site.

### ⊕ Key Points

- Reduce the pollution transfers from the landfill to the surrounding environment
- Safeguarding and stabilizing the mass of waste
- Recovery and recycling of biogas
- Improve the sanitary conditions of neighboring populations



A top-down view of a diverse group of people's hands stacked in a circle, symbolizing teamwork and collective performance. The hands are of various skin tones and are wearing different colored sleeves and watches. The background is a light, textured surface.

**AMPLIFYING OUR  
COLLECTIVE PERFORMANCE**

## THE KEY TO OUR SUCCESS: OUR TEAMS



**221**  
employees

**56%** of whom  
work internationally

### GENDER DIVERSITY

A performance lever

**36%**  
of our employees  
are women

**55%**  
of our employees  
are executives

### HEALTH AND SAFETY

Seureca ensures constant vigilance and maintains a high level of security by informing, training, and implicating all its employees.

**0**  
Severity rate<sup>1</sup>  
of work-related accidents

**3**  
Frequency rate<sup>2</sup>  
of work-related accidents

Each year, more than  
**40%** of our staff receives  
safety training



### VOCATIONAL TRAINING

A wealth of skills and their development  
is an asset to our company.

**71%**  
of our employees  
received a training course

**2 days**  
on average of training  
per employee

Seureca, Key Data for 2020



## MAINTAINING THE WELL-BEING OF OUR TEAMS

Keeping in touch with our teams in France and abroad, especially during periods of confinement, has more than ever become a necessity. With digital support, virtual «coffee breaks» have been organized to facilitate exchanges between staff, with a flexibility over the time differences.

Remote monitors were provided in order to allow staff to work remotely more comfortably, and workstation ergonomics sessions were organized in September of 2020, both on-site and at distance.

A weekly publication, #ensemble, based on fun tips and best practices, was published in 2020.

And of course... to begin the week full of vitamins, fresh fruit baskets are available at Headquarters.



# SKILLS TRANSFER: AN EXPORTABLE FIELD OF EXPERTISE

## THE CREATION OF THREE TRAINING CENTERS FOR ENERGY AUDITORS IN GHANA

The Millennium Development Authority (MiDA), the Energy Commission, and the Government of Ghana sought to establish facilities to train qualified and certified energy professionals to assist public institutions and private sector clients in implementing cost-effective energy conservation measures.

To this end, MiDA mandated DESL, a subsidiary of Seureca, to assist them in developing this project through:

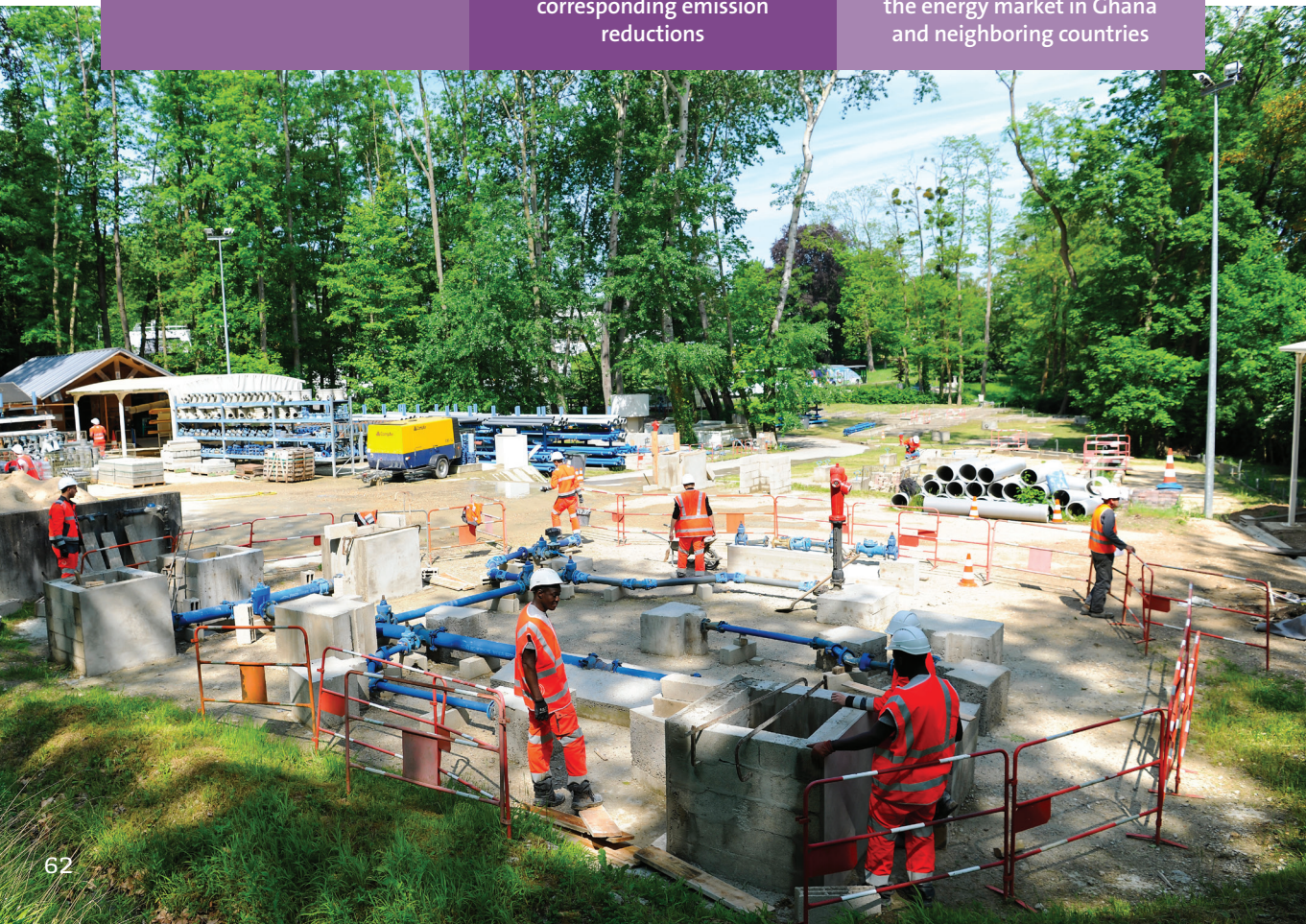
- Consulting services;
- Development of a national roadmap and business models for the feasibility of each center;
- Selection of the host institutions;
- Developing the curriculum and content of the training courses.

DESL also provided the necessary certification training to an initial group of future trainers.

26 sustainable-energy professionals were trained

The pilot projects achieved energy savings and corresponding emission reductions

A total of 3 centers were created to meet the needs of the energy market in Ghana and neighboring countries



## CUSTOMIZED TRAINING FOR OUR INDUSTRIAL CLIENTS

Epas International, our subsidiary specialized in wastewater and process water treatment, offers year-round comprehensive training courses on water treatment to its industrial clients.

Epas also offers customized training courses, adapted to their clients' specific needs: training for a specific audience or training for a particular process or technique.

These courses are divided into some twenty modules for the operation and monitoring of water treatment plants that, in order to obtain the best results, can be used in combination.

Approximately 20 training programs are followed each year

Our clients are guaranteed that the methods are efficient and sustainable

Exporting and maintaining the know-how of our clients

## TAILOR-MADE SOLUTIONS TO PERPETUATE KNOW-HOW AND BEST PRACTICES FOR INFRASTRUCTURE DESIGN AND OPERATIONAL MANAGEMENT

In parallel with a national strategic project for the development and calibration of hydraulic models, the Public Authority for Water (PAW) engaged Seureca to implement custom-made training courses in the essentials on water distribution design and modeling.

The courses will be provided on-line to some 40 PAW employees to improve their understanding and skills in the fundamentals and best practices of water system design and modelization.

Vocational training of 40 employees

Circulation of best practices to optimize water distribution infrastructures

Perpetuate the know-how of our clients



# SOLIDARITY: MORE THAN AN ASSET, A COMMITMENT

Solidarity is a core value of our company, and is increasingly important in the sanitary and economic crisis period. This commitment is shared by all Seureca team members.

## THE SPIRIT OF CHRISTMAS

Prior to the end of the year, our collaborators participate in a major effort to give a second life to unused toys. On behalf of the Rejoué Association, they donate toys for the Christmas of needy children in the Ile de France area.



## ASSISTANCE TO STUDENTS

The health crisis and its successive confinements have severely affected students psychologically, socially, and economically. In light of this situation, Seureca joined forces with Secours Populaire, a non-profit organization, in the fight against student poverty. Staff members understandably respond, taking part in a collection of the basic necessities for students in Greater Paris.

In the same spirit of solidarity, Seureca donated fruit baskets to students in precarious situations in the 13th precinct of Paris.



## INITIATIVES TO HELP THE IMPAIRED

Over the past two years, Seureca has chosen to underpin the Special Needs sector by paying its apprenticeship tax to the LADAPT Apprentice Training Centers (training for persons with disabilities) in France.

## ... AND, LIKEWISE IN OUR PROJECTS

In connection with its project at the Kingston airport in Jamaica, Seureca donated a portion of the equipment used for field measurements.

With the assistance of the Mustard Seed Association, this equipment consisting of tents, tables, and chairs, was transported up the mountain overlooking the capital to the Craighton Primary School in November 2020.

By this donation, the children, most of whom come from disadvantaged backgrounds, were able to return to school. After several months of absence and disrupted schooling, it then became possible to attend outdoor classes as a health measure against Covid-19.



# MANY THANKS TO THE SEURECA TEAM!

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# Resourcing the world

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