

2017 Activity Report



Contents

P.

04-05

Interview

P.

06-07

2017
in figures

P.

08-09

Our international
expertise

P.

10-11

Innovation at
the heart of
our activities

P.

12-23

Presentation
of 10 iconic
contracts

P.

24-25

Air quality,
a major public
health issue



INTERVIEW WITH

Patrice Fonlladosa
Chairman



Philippe Bloch,
Managing Director

What were the highlights of 2017?

Philippe Bloch : Seureca continued its strong growth momentum begun a few years ago, with sales up 14% on 2016. Our employees showed their determination once again and deserve our heartfelt thanks because our good performance is due to their unwavering commitment.

The year was marked by numerous technical and operational support projects, which now represent over a third of our turnover. We continued to develop our energy and waste businesses, we resumed our development in France and we worked on many projects with Veolia's business units. Internationally, while the Africa and the Middle East remain historically very strong business areas for the company, we pursued our growth strategy in other areas with strong potential, such as Latin America and Asia.

How is Seureca one of Veolia's key businesses?

Patrice Fonlladosa : The Consulting and Engineering Division fosters ties between the Group's businesses, countries of operation, and skills: I cannot begin to list all the projects carried out in cooperation with Veolia's teams since the beginning, which range from consultancy to effective participation in risk-sharing. Seureca is and has often been a pioneer for Veolia: we are now present in some countries, in which Veolia did not yet have operations, such as Saudi Arabia and some African countries, thanks to the projects carried out by our engineers.

'Seureca fosters ties between Veolia's businesses, countries of operation, and skills.'

Twenty-six nationalities in Seureca in 2017. What brings together employees working in different cultural contexts?

Philippe Bloch : Multi-culturalism is one of our greatest strengths: 26 nationalities and 26 ways of perceiving, working, and thinking, which, brought together in the same teams, create wealth and openness. Our Consulting and Engineering Division is intended to develop abroad, and the diversity of our profiles is a real added value for this. Team spirit, solidarity, and a sense of duty are values that are dear to the men and women working for our company and which make it so special.

What developments are planned for the future?

Patrice Fonlladosa : Seureca will be stepping up its central role in deploying Veolia's best practices, which contribute to improving the operations of its business units. In addition to the outlook for the businesses and countries mentioned by Philippe earlier, our company is also fully committed to innovation and digitalisation. This report discusses how our engineers develop solutions on topical issues, such as air quality management, detection of endocrine disruptors, use of drones, and the digitisation of data collection and processing.

I hope you enjoy your reading!



2017 in figures

34.7 M€

Turnover

TURNOVER BY ACTIVITY (M€)



Water

27.4



Waste

1.7



Energy

4.3



Air

1.3

TURNOVER BY SECTOR



10%
INDUSTRIAL
SECTOR



76%
MUNICIPAL
SECTOR



14%
TERTIARY
SECTOR

WORKFORCE

240

EMPLOYEES

26

NATIONALITIES



55%

IN FRANCE

45%

INTERNATIONAL

HEALTH AND SAFETY



33%

OF THE
WORKFORCE
FOLLOWED FIRST
AID TRAINING

<2.4%

WORKPLACE
ACCIDENT
FREQUENCY RAT

Beyond legal obligations, the prevention of occupational risks and health & safety is one of the Veolia Group's core values. Seureca monitors these issues closely and maintains a high level of safety through training and involving all employees.

TRAINING



73%

OF EMPLOYEES
FOLLOWED
A TRAINING
COURSE

15HRS

OF TRAINING
PER EMPLOYEE
TRAINED

At Seureca, skills development is essential to anticipate business changes and facilitate mobility and careers. Nearly three quarters of the workforce received training in 2017.

DIVERSITY



34%

OF THE
WORKFORCE
IS FEMALE

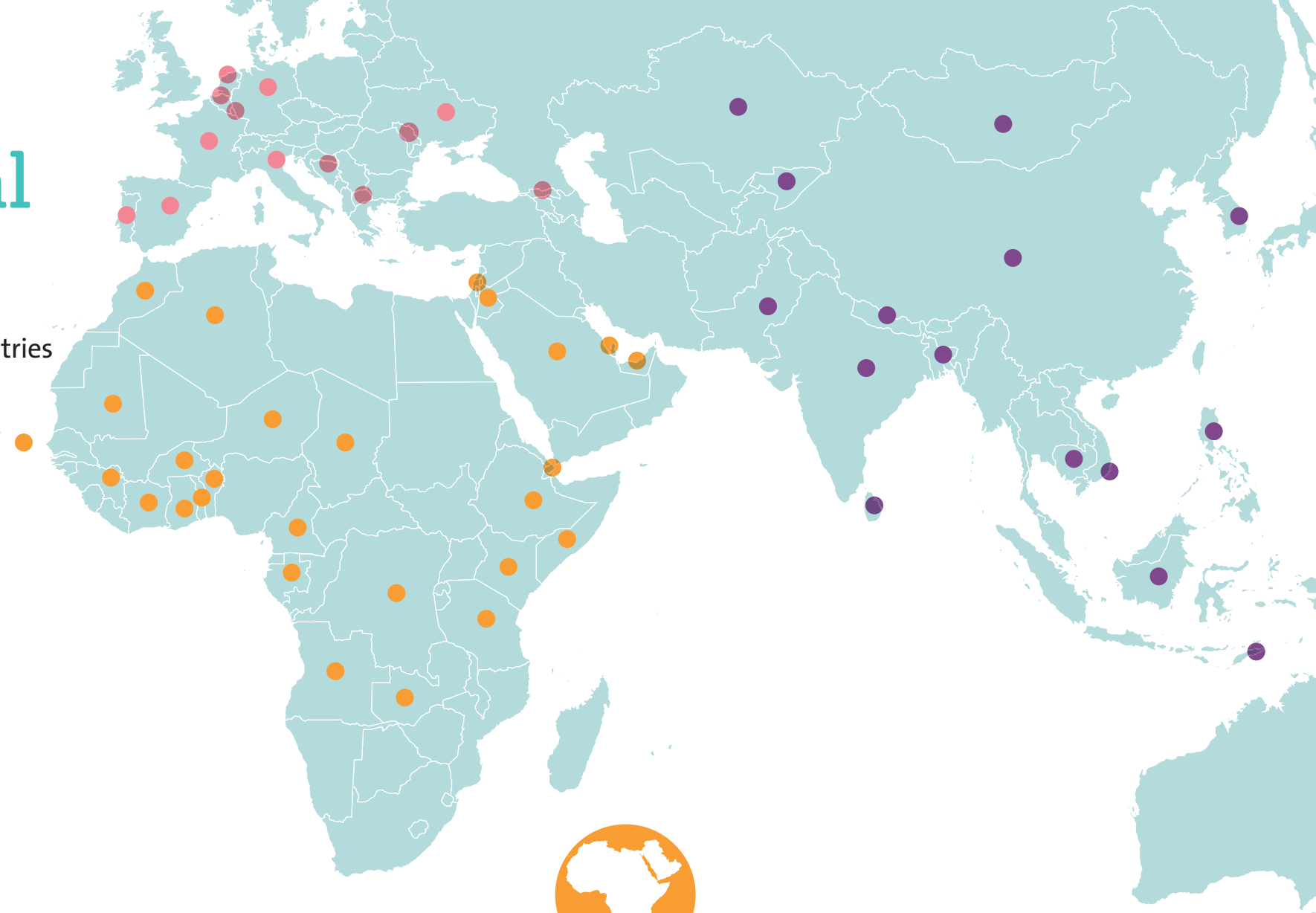
58%

OF WOMEN ARE
EXECUTIVES

Developing diversity is more than just about balance: it drives performance and innovation.

Our international expertise

In 2017, our engineers developed environmental solutions in 62 countries around the world.



NORTH AMERICA
MEXICO



LATIN AMERICA
ARGENTINA PERU
CHILE URUGUAY



EUROPE

BELGIUM	LUXEMBOURG
CROATIA	MOLDOVA
FRANCE	PORTUGAL
FRANCE (GUADELOUPE, MARTINIQUE)	SERBIA
GEORGIA	SPAIN
GERMANY	THE NETHERLANDS
ITALY	UKRAINE



AFRICA MIDDLE-EAST

ALGERIA	GABON	OMAN
ANGOLA	GHANA	PALESTINE
BAHREIN	GUINEA	REPUBLIC OF THE CONGO
BENIN	IVORY COAST	SAUDI ARABIA
BURKINA FASO	JORDAN	TANZANIA
CAMEROON	KENYA	TOGO
CAPE VERDE	LESOTHO	UNITED ARAB EMIRATES
CHAD	MAURITANIA	ZAMBIA
DJIBOUTI	MOROCCO	
ETHIOPIA	NIGER	



ASIA

BANGLADESH	MONGOLIA
CAMBODIA	NEPAL
CHINA	PAKISTAN
EAST TIMOR	SOUTH KOREA
INDIA	SRI LANKA
INDONESIA	THE PHILIPPINES
KAZAKHSTAN	VIETNAM
KYRGYZSTAN	

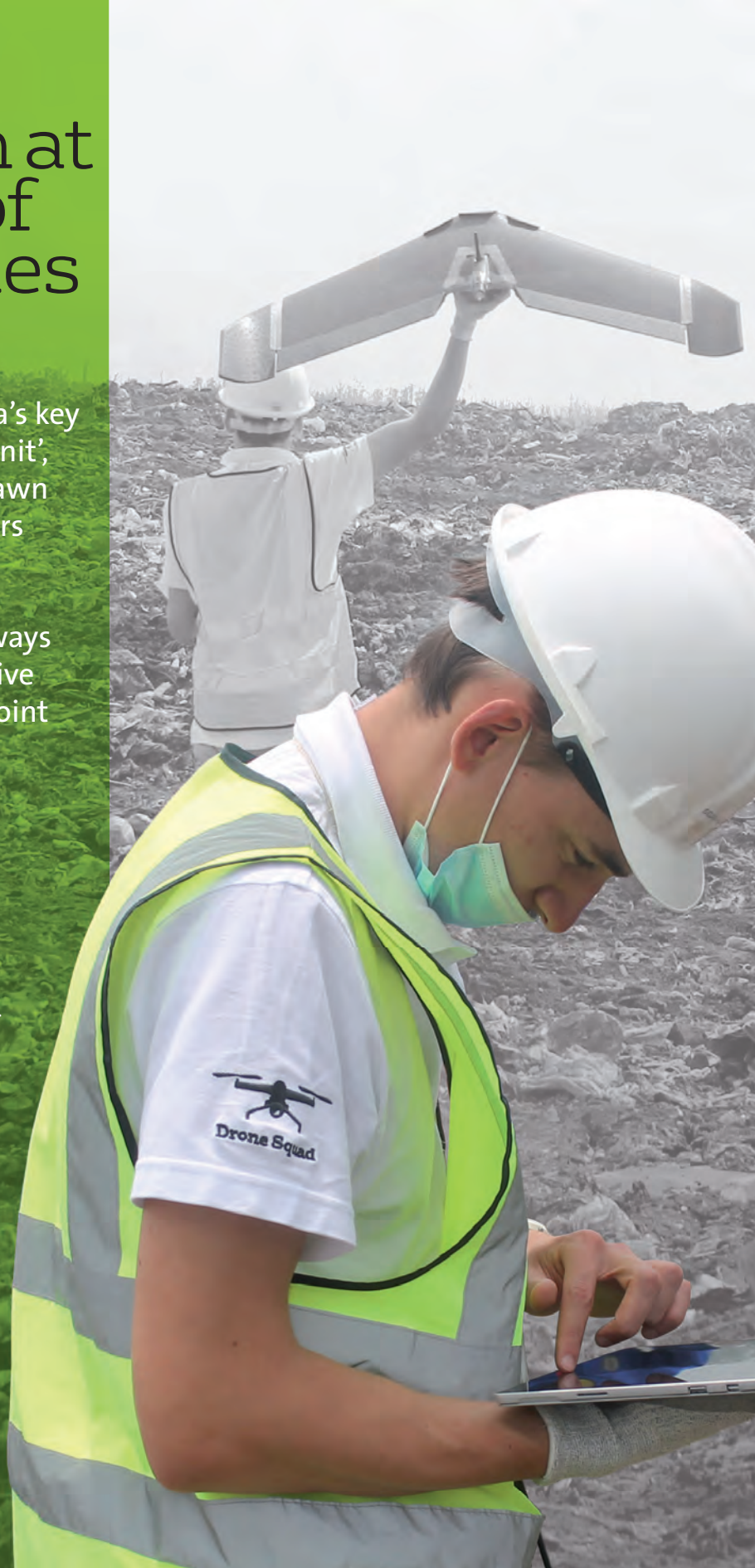
Innovation at the heart of our activities

Innovation is one of Seureca's key concerns. Our 'innovation unit', composed of employees drawn from all departments, fosters sharing of information and feedback to integrate and implement new tools and ways of working, with the objective of being ever more to the point in our recommendations.



Drones provide a new dimension

Drones are one of the high-potential domains identified by the unit. For example, as part of a landfill site analysis, a very precise topographical survey of the land can be carried out to develop a 3D model of the site. Power lines and water networks could also soon be surveyed.



Frogbox®, the device to measure industrial wastewater toxicity

Global and continuous water quality measurement tools are essential to manage costs and ecological risks. Epas, our subsidiary specializing in industrial wastewater treatment, proposes a device that measures endocrine disruptor levels in complex aqueous matrices on-site. The effect of the disruptor is determined through the use of aquatic larvae which carry genetic markers that turn them fluorescent when exposed to micro-pollutants and endocrine disruptors: the more contaminated the water is, the more light the larvae emit.



Tablets to make data collection more reliable

Using touch tablets provides a number of possibilities. During mapping campaigns, asset geo-location provides us with precise information on the assets of our customers. Tablets also have the advantage of securing the income of the companies we support: auditing water and electricity metering systems helps to identify potential fraud and define the action required to ensure compliance. We also conduct household surveys which, following advanced statistical processing, allows us to correctly size the required infrastructure.





PRESENTATION OF 10 ICONIC CONTRACTS



P. 14

Jordan: Transfer of water between the Red Sea and the Dead Sea

P. 15

Kazakhstan: District heating project

P. 16

Zambia: Municipal waste management technical assistance



P. 17

France: WWTP risks analysis

P. 18

India: Support for a solid waste facility

P. 19

Algeria: WWTP operations and maintenance specifications

P. 20

Niger: Financial and tariff analysis for the national electricity company



P. 21

Congo: Technical assistance with the national water company

P. 22

France: Owner assistance, consulting, and project management

P. 23

The Philippines: Assessment of population exposure to air pollutants



Jordan

Red Sea - Dead Sea water transfer project

The level of the Dead Sea has been steadily decreasing for fifty years. To mitigate this issue, an ambitious project to transfer water from the Red Sea to the Dead Sea is being developed. This project, which involves several countries including Jordan, Israel, and Palestine, consists of constructing 210 km of pipeline, a pumping station with a capacity of 700 million m³/year, and a desalination plant with a capacity of 65 million m³/year. Seureca provides technical assistance to the backers to ensure that the project meets their constraints and objectives.



Jordan

700 million m³/yr
Seawater intake

210 km
of pipelines

Multi-financial
backers

OUR EXPERTISE

Coordination between backers and stakeholders

- Circulation of information between funders and stakeholders;
- Advice and recommendations;
- Support to the Advisory Committee.

Communication plan

- Public information plan;
- Internal communication plan between funders, stakeholders, and consultants.

Environmental assessment

- Review of environmental studies on the risks and impacts of seawater intake and overland transport of brine;
- Calculation of the project's carbon footprint.

Technical assessment of the selected project company

Monitoring

- Coordination and support for the Dead Sea and Red Sea monitoring programme.



Semey

District heating project



Kazakhstan

OUR EXPERTISE

- Maintenance of accounting systems, cost and management controls, and books of account according to international accounting standards;
- Annual and financial environmental and company reports in accordance with financing agreements;
- Maintenance of financial commitments in the loan agreement;
- Development and introduction of a public service contract;
- Implementation of an environmental and social impact plan;
- Implementation of a stakeholder engagement program to increase public participation in service delivery (service quality, rehabilitation, social tariffs);
- Development of a methodology and standards for the annual publication of performance objectives on the company's website.

The European Bank for Reconstruction and Development (EBRD) has implemented a district heating renovation project for Semey, one of the largest cities in northern Kazakhstan. On an average, the country's heat supply networks are depreciated by 80% and are subject to stress: average technical losses allowable for the heat distribution tariff are around 26%.

350 000
people

3 years
of support



Lusaka

Technical assistance for municipal waste and drainage management

Lusaka is a rapidly developing city with a population of nearly two million, representing about 20% of the country's total population. Unfortunately, the city suffers from flooding during the rainy season, partly due to lack of drainage infrastructure but also due to the illegal dumping of solid waste in the drains. Seureca was asked to modernize the drainage and waste management system.



Zambia

2 years
Project duration

Financed by
Millenium Challenge
Corporation

2 million
people concerned

6 weeks
Study duration

2 commissioned
experts



Cap-Sicié

WWTP risks analysis



France

OUR EXPERTISE

Preliminary phase

- Creation of a taskforce;
- Technical documentation collection and updating;
- Plant breakdown into sub-systems.

Study phase

- Study conducted in the form of several on-site sessions in work groups;
- Identification and analysis of failure scenarios by hypothetically generating deviations to process operating parameters;
- Identification of the causes of these deviations, potential consequences, and the existing means of detecting them;
- Recommendations for each risk scenario for which the initial risk is not considered permissible according to the Veolia standard.

Deliverables

- Study report including Hazop deviation tables and summary chart;
- Action plan for implementation.

Veolia asked Seureca to carry out a risks analysis on the wastewater treatment plant in Cap-Sicié using the Hazop method (hazard and operability study). Amphitria is an underground wastewater treatment plant that treats the effluents of Toulon and nearby towns through advanced physicochemical treatment and biological filtration. The Hazop study is intended to optimize investment and design, streamline the maintenance policy and guarantee plant safety, notably its ability to maintain a public service standard.



JBM Environment Management

Project management for a solid waste facility

JBM Environment Management is in the process of setting up a new integrated solid waste management facility at Sonapat, in Haryana region. The current waste collection in the region is approximately 500 tons per day and is expected to reach 750 tons per day by 2039. The technology used in this project will be combustion for steam generation and steam turbo generator for power generation: the objective is to reduce the volume of waste by 80% and reduce CO₂ in the process of generating clean fuel from waste.



● India

Waste-to-energy

220 000 tons/year
of municipal solid waste

OUR EXPERTISE

Feasibility and project costing

- Assessment of the best suited technology for the type of waste;
- Evaluation of power generation potential;
- Costing and financial analysis;
- Preparation of detailed project report as per standard requirement;
- Disaster management;
- Environment management.

Project design

- Compliance with the Solid Waste Management (SWM) ruling, and the latest National Green Tribunal (NGT) and Central Pollution Control Board (CPCB) orders on pollution;
- Combustion technology for steam generation;
- Steam turbo generator for power generation;
- Utilizing sewage water for the plant water needs.



Tango (Heineken Group)

Specifications for operations and maintenance of a new wastewater treatment plant



● Algeria

OUR EXPERTISE

- Analysis of data from the initial design phase and comparison with the actual situation during the construction phase.
- Identification of KPIs and implementation methods.
- Preparation of the technical documents required to develop the specifications.
- Support during the WWTP's start-up phase complying with hygiene, health and safety (HSE) rules.
- Support for the transition between the construction phase and actual start of operations and maintenance.
- Training of operators in charge of operational and managerial follow-up.
- Treatment process monitoring and optimisation recommendations.
- Support for phase 2 of the project related to waste treatment and recycling.

Tango is a subsidiary of the Heineken Group based in Rouiba, near Algiers, that specializes in producing alcoholic beverages. In 2017, Seureca assisted Tango to prepare specifications for operations and maintenance of a new wastewater treatment plant and to prepare for the transition between the end of the construction phase and the hand-over to operations.

New
WWTP

Operator
training



Niger

Financial and tariff analysis of the national electricity company

The electricity sector in Niger is characterized by both a low electrification rate and a large supply deficit, due to insufficient domestic production. Today more than 70% of the country's power supply is imported from Nigeria at a very low cost. The commissioning of new production facilities, such as the Gorou Banda thermal power station, will cause a significant increase in the operating costs of the national electricity company, Nigelec, and will significantly impact its financial balance.



OUR EXPERTISE

Financial analysis

- Identification of current and future investments to meet demand.
- Analysis of the level of sustainable debt and various financing scenarios to ensure that Nigelec can consolidate its financial sustainability, remain solvent with its creditors, and meet its contractual commitments.
- Proposals for necessary and feasible financial recovery measures and scenarios: tariff adjustments, optimization of government subsidies, and proposals for periodic tariff adjustment mechanisms.



21 million
people concerned

Financial projections
over 20 years



Republic of the Congo

Technical assistance to Société Nationale de Distribution d'Eau



Republic of the Congo

OUR EXPERTISE

- Consolidation of knowledge of existing assets and organisation of water supply services in Brazzaville, Pointe-Noire, and secondary cities.
- Supervision of the PEPS project (a 690 km extension of drinking water networks, replacement of 211 km of pipelines, and 62 000 connections).
- Implementation of investments planned under the Operational Support Investment Fund (OSIF).
- Improvement of performance and capacity over all business functions: operational management, asset management, business management, finance, and human resources.

Société Nationale de Distribution d'Eau (SNDE) supplies water to the Congo's main cities. Its service area covers 22 urban centers, including Brazzaville and Pointe-Noire, for a total population of approximately one million. The main objective of the technical assistance contract is to put SNDE on the path to achieving financial and technical autonomy to enable a sustainable service.

2 years
Project duration

1 million
people served



Chauny-Tergnier-La Fère SIVOM

Owner assistance, consulting, and project management

The Chauny-Tergnier-La Fère local authority management board (SIVOM), which has been a customer of Seureca for over twenty years, entrusted four sewerage assignments to us: two framework contracts for support and advice on wastewater and storm water management, comprehensive project management for the treatment of rainwater run-off collected in storm drains, and the preparation of regulatory documentation required for river maintenance operations.



France

12

towns served

42 000

people

OUR EXPERTISE

Owner assistance for wastewater and rainwater network sanitation

Preliminary studies

- Review of televised inspection reports;
- Diagnostic studies;
- Costing of necessary works.

Assistance to the contracting authority

- Tender documentation;
- Tender evaluation;
- Analysis reports;

• Approval of project studies;

• Contract preparation.

Project management for effluent processing

- Comprehensive project studies;
- Additional consulting and management of geotechnical studies, topographical surveys, and workplace health and safety coordination;

• Treatment plants for the main storm water outlets.

Advice and regulatory support

- Document preparation: authorisations under the French Water Act, declaration of general interest, public inquiry.



Manila

Assessment of population exposure to air pollutants



The Philippines

OUR EXPERTISE

Investigations

- Identification of the main outdoor and indoor sources of air pollution;
- Identification of the major pollutants at the origin of diagnosed diseases;
- Investigations with the population, NGOs and local institutions.

Air analysis

- Definition of a sampling strategy;
- Outdoor and indoor air quality measurement campaign.

Action plan

- Proposals of initial actions to reduce population exposure;
- Definition of long-term improvement actions.

Since 2012, Médecins du Monde has been involved in environmental and sanitation projects in the slums of Manila with the Veolia Foundation's financial and technical support. A medical mission in a district in 2017 showed that respiratory infections are among the main diseases diagnosed in the population. Investigations identified the main sources of air pollution and priority actions to reduce the population's exposure.

40

homes inspected

90

measurements taken

Médecins du Monde partnership

Air quality, a major public health issue

Air pollution does not only make you cough, it can kill you.

According to the latest World Health Organization (WHO) report, seven million people die each year worldwide because the air they breathe contains too much particulate matter. It is a complex issue with health and economic impacts. Ofis, our subsidiary specialised in sanitary engineering, has over twenty years of extensive experience enabling it to respond to these key issues.

Indoor air: constant exposure in the tertiary sector

In urban areas, people spend an average of 22 hours a day in an indoor environment, of which almost 50% is at the workplace. There are a number of sources of pollution inherent to buildings:

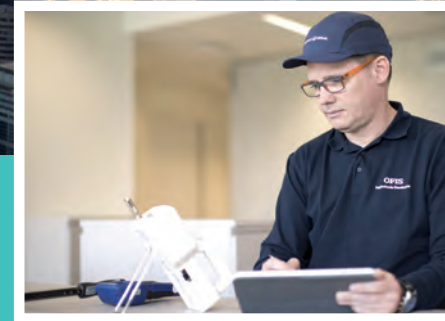
- The structure and the building materials used generate chemical pollutants, such as formaldehyde and volatile organic compounds (VOCs);
- Poorly designed or poorly maintained ventilation systems can cause biological or particulate contamination;
- The presence of humans generates chemical (CO₂), biological (bacterial flora), and particulate pollution.

Faced with these issues, measurement campaigns are essential to assess indoor air quality and pollution sources. Measurements are taken at all levels of the air treatment chain (air handling unit, air duct, air in the rooms) to precisely locate the sources of degradation.

Ofis has also developed strong expertise in the continuous monitoring of air quality indicators, the selection of innovative sensors, and optimization solutions to continuously monitor the exposure of the users of healthcare facilities, leisure buildings, and office buildings,

Towards an integrated offer

In addition to indoor air quality, our engineers are also involved in a number of pilot projects intended to reduce ambient air pollution in cities. From pollen monitoring (Urban Environmental Monitoring of Nice metropole, France) to the identification of parameters contributing to both climate change and air quality (Climate-KIC, EU), the challenges regarding air quality are numerous and our employees are ready to take them on.



Veolia and Icade innovate for better air quality in office buildings

Veolia, with Ofis's expertise, and Icade are experimenting on how to improve the indoor air quality of office buildings using a new generation of sensors. The objective is to continuously measure the main pollutants in indoor air, assess the performance of ventilation systems, and adjust facilities to improve air quality for occupants. In order to select the most efficient sensors, the two partners launched a call for expressions of interest. This open-innovation dynamic should result in the first tests being run in the summer of 2018.

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