

PLANET

#April 2016



Responsibility a factor in performance

Forum

CSR: a performance driver? Three experts debate the question

Gallery

"Love Planet.photo": climate ambassadors one and all

Outfront

Global value creation: for long-term performance

Explainer

Zero liquid discharge technology

TABLE OF CONTENTS

APRIL 2016

03 THE POST

by Antoine Frérot

04 CONTRIBUTORS

Hélène Toury, Mark Hoffman, Pascal De Petrini, Alexandra Palt

06 CURRENT

The news in brief.

An infographic on the social return on investment (SROI) method

12 FORUM

Estelle Brachlianoff, Mark Hoffman and Alexandra Palt
CSR: a performance driver?

18 SPOTLIGHT

Francisco Silvério Marques, Mathilde Prete

22 FRONTLINE

NIGER Drinking water for as many as possible
AUSTRALIA Welcome to Woodlawn's eco-world
MEXICO Nestlé draws water from its milk

34 GALLERY

Carte blanche for the Veolia winners of the Love Planet.photo competition

42 OUTFRONT

Responsibility: a value creator

47 COMMUNITY

Malaysia: shared biodiversity

48 EXPLAINER

Target: zero water discharge

50 FUTURIST

The Organic Skyscraper, a self-extending tower



Antoine Frérot
Chairman and CEO
of Veolia

November 30 – December 11

COP21, an agreement and solutions. From now on, we must manage the climate together with nature. While the earth does part of the work of cleaning up CO₂, it is up to us to do the rest. Despite the size of the task, creating a low-carbon economy is possible. Of course, we cannot control the climate, but we can decarbonize growth, produce differently, consume less petroleum. Beyond COP21's diplomatic success, the strength of this international gathering lies in the presentation of CO₂ solutions that have proven their worth. The solutions implemented by our Group include unavoidable energy recovery, organic waste-to-energy, replacing fossil fuels with forest biomass, the circular economy, improving energy efficiency, etc. Yes, there are cures for our climate ills! While man is the climate's number one enemy, he is also – when he wants to be and sets about it with determination – its best friend.

December 14 A new strategic plan focused on growth. The transformation plan implemented by Veolia between 2012 and 2015 has allowed it to refocus on its most lucrative markets, put in place a more integrated organization, restore its margins and considerably reduce its debt. The Group is now ready for renewed growth. This is the primary objective of the new strategic plan that we announced in December for the 2016-2018 period. It aims for a gradual return to growth in revenue – between 2-3% per year on average by 2018 – by rebalancing our activities between municipal and industrial clients. We will be particularly concentrating our efforts on six market segments: the oil, gas and chemical sectors; the mining, metal and power sectors; the food and beverage and pharmaceutical industries; along with the hazardous waste market, decommissioning, and finally the circular economy. The new strategic plan also provides for the continued improvement of our operational efficiency through a program to reduce costs by over 600 million euros by 2018.

January 22 Strengthening cities' resilience. Natural disasters, technological accidents, environmental deterioration, socio-economic changes, and so on. Cities face the challenge of resilience. In this respect, Veolia's know-how covers a variety

of fields: bolstering vital infrastructure, preserving water resources to prevent water stress, providing decentralized energy to ensure energy continuity in critical situations, reducing the exposure of urbanized areas to flooding, implementing emergency measures, reestablishing essential services so that the city starts functioning satisfactorily again as quickly as possible, etc. They allow cities to anticipate and adapt to a wide range of shocks, reduce the impact of crises on economic activity, and improve cities' overall performance. Resilience is therefore not limited to risk prevention and a fast return to normal in the event of a disaster. It represents a factor of appeal and a competitive advantage in the urban contest. This conviction underscores the memorandum of understanding signed between Veolia and Swiss Re, the world's second-largest reinsurer, under the aegis of the Rockefeller Foundation and its *100 Resilient Cities* program.

February 3 Controlling the end of the nuclear cycle. With the acquisition of the Californian start-up Kurion, our Group is rounding out its offering for the nuclear industry. It now has comprehensive expertise in treating low- and very low-level radioactive waste. We want to extend this expertise to cleaning up irradiated facilities, coordinating know-how in order to treat water, toxic waste and polluted soils. Kurion and Veolia first met in Fukushima, at the plant devastated by the tsunami of March 2011. They had been summoned with great urgency, along with Areva, to design and put in place equipment to decontaminate the water used to cool the damaged reactors. In the future, the area of dismantling nuclear installations will become more important. 100 to 150 reactors worldwide have been shut down or will be by 2030, and 50 research centers are set for dismantling. When you close a nuclear plant, there are two types of radioactive waste to manage: waste from the reactor, representing 99.9% of the radioactivity and 3% of the volume. The remaining waste accounts for 0.1% of the radioactivity, but 97% of the volume! Our Group is positioning itself to treat this second type of waste. Veolia exists to find solutions to complex environmental problems, and to make hazardous pollution harmless!

CONTRIBUTORS



Editor-in-chief Hélène Toury

Marketing & Communications Director,
Middle East Africa, Veolia

There is no quick answer to managing the world's resources but there is an inclusive way of doing it. A way... that would make sustainable growth the condition of performance.

How? By combining innovative technologies, developing partnerships with stakeholders, creating civic-minded solutions - with the ambition of making a significant impact on businesses, human development, the environment and local areas.

In this issue of Planet we have made a rich selection of best practices and case studies that perfectly illustrate this new business paradigm. Of course, once again acting responsibly is more than just a handful of interesting stories; it is a powerful way to boost performance.

I am glad that I was invited to be Guest Editor-in-Chief of this edition. I realized how much work and dedication was needed to prepare an issue and I would like to sincerely thank all the contributors.

Enjoy your reading!

Also in this issue

Alexandra Palt

Chief Sustainability Officer,
L'Oréal

Since 2012, she has been instilling sustainable development concepts throughout L'Oréal and redirecting it along the path of environmental concern and social innovation. A legal expert by training, Alexandra has devoted herself in turn to defending human rights with Amnesty International Germany, preventing discrimination and promoting societal engagement with IMS-Entreprendre pour la Cité, and working for HALDE (High Commission against Discrimination and for Equal Opportunities) where she was in charge of promoting equal opportunities, before heading a consulting agency advising top firms on how to implement their CSR policy.



Mark Hoffman

Director KPMG
in South Africa

At the head of KPMG's Integrated Reporting department, Mark advises many companies listed on the Johannesburg stock exchange (JSE) along with major public sector players on their integrated reporting approach. With over 25 years' auditing and consultancy expertise in various fields, including private equity, public service, transport, mines, finance, manufacturing, consumption, chemistry, pharmacy and electronics, Mark specializes in providing tailor-made practical solutions to organizations looking to improve the effectiveness of their business reporting.



Pascal De Petrini

Executive Vice-President Strategic
Resource Cycles, Danone

Overseeing all of the food giant's sourcing organizations, Pascal's priority is to protect, secure and get optimal value from Danone's key resources, such as milk, water and plastics. Having joined the group in 1984, he initially held the post of industrial engineer before becoming LU France's Supply Chain Director, and then Managing Director of the Biscuits division in China. He subsequently held a variety of positions for different brands. Until 2015, he was Fonterra's Managing Director Asia-Pacific, Middle East and Africa.



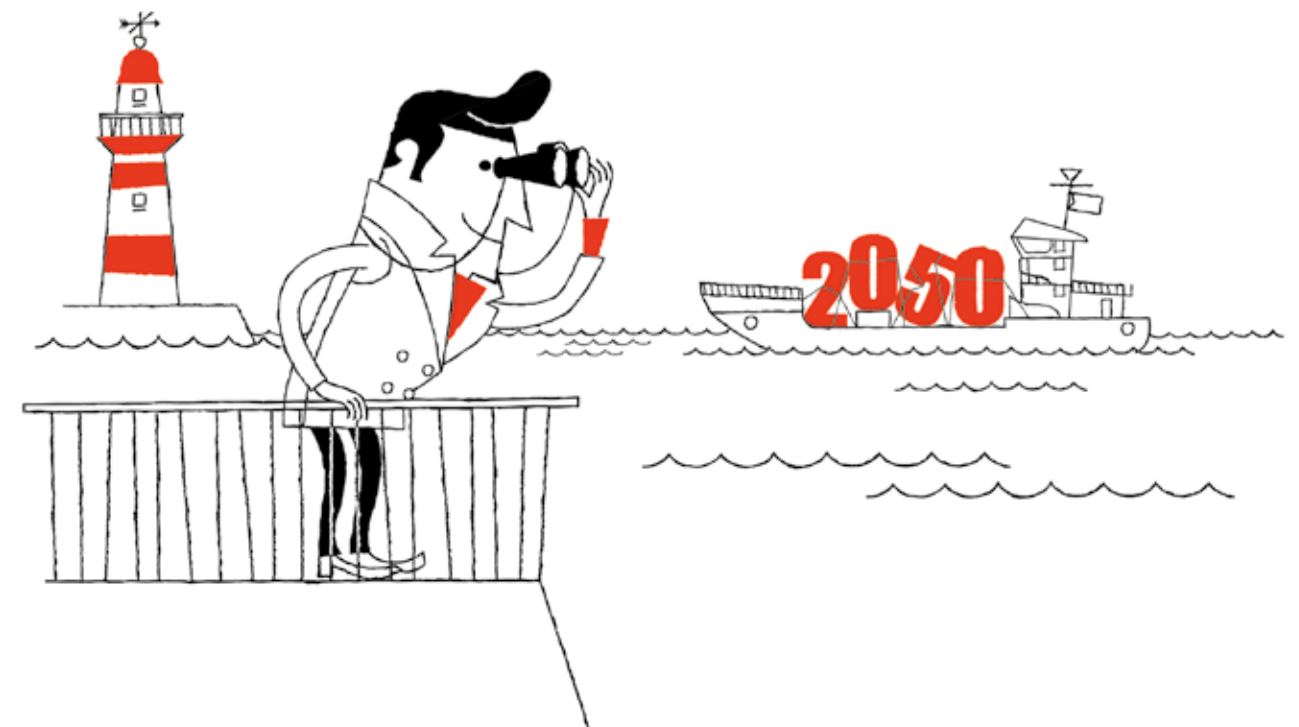
Event

FROM APRIL 19 TO 20, 2016,
ABU DHABI (UNITED ARAB EMIRATES)

GLOBAL WATER INTELLIGENCE SUMMIT

THE WORLD OF WATER IN 2050

WHAT WILL WE BE LEAVING BEHIND FOR THE NEXT GENERATION?
IN 2016, THE EVENT OF THE YEAR FOR THE WATER INDUSTRY IS
CONCENTRATING ON THE THEME OF "WATER 2050: THE FUTURE IS NOW."
THE CHALLENGE: INNOVATING TO OBTAIN HIGH-QUALITY WATER.



WWW.GLOBALWATERINTEL.COM/GLOBAL-WATER-INTELLIGENCE-EVENTS

Veolia publication (38, avenue Kléber – 75116 Paris – France)

Publication Director: Laurent Obadia. Editorial Director: Nathalie Cottard. Editorial direction: Anne Béchiri, Étienne Collomb. Editor-in-Chief: Hélène Toury. Image content: Laure Duquesne, Gilles Hureau. With special contributions from: Alicia Alford, Johann Bonnet, Rémi Bourgarel, Scott Edwards, Cécile de Francieu, Kevin Hurst, Amiruddin Ibrahim, Philippe Langenieux-Villard, Hélène Lebedeff, Clément Levaux, Sonia Ouldali, Peter Stokes. Copyright: April 2016. ISSN number: 1761-4996. Veolia photo library: Alexis Duclos, Rodolphe Escher, Christophe Majani d'Inguibert, Didier Olivré, Gael Turine/Agence VU. Jerry Fer Damian, Kan In Ho, Johnny McClung, Martin Mecnarowski, Peng Du, Sungsoo Yang (Portfolio). Agence Chartier-Corbasson, Jean-Louis Dias, Vincent Fouquet/VWT, Justin Grainge, OJO Images, Groupe L'Oréal, Craig Magee, Keith Mayhew/Landma/NEWSCOM/SIPA, Laurence Tissot Photography, Peter Morris, Nestlé photo library.

Published by Bords de Loir. Art Director: Jean-Jacques Farré. Editorial team: Victor Branquart, Guillaume Frolot, Cécile Martin, William Mengebier, Yves Sciami. Infographic and illustrations: Mariette Guigal. Illustration p.15: Isabel Espanol. Coordination: Sylvie Roussel. Production Manager: Caroline Lagailarde. Printed by: Altavia. Packaging, sorting and mailing by Staci.

CURRENT

6/7



International standard for low-carbon cities

The aim in creating the ISO 37210 standard is to provide a single tool for all decision makers in major cities with regard to sustainable development. This tool incorporates some 100 indicators capable of processing all of the urban data in the form of interactive computer graphics that can be consulted on the Internet. Each city will thus be able to compare and judge the quality of its own initiatives in the light of those made by its counterparts worldwide.

<http://open.dataforcities.org/>

“Hubgraded” efficiency in Bilbao

Hubgrade, in the northern Spanish city of Bilbao, is a platform for remotely controlling the Group’s 2,000 energy facilities located throughout Spain. Inaugurated in December 2015, this hypervision center is dedicated to energy efficiency. It combines the speed of digital technologies with targeted intervention capacities. The aim is to achieve 15% additional energy savings compared to current services on the market.

Danone moves to zero net carbon

Looking for unprecedented solutions to achieve carbon neutrality by 2050 and face the climate challenges of the 21st century, the food giant has joined forces with Veolia. A strategic and innovative global-scale partnership in the areas of the water cycle, waste management, sustainable farming and energy efficiency. This alliance is based on a genuinely collaborative approach in which shared value creation arises from the two companies’ complementary skills. Priority concerns include securing water resources and sustainably managing plastic packaging, key issues in Danone’s new climate policy. A number of concrete projects have already been defined, such as developing “zero liquid discharge” plants and putting recycled plastic production units in place. Also focused on the circular economy, other projects target producing biogas from the plants’ biowaste combined with liquid manure from local farms or optimizing energy consumption by making the best use of alternative energy.



Managing major water infrastructure better

A new managerial approach known as EEDS (Eco-Engineering Decision Scaling) could provide an answer to difficulties managing major water-related projects. Put forward by an international group of researchers, its originality lies in involving all of the stakeholders — private and public players, local communities, etc. — in rehabilitating installations or building new facilities. “To anticipate the risks and be able to manage climate uncertainties, you must extend hydraulic resource management beyond solely economic criteria” is the essence of the researchers’ message. This innovative managerial logic therefore suggests taking into account the social value of ecosystems and their benefits. The end result is global performance of major infrastructure combining sustainable water resource management, energy efficiency and respect for the environment.

Source: Nature Climate Change, January 2016



100,000 MWh

This is the amount of “green” energy produced each year by optimizing the treatment of a third of the household waste from the Shanghai megalopolis (24 million inhabitants). Enough to power 100,000 households with electricity.

Source: Le Figaro, December 11, 2015

Toward leadership in nuclear cleanup

With the acquisition of the American start-up Kurion, which specializes in nuclear cleanup technologies, Veolia is confirming its ambition to develop its low-level radioactive waste and water treatment business in the atomic sector. Established in California, the United Kingdom and Japan, Kurion is to date the only international player working at Fukushima on behalf of the Japanese operator Tepco. It has developed a unique robotic access technique to separate, concentrate and vitrify low- and medium-level radioactive pollution. This acquisition supplements the work of Veolia’s subsidiary Asterolis, which is dedicated to dismantling nuclear installations and a partner of the Alternative Energies and Atomic Energy Commission (CEA) in France. The Group now possesses all the expertise for cleaning up and treating low- and medium-level radioactive waste and facilities. As the global market for Veolia’s new activities in the nuclear sector is evaluated at €210 billion by 2030 (Roland Berger consulting), the Group is making no secret of its ambition to be the first in the world to offer a comprehensive range of solutions and technologies to clean up this type of irradiated facilities and waste.

Telex

An unprecedented partnership in France concerning the first complete circular economy loop for small electrical appliances.

The waste electrical and electronic equipment is collected by Eco-systèmes. It is then repurposed by Veolia in the form of recycled raw materials.

The small electrical appliance manufacturer SEB uses these to produce new electrical items sold in stores. The first concrete application of this partnership is a steam iron.

Joint creation of a brand new initiative to rehabilitate infrastructure.

The Rockefeller Foundation, Veolia and Swiss Re want to allow cities the world over to relaunch their economic activity more quickly in the wake of a catastrophe. This partnership looks to provide assistance in terms of adapting to climate change, reducing disaster risk exposure, and reinforcing and rehabilitating infrastructure.



Neste and Borealis, shared energy

The next electric power plant supplying both steam and electricity to the sites of the Austrian petrochemical firm Borealis and the Finnish refining company Neste in Porvoo in Finland will be the fruit of a collaboration between these two industry players and Veolia. The Kilpilahti Power Plant Limited (“KPP”) joint venture will undertake the construction of four steam and electricity production units with a capacity of 450 MWh thermal and 30 MWh electric power as of 2018.

Investors committed to the energy transition

The GIIC (Green Infrastructure Investment Coalition) was formed at COP21 on the initiative of a group of investors, development banks, financial sector organizations and NGOS to facilitate funding the energy transition. In direct link with governments and local officials, it looks to encourage a rapid transition toward a resilient economy with low carbon emissions by promoting a system for funding large infrastructure.

In Peru,

preserving freshwater with seawater

The mining group Milpo has tasked Veolia with operating and maintaining its desalination plant, which has been established on the Peruvian coast, 40 km from its Cerro Lindo production site, for the past eight years. While complying with Peru’s environmental standards in terms of desalination, Veolia will increase the plant’s industrial water production performance by 20%. These services will further reduce the chronic water stress of this arid, desert-like region. Located on the edge of the Topará River ravine, the plant became the country’s first mining site to stop using river water for its extraction operations in 2007. This river’s low flow rate has long posed a serious challenge to the region’s agricultural development and weakens the local communities, for whom water is a vital resource.

C40 Cities Awards: rewarding green cities

During COP21, the group of mayors from the world’s largest cities – the C40 Cities Climate Leadership Group – singled out ten cities for their actions to promote energy transition and fight global warming. An overview of their initiatives:

Boston (United States):

the Greenovate climate action plan, a platform involving the entire urban community.

Cape Town (South Africa):

a water resource management and conservation program.

Johannesburg (South Africa):

the creation of an instrument of measurement, the Green Bond, to anticipate the city’s carbon emission reductions.

Nanjing (China):

renewable energy promotion and installation of a network of 12,000 electric charging stations.

New York (United States):

the “One City: Built to Last” decade-long plan to improve the energy efficiency of a million buildings.

Rotterdam (The Netherlands):

the Rotterdam Adaptation Strategy, a

set of actions aimed at reinforcing the city’s safety and developing business activities.

Stockholm (Sweden):

the Stockholm Royal Seaport project will transform the vast and dilapidated industrial port into a business and residential eco-district that does not rely on fossil fuels for its energy consumption.

Vancouver (Canada):

the Greenest City Action Plan, named for its 160 actions to reduce fossil fuel consumption and make Vancouver the “greenest” city in the world by 2020.

Washington, DC (United States):

the Wind Power Purchase Agreement undertakes to supply 30% of the district’s electricity through wind power.

Wuhan (China):

an ecological restoration project for Jinkou landfill.

500,000 metric tons

This is the amount of CO₂ saved in Great Britain and Ireland over the past four years thanks to biomass plants. This represents annual savings equivalent to the carbon emissions of 90,000 cars.

Source: Veolia UK

Veolia recycles industrial water in the Appalachian mountains

Limiting the environmental impacts linked to shale gas and oil production is a must. In the operational areas in the Appalachian Mountains (West Virginia), the American group Antero Resources has entrusted Veolia with its entire process water treatment. Two local subsidiaries will design, construct and then operate an optimized polluted water treatment and recycling plant over a ten-year period. 9,500 m³ of wastewater will be recycled daily before being reinjected into a centralized system. The separation of water and waste will be supplemented by the recovery of reusable materials — salt and brine — that can be used for drilling operations, along with freshwater that, in the event of a surplus, can feed into the farming irrigation channels of states experiencing severe drought, such as California.

“The Paris agreement was a call to action but it is now up to all of us to build this progress with ingenuity and commitment to change. Together we are fighting to preserve our fragile climate from irreversible damage and devastation of unthinkable proportions.”

Leonardo DiCaprio, Crystal Award* recipient, at the World Economic Forum in Davos (January 19, 2016)

*The 22nd Annual Crystal Awards took place on January 19, 2016 during the 46th World Economic Forum (WEF) in Davos. Actor Leonardo DiCaprio was among the awardees for his role in tackling the climate crisis.



Training tomorrow’s business leaders

Yale University and the World Business Council for Sustainable Development (WBCSD) have signed a knowledge-exchange partnership to prepare leaders for changes in society. Students and academics from a network of 28 international business schools will be linked to WBCSD’s multinational members. The aim is to share knowledge and expertise in light of the growing complexity of the questions raised by the impact of environmental transformations on society. This collaboration will help future corporate leaders more effectively incorporate sustainable development into innovative and profitable business models.



Biodiversity commitment rewarded
At the heart of COP21, Ségolène Royal, France’s Ecology Minister, and the astrophysicist Hubert Reeves awarded the National Biodiversity Strategy (SNB) label to twelve winners for 2015. These included Veolia, rewarded for its commitment to preserve and restore biodiversity.

A green dictionary
During the Brive Book Fair, the Veolia Foundation presented the 2015 Environment Book Award to Dominique Bourg and Alain Papaux for their Dictionary of ecological thinking. The work, which is historical, critical and forward-looking in one, groups together 357 articles written by 260 authors. The authors tackle key themes in understanding the issues at stake for the planet and set out contradictory points of view on a complex subject, which asks renewed questions about man’s place in nature.

\$329 billion

This is the record sum invested in renewable energy around the world in 2015. The only hiccup: in France, this investment saw a 53% drop over the same period.
Source: Bloomberg New Energy Finance 2015

A 3.0 subsidiary
Nova Veolia, a fully owned subsidiary of the Group, will develop new service offerings with a strong digital component that helps promote growth in water and wastewater management in France. Initially these offerings, based on Veolia’s expertise, will be aimed at its public and private clients and subscribers. The long-term goal is to create new sectors of activity and turn to other private customers and industries.

Low carbon 100 Europe, a new stock market index
Designed by Euronext, the primary exchange in the euro zone, in partnership with the NGOs AgriSud, GoodPlanet and WWF, this index revolutionizes the traditional methodology used to evaluate companies’ CO₂ emission levels. For the first time, it will identify companies making a positive contribution to climate transition through their operational performance and the products that they sell. The choice of these 100 companies, 19 of which are French, takes into account the emissions avoided through their innovation efforts. The adoption of this new index also attests to the redeployment of investment in favor of the “green” economy.

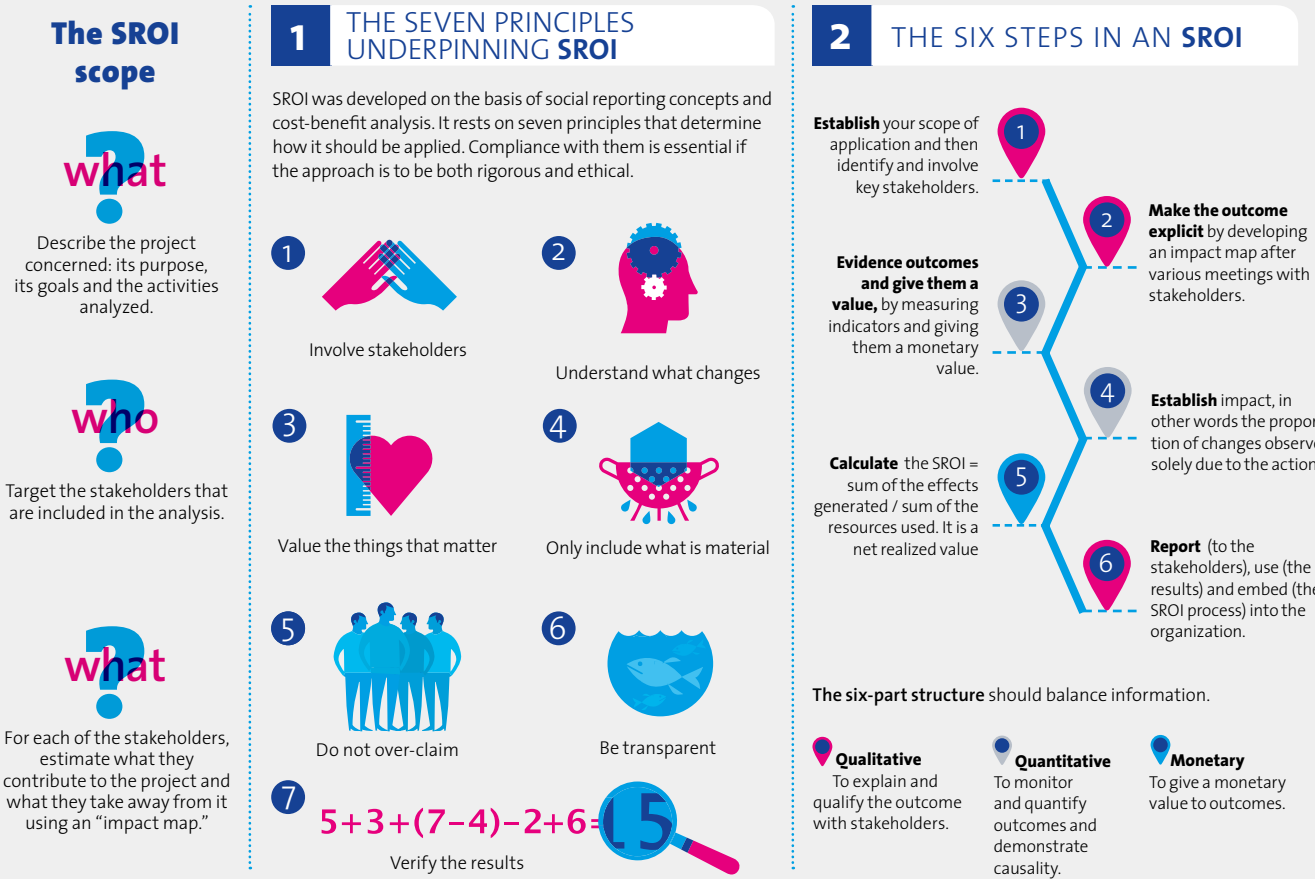


Social entrepreneurship in an incubator

POP UP, Veolia’s new social entrepreneurship incubator platform, is looking to generate a strong entrepreneurial dynamic in its local areas of operation. The idea is to welcome social partners to coach start-ups with a budding idea or the beginnings of a business. POP UP has already partnered with the global network of entrepreneurs Ashoka, French management school ESSEC’s social incubator Antropia, and Ticket For Change, a start-up and social business specialist. Veolia supports several initiatives: optimizing water management and waste treatment (Lyon, France); developing water consumption control tools (Mexico City); and encouraging the emergence of smart cities (Toulouse, France).

DECIPHERING THE SOCIAL RETURN ON INVESTMENT (SROI) METHOD

There are several methods of measuring the social and societal impact of a project, including SROI: Social Return On Investment. This makes it possible to measure and demonstrate – through monetization – the social, environmental and economic value of a project created compared to the investment made. More than a mere calculation method, SROI is a whole approach. In six steps and on the basis of seven principles, the impact map for a Veolia contract can thus be obtained. It represents a tool for steering the Group’s CSR performance.



CSR: a performance driver?

Estelle Brachlianoff / Alexandra Palt / Mark Hoffman. Expert discussion.

12/13



Estelle Brachlianoff
Senior Executive Vice-President
Uk & Ireland, Veolia

We see social responsibility as the best way to sustain profitability in the long term. Social value and profitability go hand in hand.



Mark Hoffman
Director at KPMG
South Africa Office

Socially responsible entrepreneurship implies that a business is connected with and responds to the needs of the social environment that it operates in. Which many successful companies do, not only because of an obligation to be socially responsible, but because it is good for business.



Alexandra Palt
Chief Sustainability Officer,
L'Oréal

CSR is the best way to sustain profitability in the long term [...] Being leader in our sector is compatible with very ambitious commitments in terms of sustainable development.

A CSR approach has become a must-have in most companies. Is this a fad or a deep recognition of its long-term impact? How can it be implemented? And measured? Three experts share their point of view.

What are in your view the essential characteristics of socially responsible entrepreneurship?

Mark Hoffman: To put it in a few words, socially responsible entrepreneurship (CSR) implies that a business is connected with and responds to the needs of the social environment that it operates in. Which many successful companies do, not only because of an obligation to be socially responsible, but because it is good for business.

Alexandra Palt: Socially responsible entrepreneurship relies on the belief that companies, as major actors in modern societies, have an active role to play in addressing the environmental and societal challenges of our world – for example global warming, scarcity of resources, or poverty... I would add that it is important to integrate the principles of sustainable development all along our value chains, addressing all of our companies' impacts, as we are trying to do.

Estelle Brachlianoff: Let me also stress the importance of the community level: successful, healthy communities make successful, healthy businesses – and this calls for a completely integrated approach, not just pockets of excellence. It is important to train skilled and engaged individuals (in 2015, we have focused part of our recruitment in marginalized groups, for instance), to support local and small businesses, to partner with charities and community groups, etc.

How is it possible to implement such behaviors in a very competitive environment where everyone will not accept constraints?

M. H.: Business should not see these behaviors as constraints but rather as necessary practices to

“Socially responsible practices should be strategically relevant to the business and not just the social conscience of the business at work.”

Mark Hoffman

“We see social responsibility as the best way to sustain profitability in the long term.”

Estelle Brachlianoff

ensure that they meet their strategic objectives. Alternatively, the costs can be immense when the issue gets out of hand. For example, the lack of treating employees fairly over time can severely impact the reputation of the business in the eyes of customers, and generate disruptive levels of staff turnover in the long term.

A. P.: I am convinced, as we all are at L'Oréal, that changing our behaviors toward a more responsible business is not just a moral obligation but also a vital challenge. And a huge opportunity in terms of innovation and employee engagement. Setting up the necessary frame allows one to be competitive in the long-term perspective.

E. B.: I believe that socially responsible businesses will stand the test of time. By creating resilient communities in the areas that we work in, we are creating a more robust business that is having a positive impact.

Should companies accept that social responsibility sometimes reduces profitability, or should we see it simply as the best way to sustain profitability in the long term?

A. P.: Of course simply as the best way to sustain profitability in the long term, as I just mentioned. For example in the last 10 years, L'Oréal has increased production by 22% and reduced CO₂ emissions by 50%, while maintaining its leadership. Being leader in our sector is compatible with very ambitious commitments in terms of sustainable development.

E. B.: I want to dispel the myth that for a company to adopt sustainable business practices is expensive, just done to satisfy a CR agenda and not cost-effective. We see social responsibility as

... the best way to sustain profitability in the long term. Social value and profitability go hand in hand. Some call this shared value. For example, at our Household Waste Recycling Center in Southwark we work with social enterprises that take bulky waste from us, and train people who are currently unemployed to repair it so it can be sold. This is a win-win partnership where we divert waste from landfill, save resources, train individuals so that they are able to better compete for jobs and provide a revenue stream for these social enterprises. This approach is the best way to sustain business and communities in the long term.

M. H.: Obviously, some practices come with compliance costs; for example ensuring a company’s suppliers comply with basic human rights for employees and an environmentally acceptable behavior. But these practices can avoid catastrophic loss of profits in the event of a scandal where it is found that a company is complicit in the improper practices of its suppliers.

Surely a company cannot be on all fronts, from environment to gender to education or local development. So how should it set its priorities in the field of responsible business?

E. B.: We know that we can’t do everything, but we can do a lot. To establish priorities, some form of two-way, meaningful stakeholder engagement is necessary, in order to gain a deeper understanding from external individuals and organizations on what we should be focusing on. We do this through communicating with customers, being part of many stakeholder groups and through our Advisory Board.

A. P.: From our point of view, a responsible company has to be on all the fronts that make sense regarding its impacts. It is for instance the way we frame our “Sharing Beauty with All” commitments. From research to production, from marketing to communication to our consumers, we have decided to address all our impacts. And of course a company like ours has both environmental and societal impacts, which mean that we have to address a lot of different issues in order to be the transformative force we want to be.

M. H.: The socially responsible initiatives of businesses have to be relevant to the nature of operations and should be seen to be responding to material risks and opportunities. For example, a mining company will have more focus on the safety and health of employees than a bank. However, the bank may need to be aware that it should be more accessible and responsive to communities that have not previously had access to banking facilities, thus presenting a strategic opportunity. Socially responsible practices should be strategically relevant to the business and not just the social conscience of the business at work.

Which leads to a question on accountability and instruments of measure. What indicators, what means of verifying their social impact do companies have?

M. H.: Measurement of performance should be relative to what the business is trying to achieve in terms of the strategic response that it has chosen to the underlying issue. For example, a business can measure the extent to which its supply chain is compliant with human rights and environmental practices and measure the extent to which customers trust and are loyal to the brand through market research.

A. P.: Indeed reporting is key. L’Oréal communicates each year in a transparent and rigorous way on its strategy and results in terms of sustainability with facts and figures, most of them being verified by external auditors. We have also a very strong dialogue with external stakeholders to challenge our strategies. For example, we set up what we called a “panel of critical friends,” led by José María Figueres, former President of Costa Rica and a renowned environmentalist. Once a year, they review our results and challenge them.

E. B.: To calculate the added value we create consistently, we worked with an external consultant, Professor Adrian Henriques, to develop our own approach, based on a framework for measuring a much broader concept known as Social Return on Investment (SROI). SROI attributes monetary values to activities that typically don’t have one, such as wellbeing or crime reduction, so that they can be accounted for.

“Changing our behaviors toward a more responsible business is not just a moral obligation but also a vital challenge.”

Alexandra Palt

“The lack of treating employees fairly over time can severely impact the reputation of the business in the eyes of customers.”

Mark Hoffman





...

We piloted this approach by measuring the social value of our waste management contract with Southwark Council. This approach now gives us a better understanding of where we interact with society and our importance to the community, enabling us to improve our social value over time.

Corporations are very frequently accused of greenwashing; is this in your view justified or unfair? How is it possible to avoid that trap, and escape that accusation?

M. H.: Some businesses certainly have just prepared reports and marketing materials for the sake of reporting. Those that have recognized the significant risk and opportunities that societal issues present to their business, and have responded strategically with appropriate performance measures, have become stronger: they can legitimately demonstrate to all stakeholders the relevance of such issues to their business.

A. P.: Yes, it is right that there is a real mistrust toward big companies and it is also true that companies have made mistakes, putting

“It is very easy for companies to talk about how environmentally and socially sustainable they are, but being able to prove it [...] is the only way to gain credibility.”

Estelle Brachlianoff

communication ahead of their sustainability strategy before doing the job to transform them with sincerity. For L'Oréal, a sustainability strategy is not a question of communication, it is a question of competitiveness for the future, and ultimately a question of survival. So to avoid the trap of “greenwashing,” simply do the job before communicating about it, and that is what we try to do at L'Oréal.

E. B.: It is very easy for companies to talk about how environmentally and socially sustainable they are, but being able to prove it through tangible impact and figures is the only way to gain credibility. This is especially true in this new ‘green’ era where everyone seems to be talking about sustainability, and using it as a sales tool. The key is objectivity. We try to achieve this through our SROI tool and our sustainability reports that we put on our website about how we save resources as part of our commitment to “Resourcing the World.” Third party endorsement is equally important – and it is for this reason we were delighted to receive the Queen’s Award for Sustainable Development in 2015, the UK’s highest independent business accolade. ■

MAY 22, 2016

INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY

PRESERVING BIODIVERSITY
MEANS PROTECTING MANKIND

EVERY YEAR SINCE 2000, ALL OVER THE WORLD THE GENERAL PUBLIC HAS GEARED INTO ACTION ON A SPECIFIC THEME. THIS 16TH YEAR IS DEDICATED TO “MAINSTREAMING BIODIVERSITY: SUSTAINING PEOPLE AND THEIR LIVELIHOODS.”



WWW.CBD.INT/IDB/2016/

SPOTLIGHT

*One sells energy savings to cities
in the Middle East, the other
is a budding lobbyist in Brussels.
They share the same conviction
that Veolia's performance
goes beyond borders.*

Above and beyond

Meeting Veolia employees from all over the world.

Francisco Silvério Marques,

Enova's Business Development
and Marketing Director,
Dubai

"I got interested in energy performance when I was little!" admits Francisco Silvério Marques right away, as shown by the career path of this engineer and architect by training, from his early work in Brussels at an architecture firm — where he participated in the innovative renovation of the European Commission's headquarters — to the United Arab Emirates, where today he is guiding Enova's growth in the field of energy services for buildings. Since his arrival in Dubai in 2014, Francisco has been chaperoning this Veolia subsidiary in a market that is still taking shape: "Energy efficiency is a recent preoccupation here, but the goals set by the city — a 30% reduction in consumption by 2030 — reflect its desire to become a green economy model."

It's difficult to resist this kind of challenge... Especially when, like Francisco, you have sound marketing and business development experience: from 2010, he helped design Dalkia's range of energy services, before coordinating their implementation in its facilities worldwide. It is this business base that he is keen to develop with Enova in seven countries in the Middle East. It's been a successful initiative so far; in 2015 the company won a series of iconic contracts with shopping centers, office buildings and airports. This impressive record was further enhanced recently with the signature of an energy performance contract for Jafza, in Dubai, the largest free trade zone in the world.

"It's gratifying to see the success of a model on the ground, adapting it as necessary for the local market," notes Francisco, who does not underestimate the major communication work carried out beforehand among public and private decision-makers. "Selling energy savings is a complex activity that requires you to create an atmosphere of trust," he summarizes. "You have to understand the concerns of each person involved in the conversation, and then find the right words to explain the energy efficiency issues at stake and the pertinence of our solutions." This is an exercise that we imagine is tailor-made for this polyglot (he speaks five languages fluently), who is passionate about cities and building management. ■

1. In 2014, Veolia and EDF divided up their subsidiary Dalkia. Veolia kept international operations, while EDF, which retained the Dalkia brand, acquired France.





Mathilde Prete,
Policy Officer at the
Representative Office to the
European Union institutions,
Brussels

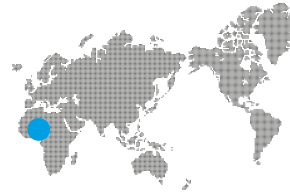
Education
Mathilde holds a Masters in
Law and Economics and a
Masters in Political Science,
specializing in European
Affairs.



In Brussels, Mathilde is surrounded daily by the buzz of political decisions. After gaining varied experience in contact with European institutions, she decided to start her professional career with the Pangeo program in Veolia’s Public Affairs department. For the past year, Mathilde has been helping defend the company’s interests with regard to EU decisions, as part of the Brussels branch. As soon as she arrived, this 27-year-old Franco-Italian threw herself into the strategic activity of legislative and regulatory monitoring, keeping Veolia’s divisions informed on a daily basis. In order to deliver first-hand information on draft texts and case developments that could impact the Group, she “scans” the news and attends parliamentary commissions whenever possible. “Identifying subjects before they are even debated is an essential part of the job,” she explains. Constantly absorbed by this challenge, she does not fail to pass on European funding opportunities of interest to Veolia’s business units for their projects.

A budding lobbyist, Mathilde has taken her first steps on the ground, organizing the Group’s participation in events such as the Open Days¹, and taking the opportunity to harness the company’s resources: “For this key event, we got heavily involved in the areas of smart cities and public-private partnerships, strategic domains for a service provider.” Mathilde is also the correspondent for Eurocities (the largest network of European cities) and coordinates Veolia’s contributions to the environment forum on its website. All of these connections serve to create ties with organizations involved in the European political sphere. David Berman, Deputy Director in charge of EU Affairs, who heads the office, states: “Mathilde has the maturity and all the interpersonal skills required to build the partnerships that we need to make our voice heard.” This coming year will allow her to put her talents to use on behalf of the circular economy: “It’s a new challenge for me, which is all the more exciting as it is going to be a burning hot topic at the European Parliament,” she concludes. ■

1. The European Week of Regions and Cities, an annual event in which Veolia participates with its public partner, UDITE (European Federation of Local Government Chief Executives).



Ni ger

Drinking water for as many as possible

Even in the poorest countries, there are solutions to ensure access to water for all people. In Niger, the infrastructure is adapting: the installation of water fountains in urban and peri-urban centers allows millions of people to obtain high-quality drinking water.

Issue at stake

➤ In Niger, access to drinking water remains difficult, within the context of a fast-growing urban population.

Objectives

➤ Provide drinking water to as many urban inhabitants as possible, at a cost compatible with the populations' income
➤ Uphold quality standards comparable to those in Europe and ensure a smoothly running service.

Veolia solution

➤ Develop in parallel meter-based water distribution and distribution via water fountains supplying neighborhoods and managed by the inhabitants. Create and deploy tailored payment solutions.



The issue of water access is crucial. Niger is at the bottom of the list in the Human Development Index created by the United Nations Development Programme (UNDP).

Turning on a tap is so commonplace for most of us that this automatic gesture makes us forget just how invaluable access to water is. A great many people are not so fortunate and have to travel miles to obtain this precious resource. However, between these two extremes, there are intermediate solutions well suited to developing countries. In this respect, water fountains supplying neighborhoods, such as those set up by Veolia in Niger, are a good way of providing water to numerous families in areas where infrastructure is rudimentary and resources lacking.

Water: a priority in Niger

In this West African country, the issue of water access is crucial. Niger is at the bottom of the list in the Human Development Index created by the United Nations Development Programme (UNDP). Its population is experiencing strong 4.2% annual growth, leading to a very high increase in the number of urban inhabitants. These two factors combine to cause a steep rise in the demand for drinking water. “The challenge is to cope with this demand and find skills on the ground,” states Rémi Bourgarel, Director of Veolia Africa. The Group works with funders such as the World Bank or the French Development Agency, who fund the development of infrastructure, in order to supply districts as quickly as possible. Despite these efforts, “the population’s

needs remain greater than the production capacity of plants, which we are obliged to run at full capacity,” notes Adamou Issaka Djibo, an employee at the Niamey plant. “They are constantly put under high demand, which leads to premature aging of the facilities.” Measures are being taken to remedy this, in particular the optimization of the network (by searching for leaks) and the creation of new plants.

Three questions for...

Rémi Bourgarel, Director of Veolia Africa

“We are connecting millions of people”

What does Veolia do in Niger?

We have been present there since 2001, with the aim of widely developing water access. For this reason, we founded the Société d’Exploitation des Eaux du Niger (SEEN). Niger is an important model for Veolia. It illustrates our dual capacity to deploy know-how with a view to developing water access for countries and communities with limited resources, as well as to maintain good performance in terms of service continuity. During the last campaign, which was completed in 2014, we connected 50,000 branch lines that supply some 500,000 people. In total, we are shortly going to celebrate our 200,000th branch line, and are able to supply almost three million people on a daily basis!

How do you provide drinking water to as many people as possible in a country with so little infrastructure?

Our specialty is distributing water both via meters — each one supplying a family of a dozen — and via water fountains managed by a local resident, who is responsible for selling water by the can, often 20-liter cans. This person signs a contract with us and

is tasked with delivering water in the neighborhoods on carts or selling it at the fountain. Each fountain supplies 250 people on average. In this way, SEEN manages 3,500 water fountains. We put a great deal of effort into developing the service in districts that need it most; we work with neighborhood organizations... When there is a planned extension to the city, we initially set up a water fountain on the outskirts and then build up the network.

Is the water not too expensive for the inhabitants?

The average price is 300 CFA francs per cubic meter, i.e. 0.50 euros. However, a social pricing scheme is in effect: the first band is €0.15/m³. Billing is monthly to avoid large bills and the average sum remains less than ten euros a month. Because of the very low penetration of banking services, a great deal of cash circulates in Niger. We have therefore developed a mobile phone application — not for smartphones, because these remain a rarity — which offers customers a digital means of paying their bill. And allows us to develop our services without a financial risk.

Serving as many people as possible

The country enjoys considerable water resources: the River Niger, which flows through the capital, Niamey, has a sufficient flow rate although it is erratic at certain times of year. This water is treated by Veolia using the same technologies and the same quality standards as in Europe.



However, the Group does not only supply the capital: it is present in 54 provincial towns. For those located too far away from the river, water from groundwater is captured via boreholes. Devoid of any drinking water infrastructure and outside the scope of Veolia’s contract, countryside regions are supplied by wells and boreholes set up by the inhabitants.

Niger does not have any wastewater infrastructure either, but this issue is being studied with the French Development Agency. However, even though a lack of sanitation services is a problem in certain districts, “most of the water distributed is not discharged and therefore cannot be retreated,” highlights Rémi Bourgarel. “In fact, individual water consumption is

Three questions for...

Aboubacar Mohamed,
fountain operator

How many people are supplied by your water fountain?

I manage a water fountain that supplies approximately 2,000 people. Thanks to this activity, I really am able to cover the needs of everyone who comes to get their supply here.

What difficulties do you encounter?

First of all, there is the cost of installing a water fountain. When it is not part of a social campaign scheme, its price increases. Another hindrance is pressure problems that slow down the service at times. Finally, during hot periods from March to May, there is frequently a lack of water...

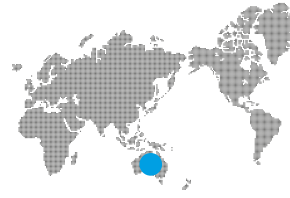
Has the water fountain improved the beneficiaries’ living conditions?

Yes, it has optimized the drinking water supply in the long term, along with the health and hygiene conditions of the communities living nearby. Not forgetting that it represents an income-generating activity that allows me to meet the needs of myself and my family.



Veolia celebrates its 200,000th branch line and supplies almost three million people each day.

low, approximately 20 liters per person per day, compared to 180 liters in France.” This is why Veolia is focusing on the flagrant needs: drinking water access for as many people as possible. ■



Woodlawn

Australia

Welcome to Woodlawn's eco-world

The Australian eco-site – which boasts a wide variety of innovations – is an ingenious example of sustainable land use. Already home to one of the world's largest green energy-producing bioreactors, Veolia's Woodlawn eco-precinct continues to find novel ways to promote sustainability. An approach that delivers benefits for the environment, community neighbors and business development.



› Bioreactor: a gas producer
The principle of the bioreactor is to cause the fermentation of organic waste via the application of moisture, bacteria and nutrients, creating optimal conditions for micro-organisms to decompose waste. Moisture is controlled by circulating leachate, while pH and temperature levels are continually monitored. A series of enclosed cells enables effective liquid circulation and gas capture.

Issue at stake

› Find innovative ways to deal with increasing waste, diminishing energy resources and an abandoned mining site.

Objective

› Promote recycling and waste minimization, remediate the disused mine and increase sustainable energy and farming.

Veolia solution

› A closed-loop recycling network of bioenergy facilities and technologies that convert waste into valuable products and protect natural resources. This solution is possible by combining treatment facilities with bioenergy technologies.

If someone were to design a theme park dedicated to showcasing several innovative sustainability technologies side-by-side in the same location, it very well might look like Australia’s Woodlawn eco-precinct. Begun as a waste reduction and recovery project 12 years ago, the site, located near the town of Goulburn, New South Wales (NSW), 250 kilometers south of Sydney, has morphed into an ambitious network of interconnected green projects that serve the Sydney metropolitan area and nearby communities.

The recipient of numerous awards for sustainability and innovation, the Veolia-operated site continues to add new projects and infrastructure, including constructing a mechanical and biological treatment (MBT) plant to manage organic waste.

A site dedicated to waste recovery

The eco-precinct is built on the site of an open-cut zinc, copper and lead mine that was closed following the previous owner’s financial collapse in the late 1990s. Its main elements include:

- a bioreactor facility that recovers methane from over 500,000 metric tons of putrescible waste material annually and produces enough green electricity to supply over 2,500 households;
- aquaculture and horticulture operations that use residual heat from waste for fish farming, providing 2,500 metric tons of barramundi fish per year for local markets;
- a working farm that supports 18,000 sheep, applying nutrient and grazing rotation to improve meat and wool productivity while reducing impacts on the soil;
- a 50-MW wind farm (operated by Infigen

Geoff Kettle

Mayor of Goulburn Mulwaree

“Goulburn Mulwaree and the local government areas immediately surrounding us are very grateful for the Veolia Mulwaree Trust, which administers and distributes host fees paid by the Woodlawn facility as grants and donations to needy community groups to bring worthwhile community infrastructure projects to life. The trust enables local communities to realize many projects that would not have been achievable without it. It is a magnificent asset to the Goulburn Mulwaree Community and has contributed many millions of dollars to valuable community infrastructure, including the impressive Veolia Arena at the Goulburn Recreation Area.”

Danny Colon

Executive General Manager, Veolia Australia and New Zealand

“What we are doing at Woodlawn is a great example of innovation and sustainability at its very best - and is in line with Veolia’s ongoing commitment to reduce and recycle waste. Currently we have enough installed capacity to supply power to as many as 6,000 homes and businesses on the grid, by using the latest technology to convert waste into green electricity. The investment in sustainable activities and technologies is also an investment in the local community.”

Key figures

- 1.1 million metric tons: new permitted waste capacity for the bioreactor
- 300,000 MWh: annual full capacity power generation at Woodlawn, sufficient to power 37,500 homes
- 2,500: metric tons of barramundi fish produced through aquaculture and horticulture
- 25 million cubic meters: capacity of the former mining pit being rehabilitated
- AUS\$8 million contributed to local community projects through the Veolia Mulwaree Trust since 2005

Energy) that harnesses the natural energy with 23 wind turbines in an area renowned for significant year-round wind generation.

Multiple developments

The site’s new projects further illustrate how its component parts come together to advance business, environmental and community interests. The new MBT plant, designed to separate organics from mixed



Woodlawn fish farm uses the residual heat from waste to produce barramundi, the perch’s tropical cousin, which thrives in water at 28°C.

household waste, will reduce the amount of waste going to landfill, helping the local municipal and industrial sectors meet targets for resource recovery. Some of the residual material from the MBT facility will go to the bioreactor, ultimately increasing green energy production to supply the equivalent of 7,000 homes. Together, the combined energy production from the bioreactor at full capacity and the wind farm is expected to generate almost 300,000 MWh per year, providing power for the equivalent of approximately 37,500 homes.

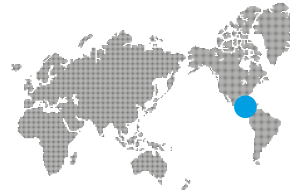
At the same time, the organic portion of the waste is being converted into compost suitable for use in rehabilitating the former mine site, a major priority for Veolia. The feasibility of developing an organic tomato greenhouse that could utilize excess CO₂ and heat from the unit is currently being studied. Steel separated

from the waste will also be recycled. A new transfer terminal is being built near Sydney to handle the increased rail shipments of waste, reducing CO₂ emissions by eliminating more than 30,000 truck trips per year. All of this investment and expansion also provides further employment and business opportunities within the local and extended community.

Good neighbor

Beyond the facility’s direct economic impact, Veolia’s employees working at Woodlawn are actively engaged in consulting with and supporting neighboring communities. Through the Veolia Mulwaree Trust, the Group contributes one dollar for each metric ton of waste received from Sydney, with funds going to local community projects.

Since the trust’s creation in 2005, more than AUS\$8 million has been distributed to worthy causes. Woodlawn also hosts recreational events such as 10K races on the site, as well as welcoming visitors to view the operations. “We have one of the largest and deepest bioreactors in the world and our guests are surprised by the bioreactor’s physical size,” says Veolia NSW General Manager, Ben Sullivan. “From the viewing platform, it measures 800 meters wide and 150 meters deep. Most visitors are generally amazed at the diversity of our operations and talk about how impressed they are to see green energy being produced, fish grown for the local community and our plans for converting waste into organic compost to remediate the old mine site. It’s an exciting time to be part of the ongoing development at the eco-precinct, where there are always new ideas!” ■



Mexico

Nestlé draws water from its milk

In the water-parched Mexican state of Jalisco, Nestlé's success in implementing zero-water dairy production offers hope for improved stewardship of water in a country where the resource is under serious stress. A unique technology is being implemented – and recognized – worldwide.

Issue at stake

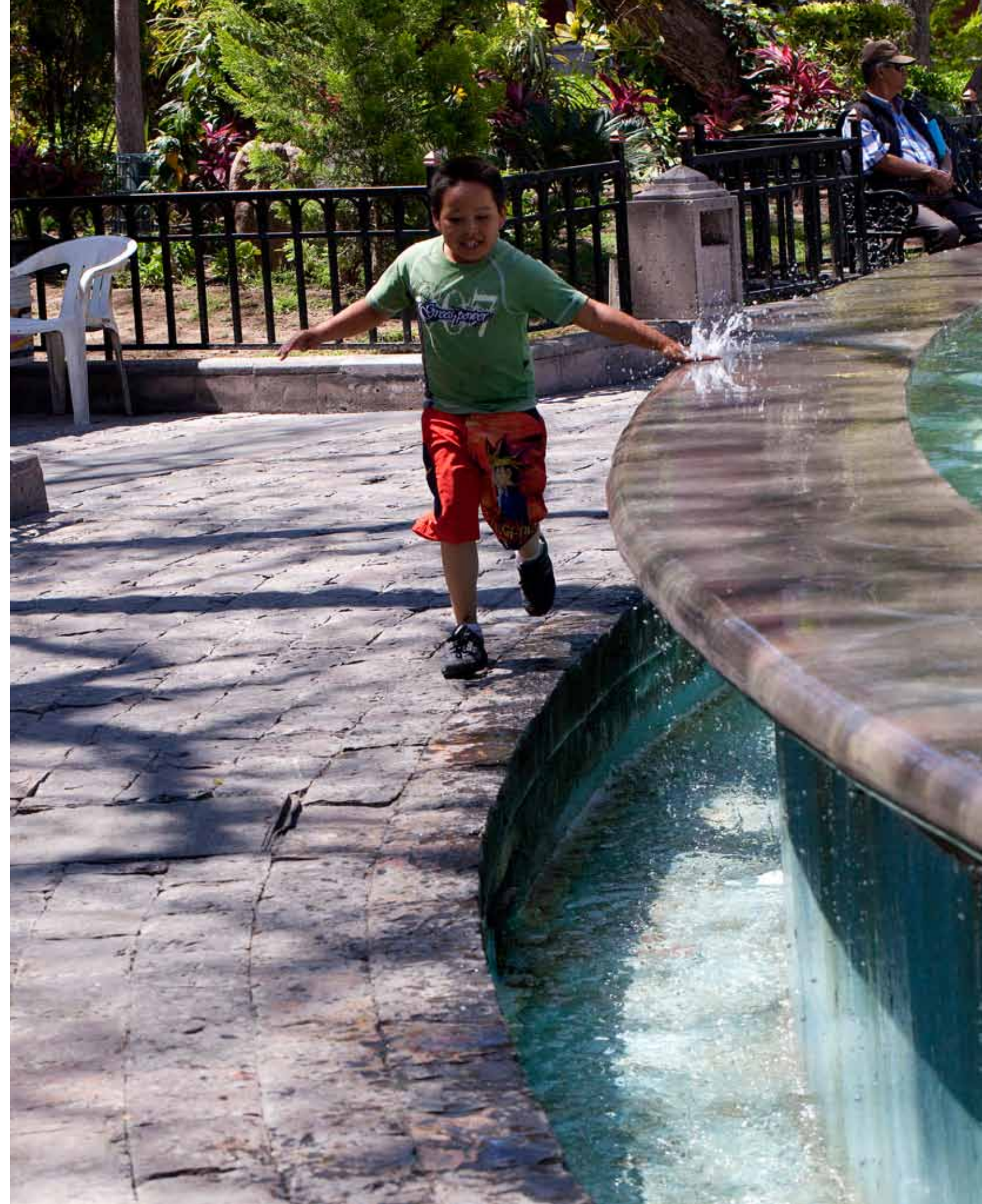
› Conserve scarce groundwater resources in Mexico and limit extraction.

Objective

› Recycle the water used in powdered milk production at Nestlé's dairy facility in Lagos de Moreno.

Veolia solution

› Treat effluent from the water used to produce dairy products in two steps. First, a membrane reactor removes solids and then the reverse osmosis step allows the water to be reused.





In October 2014, as Nestlé inaugurated its new dairy plant in Lagos de Moreno, Mexico, the celebration was about more than just the facility's production of Nido, one of the world's leading infant formulas. It was also about achieving zero-water dairy production. To achieve this feat and as part of its global commitment to preserve water resources, Nestlé entrusted Veolia, along with dairy technology firm GEA Filtration, with finding a solution to reduce water consumption at its plant in the water-stressed state of Jalisco. Increasing population growth over the past 60 years has decreased available

groundwater throughout Mexico. The Lagos de Moreno plant – actually three side-by-side facilities, which also produce ice cream and cereals, in addition to Nido powdered milk – requires 1.6 million liters of water per day, roughly equivalent to the daily water consumption of 6,400 people.

Zeroing in on resource savings

In 2013, Veolia added new technologies to treat the effluent from the GEA Filtration-built wastewater treatment plant so water

could be reused within the plant. The effluent is made up of “cow water,” the condensate recovered from evaporation of dairy products, and discharges from the “clean in place” sanitization of processing equipment. A polishing system featuring Veolia's Aquantis membrane bioreactor treats the effluent to produce a filtrate virtually free of solids. A further reverse osmosis treatment step retains dissolved solids and salts to drinking-water quality levels. The project, called “Cero Agua” (zero water) by Nestlé, enables the treated water to be reused for non-food production applications such as



A Water Technologies Mexico engineer works on a reverse osmosis membrane module.

cooling, watering the gardens and cleaning, eliminating the plant's need for external water resources.

Leading a global wave

Nestlé has reduced its water consumption globally by one third during the past 10 years and by 50% at its plants in Mexico, even while global production has increased. The Jalisco Cero Agua project is one of more than 370 initiatives Nestlé is undertaking in its factories around the world that are helping to conserve water. A world-first for

Nestlé has reduced its water consumption globally by one third during the past 10 years and by 50% at its plants in Mexico, even while global production has increased.

the dairy products industry, the zero-water technology is now being rolled out by Nestlé at its other plants worldwide, starting with dairy factories in water-stressed areas of South Africa, Pakistan, India and China. In 2015, Nestlé was recognized at the Global Water Summit in Athens with the Corporate Water Stewardship award for the Cero Agua project. “Twelve years ago, we were told that this couldn't be done, due to cost implications, water quality issues, the technical complexity involved,” said Jim Knill, Nestlé's head of dairy operations. “But we've shown that the technology works – now we want to apply it elsewhere.” ■

Snapping for a better world

Last summer, “Paris Match” magazine invited shutterbugs to offer their view of the state of the planet in light of COP21. The call was answered: a few months later, the Love Planet photo competition put together a gigantic mosaic of no fewer than 15,000 shots from the four corners of the globe. Rants, messages of hope, heartfelt cries, declarations of love... In turn, these amateur and professional photographers celebrated the

beauty of nature or denounced its transformation, reflected the diversity of ways of life or bewailed the vulnerability of ecosystems, praised solutions for the future, etc. Whatever the point of view, it was difficult to remain indifferent in the face of such a host of testimonies, compiled in a book* given to the heads of state and delegations present in Paris at the end of 2015. A partner in this huge participatory and civic-minded dynamic, Veolia

organized a competition among the company’s staff. Internal mobilization bore fruit, with almost 2,000 entries in total! We take a look back at this key event with photos from the five finalists and the winner, Jerry Fer Damian.

*Available in a digital version on www.parismatch.com/Actu/Environnement/Ma-terre-en-photos-872315.

GRAND
PRIX



Jerry Fer Damian. Province of Baler Aurora (Philippines). Rags stitched together to make a boat sail. The fisherman pulls his boat ashore to shelter it. A typhoon is coming and violent winds have damaged its sail, a makeshift patchwork of clothes, mats and used materials. On average, 15 to 20 typhoons sweep across the country each year. They are becoming more and more powerful because of climate change.

Martin Mecnarowski. Zanzibar, Tanzania. When the tide rises... When the tide rises, it is time to leave the coral reef... The Zanzibaris have long earned a living by growing seaweed. At low tide, you can see them – mostly women – harvesting this invaluable resource in traditional Swahili dress, half-immersed in an emerald green sea. This seaweed has many uses, but the Zanzibaris lament its gradual decline due to increasingly acidic water.



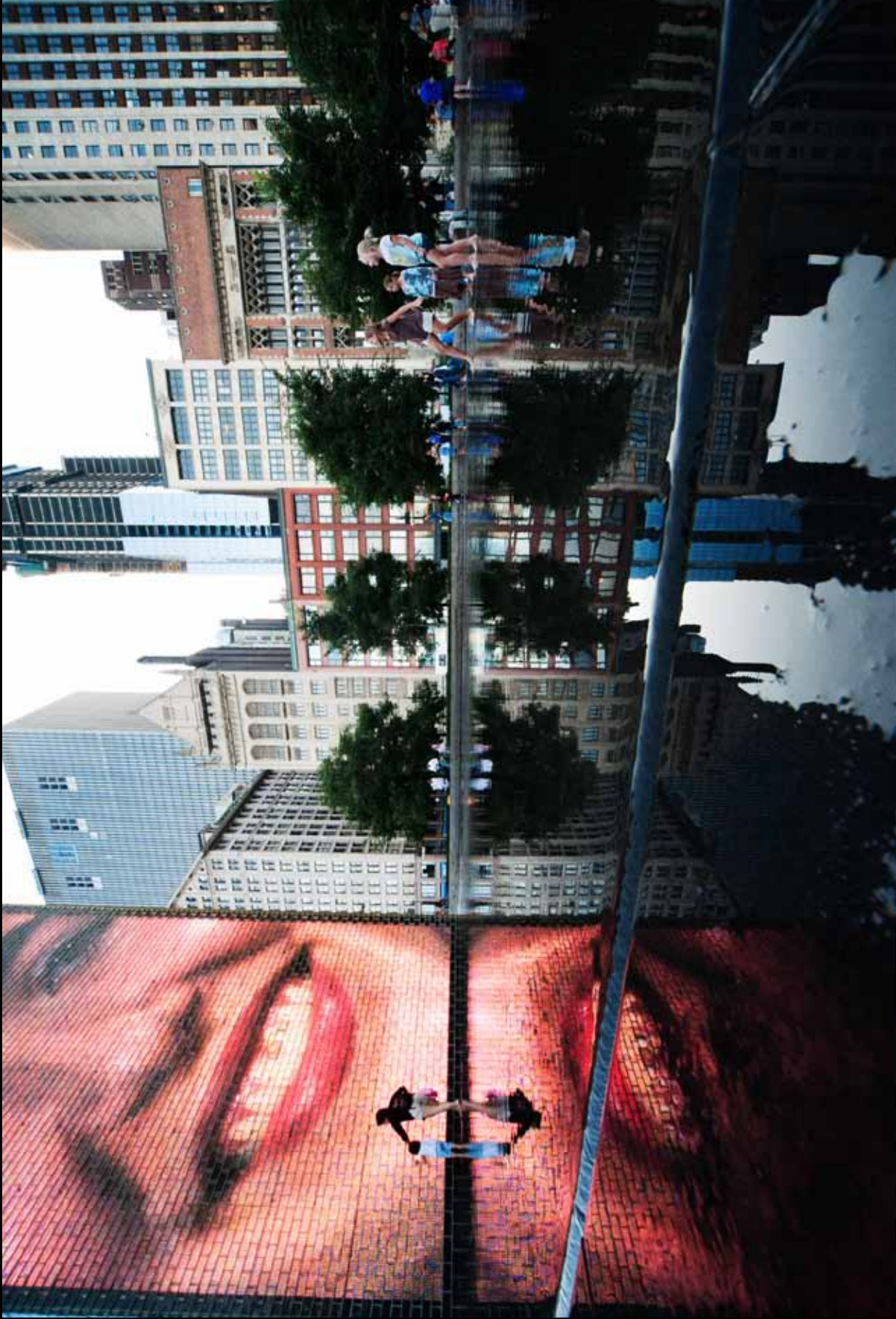
Peng Du. Heilongjiang Province, China. “What a perfect day!” “What a perfect day!” these bathers must be humming, determined to make the most of the refreshing water bursting forth from a mountain stream at the heart of Dailiangzhe national forest park. A ray of sun illuminates the rock, fracturing the water into billions of droplets. The pure joy of man in exultant, preserved nature.

Sungsoo Yang. South Korea. Love, happiness and blessing. Although the white egret lays an average of four eggs a year, with a survival rate of under 50%, we can clearly see three fledglings in this nest... A miracle of nature? The ability to withstand the harsh laws of life in the wild? It's a mystery. In Korea, the egret with its pure white feathers is the symbol of magnanimity and honesty.



Kang In Ho. Homi Bay, South Korea. Sun salutation. Waiting for the sun to rise and wishing for the sky to be as calm tomorrow... Homigot beach with its Sunrise Square is a popular destination. It is the spot in the country hit by the first rays of sunlight every day, all year long. It is also a place known for its unique statues entitled "The Hands of Harmony," representing sunrise on New Year's Day. The left hand is located on land, while the right hand is surrounded by sea. Built in 1999, they symbolize the continued efforts of all Korean citizens to lead a better life.

Johnny McClung. Millenium Park, Chicago. Positive reflections. The Crown Fountain is extremely popular with kids, who have fun running around barefoot while escaping jets of water that giant faces “spit” onto the ground. But don’t worry: these are just massive LED projections of faces that seem to spurt water from their mouths. A great example of water in the city and its unifying role.



Jerry Fer Damian. What a contrast between the photo of Chicago’s Crown Fountain, the symbol of an increasingly important urban world, and the raw beauty of these natural landscapes. Everyone must ensure that these ecosystems are respected and take responsibility for preserving them.



Jerry Fer Damian: his Earth in pictures

“Photographing nature is a way of helping to preserve it,” claims Jerry Fer Damian. His contribution to the Love Planet:photo competition perfectly illustrates this conviction, powerfully symbolizing the fragility of a world affected by climate change. Under a menacing sky, we see a fisherman hurrying

to pull ashore a small boat whose sail, a patchwork of old rags, has been buffeted by winds that we can imagine are already violent. Jerry Fer remembers: “I captured this scene shortly before a typhoon arrived, while I was holidaying in the province of Baler Aurora.” In fact, between 15 and 20 of these devastating tropical cyclones strike the Philippines each year. According to the 40-year-old Filipino engineer, “their increasing severity over the past few years is due to climate

change.” His country is still suffering from the devastating effects of Haiyan in 2013, one of the most violent typhoons ever recorded. Through this image, Jerry Fer Damian offers a striking interpretation of the “calm before the storm” and reminds us of the urgency of finding solutions, in one of the regions of the world most exposed to the effects of global warming.

Bio

A mechanical engineer living in Abu Dhabi for about a dozen years, Jerry Fer Damian has been supervising the hydraulic maintenance of a water treatment plant run by VeBes O&M (a joint venture bringing together Veolia, Besix and the government) since 2011. A passionate image hunter and traveler, he likes to end his day by taking a few photos of the desert that surrounds his workplace. He won the internal competition organized by Veolia during the Love Planet:photo challenge.



RE- SPON- SIBIL- ITY: A VALUE CREATOR

Companies that take their environmental and societal impact into account also improve their long-term performance. Thinking in terms of “global value creation” profoundly changes their business sectors and economic models.

9 commitments to sustainable development

Resourcing the planet

1 Sustainably manage natural resources by supporting circular economy

2 Contribute to combating climate change

3 Conserve and restore biodiversity

Resourcing the regions

4 Build new models for relations and value creation with our stakeholders

5 Contribute to local development

6 Supply and maintain services crucial to human health and development

The women and men we employ

7 Guarantee a healthy and safe working environment

8 Encourage the professional development and commitment of each employee

9 Guarantee respect for diversity and human and fundamental social rights

www.veolia.com: “Our commitments to sustainable development” & “CSR Performance Digest 2014”



Hélène Lebedeff, Deputy Vice President Sustainable Development, Veolia

“Global value creation is part of a subtle balancing game”

What does global value creation mean?

For me, a company in its ecosystem, in other words in interaction with all of its stakeholders, creates value that goes beyond financial results. So Veolia creates societal value through its efficient resource management services. The Group contributes to the development and appeal of local regions. Training employees or integrating those excluded from the job market creates social value, and R&D helps create intellectual value. Last but not least, treating negative externalities such as pollution adds environmental value for our customers and the local regions. The issue at stake is to maintain

the balance to maximize global value creation.

Veolia has defined nine commitments divided into three categories: the planet, regional areas and employees. Why?

Veolia is a major environmental services player, firmly rooted in local areas through its sectors of activity providing essential services that cannot be relocated. Its primary resources are the expertise and performance of its staff. Our commitments have consequently been defined in the light of these three characteristics. They represent our DNA.

How do you assess their effectiveness?

Our commitments have been supplemented by quantified performance targets for 2020, which can be measured each year within the framework of a progress initiative championed at the highest level of the company.

Can you give an example of global value creation?

Projects concerning biodiversity are symbolic of this global value creation. They offer meaning and new skills for members of staff, help give a positive image of the regions, and are highly prized by our clients. They can generate savings or develop new ecological engineering services, for example.



Today, companies can no longer content themselves with doing business without considering the environmental and societal consequences. They are players in the areas where they are established and must therefore play a role in ensuring their sustainability. “This goes beyond environmental performance, which itself goes beyond merely complying with legislation,” underlines Edwin Piñero, Senior Vice-President for Sustainability and Public Affairs, Veolia North America. A sustainable business takes into account the environment, the economy and society in one.

Environmental protection

The environmental impact of the agri-food industry is one of the areas in which Veolia is concentrating its efforts. Through the contract with British firm Diageo’s Cameronbridge distillery in Scotland, the Group recovers the waste from whisky manufacture to produce energy and recycle wastewater. The principle: a biomass plant adjoined to the distillery burns distillation residue to generate electricity, which in turn powers the distillery. The residue — a blend of wheat, hops, yeast and water, amounting to a total of 90,000 metric tons a year — is placed in containers where bacteria convert it into biogas. Enough to supply 80% of the distillery’s electricity needs and 98% of the steam required. And eliminate the effluents that

were previously discharged into the River Forth.

Benefits for local regions

Taking global performance into account has involved a complete rethink of Veolia’s economic model. “In a linear economy, we were service operators,” states Bernard Harambillet, CEO of Veolia Waste Solutions, France. “We are now becoming renewable resource producers, moving toward a more circular economy.” One such example is the agreement Veolia has signed with Restau’Co, the collective catering network, to develop circular economy loops from leftover food. Restau’Co, whose member companies serve 2.3 billion meals a year, will encourage programs to collect biowaste, transported by Veolia to its composting centers. The compost is then sold to the farmers that supply Restau’Co. The (short) loop is thus closed. The first pilot schemes are currently being implemented in Calvados. For Bernard Harambillet, a local approach is at the heart of the circular economy. Accordingly, the waste storage facility in Lapouyade, in southwest France, has developed to become first of all an energy plant for the urban area and, secondly, a source of local employment. Through biogas recovery, the site produces a total power of seven MW of electricity, enough to meet the consumption needs of half of the conurbation (35,000 inhabitants). The engines heat up as they produce electricity. ...

Contd. page 46



Bernard Harambillet,

CEO of Veolia Waste Solutions, France

“We are becoming renewable resource producers”

What does global value creation mean to you?

In the area of waste, for example, it involves a real mindset change. In the past, our job was to collect waste and then find solutions. However, to create circular economy loops, it’s the reverse logic: you have to start with the end customer’s need for resources. We are becoming recycled raw material producers. Which means adapting the collection of the material and preparing it to this end. For this to happen, waste collection is going to have to evolve and become increasingly selective so as to transform the material more effectively. In order for waste to become a resource, an industrial transformation step is required. And for industry to agree to replace the virgin material with recycled material in its manufacturing process, we must be able to guarantee equivalent volumes, quality and price.

How is it beneficial?

For the environment, of course. Producing a plastic bottle from recycled plastic emits 70% less CO₂ than manufacturing it from petroleum. It’s also more advantageous for the economy. Recycling generates 25 times more jobs than waste storage. We have therefore created 275 jobs in three years at Elise, a social integration firm with extensive expertise in the civic and social economy. We have signed a partnership in order to pursue joint business efforts. Elise collects the office paper, which we repurpose. We are planning on 300 new jobs by 2020 through the collection of various types of waste.

What is the advantage for Veolia?

We have set our 2017 target for contracts linked to the production of renewable resources — recycled raw materials or green energy — at 20% of our revenue, i.e. 500 million euros. We are on track to meeting this target, with already €265 million worth of contracts for these new services at the end of 2015.



“There are cultural differences when it comes to deciding on priorities. In North America, we attach a great deal of importance to biodiversity.”

Edwin Piñero,

Senior Vice President for Sustainability and Public Affairs, Veolia North America



Edwin Piñero,

Senior Vice President for Sustainability and Public Affairs, Veolia North America

“Demonstrating the economic interest of environmentally friendly actions”

How would you define global value creation?

It is the balance between environmental, economic and societal aspects. This means that some environmentally friendly solutions are not always the most sustainable because they may be too costly or have an adverse impact on the quality of life. Also, the least costly option may not be the most sustainable either. We need to be able to demonstrate to our customers and stakeholders that it is in their best long-term interests to invest in the more sustainable solution, even if it is more expensive. To make this business case, measuring environmental, as well as economic and social performance is essential. For example, we have an energy project in Boston: the Green Steam project. It involves producing steam to heat part of the city. By choosing a particularly high-performance steam-generation technology, we lose less heat and emit less greenhouse gas. This not only has environmental and quality of life benefits, but the customer saves money. We can clearly see that the benefits are environmental, societal and economic.

What is distinctive about North America?

In this global economy, there are many similarities around the world as to how sustainable performance and value creation is measured. However, North America is somewhat distinctive in how it integrates regulatory concerns and economic business case factors into environmental decision-making. For example, even with a biodiversity project, we also consider the community and societal benefits of such actions, as well as the economic value of the related ecosystem services.

Does Veolia have a specific approach to global value?

In addition to always trying to offer the most sustainable solution, we strive to demonstrate the business case around such efforts. We show how efforts that help the environment also make economic and societal sense. We even have tools and methodologies that help calculate the financial value of environmental actions.



... This heat was initially not recovered. Why not do so? After consultation with the local authorities, the decision was made to grow tomatoes in heated greenhouses, allowing the creation of 25 jobs (60 planned for the long term) for a village of 450 inhabitants.

People are the key resources

Because Veolia views its staff as its primary resource, the Group promotes best practices internally with regard to human resources. In 2015, through its “Social initiatives: ideas for progress” approach, it chose 70 initiatives out of 270 best practices from 34 countries. By way of example, Australia encourages a safety culture shared by everyone via the “Always Safe” program. Launched in 2013, it is already bearing fruit, especially in terms of reporting near misses and a significant reduction in occupational accidents. In 2014, their frequency rate fell to zero! Another particularly virtuous project from a social perspective is the contract with Ecocis, the first example of a paper plant reopening in France. It will ultimately result in the creation of complementary activities and has the potential to create

70 direct jobs (not including complementary activities). “We oversee their entire supply of recycled raw materials,” explains Bernard Harambillet. “Veolia’s positioning as both a producer and manager of resources is completely new. This economic model is highly promising: the contract with Ecocis amounts to 150 million euros over five years.”

Societal solution

A Veolia partner, Danone is also interested in the impact of its activities on society. This involves, for example, engaging in recycling in countries where this still depends a great deal on the informal economy. “We are therefore trying to work with the communities that collect waste in order to include them in a more formal economic cycle,” states Pascal De Petrini, Danone’s Executive Vice-President Strategic Resource Cycles. “In this way, these people are recognized and can benefit from services such as health and education. Veolia helps us by providing its technical know-how in setting up waste collection and sorting centers, along with its skills in interacting with these informal collectors.” ■



Pascal De Petrini,

Danone’s Executive Vice-President Strategic Resource Cycles

“Zero net carbon by 2050”

Why is Danone taking an interest in sustainability questions?

Sustainable development has always been very important to Danone: in a legendary speech in Marseille in 1972, the founder Antoine Riboud highlighted the fact that a company’s responsibility did not stop at the factory door, that it had an impact on the environment and people’s lives. Today, these questions are even more critical: the scarcity and price volatility of resources (water, agricultural raw materials) are causing us to question the resilience of our model. Environmental or economic problems will affect our suppliers, and therefore their ability to supply us with agricultural products. Taking an interest in the circular economy, for example, is a way of managing the sustainability of our business model.

What does this look like in concrete terms?

Let’s take the example of greenhouse gases (GHGs). We have the ambitious target of achieving zero net carbon by 2050. We are working especially on milk, which represents 50% of our emissions. Two striking examples: if cows are fed on corn or soya, GHG emissions — primarily methane — are higher than if they are fed on alfalfa or flax. Likewise, in many emerging countries, farming practices are not very effective and lead to soil depletion, and therefore less CO₂ capture. Helping farmers to improve their practices has an impact on GHG emissions.

In what areas are you taking action?

We are particularly concentrating on four areas. First of all, protecting water resources, then managing packaging and its recycling. Thirdly, we are working a great deal on energy efficiency by optimizing our plants and using the renewable energy derived from biomass — wood and agricultural waste. Finally, we are taking action on process wastewater, mostly from dairy by-products, or sustainable farming, which means for example that we take an interest in managing liquid manure and developing biogas plants.

Pascal De Petrini,

Danone’s Executive Vice-President Strategic Resource Cycles

Community



To meet the needs of a Petrochemical Integrated Complex (PPIC) in Kertih, Malaysia, a Veolia Water Dungun (VWD) water treatment plant was built in 1999, in a tropical forest area with remarkable biodiversity. A partnership was concluded with a local university in order to assess the site’s environmental impact and reinforce its ecological management.

Shared biodiversity

Preserving biodiversity is first of all about trying to get to know it better. But how can you take an inventory of the living species over a 990-acre site, made up of jungle, meadows, orchards and a vast water storage basin? “To meet this challenge, we called on the renowned expertise of the University of Terengganu,” explains Amiruddin Ibrahim, VWD’s Plant Manager. Under the direction of experienced researchers, a team of biology and biodiversity management students geared into action to measure the wealth of the site’s aquatic and terrestrial ecosystems between 2010 and 2011. To precisely determine the site’s state of health, the university team concentrated on species likely to provide the best bioindicators for each of the six areas studied. This is how some twenty scientists examined nature with a fine-tooth comb: small mammals, birds, insects, microbial organisms, and plants. A highly educational immersion for the students (sorely tested by the monsoon!), this sampling work made it possible to

take an inventory of rare or endemic species (such as the umbrella palm tree or the Lesser Dawn bat) and enrich the university’s knowledge. At its conclusion, the evaluation confirmed the good ecological condition of the areas and led to reinforced protection for the site, with an action plan still in effect. “On the basis of our partners’ recommendations, we are continuing to conduct environmental monitoring, especially by organizing tree planting, implementing late mowing and eliminating invasive plants,” highlights Tuan Ahmad Bin Tuan Dalam, VWD’s Technical Support Manager. At the same time, this dynamic partnership has successfully made a complex subject – biodiversity – an issue shared by all: the site’s personnel and the neighboring communities have been made aware of the need to limit human activity in the forest under regeneration, while visitors and schoolchildren are invited to help preserve the region by planting medicinal plants in the factory’s arboretum.



Ecosystems under the microscope

➤ 310 plant species, 74 animal species and 8 species of single-celled organisms have been identified on the site.

➤ These include, *Nepenthes ampullaria*: this carnivorous plant, which also feasts on decomposed plants, provides a habitat for an endemic tiny frog species, *Mycrohylla nepenthicola*, discovered in 2010.

➤ The Dungun factory’s arboretum is home to several hundred fruit trees and medicinal plants, such as *Eurycoma longifolia*, known for its multiple antimalarial, antidiabetic, antimicrobial, aphrodisiac, etc. properties. Spanning 2,500 m², the site is maintained by two employees and has welcomed 1,500 visitors since it opened in 2000.

EXPLAINER

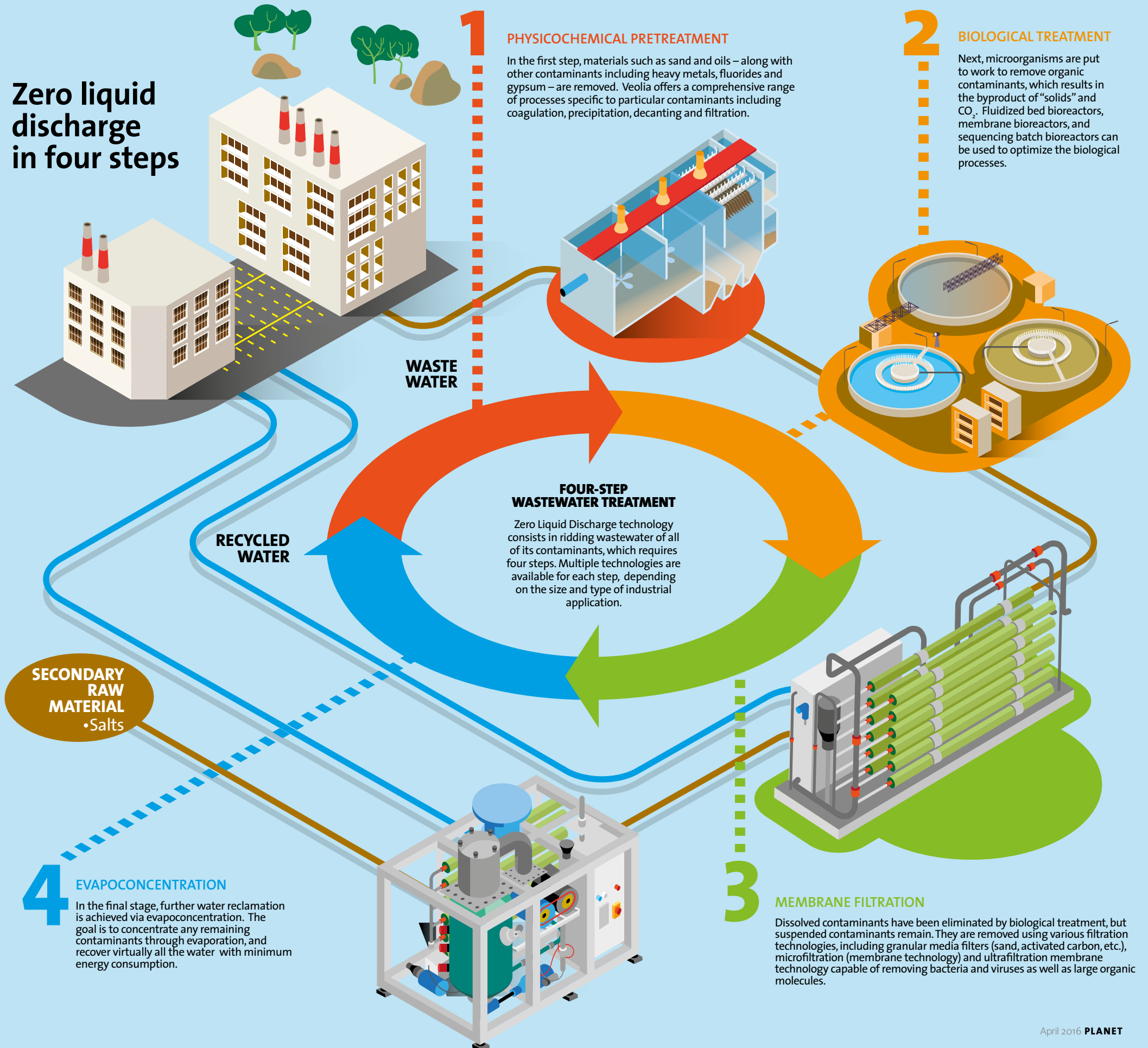
Target: zero water discharge

Zero Liquid Discharge technology aims to reuse wastewater in a system. This technology has a bright future especially in regions around the globe where water reuse is mandatory.

A closed loop water cycle: this is the principle of Zero Liquid Discharge – or ZLD – technology. A simple principle, but a complex technology. Water remains in a closed loop in the factory, where it is gradually rid of all of its contaminants and is of high enough quality to be reused in the industrial facility's process. There are four decontamination processes required to achieve this: physicochemical pretreatment, biological treatment, filtration and, finally, evapoconcentration (see opposite). Certain pollutants are purified and reused in the process. "ZLD technology has applications across multiple industries including oil and gas, automotive, food and beverage, pharmaceutical, and others," states Dionisio Visintin, Marketing Manager of Veolia Water Technologies Italia's Solutions division. "At the outset, this technology was geared toward large manufacturing and industrial

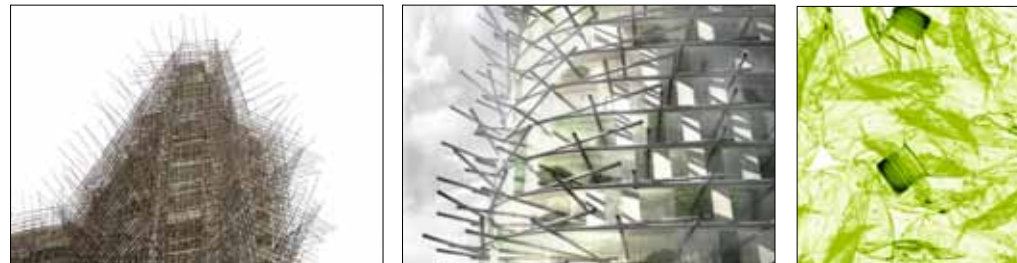
complexes, but this is now no longer the case." So why utilize this sophisticated technology when it would be simpler to treat and discharge water using traditional wastewater treatment technology? "ZLD technology is critical when the surrounding environment is fragile and cannot withstand even the discharge of treated wastewater effluent," points out Visintin. "ZLD also offers another major advantage: since no effluent is discharged, water legislation need not be taken into account. Last but not least, it sometimes allows you to avoid post-treatment." Another scenario in which ZLD is a must: in regions where water is scarce, its reuse may be required by law. This is the case, for example, in California, which has been struck by drought for over a year and where all businesses are required to "close the loop." Ever mindful of sustainability, most industries are now looking to reduce their environmental impact, especially their water consumption. ■

Zero liquid discharge in four steps





➤ **Energy from the four winds**
Inspired by bamboo scaffolding, the skyscraper's structure is made of standardized prefabricated steel tubes to make construction easier and limit disturbance on the site. These elements are also hollow to increase the tower's wind resistance. This feature is exploited to accommodate a network of wind turbines powered by the air flowing through the tubes. The tower therefore takes advantage of its wind exposure to produce energy.



The Organic Skyscraper, a self-extending tower

A new alternative to traditional construction materials, waste is inspiring a growing number of architects. The Organic Skyscraper, designed by the Chartier-Corbasson agency and engineering specialists VS-A, is part of this trend with a particularly fertile concept.

This office building, which was presented and received a special mention at the SuperSkyScrapers ideas competition, is unique in that it "grows" from the waste produced by its occupants. But how? Paper and plastic bottles are collected and recycled into acoustic tiles in situ, in small reconditioning plants. "To assess the project's feasibility, we estimated

someone's annual consumption at their workplace," explains Thomas Corbasson, the skyscraper's designer with Karine Chartier. "It would take about a year to produce the façade surface area required for a set of offices." Before building another, then another, and so on. The self-generating tower is designed to develop according to needs. More occupants

mean more recycling, and therefore more materials to build it. Less utopian than it may seem, this continuous construction principle also appeals due to the relevance of the economic and social model it promotes. Compared to the investment currently required to construct a skyscraper, the Organic Skyscraper presents itself as a relatively

inexpensive solution, which also invites us to consider the collaborative role that everyone can play in helping to build their own environment. If recycling is about building a more sustainable future, this eco-friendly growing tower deserves to emerge from the ground one day.

JULY 6-8, 2016, BONN (GERMANY)

7TH RESILIENT CITIES 2016 GLOBAL FORUM

RESILIENCE AND ADAPTATION

EXPERTS FROM ALL OVER THE WORLD ARE CONCENTRATING ON SOLUTIONS FOR LOCAL PUBLIC AUTHORITIES, INCLUDING SMALL INSULAR STATES.

QUESTIONS LINKED TO URBAN RESILIENCE AND CLIMATE CHANGE ADAPTATION RAISE ISSUES REGARDING RESILIENCE STRATEGIES, FUNDING, PERFORMANCE MEASUREMENT AND RESOURCE MANAGEMENT.



[HTTP://RESILIENTCITIES2016.ICLEL.ORG/](http://resilientcities2016.iclel.org/)

Together committed to the Environment!

Everywhere, Veolia's employees are personally committed to Resourcing the World!
Find out about the 2015 winners of the 2nd edition of our internal operation.

 CLEANERS	 AUSTRALIA	 PORTUGAL	 SLOVAKIA	 SPORTSMEN	 IRELAND	 PERU
 SUPER ORGANIC	 GERMANY	 BELGIUM	 SAUDI ARABIA	 ROMANIA	 FRANCE	 INDIA
 FRANCE	 ARTISTS	 COLOMBIA	 UNITED-KINGDOM	 BULGARIA	 ARGENTINA	 DENMARK
 TREE PLANTERS	 SPAIN	 NEW ZEALAND	 NIGERIA	 RECYCLERS	 CHINA	 SINGAPORE
 CHILE	 SPAIN	 FRANCE	 GARDENERS	 JAPAN	 TAIWAN	 HONG KONG
 FRANCE	 PHILIPPINES	 PEDAGOGUES	 INDIA	 CZECH REPUBLIC	 BRAZIL	 MALAYSIA
 HANDYMEN	 HUNGARY	 OMAN	 POLAND	 USA	 MEXICO	 FRANCE
<p>To know more: www.veolia.com (Veolia Group/Corporate Social Responsibility/ "Together committed to the environment !" - 2015)</p>				 FAVOURITES	 SOUTH KOREA	 FRANCE