

ACTIVITY REPORT 2022



THE VEOLIA INSTITUTE

As a **platform for analysis and exchange** between the worlds of academic, business and civil society, the Veolia Institute has been contributing since 2001 to enriching their reflections on the major global issues as well as the future vision of the Veolia Group.

The Institute addresses issues at the crossroads between **society and the environment**, such as climate change and urban resilience.

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The question of resources is never a neutral subject; it is a major geopolitical issue.



Dinah Louda
President of
the Veolia Institute



Nicolas Renard
Executive Director of
the Veolia Institute

« *History is again on the move* », wrote the great historian Arnold Toynbee in the previous century. The same was true in 2022: with the war in Ukraine and its cascade of repercussions, this phrase has become topical again and once more, we find ourselves in one of those critical periods when history accelerates and bifurcates.

Immediate history, at close range, the history that is being made before our eyes, imposes its themes (the deadly battles, the cohorts of refugees, the diplomatic attempts, but also the return of inflation, the upheaval of the energy markets...) and obscures others, which are nonetheless crucial for the future, such as the eight billion inhabitants that now live on the planet.

Faced with the urges of the present, what weight does the long term -one of the Veolia Institute's favorite subjects, have? How can we plan ahead when the news is once again tragic and uncertainty reigns? The current crisis calls for a number of comments, but two in particular concern the Institute. Firstly, public authorities, companies, universities... must get used to thinking and acting in an environment that is even more volatile and complex than before. Calm times are likely to become the exception and storms the norm. It is this complexity and diversity of options that the Institute seeks to explore, in the hope that those who follow will find in its work and in the solutions it identifies useful material for their reflections and actions. The Institute's vocation is to shed light on the future of the environment, cities and the climate, in all their uncertainties and potential.

Secondly, in times of crisis, political and economic leaders will have all the more room for maneuver if they have anticipated and planned for firewalls, protecting them in part from emergencies. And it is this observation that gives meaning to the Institute's activities, even when the storm is roaring. Let's take the example of alternative resources, a theme that the Institute has been exploring for many years. Why are they so important in the current crisis? Quite simply, because renewable energies, being most often local, are energies of sovereignty, an issue that has once again become vital for governments. Because the reuse of wastewater gives access to a safe resource, located at home, sheltered from international constraints. Because recycling waste decouples growth from the extraction of resources from nature, and from imports of raw materials from unstable or hostile countries.

The truth is that the question of resources is never a neutral subject; it is a major geopolitical issue. That is why the Veolia Institute's Foresight Committee addressed this subject last October. That is why, in 2022, the Institute's work also focused on sufficiency ("sobriété" in French) and ecological transformation, both of which strengthen the independence of States in terms of their supply of essential resources.

Faced with the difficulty of reconciling the imperatives of the present and the preparation of the long term, faced with the cracks in the world and the tensions born of the incessant dialectic between possible futures, subjugated futures and a chosen future, we need to exercise will, we need to take the lead, to decide, to innovate. Foresight contributes to this. Leonardo da Vinci said that « not to foresee is already to groan ».

Trends that inspire optimism about the future of our planet.



Pierre-Marc Johnson

Chair of the Foresight Committee

Since the end of 2022, the world has been home to eight billion people.

This new demographic threshold comes at a time when climate change is increasingly disrupting life on Earth. Forest fires and droughts continue to rage around the world, floods are destroying cities, heatwaves are making summers deadly and greenhouse gas emissions, which exacerbate these disasters, are on the rise.

So, in 2022, the world continued to face two existential crises - rapid global warming and an accelerating decline in biodiversity - while recovering from a pandemic and rediscovering the horrors of a high-intensity armed conflict in Europe with global economic repercussions.

However, hope should not be lost for the environmental cause, which also scored some significant victories this year. These include the continued implementation of the Paris Climate Agreement and the inclusion of adaptation to the proven consequences of global warming at COP27, the marked increase in investment in renewable energies, particularly in the wind and solar sectors (with 41.4 GW more installed by 2022, the cumulative capacity of photovoltaic installations in the European Union now stands at 208.9 GW), and the adoption in Montreal, at COP15, of a Global Framework for Biodiversity setting ambitious targets for 2030.

Beyond these surges, we cannot hide the fact that the ongoing changes to the climate and the destruction of biodiversity, which threaten our quality of life in the long term, reveal the limits of our growth models and the need to rethink them. This is an opportunity that we must seize to build a new development model that leaves

no one behind. At this stage, with eight billion people on Earth, we need to implement a genuine ecological transformation to enable sustainable development. But it's a complex challenge that requires collaboration at every level.

First of all, governments have a key role to play in establishing strict environmental policies to limit greenhouse gas emissions and encourage renewable energies. Companies can also get involved by adopting more sustainable practices without waiting for the rules to be established. Many are already doing so, under pressure from public opinion and consumers of the goods and services they produce. This is why raising public awareness of climate and environmental issues remains a priority - as do education and scientific teaching to train today's and tomorrow's workers in the issues at stake, and investment in research and development to develop new, more sustainable technologies and find solutions to environmental challenges.

In any case, what we need is a real paradigm shift that strengthens understanding of environmental challenges and encourages determined action to address them. The Veolia Institute has given a great deal of thought to all these aspects this year, through its various projects, with the aim of gaining a better understanding of the notion of ecological transformation throughout the world, clarifying what is at stake and identifying the conditions for accelerating this virtuous process of transformation.

This fundamental transformation is both a challenge and an opportunity, and all players in society must play their part to ensure its lasting success.

A PLATFORM

FOR ENVIRONMENTAL AND SOCIETAL FORESIGHT

Since 2001, the Veolia Institute has been conducting foresight work on issues at the crossroads of the environment and society. Its mission is to offer a cross-section of views to shed light on the future. As a bridge between the academic world, civil society and the Veolia Group, the Institute contributes to public debate, identifying and sharing elements of analysis and understanding of emerging issues.

A PARTNERSHIP-BASED AND MULTIDISCIPLINARY APPROACH

The Veolia Institute develops its activities through a permanent dialogue with scientific and intellectual circles. Through its conferences, its journal, The Veolia Institute Review - Facts Report, and forward-looking working groups, the Veolia Institute brings together and disseminates the experience and expertise of various players (researchers, academic experts, public authorities, international organizations, NGOs, companies) to offer a variety of perspectives on its working themes:



A GOVERNANCE OPEN TO THE WORLD

The Veolia Institute is based on three pillars:

- + An operational team that ensures the day-to-day running of the Institute;
- + A Board of Directors which defines the general policy, directs and controls the management of the Institute;
- + A Foresight Committee that supports the Institute and guides its development.

THE VEOLIA INSTITUTE TEAM

The team looks for avenues of reflection, proposes major orientations and identifies priority subjects and expert partners. It implements action programs, coordinates the network of stakeholders and promotes the results of its work. This collective work is regularly discussed with the Foresight Committee and validated by the Board of Directors.



Dinah Louda
President



Nicolas Renard
Executive Director



Nina Cambadélis
Director of Programs



Laurence Aureli
Head of Communications



Raphaëlla Etienne
Executive Assistant

THE VEOLIA INSTITUTE'S BOARD OF DIRECTORS

The Board embodies the Institute's positioning and the bridges it creates between private players, the scientific sphere and representatives of civil society. Its mixed representation of 15 members - including representatives of the Veolia Group, the Foresight Committee and recognized outside experts - ensures balanced management of the Institute.

- | | |
|---|--|
| + Jean-Pierre Boisivon , Professor Emeritus of the University of Paris II Panthéon-Assas; Vice President of the Veolia Institute; | the Institute's Foresight Committee; |
| + Estelle Brachlianoff , Chief Executive Officer, Veolia ; | + Claude Laruelle , Chief Financial Officer, Veolia, Treasurer of the Institute; |
| + Antoine Frérot , Chairman, Veolia ; | + Helman Le Pas de Sécheval , General Counsel, Veolia; |
| + Paul-Louis Girardot , Vice President of the Veolia Institute; | + Claude Mandil , Former Director General of the International Energy Agency; |
| + Alain Griot , consultant, former Advisor to the Director of Research and Innovation, Ministry of Ecological Transition and Solidarity; | + Christophe Maquet , Senior Executive Vice President - Asia, Veolia ; |
| + Olivier Grunberg , Executive Vice President, and General Secretary of Veolia Water; | + Julia Marton-Lefèvre , Expert in sustainable development and the environment, former Director General of the International Union for Conservation of Nature (IUCN); |
| + Philippe Guitard , Senior Executive Vice President, Central and Eastern Europe, Veolia; | + Jean-Pierre Tardieu , Honorary Chairman of the Veolia Institute; |
| + Pierre-Marc Johnson , International lawyer, former Prime Minister of Quebec, Chair of | + Sébastien Treyer , Executive Director of Institute for Sustainable Development and International Relations (IDDRI). |

THE FORESIGHT COMMITTEE

Thanks to the international reputation of its members and their expertise, the Foresight Committee guides the work and development of the Veolia Institute. Since the creation of the Institute in 2001, the Committee has met regularly to enrich the Institute's networks and guide its foresight mission. Its members are:

HARVEY FINEBERG

President of the Gordon and Betty Moore Foundation, former President of the United States Institute of Medicine

PIERRE-MARC JOHNSON

General counsel at the Lavery law firm, Montréal, former Premier of Quebec

PHILIPPE KOURILSKY

Honorary Director General of the Pasteur Institute, biologist, Professor Emeritus at the Collège de France

AMY LUERS

Global Lead for Sustainability Science at Microsoft, founder of Sustainability in the Digital Age

MAMPHELA RAMPHELE

Former Managing Director of the World Bank, former Vice-Chancellor of the University of Cape Town

AMARTYA SEN

Economist, winner of the 1998 Nobel Prize in Economics, holder of the Thomas Lamont Chair and Professor of Economy and Philosophy at Harvard University



From left to right, standing: Franck Galland, Managing Director of the engineering consultancy Environmental Emergency & Security Services (ES); Sébastien Daziano, Senior Executive Vice President, Strategy & Innovation, Veolia; Jean-Pierre Tardieu, Honorary Chairman of the Veolia Institute; Pierre-Marc Johnson; Nicolas Tenzer, President of the Centre d'étude et de réflexion pour l'action politique; Nina Cambadélis, Director of Programs of the Veolia Institute; Harvey Fineberg; Emilie Nguon, work-study student at the Veolia Institute; Pierre Ribaute, Managing Director of Water France at Veolia. From left to right, seated: Philippe Kourilsky; Mamphele Ramphele; Dinah Louda, President of the Veolia Institute; Amy Luers.

The meetings of the Foresight Committee are an opportunity for the Institute to validate current projects, to detect new foresight topics and to enrich its areas of work «thanks to the insights of international and renowned experts. In 2022, the Foresight Committee met in Paris to discuss the return of geopolitics to the energy game and its impact on scarce resources.

A RECOGNIZED LEGITIMACY

For more than 15 years, thanks to its unique positioning that benefits both from Veolia's experience and the support and scientific rigor of the Foresight Committee, the Veolia Institute has established itself as a relevant and legitimate platform on global issues, which has earned it recognition on an international scale.

The Veolia Institute was thus admitted as an «NGO Observer» by the United Nations Framework Convention on Climate Change (UNFCCC) by decision of the COP 21 in December 2015. This is a recognition of the Institute's legitimacy as a contributor to the understanding of climate issues. This admission allows it to participate in the COPs alongside the Parties (governments, negotiators...), to be a force of proposal within the networks of civil society actors and to feed the debates in preparation for the negotiations.

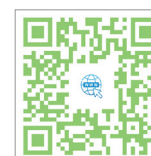
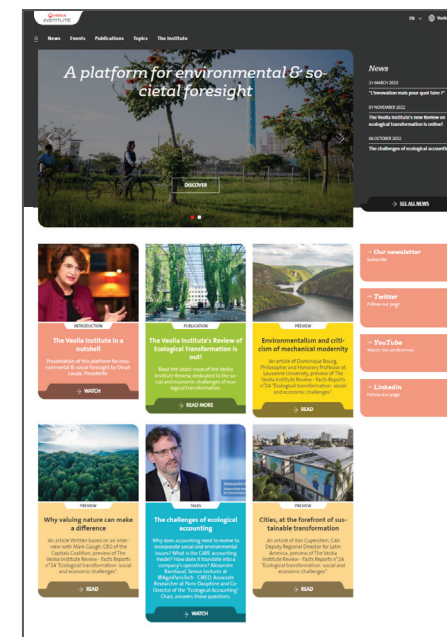
This status supplements other recognitions obtained previously:

- Member of the « civil society » network of the UN Department of Economic and Social Affairs;
- Accreditation as a « research organization » by the European Commission in the framework of the Seventh Framework Program for Research.

WORK ACCESSIBLE TO ALL

The Institute continued its communication activities and the dissemination of its work as widely as possible in 2022:

- + The Veolia Institute publications are available in free access, on the Veolia Institute website and on the Open Edition portal of electronic resources in the humanities and social sciences.
- + The Veolia Institute conferences may be viewed on the Institute's website and Youtube channel.
- + The newsletters and social networks are used to promote the Veolia Institute's external network and its links with the Veolia Group. ■



ECOLOGICAL TRANSFORMATION:

CHALLENGES AND OPPORTUNITIES

While the urgent need to act on climate change is increasingly on the international agenda, debates on the vision and implementation of ecological transition are still far from settled.

Against this backdrop, how can we make ecological transformation feasible and acceptable, both socially and economically?

A DEDICATED ISSUE OF THE VEOLIA INSTITUTE REVIEW

In November 2022, the Veolia Institute published a Review dedicated to this theme, in partnership with Archipel&Co, featuring contributions from academics (University of Lausanne, University of Stellenbosch), research organizations (CNRS-Cirad), NGOs (UNEP Copenhagen Climate Centre, ChemSec, C40, Art Climate Transition), foundations (Institut du Développement Durable et des Relations Internationales, Fondation Roi Baudouin, European Policy Centre, Climate Policy Initiative, Chatham House), CSOs (Sustainability Institute, BehaviourWorks Australia) and companies (AREP, Google, Veolia, Groupe Bouygues, UNDP, Capitals Coalition) to explore ways of ecological transformation.



Find the Review online, freely accessible, on the Veolia Institute website.



Covering multiple realities, varying according to geographical context, time horizon and field of application, this process is the source of divergences and cleavages questioning our relationship with nature and technology.

A common denominator of the different approaches is the bet on humanity's ability to rise to the «climate challenge», by rethinking our societies within a sustainable logic. Increasingly, it is the link between environmental imperatives and social issues that is the subject of debate: how can we reconcile climate emergency, biodiversity crisis and resource scarcity with human development and the fight against inequalities?

The aim of this issue is to gain a better understanding of the different narratives and scenarios people imagine surrounding the notion of ecological transformation around the world; to clarify the issues at stake and identify the main opportunities for organizations and society in general; and finally, to identify the conditions for accelerating a virtuous transformation process.

A CONFERENCE-DEBATE ON « ECOLOGICAL TRANSFORMATION: SOCIAL AND ECONOMIC ISSUES »



Following the publication of this Review, the Institute organized a conference-debate on the theme of ecological transformation on November 30 at Veolia's headquarters in Aubervilliers.

Valérie Quiniou-Ramus,
Laurence Lehmann-Ortega,
Anne Le Guennec
and Fabrice Bonnifet

The diagnosis of the urgent need to act in the face of climate change is becoming more and more prominent on international agendas, while debates on the vision and methods for implementing ecological transition are still far from settled... In this context, how can ecological transformation be made feasible and acceptable, from both a social and economic point of view?





Moderated by David Menasce, Managing Director of Archipel&Co, the debates brought together :

- + **Anne Le Guennec**, CEO - Veolia Waste Recycling and Recovery France, explained how to reconcile industrial and citizen issues, stressing the importance of giving value to recycled raw materials and rewarding the act of sorting.
- + **Valérie Quiniou-Ramus**, Executive Director of Foresight and Research at Ademe, presented the four main scenarios identified by Ademe (frugal generations, territorial cooperation, green technologies, reparative betting) for achieving carbon neutrality by 2050, as well as their social and economic consequences.
- + **Fabrice Bonnifet**, Director of Sustainable Development and Quality, Safety and Environment at the Bouygues Group, presented what the Bouygues

Group is doing on the subject, and how he sees it evolving in the company's activities, enabling action to be taken on issues such as materials, positive energy buildings and water treatment.

- + **Laurence Lehmann-Ortega**, Professor of Strategy and Corporate Policy at HEC Paris, explained how ecological transformation and its challenges are taught to current and future generations.



Watch the recording of the conference on [the Veolia Institute website](#).



THE VEOLIA INSTITUTE

INSIGHTS INTERNAL FORESIGHT TOOL

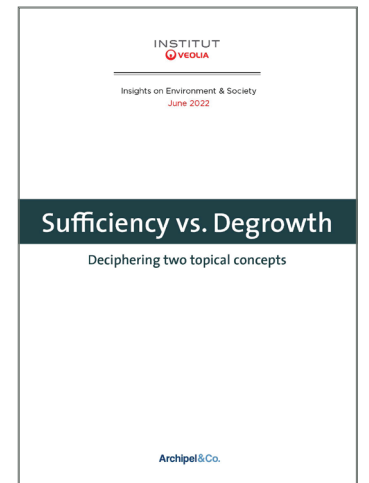
In 2021, the Veolia Institute launched a new series of forecast notes called Insights. These internal papers are designed to monitor themes of interest and to disseminate a forward-looking vision within the group. They present a summary of a social issue related to ecological transformation, combining an academic perspective with examples of how to take action.

SUFFICIENCY VS. DEGROWTH

After highlighting the challenges of plural corporate performance, followed by the rise of the Just Transition concept in 2021, the third edition, in June 2022, focused on the subject of sufficiency and degrowth.

Far from the concepts of green growth, sustainable development or inclusive growth, sufficiency and degrowth are both aimed more at «self-sufficiency», frugality and a break with certain current consumption patterns.

The concepts of sufficiency and degrowth are enjoying a resurgence of interest in some countries - notably France - further accentuated by reflection on energy sovereignty in the context of Russia's invasion of Ukraine.



Putting these concepts into perspective.

The different ways of implementing sufficiency.

The obstacles to scaling up these solutions.

This note analyzes the weight of these two concepts in public debate. The analysis is divided into two parts: a perspective to assess the impact of the concepts of sufficiency and degrowth in public debate (and their translations), and a more operational perspective. The latter highlights the different ways in which companies are implementing sufficiency in particular, as well as the obstacles limiting the scaling-up of these solutions.

SUSTAINABLE CITY COMPETITION

EKOOPŠTINA (SERBIA)

In February 2022, with the support of Veolia Serbia, the Veolia Institute signed a partnership to support the Sustainable City - EkoOpština (« Eco-Commune ») competition implemented by the Institut Français in Serbia in 2022.



Press conference for the launch of the EkoOpština sustainable cities competition (May 2022).

SEMINARS ON WATER AND WASTE MANAGEMENT

Designed to be deployed in countries with a strong need for urban infrastructure renovation and construction, this project aims to facilitate the peer-to-peer exchange of best practices in sustainable cities, promote the know-how of French companies in the field of sustainable cities, and reward the efforts of local authorities towards sustainable development.

The Veolia Institute contributed to the financing of two seminars (on sustainable water and waste management), as well as to the prizes awarded to Serbian schools for their efforts to raise awareness of sustainable development.

The theme of the sustainable city has been one of the main threads running through the work of the Institut Veolia since its creation, as part of its mission to share best practices and raise awareness of environmental and societal issues.

By supporting this program, the Institute is pursuing its commitment to sustainable city issues and strengthening its ties with Veolia's international teams and stakeholders.



ECONOMIC AND ENVIRONMENTAL DIPLOMACY AND DECENTRALIZED COOPERATION

In addition, the «sustainable city» competition is part of economic and environmental diplomacy and decentralized cooperation on the theme of sustainable cities (water, energy, waste, smart cities, mobility) supported by the French diplomatic network (via the Institut Français).

Developed in Poland in 2013 (where it is still active under the name Eco-Miasto and currently supported by the Veolia Poland Foundation - Fundacja Veolia Polska) then in Bulgaria in 2016 and 2017, this competition has always been intended to be replicated in other geographies.

The project in Serbia is intended to have a regional impact in the Western Balkans. Indeed, the countries of the region have a significant infrastructure deficit, considered a major obstacle to economic development and a key factor in their integration into the European Union.

As the 2022 edition of this competition in Serbia was very well received, the Veolia Institute is pleased to extend its partnership with the Sustainable City - EkoOpština competition in 2023.



Award ceremony for the winners of the EkoOpština sustainable cities competition (October 2022).

THE VEOLIA

INSTITUTE TALKS

This format of meetings for Veolia managers allows them to explore the environmental, societal and geopolitical changes underway through dialogue with high-level experts. In 2022, these meetings were an opportunity to welcome two personalities:

SOPHIE TRÉMOLET

February 2022



**What are nature-based solutions?
How do these solutions meet the challenge of water security?
What are the possible financing models for these solutions?**

These are just some of the questions Sophie Trémolet, Water Europe Director at The Nature Conservancy, was kind enough to answer.

Nature-based solutions make it possible to preserve, manage or restore ecosystems to meet today's societal challenges, combining benefits for society and biodiversity. Closely related to the concepts of agroecology and ecological engineering, they place a key emphasis on the preservation and conservation of natural processes.

Sophie Trémolet's talk reminds us that nature offers a wealth of resources that we can draw on to reconcile economic and social development with the protection of natural environments.

Find all the videos from the Veolia Institute Talks online on our website.



FRANCK GALLAND

February 2022



In a world subject to climate upheaval, demographic pressure and dwindling water resources, water is becoming a central issue in many conflicts.

Franck Galland, Managing Director of engineering consultancy (ES)², a French specialist in water-related geopolitical and security issues, provided us with a detailed analysis, right at the heart of current events, demonstrating just how essential water is to collective security.

Supported by maps, he showed how water infrastructure has been targeted in recent conflicts, and outlined the collective security issues linked to water on the international stage.

PERSPECTIVES 2023

The next edition of the *Veolia Institute Review* will focus on **innovations**, including new and unconventional definitions of innovation, that can lead to ecological transformation.

For Veolia and the Veolia Institute, ecological transformation describes the changes needed in our economies, our societies and our relationship with the environment, to ensure a prosperous future for people and

the planet. It involves radically changing production and consumption patterns, to place ecology at the heart of every process and every assessment.

In 2023, the Institute aims to go beyond defining «what» ecological transformation is, to illustrate «how» it can be achieved. New Rencontres de l'Institut and Insights will be organized around La Revue to shed multi-dimensional light on this theme.

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Thinking together to shed light on the future