

## ACTIVITY REPORT 2021





## 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.

## CONTENTS

### 4 EDITORIALS

- **Dinah Louda**, President of the Veolia Institute, and **Nicolas Renard**, Executive Director of the Veolia Institute
- **Pierre-Marc Johnson**, Chair of the Foresight Committee

### 8 THE VEOLIA INSTITUTE

- A partnership-based and multidisciplinary approach
- Governance open to the world
- Recognized legitimacy
- Work accessible to all

### 12 THE VEOLIA INSTITUTE IN 2021

- Tomorrow, the African City
- The Veolia Institute Insights, a new internal foresight tool
- Industry and waste: toward the circular economy
- The Veolia Institute Talks

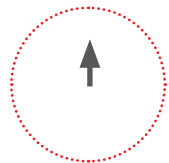
### 19 OUTLOOK FOR 2022

- Ecological transformation: challenges and opportunities



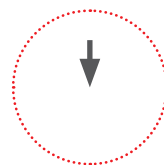


EDITORIAL



**DINAH  
LOUDA**

President of the  
Veolia Institute



**NICOLAS  
RENARD**

Executive Director  
of the Veolia Institute



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**The long term is one of the forms  
of the general interest.**

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Strong trends, weak signals, big uncertainties. Foresight has never been an easy discipline. It is no more so today than in the past. And yet it remains essential to guide decision-making, to call for action, to encourage useful innovations. In a world of technological disruption, social and ecological fragility, and geopolitical and economic convulsions, the unpredictable seems to be becoming the norm. Certainly, part of what awaits us is unknown, but another part is known.

So what do we know about the world to come? That it will be a more urban, more populated, hotter world. A world where extreme weather events will be more frequent. A world of scarce raw materials and natural resources. A world where meeting the basic needs of humanity for food and water will be more difficult.

More difficult, but not impossible. It is here, in the tension between these two poles, between the clamor of the moment and individual and collective responsibility, between the needs of the century and the will of the stakeholders, that one of the missions of the Veolia Institute is based: to contribute to making the necessary possible. To avoid the worst and favor the best. To not abdicate the long term. If from certain angles the future seems worrying, it will be even more so if we do not prepare for it. In the field of environment and human health, the challenges of this century are numerous. Identifying them, analyzing them, and above all detecting solutions to meet them, are among

the Institute's cardinal missions. In this sense, foresight is a fight against pessimism.

Hence the topics addressed by the Institute in 2021 (the circular economy, the just transition, the transformation of agricultural systems, green finance, sobriety, the purpose of companies, etc.) and, even more so, the approach chosen to address them: highlighting proven solutions, positive initiatives, promising innovations. At a time when history is accelerating, when challenges are piling up and the need for ecological transformation is becoming more pressing, the Institute's role as a platform for exchange, for deciphering developments and as a «research head», in connection with the global scientific and economic ecosystem, is becoming increasingly important.

Companies, public authorities, administrations, universities, NGOs... all must be prepared for several possible futures! The Institute helps them to do so, by shedding light on the near and distant future. One of the reasons why the Institute is involved in foresight is of course linked to the nature of the Veolia Group's businesses, to which it has the privilege of being attached: water supply, waste management, energy supply, urban agriculture and, more generally, environmental preservation, are by their very nature long-term activities. But there is another reason, deeper, more important, more compelling too: because « the long term is one of the forms of the general interest ».

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The circular economy is a favorable lever for a country's economic growth.

It preserves the environment, creates jobs and activity and is also a social and civic approach.

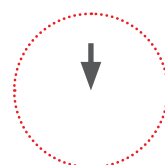
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**PIERRE-MARC JOHNSON**

Chair of the Foresight Committee

## EDITORIAL



The just transition is a vast subject that has been part of the public debate for a long time, and has really gained momentum in recent years. This concept, which has recurred throughout our recent work at the Veolia Institute, implies that the energy transition, and more generally the ecological transition, must not be achieved at the expense of the social question. Defending a vision in which a green economy must go hand in hand with decent jobs and living conditions for all means putting the «end of the world» and the «end of the month» on the same level, without abandoning either of these horizons.

Make «green» opportunities a reality by developing green jobs and workplaces, especially in terms of technology; conduct research and evaluation of professional and social impacts to best prepare for change; consult all actors concerned by these changes, to ensure a transition that respects human and labor rights; training workers in the new skills required by the energy transition, or putting in place social and labor policies that protect workers from the vulnerabilities generated by the transition, are all factors to be taken into account by companies, as well as by NGOs and governments, which are now approaching sustainability from the concomitant angles of the environment, the economy and social issues.

In this context, the circular economy, which is first and foremost an ecological approach to preserving the environment, is a favorable lever for a country's economic growth. According to a study by the Club of Rome, relayed by the National Institute for the Circular Economy, it could generate 500,000 jobs and +2.5% of

GDP in France. The impact is different, but still important in each country. Thus, the Institute for the Circular Economy has evaluated the impact of a development of the circular economy, or a better management of natural resources in different countries, in terms of employment: it would be 1.2 million more jobs in South Korea, nearly 233,000 in South Africa, 3.3 million in Australia. In Europe, various published studies suggest 1.4 to 2.8 million jobs created and a 17% reduction in natural resource consumption.

The circular economy is rethinking the relationships between economic actors, encouraging the sharing and exchange of know-how, the development of short circuits and local industries, responsible consumption and the pooling of infrastructures. Moreover, the jobs it generates are often part of the social and solidarity economy. In short, the circular economy preserves the environment, creates jobs and activity and is also a social and civic approach.

This new type of economy feeds into the thinking of the Veolia Institute in all its dimensions, just as it does into the strategy of the Veolia Group, which is putting in place operational solutions and new business models to promote the development of territories. This approach is at the heart of its strategic ambition and vision, a vision in which ecological transformation is also a social issue. The scale of the climate challenge highlights the need to organize the economy according to social and ecological criteria that ensure the integrity of ecosystems and decent living conditions for the greatest number.



# THE VEOLIA INSTITUTE

## 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:

- Access to essential services;
- Biodiversity;
- Climate change;
- Governance and societal debate;
- Resources and circular economy;
- Health and environment;
- Cities and urban services.



In 2021, the Veolia Institute worked in partnership with the French research and consulting firm Archipel&Co and the Centre de Gestion Scientifique de Mines ParisTech for its various productions.

### 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



*Lorraine de Jerphanion*  
Program Manager



*Sophie Soubrier*  
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 14 members - including representatives of the Veolia Group, the Foresight Committee and recognized outside experts - ensures balanced management of the Institute.

The following are members of the Board of Directors : **Jean-Pierre Boisivon**, Professor Emeritus of the University of Paris II Panthéon-Assas; **Estelle Brachlianoff**, Chief Operating Officer, Veolia; **Antoine Frérot**, Chairman and CEO, Veolia; **Paul-Louis Girardot**, Vice President of the Veolia Institute; **Alain Griot**, Advisor to the Director of Research and Innovation, Ministry of Ecological Transition and Solidarity; **Olivier Grunberg**, Executive Vice President, and General Secretary of Veolia Water; **Philippe Guitard**, Senior Executive Vice President, Central and Eastern Europe, Veolia; **Pierre-Marc Johnson**, International lawyer, former

Prime Minister of Quebec, Chair of the Institute's Foresight Committee; **Claude Laruelle**, Chief Financial Officer, Veolia, Treasurer of the Institute; **Helman Le Pas de Sécheval**, General Counsel, Veolia; **Claude Mandil**, Former Director General of the International Energy Agency; **Julia Marton-Lefèvre**, Expert in sustainable development and the environment, former Director General of the International Union for Conservation of Nature (IUCN); **Jean-Pierre Tardieu**, Honorary Chairman of the Veolia Institute; **Sébastien Treyer**, Executive Director of Institute for Sustainable Development and International Relations (IDDRI).

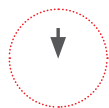


## THE FORESIGHT COMMITTEE

### MEMBERS:

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.

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.



### MEETING IN 2021:

#### The challenges of the just transition

In October 2021, the Foresight Committee, which guides the work and development of the Institute, devoted a day of remote study to the challenges of just ecological transition, with a focus on the issues of food, employment and training.



**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

## 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 2021:

- **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. ■





# TOMORROW, THE AFRICAN CITY

## URBANIZATION AND ESSENTIAL SERVICES

Within a generation, Africa will have doubled its population and will be home to 2.5 billion people. Cities will absorb 70% of the continent's demographic growth. Given this situation, developing urban infrastructure is a real challenge, to give everyone access to drinking water, sanitation, energy and sustainable waste management.

### INNOVATING FOR ESSENTIAL SERVICES

#### Water, Energy, Waste

Following the publication, at the end of 2020, of a new issue of its journal dedicated to the challenges of access to essential services on the African continent, the Veolia Institute organized an online conference, open to both internal and external audiences, at Veolia's headquarters in Aubervilliers on February 12, 2021.

At the crossroads of environmental and societal issues, the challenges of access to essential services will be met thanks to the many innovations emerging on the continent, driven by start-ups, large companies, non-profit organizations, and even by the populations themselves, provided that the governance systems and economic models are in place to allow them to scale up and be deployed.

The conference brought together the following speakers: Fadel Ndaw, Water and Sanitation Specialist, World Bank; Haweya Mohamed, Co-founder of Afrobytes; Max Cuvellier, Director of Mobile 4 Development, GSMA; Christophe Maquet, Director of Africa and Middle East, Veolia and, as moderator, David Menascé, Director of Archipel&co and Professor at HEC.



### A SERIES OF CONFERENCES WITH THE NEWSPAPER *LE MONDE*

#### Rabat, Abidjan, Paris

At the end of 2021, the Veolia Institute initiated a series of conferences in partnership with Le Monde Afrique and Cities on the theme «Tomorrow's African city», in close collaboration with Veolia's Africa and Middle East zone teams. These meetings provided an opportunity to analyze the urbanization of the continent and its challenges. They were held in person and online in November and December..

- In Rabat on November 4, experts discussed the levers and obstacles to the development of essential services for all. Sylvie Jaglin, LATTs (Technical Laboratory for Territories and Societies), introduced the debates which brought together Christophe Angely, Foundation for International Development Studies and Research (Ferd); Moncef Ziani, Economic, Social and Environmental Council (Cese) of Morocco; Salima Naji, architect, urban planner, Françoise Bonnet, Association of Cities and Regions for Sustainable Resource Management (ACR+); Sheryn Ziani, Coalition for Waste Valorization (Covad); Sais Eddine Laalej, Zelij Invent and Nabil Touzani, Renault Morocco. Driss Benhima, Office national de l'électricité (ONE), made the concluding remarks.
- In Abidjan, on November 18, the future of so-called «intermediate» cities was at the heart of the debate. The session was introduced by François Moriconi-Ebrard, geographer, director of research at the CNRS, president of the e-Geopolis Institute. Many experts followed, such as François Yatta, UCLG Africa; Issa Diabaté, architect; Diamandé Messou, Mayor of San Pedro; Nicolas Djibo, Mayor of Bouaké; Alexandre Lemille, African Circular Economy Network (ACEN); and Aurore Garnier, Club Abidjan Ville Durable. Dao Macoura, President of the Network of Local Elected Women of Africa, made the concluding remarks.





- On December 1, a program produced by *Le Monde* was broadcast online on the theme of the circular economy as a pillar of transformation on the African continent. As explained by Edouard Yao and Jocelyne Landry Tsonang, from ACEN, and Alexandre Lemille, the continent has many assets to make a circular and inclusive economy happen. This round of debates highlighted concrete examples of implementation of these principles in many sectors.



- In Paris, on December 9, at the headquarters of the newspaper *Le Monde*, a closing conference presented the main lessons of the cycle. Laurent Bossard, Director of the Sahel and West Africa Club (SWAC), reminded us of the social, economic, environmental and political issues that were at the heart of the discussions during this conference and closed the cycle of debates on African urbanization. Audrey Guiral-Naepels, AFD; Edouard Yao, ACEN; Joël Ntsondé, Ecole des Mines; Sename Koffi Agbodjinou, architect; François Laurent, Urbaplan; James Christopher Mizes, Institut de recherche interdisciplinaire en sciences sociales, Paris Dauphine; Jean-François Habeau, GFCD (Global Fund for Cities Development) and Dao Macoura, exchanged views on these issues. Karamoco Camara, Ewarren Financial Services, spoke on the subject of mobility and Dinah Louda, President of the Institute, closed this last conference.

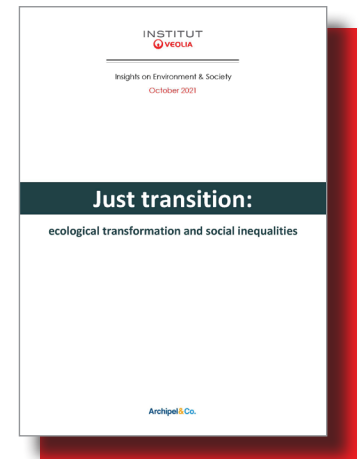
# THE VEOLIA INSTITUTE INSIGHTS

## A NEW INTERNAL PUBLICATION

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.

In July, the first issue focused on the challenges of multi-faceted performance, with a comparative approach.

In October, the second issue presented the emergence of the concept of « just transition » as well as operational implementation paths. The issue plan for 2022 will focus on the notion of sobriety.





# CIRCULAR ECONOMY

## REGULATIONS, ECONOMIC MODELS AND BEHAVIORAL CHANGE

Faced with the limits of a linear production and consumption model and the historical waste management system, the transition to a circular economy has become a necessity. This transformation requires significant changes in behavior on the part of various actors (companies, consumers/citizens), which public policies must encourage. The emergence of an innovative and job-creating circular economy will take place at the company level, as well as at the level of larger ecosystems, thanks to new business models, notably the economy of functionality.

### A NEW ISSUE OF THE VEOLIA INSTITUTE REVIEW - FACTS REPORTS

#### Industries and waste: on the road to the circular economy

In November 2021, the Veolia Institute published an issue dedicated to the circular economy, in partnership with a team of researchers of the Scientific Management Center (CGS) of MINES ParisTech-PSL. With some twenty contributions from academics (Yale University, Linköping University, Paris-Dauphine University), NGOs (The Shift Project, African Circular Economy Network, Halte à l'Obsolescence Programmée-HOP, Ellen MacArthur Foundation) and companies (Envie, Veolia, Interface, Signify), this issue explores the pathways to circular economy:

- Since the beginnings of the consumer society, waste production has constantly increased and material consumption is expected to double in the next four decades. The environmental and social impacts are increasingly visible. The circular economy, defined in opposition to the linear «extract-use-discard» model, offers solutions to these challenges.
- Accompanying the transition of our models to the circular economy implies mobilizing private actors who participate in the production of goods and services, public actors who regulate economic and social life, as well as consumers who influence, through their purchasing behaviors, the current and future strategies of companies.
- To move to strong circularity, we need to design products that are traceable and reusable. But there are other challenges such as toxicity, technology, employment and cost. Public authorities therefore have a role to play by encouraging investment, imposing standards, guiding behavior and developing indicators.



### A CONFERENCE

#### Sobriety, reparability, reuse, recycling

Following the publication of this issue, the Institute organized a conference-debate open to all on this theme on November 23 at Veolia's headquarters in Aubervilliers. Moderated by Franck Aggeri, Professor of Management at the Scientific Management Center (CGS) of MINES ParisTech-PSL and coordinator of the latest issue. The debates brought together:

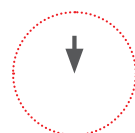
- Valérie Guillard, Professor of Marketing at the University of Paris Dauphine, who focused on consumer behavior and the issue of sobriety, which questions the need to purchase, upstream of the circular economy.
- Ronan Groussier, Head of Public Affairs at the NGO Halte à l'Obsolescence Programmée-HOP, who presented the work of his organization to inform consumers, influence public decisions and accompany companies towards the extension of the life span of products and their reparability.
- Jean-Paul Raillard, president of the ENVIE federation, who spoke about the potential for local job creation in the circular economy, particularly in the area of repair.
- Cédric L'Elchat, CEO of Veolia subsidiary SARP Industries, who explained why and how recycling electric vehicle batteries is a solution for the future.





# THE VEOLIA INSTITUTE TALKS

## LEVERS AND CHALLENGES OF THE ECOLOGICAL TRANSFORMATION



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 2021, five meetings took place:

JANUARY 2021

### HERVÉ LE TREUT

#### Climate resilience on a territorial scale

Hervé le Treut, Climatologist and member of the Academy of Sciences, spoke about the state of global warming and the impact of human activity on the planet. The observation that the world is globally impacted by the climate crisis calls for action. Acting locally can be a response to this challenge.

OCTOBER 2021

### ANNE-CATHERINE HUSSON-TRAORE

#### The European challenge of sustainable finance

Anne-Catherine Husson-Traoré, Managing Director of Novethic, the French media and reference organization for sustainable finance, presented the challenges of extra-financial reporting for companies, the growing expectations of investors and rating agencies in this area and the prospects for change, particularly in relation to the European Taxonomy.

FEBRUARY 2021

### THOMAS GOMART

#### Climate and data: geopolitical issues

Thomas Gomart, Director of the French Institute of International Relations, presented the place of environmental and digital issues in a geopolitical context marked by Sino-American rivalry. The strategic choices of the different actors in terms of climate policy and data control will be increasingly structuring.

SEPTEMBER 2021

### SÉBASTIEN TREYER

#### Transforming agri-food systems on a European scale

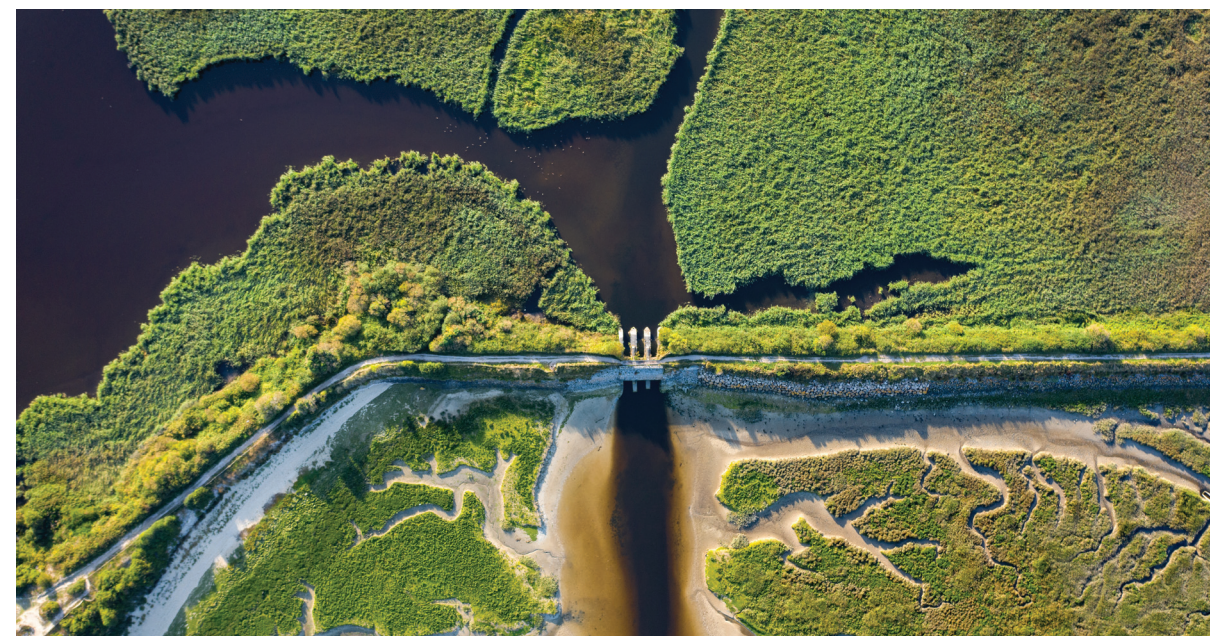
Sébastien Treyer, Director of the Institute for Sustainable Development and International Relations (IDDRI), discussed the necessary ecological transition of food systems to meet the challenges of decarbonization, protection of biodiversity but also employment and social justice.

NOVEMBER 2021

### ALEXANDRE RAMBAUD

#### Ecological accounting: a lever for transformation

Member of the AMF's Climate and Sustainable Finance Commission and head of the AgroParisTech Ecological Accounting Chair, Alexandre Rambaud offered an introduction to the new models developed to take into account the natural and social capital of companies.



## OUTLOOK FOR 2022

### ECOLOGICAL TRANSFORMATION: CHALLENGES AND OPPORTUNITIES

The Veolia Institute is preparing a forthcoming issue of its review on the theme of ecological transformation. Covering multiple realities, varying according to the geographical context, the time horizon, and the field of application considered, 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 capacity to take up the «climate challenge» by rethinking our societies in a sustainable way. Increasingly, it is the articulation between environmental imperatives and social issues that is being debated: how to reconcile the climate emergency, the biodiversity crisis and resource scarcity with human development and the fight against inequalities?

The objective of this issue is to better understand the different narratives and imaginaries that exist around the notion of ecological transformation throughout the world; to specify the issues at stake and identify the main opportunities for organizations and, more broadly, for society; and finally, to identify the conditions for accelerating a virtuous transformation process.

Veolia Institute • institut.ve@veolia.com. Editorial directors: Lorraine de Jerphanion, Laurence Aureli.

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Thinking together to shed light on the future