









Foreword

Among other activities, every 18-24 months the Veolia Institute organizes a series of "Future Environmental Trends Conferences", in collaboration with academic centers, non-governmental organizations or institutional partners. Since 2004, this programme of international conferences has been facilitating interdisciplinary communication and acting as a catalyst for innovative problem-solving, thereby manifesting the mission of the Institute: to identify emerging challenges of sustainable development, to raise awareness about them, and to contribute to public debate.

For its 7th edition, the Institute has chosen the theme of large-scale management and restoration of ecosystems, in order to highlight the interlinkages between Ecosystems, Economy and Society.

To accomplish this, the Veolia Institute is grateful for the support of the following key organizations, whose activities, expertise and reputation have contributed greatly to the success of the project:

Co-organizers:

- The US National Research Council Water Science and Technology Board (WSTB);
- The Agence Française de Développement (AFD);
- The International Union for Conservation of Nature (IUCN).

Associated partners:

- The Prince Albert II of Monaco Foundation;
- Conservation International;
- The UN Convention to Combat Desertification;
- The World Resources Institute;
- The Office for Cooperation with Civil Society Organizations of the French Embassy in the US.

Last but not least, the conference has benefited from the patronage of our host, the US National Academy of Sciences.

The two-day conference will bring together Nobel Prize winners, decision-makers from both the public and private sectors, outstanding scientists, practitioners and attendees to explore the potential of large-scale ecosystems restoration with respect to improving people's livelihoods, jobs creation and socio-economic development, together with the recovery of ecosystems functionalities, continuity and biodiversity.

Our diverse and original cooperation brings a wide range of expertise to a common stage: science, policy, business, development, think-tanks and field projects. It is a great example of the type of collaborative mobilization that is needed to address the challenges of our time.

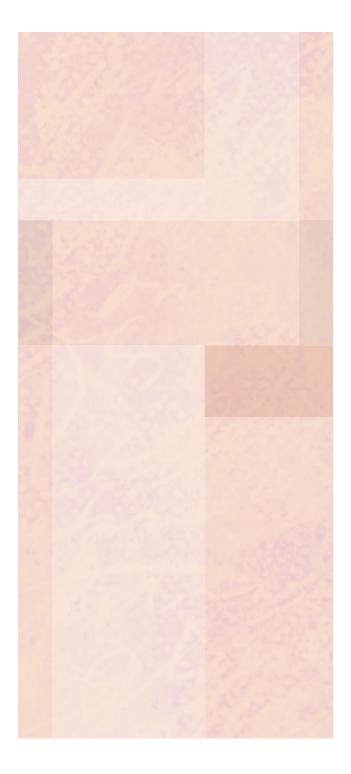


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Background / Overview

7th FUTURE ENVIRONMENTAL TRENDS CONFERENCE

"ECOSYSTEMS, ECONOMY AND SOCIETY: HOW LARGE-SCALE RESTORATION CAN STIMULATE SUSTAINABLE DEVELOPMENT"

29-30 May 2014 - U.S. National Academy of Sciences - Washington, DC, USA

SCOPE OF THE CONFERENCE

Biodiversity underpins humanity by a myriad of ways, including provision of food, freshwater, clean air and disease control. However continued population growth, uncontrolled over consumption of natural resources, increasing pollution and climate change are likely to put additional pressure on ecosystems.

At the same time, there is a growing consensus that restoring ecosystem functionalities contributes not only to preserve biodiversity but also to secure livelihoods, to combating desertification and to both climate-change mitigation and adaptation. Furthermore, ecological restoration could open new economic avenues.

Several initiatives have successfully achieved promising improvements: Watershed Protection for Drinking Water (city supplies), Reforestation and Poverty Alleviation, Wetlands Engineering, Large-Scale Soil Decontamination, Sea Canals, Artificial Reef Programs, Invasive Species Extirpation, Forest and Carbon Sinks Restoration, emergence of the Landscape restoration approach. They all combine unprecedented levels of scientific and technical expertise, collaboration among a plurality of actors – public, private and civil society – new forms of collaborative governance and diversified funds and resources.

There is a need for enriched scientific data, at the first stage, but also context-based practices that facilitate the understanding of highly complex challenges and the emergence of solutions. With a multidisciplinary and holistic approach, the Conference will collect and promote innovative ideas and tools on how to implement effectively restoration projects at a large-scale.

To do so, it will be structured around:

- A Technical Segment analysing existing restoration projects and practices, to foster a productive dialogue and draw lessons on the conditions of operability, appropriateness and transferability in different contexts.
- A decisions-makers segment aimed at strengthening political will and institutional schemes to translate those ideas and commitments into actions of implementation on the ground.

Acknowledging all that, the two-day Conference will provide a platform for over 400 scientists, practitioners, NGOs, business leaders and policymakers from both the South and the North to discuss remarkable case studies, best practices and share better insights on the potential of large-scale ecosystem restoration towards sustainable development.

In doing so, the Conference will contribute to achieving CBD Aichi Target 15 (restoration of at least 15% of degraded ecosystems), the EU Biodiversity Strategy to 2020 and the UNFCCC REDD+ goal to slow, halt and reverse the loss of forest and carbon, as well as other international objectives, including those on land degradation and food security. It can also offer a timely contribution in the context of the post-MDGs 2015 period and the preparation of action-oriented SDGs.

MAIN OBJECTIVES

- Share international experiences on successful ecosystems restoration initiatives and promote evolutive quality scientific research and field experiments in order to provide sound factual knowledge.
- Analyze the conditions for the projects to be scaled up and replicated elsewhere.
- Help the comprehension of adapted regulatory frameworks to facilitate the implementation of such landscape-scale projects.
- Foster in-depth dialogue and promote the exchange of ideas among restoration practitioners, policy makers, scientific experts, funding agencies, publicand private operators, multilateral institutions, NGOs and local communities' representatives.
- Highlight the potential of large-scale restoration projects in terms of ecosystems preservation, climate mitigation or adaptation and development.
- Contribute to informing policy makers on the conditions to develop successful experiences in order to assist decision-making.
- Support the implementation of the CBD Aichi targets, the Bonn Challenge and the framing of the UN Sustainable Development Goals.

ABOUT ORGANIZERS

- **Veolia Institute**, a non-profit organization under French law 1901, created in 2001 by the company Veolia, which is dedicated to promoting foresight reflection on interactions between society and the environment.
- US Water Science and Technology Board, established in the US National Research Council, to provide a focal point for studies related to water resources under the aegis of the National Academy of Sciences and the National Academy of Engineering.
- Agence Française de Développement, the financial institution and main implementing agency for Françe's official development assistance to developing countries and overseas territories.
- International Union for Conservation of Nature, the world's oldest and largest global environmental network.

Conference website: www.ecosystems-economy-society.org



Programme at a glance

PLENARY SESSION TRACK

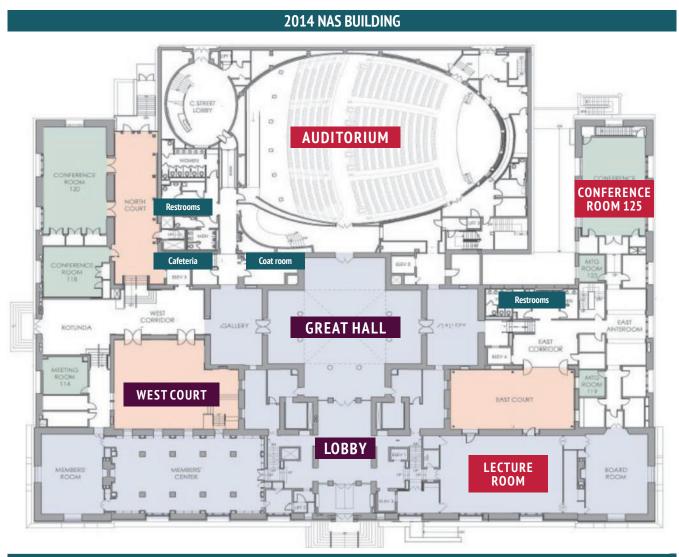
BEYOND ECOLOGICAL BENEFITS TRACK

CASE STUDIES ANALYSIS TRACK

DAY 1 MAY 29	
08:00 - 09:00	Welcome
09:00 - 09:15	Opening: welcome speech from Conference Chair, Dr. Harvey Fineberg
09:15 - 10:45	SESSION 1 Assessing major environmental challenges and shaping innovative pathways to sustainability
10:45 - 11 :00	Break
11:00 - 12:30	SESSION 2 Large-scale restoration: opportunities to deal with our main environmental and development challenges
12:30 - 14:00	Lunch break (free time)
14:00 - 16:00	Opening up new economic avenues Governance / Institutions Financing / Valuing
16:00 - 16:15	Break
16:15 - 17:15	SESSION 3 Practitioners Talk: Restoration, assessing a long track record of practices and scientific studies
17:15 - 17:30	Wrap-up

DAY 2 MAY 30	
07:45 - 08:30	Welcome
08:30 - 10:30	Generating positive social impacts Measuring / Metrics Knowledge
10:30 - 11:00	Break
11:00 - 12:30	Landscape Restoration, a Nature Based Solution Engineering and Technology
12:30 - 14:00	Lunch break (free time)
14:00 - 14:30	SESSION 4 Options for the future: Restoration and sustainable management of ecosystems
14:30 - 16:00	SESSION 5 Shaping a more sustainable and resilient planet
16:00 - 16:15	Break
16:15 - 17:00	SESSION 6 Keynote address on "Environment and Development" by Amartya Sen, Economist, Harvard University, Nobel Prize in Economic Science
17:00 - 17:15	Closing

Map of the venue



NEW FIRST FLOOR LAYOUT

Main entrance: 2101 Constitution Avenue, NW

- Live Tweet during the Conference #EESConf7
- Wi-Fi available at the National Academy of Sciences Building
- CONFERENCE ROOMS: Auditorium, Lecture Room and Conference Room 125
- HOSPITALITY SPACES:
 - Lobby: Welcoming
 - Great Hall: coffee-breaks and boxed lunch distribution
 - West Court: Documents room
- Documents will be displayed in the West Court for participants who want to know more about the organizers and partners.

Detailed programme

DAY 1 MAY 29

9:00 – 9:15 Welcome/Opening

Welcome speech from the Conference Chair,

Dr. Harvey FINEBERG, President, Institute of Medicine of the National Academies, USA

9:15 - 10:45

SESSION 1

Assessing major environmental challenges and shaping innovative pathways to sustainability

The first plenary session will present the state of knowledge on major global environmental challenges and their respective socioeconomic consequences. It will analyse the role and means of different stakeholders (public and private sectors, international organizations, NGOs, citizens, etc.) in mitigating the human ecological footprint and designing sustainable pathways that address the challenges in a comprehensive way, contributing thus to increase synergies between the Rio Conventions. The discussion will focus on how to foster the emergence of practical solutions in order to achieve international objectives, such as the CBD Aichi Biodiversity targets, including the Bonn Challenge, and to the setting of Sustainable Development Goals.

Chair and moderator: Dr. Harvey FINEBERG, President, Institute of Medicine of the National Academies

Speakers:

Antoine FRÉROT, Chairman and CEO, Veolia

Catherine GARRETA, Executive Director, Head of External Relations and Partnerships, representing Anne PAUGAM, CEO, Agence Française de Développement (AFD)

Valerie HICKEY, Acting Sector Manager, Agriculture and Environmental Services, Senior Biodiversity Specialist, World Bank

George HORNBERGER, Chair, Water Science and Technology Board, National Research Council, Director Vanderbilt Institute for Energy and Environment

Julia MARTON-LEFEVRE, Director General, International Union for Conservation of Nature

10:45 - 11:00 Coffee-break

11:00 - 12h30

SESSION 2

Large-scale restoration: opportunities to deal with our main environmental and development challenges

Based on the state of ecosystem degradation, the session will discuss the need to revert such deterioration in an equivalent scale, including the recovery from major pollutions such as offshore oil spills. It will also analyse the potential of large-scale restoration to generate improvements beyond the ecological ones, focusing particularly on the contributions that such initiatives can bring in terms of food security, preservation of ecosystem services, income generation and both climate change mitigation and adaptation. In addition, speakers will cover the main issues surrounding the implementation of large-scale restoration and the main drivers for those initiatives to succeed (e.g. establishing priorities, restoring capacities, integrating externalities, modes of governance, financing and valuing schemes, monitoring tools, technology, etc.).

Chair and moderator: Carole SAINT-LAURENT, IUCN

Speakers:

James ARONSON, Researcher, CEFE/CNRS, Representative-at-large, Society for Ecological Restoration

Dennis GARRITY, Drylands Ambassador, UNCCD, Senior Fellow, World Agroforestry Center, Chair, EverGreen Agricultural Partnership, Chair, Landcare International

Kyle GRAHAM, Executive Director, Coastal Protection and Restoration Authority of Louisiana

Carole SAINT-LAURENT, Deputy Director, Global Forest and Climate Change Programme, International Union for Conservation of Nature

DAY 1 MAY 29

12:30 – 14:00 Lunch

BREAKOUT SESSIONS TRACK 1

14:00 – 16:00 **Beyond ecological benefits: Opening up new economic avenues**

This session will be dedicated to analysing the potential of large-scale restoration to stimulate economic activities and new businesses. It will address the following topics:

- Is there a business model for large-scale restoration?
- Is there an industrial know-how for implementing restoration efforts?
- What are the main incentives and business opportunities?
- How to value the benefits created by restoration?
- Is it possible to have a return on investments?
- Insights for investments
- Public sector financial/funding arrangements
- Public-private-partnerships packages
- Innovative opportunities
- Market mechanisms
- What are the legal constraints?
- How should legislation evolve to foster restoration initiatives to take place?

Chair and moderator: Jonah BUSCH, Research Fellow, Global Development Center

Speakers:

Jean-Luc FRANÇOIS, Director, Agriculture, Rural Development and Biodiversity, Agence Française de Développement

Mauricio MOURA COSTA, Founder and Chief Operational Officer, BVRio, Brazil

Philippe VALLETTE, Chairman, World Ocean Network, Director, National Center Nausicaá

Leslie WELDON, Deputy Chief, National Forest System, USDA Forest Service

14:00 – 16:00 Case Studies Analysis track: Governance / Institutions

Through the presentation of practical examples, this session aims to help the comprehension of adapted regulatory frameworks to facilitate the implementation of large-scale projects. It will assess the main drivers of cooperation among different sectors, which may not necessarily cooperate. Speakers will share their experiences in making these sectors look beyond their own horizon and build a shared vision. Discussion will cover the following topics:

- Institutional policy framework (international, national or sub-national) to provide adapted and favourable conditions for restoration
- Institutional arrangements and innovations for the development and governance of ecosystems and landscape restoration initiatives
- Synergies between different parties/stakeholders involved and approaches for negotiation of trade-offs within landscapes
- Identification of barriers to decision-making being made at the local level
- Synergies between climate change, land degradation and biodiversity agendas

Chair and moderator: Naïg COZANNET, Senior project manager, Biodiversity & Forests, Agence Française de Développement (AFD)

Speakers:

Alexandre ICKOWICZ, Scientist, French Agricultural Research Center for International Development (CIRAD)

Lynn SCARLETT, Managing Director, Public Policy, The Nature Conservancy

Robert SNOW, Attorney-Advisor, Office of the Solicitor, US Department of the Interior

Gustavo ZULETA, Vice-chair, Ibero-American and Caribbean Society for Ecological Restoration (SIACRE), Director, Dept. of Ecology & Environmental Sc., Maimónides University

Detailed programme

DAY 1 MAY 29

14:00 – 16:00 Case Studies Analysis track: Financing / Valuing

Based on existing restoration projects, practitioners and researchers will present methods to estimate large-scale restoration costs and share best practices to create favorable conditions for investments. They will address topics such as:

- How much do restoration initiatives cost?
- How to value natural capital and the costs of ecosystem degradation? (e.g cost-benefit analyses)
- Who should pay for those projects?
- How do you take stock of the potential benefits of restoration?
- How can the public sector be engaged in such activities?
- How to value social, public benefits?
- How to build investment packages to reduce risk to investors and to deliver multiple goods and services? How to create favorable conditions for private sector investment?
- What are the innovative financial mechanisms that can be used in restoration projects?
 What has worked at a landscape scale?
- How to ensure a long-term funding for restoration programs?

Chair and moderator: Valerie HICKEY, Acting Sector Manager, Agriculture and Environmental Services, Senior Biodiversity Specialist, World Bank

Speakers:

Pierre GERBER, Livestock Policy Officer, Food and Agriculture Organization of the United Nations (FAO)

Linwood PENDLETON, Director, Ocean and Coastal Policy Program, Duke University's Nicholas Institute for Environmental Policy Solutions

Steve POLASKY, Regents Professor and Fesler-Lampert Professor of Ecological / Environmental Economics, Department of Applied Economics / Department of Ecology, Evolution and Behavior, University of Minnesota

Michael VERDONE, Associate economist, IUCN

16:00 - 16:15 Break

16:15 - 17:15

SESSION 3

Practitioners Talk: Restoration - assessing a long track record of practices and scientific studies

From a practical perspective, this session will present how restoration knowledge and practices have evolved over the past years. It will cover constraints, positive externalities and the most up-to-date approaches related to restoration. Speakers will focus on the US experience related to water resources and forest experiences in Brazil.

Anne CASTLE, Assistant Secretary for Water and Science, U.S Department of the Interior

Pedro BRANCALION, Professor, University of San Paulo, Brazil

17:15 - 17:30 Wrap-up

DAY 2 MAY 30

BREAKOUT SESSIONS TRACK 2

8:30 – 10:30 **Beyond ecological benefits: Generating positive social impacts**

This session will discuss the potential of ecosystem restoration to ensure people's access to natural resources and ecosystem services as well as to generate income to local communities. It will address topics such as:

- How to have social support on restoration programs?
- Raising public awareness about environmental issues to revert the drivers of degradation
- · Capacity building on restoration measures
- · Ensuring food security
- Enhancing livelihoods
- Generating income for local communities.
- Generating alternative livelihoods to mitigate human pressures on ecosystems
- Formulating incentive mechanisms to stimulate ecosystem conservation and restoration

Chair and moderator: Catherine GARRETA, Executive Director, Head of external Relations and Partnerships, Agence Française de Développement (AFD)

Speakers:

Ben BROWN, Senior Ecologist - Blue Forests (Yayasan Hutan Biru)

Sarah FRAZEE, Chief Executive Officer, Conservation South Africa

Françoise GAILL, Special Advisor, French National Center for Scientific Research (CNRS)

LEI Guangchun, Dean of School of Nature Conservation, Beijing Forestry University, China

8:30 – 10:30 Case Studies Analysis track: Measuring / Metrics

Based on the presentation of case studies, this session will explore methods and tools to measure environmental impacts and monitor changes in ecosystems functionalities as well as socio-economic benefits. It will cover topics such as:

- Establishing the criteria and methodologies for monitoring indicators
- Selection of indicators for monitoring changes in ecosystems functionalities and landscapes
- Measuring restoration progress, in terms of economics, livelihoods, food security, social impacts biodiversity and carbon sequestration
- Data collecting and data sharing (tools, methods, periodicity, etc.)
- · Analytic methods
- Tracking the progress of international commitments and objectives (e.g. the CBD target 15, the Bonn Challenge)
- Issues related to the equivalence estimation in offsetting (how to compensate major infra-structure projects)

Chair and moderator: Jeffrey JACOBS, Director, Water Science and Technology Board

Speakers:

Jeb BARZEN, Director, Field Ecology, International Crane Foundation

Cathy KELLON, Program Director, Water and Watersheds, Ecotrust

Carolina MURCIA, Consultant, CIFOR, Science Director, Organization for Tropical Studies, USA (presenting a study conducted by CIFOR)

Fred SKLAR, Director, Everglades division, South Florida Water Management District, USA

DAY 2 MAY 30

8:30 – 10:30 Case Studies Analysis track: Knowledge

Drawing lessons from concrete experiences, the session will present state-of-the-art practices and approaches to restore different ecosystems. It will focus on different approaches:

- Knowledge to guide restoration projects (priorities, prospective scenarios);
- New knowledge derived from restoration projects and remaining gaps;
- The use and integration of traditional knowledge in restoration projects;
- Knowledge to inspire: knowledge to educate and change practices / knowledge for replication and scaling up / knowledge for decision-makers.

Chair and moderator: Gaëll MAINGUY, Director for Scientific Publications, Veolia Institute

Speakers:

Hans FRIEDERICH, Director-General, International Network for Bamboo and Rattan (INBAR)

Kong Luen HEONG, Former principal scientist, International Rice Research Institute, Senior advisor, CABI South East Asia

Cara NELSON, Chair, Society for Ecological Restoration, Associate Professor of Restoration Ecology Director, Wildland Restoration Program, College of Forestry and Conservation, University of Montana

Claudio SCHNEIDER, Technical Director, Conservation International Peru

10:30 – 11:00 Coffee-break

BREAKOUT SESSIONS TRACK 3

11:00 – 12:30 Case Studies Analysis track: Landscape Restoration – a Nature Based Solution

This session will be dedicated to the landscape approach to restoration. Ecosystem-based restoration at a landscape scale aims to restore ecological integrity at the same time as improving human wellbeing through multi-functional landscapes. Landscape restoration significantly increases and maintains carbon stocks and results in healthy resilient ecosystems, which provide the multiple goods and services people need, maintain biodiversity and enhance ecological integrity. Restoring the world's natural capital in this manner offers the potential to provide crucial goods and services on which mankind depends, such as water, timber, energy and biodiversity, while enhancing carbon uptake and increasing the resilience of forests and people to climate change.

This session will concentrate on specific themes, including:

- Restoring for landscape resilience
- The role of landscape restoration in the urban-rural interface
- Landscape restoration and disaster risk reduction

Chair and moderator: Peter BESSEAU, Director International Affairs, Canadian Forest Service, Natural Resources Canada, Executive Director, International Model Forest Network Secretariat, Co-chair, Global Partnership on Forest Landscape Restoration

Speakers:

Sean DeWITT, Senior Manager for Forest & Landscape Restoration, World Resources Institute

LI Hao, Project official, Beijing Forestry Society

Andrea NÁJERA, Manager of Strategic Ecosystems Conservation, National Forests Institute (INAB), Guatemala

Piet WIT, Chair, Commission on Ecosystems Management, IUCN

DAY 2 MAY 30

11:00 – 12:30 Case Studies Analysis track: Engineering and Technology

The session will present innovative ecological engineering processes and sustainable technology to help ecosystem restoration take place at a large scale. It will cover the following topics:

- Typology of pollutions/ degradation (e.g. oil spills, mining activities and eutrophication) and technologies available
- Promises from ecological engineering, where science stands at ?
- Potential and conditions to replicate scale up?
- Using living organisms to restore ecosystem functionalities
- · Artificial habitats to help biodiversity recover

Chair and moderator: Georges VALENTIS, Managing Director, Veolia Institute

Speakers:

Clive JONES, Senior Scientist, Ecologist, Cary Institute of Ecosystem Studies

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Pierre-Joël PHILIBERT, President and CEO, GRS Valtech

12:30 – 14:00 Lunch

14:00 - 14h30

SESSION 4

Options for the future: Restoration and sustainable management of ecosystems

Considering insights from science, new technologies and remarkable case studies on large-scale restoration, this presentation will give perspectives on how our societies can shape a sustainable future, restoring degraded ecosystems, limiting degradation while managing ecosystems in a more reasonable way and promoting efficiency in the use of natural resources. A call for a change of paradigm for the interlinkages between "ecosystems, economy and society"?

Andrew STEER, President and CEO, World Resources Institute

14:30 - 16:00

SESSION 5

Shaping a more sustainable and resilient planet

Decision-makers and influencers will share their views and offer inputs for the implementation of global objectives, such as the CBD Aichi Biodiversity targets, EU Biodiversity Strategy and the framing of the UN Sustainable Development Goals.

Chair and moderator: George HORNBERGER, Chair, Water Science and Technology Board, National Research Council **Speakers:**

HSH the Prince Albert II of Monaco (video)

Monique BARBUT, Executive Secretary, UNCCD

David COOPER, Directeur Science, Assessment and Monitoring Division, representing Braulio DIAS, Executive Secretary, Convention on Biological Diversity (CBD)

Rajendra K. PACHAURI, Chairman, IPCC, Nobel Prize 2007, Director General, TERI

16:00 – 16:15 Break

16:15 – 17:00 **SESSION 6**

Final address on "Environment and Development"

Amartya SEN, Thomas W. Lamont University Professor, and Professor of Economics and Philosophy, Harvard University, Nobel Prize in Economic Sciences 1998

17:00 - 17:15 Closing

Presented in alphabetical order. For each we indicate the title of the session in which he/she participates

Conference Chair



Harvey V. FINEBERG

President, Institute of Medecine of the National Academies, USA

Welcoming address

Harvey V. Fineberg, MD, PhD, is President of the Institute of Medicine. He previously served Harvard University as Provost for 4 years and 13 years as Dean of the School of Public Health. He helped found and served as President of the Society for Medical Decision Making and has been a consultant to the World Health Organization. His research has included assessment of medical technology, evaluation of vaccines, and dissemination of medical innovations. At the Institute of Medicine, he has chaired and served on a number of panels dealing with health policy issues, ranging from AIDS to new medical technology. He currently chairs the boards of the Hewlett Foundation and the Carnegie Endowment for International Peace. He is the author or co-author of numerous books and articles on subjects including global health, prevention of disease, and increasing the quality, safety, and value obtained from health care.



H.S.H Prince Albert II of Monaco

Sovereign Prince of Monaco

SESSION 5 Shaping a more sustainable and resilient planet

H.S.H. Prince Albert is the Sovereign Prince of Monaco.

In 2006, His Highness the Prince set up the Prince Albert II of Monaco Foundation dedicated to protecting the environment and supporting the implementation of innovative and ethical solutions in three broad areas: climate change, water and biodiversity. In 2009, His Highness the Prince undertook a scientific journey in the Antarctic, which follows upon two other expeditions realized in arctic in 2005 (Spitzberg) and 2006 when H.S.H. reached the North Pole by sledge. His Highness the Prince was awarded the Teddy Roosevelt medal at the US Congress, and other international Prizes in acknowledgement of his actions towards environmental protection. He was also awarded the Doctor Honoris Causa Insignia of Nice-Sophia-Antipolis University.



James ARONSON

Researcher, CEFE/CNRS, Representative-at-large, Society for Ecological Restoration (SER)

SESSION 2 Large-scale restoration: opportunities to deal with our main environmental and development challenges

James Aronson is a restoration ecologist at the Centre d'Ecologie Fonctionnelle and Evolutive (CNRS), in Montpellier, France, and at the Missouri Botanical Garden, where he is coordinator of the Restoring Natural Capital Alliance. While working on the conceptual and practical advancement of science-based ecological restoration, he also consults on specific restoration projects and programs in arid and semi-arid. mediterranean climate and tropical forest and montane regions, marine environments, and protected areas. He is a Representativeat-Large of the Society for Ecological Restoration (SER), and editorin-chief of the SER-Island Press book series, The Science and Practice of Ecololgical Restoration. He has published extensively, these past 20 years, on ecological restoration, restoration of natural capital, and related subjects.



Monique BARBUT

Executive Secretary, United Nations Convention to Combat Desertification (UNCCD)

SESSION 5 Shaping a more sustainable and resilient planet

Monique Barbut, Executive Secretary, United Nations Convention to Combat Desertification (UNCCD), has over 30 years' experience in sustainable development, international diplomacy, governance and finance. From 2006 to 2012, she was Chief Executive Officer and Chairperson of the Global Environment Facility (GEF) and World Bank Vice President. Prior to that, she was a UNEP director, preceding which she oversaw diverse functions in the French Aid system, ranging from aid evaluation to serving as Executive Director of Agence Française de Développement. She played a key role in the 1992 Rio Earth Summit finance negotiations and GEF's creation thereafter.



Jeb BARZEN

Director of Field Ecology, International Crane Foundation

Measuring / Metrics

Jeb Barzen has directed the Field Ecology Department at the International Crane Foundation for 27 years. Projects of the Field Ecology Department involve developing research and conservation programs that restore native ecosystems for people and other inhabitants, both in the U.S. and abroad. Since 2001, Jeb has worked with colleagues to develop the University Network for Wetland Research and Training in the Mekong Region: a network that currently includes 18 member universities, teaches an annual wetland ecology course and implements integrated conservation projects. Our most recent collaborative research project includes a survey of Persistent Organic Pollutants in wetlands throughout the Mekong Basin. Jeb received Wildlife Biology degrees from the University of North Dakota (M.S.-1989) and University of Minnesota (B.S.-1982).



Peter BESSEAU

Director International Affairs, Canadian Forest Service, Natural Resources Canada, Executive Director, International Model Forest Network Secretariat, Co-chair, Global Partnership on Forest Landscape Restoration

Landscape Restoration – a Nature Based Solution

Peter Besseau is the Director of International Affairs for the Canadian Forest Service of Natural Resource Canada, based in Ottawa. Since 2003, he has also led, as Executive Director, the International Model Forest Network Secretariat (IMFNS), a global community of practice in large-scale integrated natural resource management with over 60 sites across the globe. In December 2013, Peter was also elected Co-Chair of the Global Partnership on Forest Landscape Restoration (GPFLR) a role that allows him to draw on his rich and varied experience in landscape approaches, particularly from a governance perspective, to support the objectives of the GPFLR. He has worked on international forest and forest policy issues for over 20 years including in Russia, Asia, Latin America, and Africa.



Pedro BRANCALION

Professor, University of São Paulo

SESSION 3 Practitioners Talk: Restoration - assessing a long track record of practices and scientific studies

Dr. Pedro Brancalion is professor at the University of São Paulo, Brazil. He has been actively involved in the last 10 years with the development of innovative tropical forest restoration approaches in human-modified landscapes, and has published two books and 50 peer-reviewed papers on this issue. His research findings have been directly applied in the Atlantic Forest Restoration Pact, a coalition of more than 250 institutions engaged in the restoration of 15 million ha in this global biodiversity Hotspot by 2050, as well as in the development of both state - and federal - level policies on ecological restoration. Ultimately, he has contributed to integrate research, practice and policy as a tripod to sustain large-scale restoration for improving human well-being and biological conservation.



Ben BROWN

Senior Ecologist - Blue Forests (Yayasan Hutan Biru)

Generating positive social impacts

After graduating with a B.Sc. from the University of Michigan's School of Natural Resources specializing in Aquatic Ecology and Environmental Education, Benjamin Brown moved to Indonesia, where he has been living and working since 1995. In 2000, Ben founded a small grassroots NGO called Yayasan Akar Rumput Laut (YARL), based in Yogyakarta, Java. Ben also worked during this time for Mangrove Action Project in Southeast Asia. YARL became MAP-Indonesia in 2007, at the time implementing programs in 7 provinces in Indonesia with 14 field and office staff. Currently MAP-Indonesia is engaged in the 5 year Restoring Coastal Livelihood Project in South Sulawesi. In 2012, MAP-Indonesia joined the consortium Blue Forests, where Ben serves as Senior Ecologist, Co-founder and Developmental Director.



Jonah BUSCH

Research Fellow, Center for Global Development

Opening up new economic avenues

Jonah Busch is a Research Fellow at the Center for Global Development. He is an environmental economist whose research focuses on the economics of forests and climate change. Busch is the lead developer of the OSIRIS suite of open-source software tools for estimating and mapping the benefits and costs of alternative policy decisions for reducing emissions from deforestation and forest degradation (REDD+). Busch has advised on REDD+ for several governments worldwide. He serves on the editorial board of Conservation Letters and the Technical Advisory Panel of the Forest Carbon Partnership Facility among others. Busch served in the Peace Corps as a math teacher. Prior to joining CGD, Busch was the Climate and Forest Economist at Conservation International.



Anne CASTLE

Assistant Secretary for Water and Science, U.S. Department of the Interior

SESSION 3 Practitioners talk: Restoration – assessing a long track record of practices and scientific studies

Anne J. Castle is, since 2009, Assistant Secretary for Water and Science for the U.S. Department of the Interior, where she oversees water and science policy and has responsibility for the Bureau of Reclamation and the U.S. Geological Survey. Castle spearheaded Interior's WaterSMART program and was the driving force behind the 2010 MoU on hydropower generation among Interior, the Department of Energy, and the U.S. Army Corps of Engineers. She provides leadership on Colorado River issues and is Secretary's designee and Chair of the Glen Canyon Dam Adaptive Management Work Group, and a champion of the National Land Imaging Program. Castle served on the South Platte River Basin Task Force and was twice appointed to the Colorado Ground Water Commission.



David COOPER

Director, Science, Assessment and Monitoring Division representing Braulio DIAS, Executive Secretary of the Convention on Biological Diversity (CBD)

SESSION 5 Shaping a more sustainable and resilient planet

Dr. Cooper is Director, Division for Science, Assessment and Monitoring at the Secretariat of the United Nations Convention on Biological Diversity. Previously, he led work to promote the implementation of the Strategic Plan for Biodiversity 2011-2020 and national biodiversity strategies and action plans. He was Secretary of the tenth meeting of the CBD COP, Nagoya, 2010, which adopted the Strategic Plan and its twenty Aichi Biodiversity Targets. Earlier he led the development of the Convention's Programme of Work on Agricultural Biodiversity and the Global Strategy for Plant Conservation. Previously, he worked at the Food and Agriculture Organization of the United Nations (FAO), among other organizations. He has written numerous papers on agriculture and food, and on biodiversity science and policy.



Naïq COZANNET

Senior Project Manager, Biodiversity & Forests, AFD

Governance / Institutions

Graduated as a forester and agronomist, Naïg COZANNET has worked on forests and biodiversity issues since 1996. She started as program manager in the WWF Global Forest and Trade Network, contributing until 2003 to develop FSC compliant chains of value with the forest and timber sector in Europe, Central Africa and South East Asia. She then joined AFD where she headed the CSR Responsibility program until 2008. Project Manager within the Division for Rural development and Biodiversity since 2012, she currently manages a portfolio of forest and biodiversity projects in the Mediterranean Region, Central Africa and French overseas as well as various partnerships, including the framework partnership between AFD and IUCN.



Sean DeWITT

Senior Manager for Forest and Landscape Restoration, World Resources Institute (WRI)

Landscape Restoration – a Nature Based Solution

Sean is the Senior Manager for Forest Landscape Restoration at the World Resources Institute. He oversees the process to inspire, support and mobilize WRI's partners to restore productivity and function of degraded land. Prior to joining WRI, Sean worked to improve livelihoods in Africa and Asia through financing and technology innovations as a Director at Grameen Foundation. Previously, he managed projects for the US Department of State in Africa, Asia and the Caribbean, worked as a Management Consultant with PricewaterhouseCoopers and worked as an Industrial Engineer for Intel and the Walt Disney Company, Sean holds a BSc in Industrial Engineering from Purdue University and an MSc in Development Finance from the University of London.



Jean-Luc FRANÇOIS

Director, Division for Agricultural and Rural Development and Biodiversity, Agence Française de Développement (AFD)

Opening up new economic avenues

Since September 2009, Jean-Luc François is Director of the Division for Agricultural and Rural Development and Biodiversity at the Agence Française de Développement. The AFD, a public institution devoted to France's bilateral development assistance, supports the farming, forestry and conservation sector and policies, particularly through grants and soft loans to countries, companies or civil society organizations. From 2005 to 2009, Jean-Luc François was Deputy Director for food security at the Direction for Global Public Goods at the Ministry of Foreign and European Affairs. From 1981 to 2005, he worked in Thailand, Congo, Mauritania, Ivory Coast, Madagascar and Ethiopia as an expert sent by France to assist these countries' administrations and then at the services for cooperation within the embassies.



Sarah FRAZEE

Chief Executive Officer, Conservation South Africa

Generating positive social impacts

Sarah Frazee is dedicated to global biodiversity conservation with a keen interest in the role of business and economics in conservation. This motivated her eighteen year career with Conservation International. Sarah has worked in Indonesia, the Philippines, Madagascar, and Ghana. After her Masters at University of Cape Town, Sarah became the Director for Cl's programme in South Africa. The programme became an independent NGO, Conservation South Africa in 2010. Sarah now guides a portfolio that focuses on healthy ecosystem's role in greening economic development, food security and land reform, and building resilience to climate change. In the last five years she has led the design of two large-scale rehabilitation efforts aiming to deliver major social upliftment and job creation outcomes.



Antoine FRÉROT

Chairman and CEO, Veolia

SESSION 1 Assessing major environmental challenges and shaping innovative pathways to sustainability

A graduate from the École Polytechnique and PhD in Civil Engineering from the École nationale des ponts et chaussées, Antoine Frérot joined in 1983 the Research centre at the École nationale des ponts et chaussées as project manager before becoming deputy director from 1984 to 1988. From 1988 to 1990 he was head of Financial Operations at the Crédit National. He joined the Compagnie Générale des Eaux in 1990. In 2000 he was appointed chief executive officer of Veolia Transport and member of the Veolia Board of Directors. In 2003 he was appointed Chief Executive Officer of Veolia Water, and Executive Vice-President of Veolia. At the end of 2009, Antoine Frérot was appointed Chief Executive Officer and, in December 2010, Chairman and Chief Executive Officer of Veolia.



Hans FRIEDERICH

Director-General, International Network for Bamboo and Rattan (INBAR)

Knowledge

Dr. Hans Friederich is the Director-General of the International Network for Bamboo and Rattan, based at its Headquarters in Beijing, China. INBAR is an Inter-Governmental Organisation with currently 39 Member States, dedicated to improving the wellbeing of producers and users of bamboo and rattan within the context of sustainable development. Hans has more than 30 years working experience in Africa, Asia and Europe as natural resources manager. Dr. Friederich obtained his PhD from the University of Bristol and started his career in 1982 in Botswana. He joined the International Union for Conservation of Nature (IUCN) in 1989 in Eastern Africa and has been employed by IUCN for 24 years. Until 2013, his last post with IUCN was Regional Director for Europe.



Françoise GAILL

Special advisor, French National Center for Scientific Research (CNRS)

Generating positive social impacts

Françoise Gaill was in charge of CNRS foreign affairs at the department of life sciences, before chairing the department environment and sustainable development. She was in charge of the CNRS Institute of Ecology and Environment (INEE) during the last years. The objective of this institute is to promote and coordinate top-level fundamental research in global ecology, including biodiversity and humanenvironment interactions. This scientist has been at the head of the "Grenelle de la mer" in charge of research and innovation. She was vice president of Allenvi, a national research consortium dedicated to environmental sciences. She is chair of the national committee for marine and coastal research (COMER) and scientific advisor for the CNRS INEE.



Catherine GARRETA

Executive Director, Head of External Relations and Partnerships, Agence Française de Développement (AFD)

SESSION 1 Assessing major environmental challenges and shaping innovative pathways to sustainability

Generating positive social impacts

A graduate of Sciences Po and ENA, Catherine GARRETA has devoted most of her career to development and environment issues. Her assignments have included Head of the Department of Multilateral Affairs at the French Ministry for Development (1993-1996), Head of the French Global Environment Facility (1996-2000), Deputy-Director of the French Coastal Protection Agency (2001-2005), Executive-Director of Iddri (Institut du Développement Durable et des Relations Internationales), a Paris-based think-thank dealing with global governance and sustainable development (2005-2008). She joined AFD in 2009 where her responsibilities as Head of Cross-Cutting issues included Sustainable Development Strategy, Climate Change issues and Environment and Social Safeguards. She was appointed in September 2013 Executive Director for External Relations and Partnerships.



Dennis GARRITY

Drylands Ambassador, UNCCD, Senior Fellow, World Agroforestry Center, Chair, EverGreen Agricultural Partnership, Chair, Landcare International

SESSION 2 Large-scale restoration: opportunities to deal with our main environmental and development challenges

Dr. Garrity is a systems agronomist whose career has been focused on the development of small-scale farming systems. Dr. Garrity is Distinguished Research Fellow and former Director General of the World Agroforestry Center (2001-2011), the global leader in advancing the science and practice of cultivating trees on farms. He is currently UNCCD Drylands Ambassador and also chairs the Steering Committee for Landcare International, and the EverGreen Agriculture Partnership. Previously, he served as Regional Coordinator of the Southeast Asia Programme of the World Agroforestry Centre, based in Bogor, Indonesia, and was agronomist and head of the Agroecology Unit at the International Rice Research Institute (IRRI) in the Philippines. Dr. Garrity has a PhD in crop physiology from the University of Nebraska.



Pierre GERBER

Livestock Policy Officer, Food and Agriculture Organization of the United Nations (FAO)

Financing / Valuing

Pierre Gerber is Senior Policy Officer on livestock and environment issues at FAO. He possesses over 15 years of experience in analysing global livestock sector trends and interactions with the environment and currently coordinates a programme on sustainable development pathways for the livestock sector. This involves the analysis of technical information generated by life cycle assessment of livestock commodities, combined with socio-economic data and economic modelling. Over the last years, he has been directly involved in the underpinning analyses and writing of major FAO publications, including: "Livestock's long shadow - Environmental issues and options" (2006); "State of Food and Agriculture 2009: Livestock in the balance", and "Tackling climate change through livestock - a global assessment of emissions and mitigation opportunities" (2013).



Kyle GRAHAM

Executive Director, Coastal Protection and Restoration Authority of Louisiana

SESSION 2 Large-scale restoration: opportunities to deal with our main environmental and development challenges

Kyle Graham is the Executive Director for Louisiana's Coastal Protection and Restoration Authority, the state office responsible for implementing Louisiana's Comprehensive Master Plan for a Sustainable Coast and integrating hurricane protection, storm damage reduction, flood control, and the associated infrastructure construction and maintenance of coastal protection and restoration projects. Before working for the State of Louisiana, Mr. Graham earned bachelor's and master's degrees in biology from the University of North Carolina and Appalachian State University, worked as a wetland scientist restoring streams and wetlands, and oversaw the preparation and management of environmental documentation and permitting impacts.



K.L. HEONG

Former principal scientist, International Rice Research Institute (IRRI), Senior advisor, CABI South East Asia

Knowledge

Dr K.L. Heong is a fellow of The World Academy of Science and the Malaysian Academy of Science and holds a PhD and a DSc from University of London. Formerly a Principal Scientist in the International Rice Research Institute he is now the senior advisor to CABI South East Asia. His work to develop and communicate innovations to restore biodiversity and reduce pesticide in rice has been recognized by US Council for Agricultural Science & Technology (Charles Black Award), The World Academy of Science (Agriculture Prize), the Malaysian Plant Protection Society (Excellence Prize) and Government of Vietnam. He has won the St Andrews Prize, the World Bank Award, the COM+ Award and Golden Rice award.



Valerie HICKEY

Acting Sector Manager, Agriculture and Environmental Services, Senior Biodiversity Specialist, World Bank

SESSION 1 Assessing major environmental challenges and shaping innovative pathways to sustainability

Financing / Valuing

Valerie joined the World Bank as a technical specialist in East Asia and the Pacific, working on rural development projects in Cambodia, China and Lao, and on environmental safeguards. After joining the WB's global team, Valerie became chair of the biodiversity and wildlife crime communities of practice. As Sector Manager for Environment in the Agriculture and Environmental Services Unit, Valerie manages a cross-sectoral team that covers oceans, sustainable landscapes, climate smart agriculture and environmental economics. Before joining the World Bank, Valerie worked for WWF, Wildlife Conservation Society and the US National Park Service where she managed invasive species programs in Lake Mead, the reservoir to the Hoover Dam. Valerie holds a Ph.D. in Environmental Science and Policy from Duke University.



George HORNGERBER

Chair, Water Science and Technology Board (WSTB)

SESSION 1 Assessing major environmental challenges and shaping innovative pathways to sustainability

SESSION 5 Shaping a more sustainable and resilient planet

George M. Hornberger is Distinguished University Professor at Vanderbilt University, where he is the Director of the Vanderbilt Institute for Energy and the Environment. He has a shared appointment as the Craig E. Philip Professor of Engineering and as Professor of Earth and Environmental Sciences. Previously he was Ernest H. Ern Professor of Environmental Sciences at the University of Virginia. He has served on numerous committees of the U.S. National Academies, including as chair of the Commission on Geosciences, Environment, and Resources (1996-2000), chair of the Board on Earth Sciences and Resources (2003-2009), and currently as chair of the Water Science and Technology Board. Hornberger received his Ph.D. in hydrology from Stanford University.



Alexandre ICKOWICZ

Scientist, French Agricultural Research Center for International Development (CIRAD)

Governance / Institutions

A.Ickowicz is a Veterinarian, PhD in Life Sciences. He has been working for CIRAD during 18 years in semi-arid Africa, mainly in west Africa, on research program dealing with sustainability of pastoral systems. His main research topics are feeding behavior and performance of ruminant herds on Sahelian rangelands, sustainable rangeland management, impact of livestock on the dynamics of pastoral resources. He is the head of a mixed research unit between CIRAD, INRA and SUPAGRO entitled Livestock Systems in the Mediterranean and the Tropics (SELMET) in France. He has been involved as an expert in many development projects aiming to develop water points in semiarid rangelands in west Africa to secure mobility of pastoral systems and improve sustainability of these socio-ecosystems.



Jeffrey JACOBS

Director, Water Science and Technology Board (WSTB)

Measuring / Metrics

Jeffrey Jacobs is the Director of the Water Science and Technology Board (WSTB) at the National Research Council (NRC) in Washington, DC. The WSTB serves as an independent advisor to the U.S. Congress, federal agencies, and other entities through volunteer expert committees on a variety of national water science and related policy issues. In his 17 years at the NRC, Jeffrey has directed several NRC studies of prominent U.S. water issues, including Mississippi River and northern Gulf of Mexico water quality, Colorado River hydrology and climate, New Orleans hurricane protection, and U.S. Army Corps of Engineers planning principles and methods. He also has conducted extensive research on water planning issues in Southeast Asia's Mekong River basin. Jeffrey holds a PhD degree in geography from the University of Colorado.



Clive JONES

Senior Scientist, Ecologist Cary Institute of Ecosystem Studies

Engineering and Technology

Dr. Jones is recognized as founder and leader of the field of ecosystem engineering (physical modification of the environment by species), and a leader in the field of ecological engineering (utilizing ecological processes for environmental sustainability). His work emphasizes using ecosystem engineering species in environmental management. He cofounded the Ecological Engineering Group, Ile de France; is a founding editorial board member of the journal SAPIENS; and a member of the network of international experts, Veolia Institute. The author of over 190 scientific publications including 5 books, his awards and honors include: election as a Fellow, AAAS; John Simon Guggenheim Memorial Fellow; Blaise Pascal Chair; and a Royal Netherlands Academy of Arts and Sciences Visiting Professor.



Cathy KELLON

Water and Watersheds Program Director, Ecotrust

Measuring / Metrics

Cathy directs the Water and Watersheds Program at Ecotrust where she oversees the Whole Watershed Restoration Initiative, a multi-million dollar, collaborative effort to restore the major ecological functions of high priority river basins in Oregon and Washington, U.S. Cathy has over fifteen years of experience developing and applying strategic approaches to improving habitat for native fish and wildlife, increasing public awareness of the value of nature's services, and ensuring a more reliable access to clean water for all members of our communities. She has previously worked with the State of the Salmon Program, NOAA Fisheries, and the Oregon Watershed Enhancement Board. She earned her Master's in Geography and a minor in Interdisciplinary Water Resources Studies from Oregon State University.



LEI Guangchun

Dean, School of Nature Conservation, Beijing Forestry University

Generating positive social impacts

Dr. Lei is the dean of the School of Nature Conservation at Beijing Forestry University, and the professor in wetland ecology, vice Chairman of National Wetland Science Committee. Dr. Lei received his Ph.D in Population Biology from the University of Helsinki, Finland. He is a specialist in wetland science, ecosystem services, nature reserve management and metapopulation ecology. He has served as Senior Advisor for Asia-Pacific region of the Ramsar Convention Secretariat, Director of Freshwater & Marine Programs at the WWF China Program Office and Professor of Ecology and Environmental Biology at Peking University. His awards include the China National TV documentary Award (Golden Prize), the WWF International "Global Conservation Innovation Award" and the China National Forestry Science and Technology Prize.



LI Hao

Project Director, Beijing Forestry Society (BFS), Beijing Water Supply

Landscape Restoration – a Nature Based Solution

Mr. Li Hao is the Project Director of Beijing Forestry Society (BFS). He joined the BFS team in Oct 2006 and took the leading responsibility for lots of international environmental projects, most of which focus on addressing water crisis in Beijing through natural and integrated approaches. Currently, Mr. Li is serving as a point man in the Global Water Initiative, in which Beijing was selected as one of the six global demonstration sites. He is dedicated to creating an innovative market-based mechanism for addressing water crisis in mega-cities in collaboration with strong partners such as Forest Trends and IUCN. Mr. Li received a master degree in forest management from Beijing Forestry University in 2003.



Julia MARTON-LEFÈVRE

Director General, International Union for Conservation of Nature (IUCN)

SESSION 1 Assessing major environmental challenges and shaping innovative pathways to sustainability

Julia Marton-Lefèvre is Director General of the International Union for Conservation of Nature (IUCN), the world's oldest and largest global environmental organization. Previously, she was Rector of the University for Peace, Executive Director of LEAD International and Executive Director of The International Council for Science. She is a member of several boards (UN Global Compact, Graduate Institute of International and Development Studies, Oxford University's James Martin School), a Fellow of the World Academy of Art and Science, and a member of the World Future Council. She has co-authored numerous books and papers. She is a recipient of the AAAS Award for International Cooperation in Science, Chevalier de l'Ordre national de la Légion d'Honneur, Chevalier de l'Ordre de Saint-Charles and the ProNatura award.



Gaëll MAINGUY

Director of Scientific publications, Veolia Institute

Knowledge

Gaëll Mainguy currently manages the research program of the Veolia Institute and is the executive editor of S.A.P.I.EN.S, an Open Access, multidisciplinary, peer-reviewed journal focused on integrating scientific knowledge for sustainability. Prior to joining the Veolia Institute in 2006, Gaëll successively worked with the CNRS (Paris), the Center for Biomedical Genetics (Utrecht, The Netherlands) and the INSERM (Paris). Gaëll Mainguy is a former pupil of the Ecole Normale Supérieure in Paris and holds a PhD in Molecular Neurobiology from the Pierre and Marie Curie University.



Mauricio MOURA COSTA

Founder and Chief Operational Officer, BVRio

Opening up new economic avenues

Mauricio is co-founder and Chief Operational Officer of the Brazilian environmental exchange BVRio; co-founder and Chief Executive Officer of BVTrade, BVRio's electronic platform and co-founder and Chief Executive Officer of E2 Socio Ambiental, a company dedicated to the development, financing and management of social and environmental financing projects. Before founding BVRio Mauricio was a regional director for Latin America for EcoSecurities, a world leading carbon markets company. Before joining EcoSecurities Mauricio acted as a lawyer admitted in the Brazilian and the Portuguese bar. Mauricio has a PhD in Law from Paris II University in 1996. Mauricio was a professor of European and competition law in Lisbon and Rio de Janeiro and author of several articles and publications.



Carolina MURCIA

Consultant, CIFOR Science Director, Organization for Tropical Studies, USA

Measuring / Metrics

Dr. Murcia is a Colombian tropical conservation ecologist, with a Ph.D. from University of Florida (US). She generates and coordinates interdisciplinary and inter-institutional projects in science-based conservation and restoration, focusing mostly in northern South America and Costa Rica. She is currently the Science Director of the Organization for Tropical Studies (OTS) and adjunct faculty in the Department of Biology, University of Florida (US). She also does consulting work in Colombia in conservation and restoration, particularly related to policy and assessments. Her publications span the continuum between science, science transfer and policy. Previously she was a member of the Board of Directors of the Society for Ecological Restoration (11 years) and Northern Andes Regional Director at Wildlife Conservation Society (US).



Andrea NÁJERA

Manager of Strategic Ecosystems Conservation, Guatemala National Forest Institute (INAB)

Landscape Restoration – a Nature Based Solution

Andrea Nájera Acevedo, is manager of Strategic Ecosystems Conservation at National Forests Institute (INAB) of Guatemala, where she coordinates activities related to strategic ecosystems of the country, especially cloud forests, dry regions and protected areas. She also works in activities related to the National Strategy of Forest Landscape Restoration, in coordination with various institutions involved. Previously Andrea served as a coordinator of NISP (National implementation support partnership of the Convention on Biological Diversity) at National Protected Areas Council of Guatemala, and as coordinator of conservation in the semiarid region of Eastern Guatemala at a local NGO. Andrea is a Guatemalan Biologist, holds an MSc in Ecology and an MSc in Political Sciences, both from University of Chile.



Cara NELSON

Associate Professor in the Ecosystem Sciences and Conservation Department, University of Montana, Director of the University's Ecological Restoration Program - Chair, Society for Ecological Restoration (SER)

Knowledge

Dr. Cara R. Nelson is an Associate Professor in the Ecosystem Sciences and Conservation Department at University of Montana, Director of the University's Ecological Restoration Program, and Chair of the international Society for Ecological Restoration. She received Masters degrees in Forestry and in Conservation Biology from the University of Wisconsin and a PhD in Forest Ecosystem Analysis from the University of Washington. Her research focuses in three primary areas: 1) effects of large-scale disturbance on vegetation, 2) efficacy and ecological impacts of ecological restoration, and 3) conceptual basis for ecological restoration. In addition, Dr. Nelson works to increase awareness about the knowledge and training needed to improve the quality of restoration practice.



Rajendra K. PACHAURI

Chairman, Intergovernmental Panel on Climate Change (IPCC), Nobel Peace Prize 2007, Director General, The Energy and Resources Institute (TERI)

SESSION 5 Shaping a more sustainable and resilient planet

Dr. Rajendra Kumar Pachauri is the Chair of the Nobel Peace Prizewinning Intergovernmental Panel on Climate Change (IPCC), the scientific intergovernmental body that provides decision-makers and the public with an objective source of information about climate change. He is also Director General of TERI (The Energy and Resources Institute), a major independent research organisation providing knowledge on energy, environment, forestry, biotechnology, and the conservation of natural resources. Dr Pachauri is a prominent researcher on environmental subjects, recognised internationally for his efforts to build up and disseminate greater knowledge and design counteracting measures about man-made climate change. He has been conferred with a number of prestigious awards from Heads of State of India, France, Japan, Finland, Belgium and Mexico.



Linwood PENDLETON

Director, Ocean and Coastal Policy Program, Duke University's Nicholas Institute for Environmental Policy Solutions

Financing / Valuing

Linwood Pendleton is a senior scholar in the Ocean and Coastal Policy Program at Duke University's Nicholas Institute for Environmental Policy Solutions. His work focuses on policies that affect human uses and enjoyment of ocean and coastal resources – both living and non-living. He is the director of the Marine Ecosystem Services Partnership, author of many scholarly articles, and coordinates the Marine Secretariat of the international Ecosystem Services Partnership. Pendleton's current projects include understanding the economic and human impacts of ocean acidification (funded by SESYNC), Mapping Ocean Wealth (with TNC), the economics of coastal blue carbon (Global Environmental Facility), and efforts to better manage the deep sea. Pendleton served as acting chief economist at NOAA from January 2011 through August 2013.



Pierre-Joël PHILIBERT

President and CEO, GRS Valtech

Engineering and Technology

An engineer graduate from INSA Lyon, Pierre-Joël Philibert created in 1990, and became CEO, of Valtech Industry, a subsidiary of Elf specialized in remediation. In 1992, Valtech Industry became a subsidiary of GRS, a branch of Compagnie Générale des Eaux (now Veolia). Valtech Industry and GRS merged in 1996 to become GRS Valtech with Philibert as Chairman and CEO since 2003. Over the past decade, he also assumed positions in various subsidiaries of Veolia: in 2002, as CEO of Angibaut (alternative fertilization), President of SEDE Environnement (evacuation, treatment, recycling of sewage sludge or organic/mineral waste) until 2013, thereafter remaining on the Board of Directors. In 2012, he became Chairman of EMTA, subsidiary of SARP Industrie specializing in treatment and storage of special waste.



Stephen POLASKY

Regents Professor & Fesler-Lampert Professor of Ecological / Environmental Economics, Department of Applied Economics / Department of Ecology, Evolution & Behavior, University of Minnesota

Financing / Valuing

Stephen Polasky is Fesler-Lampert Professor of Ecological/ Environmental Economics and Regents Professor at the University of Minnesota. He received a Ph.D. in Economics from the University of Michigan in 1986 and a B.A. from Williams College in 1979. He served as Senior Staff Economist for environment and resources for the President's Council of Economic Advisers 1998-1999. His research interests focus on issues at the intersection of ecology and economics and include the impacts of land use and land management on the provision and value of ecosystem services and natural capital, biodiversity conservation, sustainability, environmental regulation, renewable energy, and common property resources. He was elected into the National Academy of Sciences in 2010.



Carole SAINT-LAURENT

Deputy Director, Global Forest and Climate Change Programme, International Union fo Conservation of Nature (IUCN)

SESSION 2 Large-scale restoration: opportunities to deal with our main environmental and development challenges

Carole Saint-Laurent is Deputy Director, Global Forest and Climate Change Programme, IUCN. She is also the coordinator of the Global Partnership on Forest Landscape Restoration (GPFLR). Carole has 20 years of experience in environmental policy and programme development working at international and national levels for IUCN. WWF and the Canadian Institute for Environmental Law and Policy. She has also acted as an adviser to the UN Department of Environmental and Social Affairs and to the private sector on a range of issues related to sustainable development. She holds a Master's of Law degree from University College London.



Lynn SCARLETT

Managing Director, Public Policy, The Nature Conservancy (TNC)

Governance / Institutions

Lynn Scarlett is Managing Director for Public Policy at The Nature Conservancy. Previously, she served as Deputy Secretary and Chief Operating Officer of the U.S. Department of the Interior. In this role, Scarlett chaired the Department's Cooperative Conservation Working Group and its Climate Change Task Force. She is author of publications on climate change adaptation; ecosystem services; landscape-scale governance, and science and decision making. She serves on the Science Advisory Board of NOAA and the Dean's Advisory Council of the Bren School of Environmental Science and Management at UC Santa Barbara. She received her Bachelor's and Master's degrees in political science from the University of California, Santa Barbara, where she also completed her Ph.D. coursework and exams in political science and political economy.



Claudio SCHNEIDER

Technical Director, Conservation International Peru (CI)

Knowledge

Dr. Claudio Schneider is Technical Director of the Conservation International in Peru. He has a Forest Engineering degree from Universidad Nacional Agraria La Molina in Lima, a Master's degree in Tropical Silviculture from the University of Goettingen, and a Ph.D. in Forest Science from Colorado State University. He has worked as a consultant in agriculture development and drought mitigation in the Middle East and the Western US. He leads all CI programs in Peru, including an indigenous community forest management project for in the Central Peruvian Amazon and the development of the Alto Mayo REDD project. Currently he is working on the governance and restoration of riverine vegetation and aquatic resources in Awajun indigenous communities of the Alto Mayo.



Amartya SEN

Thomas W. Lamont University Professor, and Professor of Economics and Philosophy, Harvard University, Nobel Prize in Economic Sciences 1998

SESSION 6 Keynote address on Environment and Develoment

Amartya Sen is Thomas W. Lamont University Professor, and Professor of Economics and Philosophy, at Harvard University. Until 2004 he was the Master of Trinity College, Cambridge. He has served as President of the Econometric Society, the American Economic Association, the Indian Economic Association, and the International Economic Association. His books have been translated into more than thirty languages. Amartya Sen's awards include Bharat Ratna (India); Commandeur de la Legion d'Honneur (France); the National Humanities Medal (USA); Ordem do Merito Cientifico (Brazil); Honorary Companion of Honour (UK); Aztec Eagle (Mexico); Edinburgh Medal (UK); the George Marshall Award (USA); the Eisenhauer Medal (USA); and the Nobel Prize in Economics.



Fred SKLAR

Director, Everglades Restoration Science Dpt, South Florida Water Management District

Measuring / Metrics

Fred H. Sklar has a Masters in Oceanography and a Ph.D. in Wetland Ecology. He has been working in coastal and freshwater ecosystems since 1976, is an Associate Editor for the Ecological Society of America's journal: Frontiers in Ecology and the Environment, and is the Director of the Everglades restoration science department at the South Florida Water Management District (District) in West Palm Beach. Dr. Sklar studies the hydrology, soil, plant and animal processes associated with both the degradation and restoration of wetland and coastal ecosystems, and specializes in the design and implementation of landscape-scale, adaptive management experiments to facilitate environmental restoration.



Robert SNOW

Attorney-Advisor, Office of the Solicitor, US Department of the Interior

Governance / Institutions

Bob Snow is an Attorney-Advisor with the United States Department of the Interior. He is based in Washington D.C, providing advice to the Secretary, the Deputy Secretary, the Assistant Secretary for Water and Science, and the Commissioner of Reclamation on a wide range of legal issues concerning the Colorado River, including Indian water rights settlements and environmental programs. He works closely with the U.S. Department of State on issues arising out of the administration of the 1944 U.S.-Mexico Water Treaty. Prior to his current position, Bob was a hydrologist with the U.S. Geological Survey. He earned his Juris Doctor, cum laude, from the Pace University School of Law, and served as the Editor-in-Chief of the Pace Environmental Law Review.



Andrew STEER

President and CEO, World Resources Institute (WRI)

SESSION 4 Options for the future: Restoration and the sustainable management of ecosystems

Dr. Andrew Steer is the President and CEO of the World Resources Institute. He has three decades of experience in international development, including on the front line in Asia and Africa, with previous senior posts at the World Bank and the UK government's Department of International Development. Most recently he was the Bank's Special Envoy for Climate Change. He was educated at St. Andrews University, Scotland, the University of Pennsylvania, and at Cambridge University. He has a PhD in Economics, has written widely on sustainable development issues, and has taught at several universities.



Georges VALENTIS

Managing Director, Veolia Institute

Engineering and Technology

Georges Valentis is the Managing Director of the Veolia Institute, France. He has held leadership positions in various bodies in the field of water and solid waste research. Since 1993, he has also taught waste recycling and treatment at a French Engineering School. Georges Valentis contributed to the creation of the Veolia Institute of which he became Managing Director in September 2001. Georges has an engineering degree from Athens Polytechnic schools, Greece, and a PhD in water sanitation.



Philippe VALLETTE

Chairman, World Ocean Network Director, National Center, Nausicaá

Opening up new economic avenues

Philippe Vallette is an oceanographer. He worked for marine laboratories before devoting himself completely to Nausicaá, a complex of international standing devoted to the discovery of the marine environment and to increasing public awareness of the need for a better sustainable use of the oceans. In recent years, he has concentrated on developing the World Ocean Network, an educational world organisation whose members are aquariums, science centres, museums and educational centres under the auspices of the Global Forum on Oceans and UNESCO. He is also President of the World Festival of Underwater Pictures. In 2011, he launched a new concept the Blue Society' based on the main pillars of sustainable development (economy, society and the environment) adding culture and equity.



Michael VERDONE

Program officer, International Union for Conservation of Nature (IUCN)

Financing / Valuing

Michael Verdone is a program officer in the International Union for the Conservation of Nature's Global Economics Program and a Graduate Fellow at the Center for Collaborative Conservation. Michael began his career in conservation working on livelihood issues of marine protected areas. Later, Michael started working with IUCN's Global Forest and Climate Change Program to conduct assessments of 'Restoration Opportunity' in Ghana and Rwanda. His work uses economic analysis in multi-discipline, collaborative manner to engage with communities and stakeholders in the process of restoring degraded and deforested landscapes.



Leslie WELDON

Deputy Chief, National Forest System, U.S. Department of Agriculture Forest Service

Opening up new economic avenues

In 2011, Leslie Weldon was named Deputy Chief for the National Forest System with the USDA Forest Service. In this role, Leslie is the lead executive responsible for policy, oversight and direction for the natural resource programs for managing the 193 million acres of National Forests and Grasslands so they best demonstrate sustainable multipleuse management, using an ecological approach, to provide benefits to citizens. During her 32-year career with the Forest Service, she has participated on numerous national and international technical and policy review activities. She has been working closely with partners from academia, conservation, as well as environmental and community groups, local government, and natural resource related businesses. She is committed to workforce diversity, leadership development, and civil rights.



Piet WIT

Chair, Commission on Ecosystems Management, IUCN

Landscape Restoration – a Nature Based Solution

Piet Wit graduated at Wageningen University (The Netherlands) in 1971 on Range Ecology with a focus on Grassland ecology, Plant taxonomy and geography of tropical and subtropical regions and Entomology. Piet has been working a/o in integrated water management in The Netherlands. Piet's experience includes long-term assignments on biodiversity conservation and management projects, in West Africa and Mongolia. Piet has been member of the CEM Steering Committee since 1996, being the CEM Chair since 2008. He was member of the board of the Netherlands Committee of IUCN for 12 years. For his work on the reintroduction of the Przewalski Horse in Hustai National Park Mongolia, Piet has been awarded with Mongolia's Friendship medal. Currently Piet is actively involved with the protection of Chimpanzees in Guinea Bissau.



Gustavo ZULETA

Vice-chair, Ibero-American and Caribbean Society for Ecological Restoration (SIACRE), Director, Dept. of Ecology & Environmental Sc., Maimónides University

Governance / Institutions

Gustavo Zuleta is an applied scientist, director of the Dept. of Ecology and Environmental Sciences at Maimónides University, and professor at Lomas de Zamora University. He is leading a large-scale, interinstitutional initiative to determine high priority restoration sites/zones in major ecoregions of Argentina, filling policy gaps and using environmental and socio-economic criteria. In 2013 he created a regional network of participatory monitoring for biodiversity conservation in subtropical savannas/forests, integrating commitments from multiple (private/public) stakeholders. He is the Vice-Chair of the Ibero-American and Caribbean Society for Ecological Restoration (SIACRE) and organizing the IV SIACRE Congress (April 2015). Gustavo holds a PhD in Biology (University of Buenos Aires) and did his postdoc in Ecology at the University of British Columbia (Canada).

Organizers





www.institut.veolia.org/en

The Veolia Institute is a non-profit organization under French law, created in 2001 by the company Veolia. It operates as an independent environmental think-tank, promoting foresight reflection and providing an international platform for sharing state-of-the art scientific knowledge and best field practices on sustainable development. Dedicated to encouraging long-term thinking and to anticipating the trends that will mark the society-environment interaction in the mid and long-terms, the Institute works systematically in partnership with pluridisciplinary networks of scientists and development practitioners in the field in order to fulfil its goals. The Foresight Committee, the Institute's central body, provides independent views about social needs and directions and their implications for the Institute's activities. Besides its open-access scientific publications S.A.P.I.EN.S and FACTS Reports, the Veolia Institute organizes every 18-24 months a series of "Future Environmental Trends Conferences" jointly with academic or institutional partners. Acting as facilitator among interdisciplinary communities and catalyst of innovative reflection, the programme of international conferences organized since 2004 synthesizes the mission of the Institute: to identify emerging challenges of sustainable development, to raise public awareness and to inform decision-making.





www.dels.nas.edu/wstb

The Water Science and Technology Board was established in the National Research Council to provide a focal point for studies related to water resources accomplished under the aegis of the National Academy of Sciences and the National Academy of Engineering. The board's objective is to improve the scientific and technological basis for resolving important questions and issues associated with the efficient management and use of water resources. In carrying out its responsibilities and to serve the national interest, the board responds to requests for evaluations and advice concerning specific and generic issues in water resources, influences action by initiating studies of issues that merit consideration by public agencies and others, identifies issues and topics of research related to water resources, and cooperates with other units of the National Research Council and groups with mutual interests outside the National Research Council. The board's scope covers all dimensions of water resources, including science, engineering, economics, policy, educational issues, and social aspects.





www.afd.fr

The Agence Française de Développement (AFD) is a public development finance institution that has been working to fight poverty and foster economic growth in developing countries and the French Overseas Provinces for seventy years. It executes the policy defined by the French Government. AFD is present on four continents where it has an international network of seventy agencies and representation offices, including nine in the French Overseas Provinces and one in Brussels. It finances and supports projects that improve people's living conditions, promote economic growth and protect the planet, such as schooling for children, maternal health, support for farmers and small businesses, water supply, tropical forest preservation, and the fight against climate change. In 2012, AFD approved €7 billion to finance activities in developing countries and the France's overseas provinces. The funds will help get 10 million children into primary school and 3 million into secondary school; they will also improve drinking water supply for 1.79 million people. Energy efficiency projects financed by AFD in 2012 will save nearly 3.6 million tons of carbon dioxide emissions annually.





www.iucn.org

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN's work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, food and development. IUCN supports scientific research, manages field projects all over the world, and brings governments, NGOs, the UN and companies together to develop policy, laws and best practice. IUCN is the world's oldest and largest global environmental organization, with more than 1,200 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGOs and private sectors around the world.

Associated Partners



www.fpa2.com



In June 2006, HSH Prince Albert II of Monaco decided to set up his Foundation in order to address the alarming threats hanging over our planet's environment. The Prince Albert II of Monaco Foundation works for the protection of the environment and the promotion of sustainable development. The Foundation supports initiatives conducted by public and private organizations within the fields of research, technological innovation and activities to raise awareness of the social issues at stake. It funds projects in three main geographical regions: the Mediterranean Basin, the Polar Regions and the Least Developed Countries. The Foundation's efforts focus on three main sectors: Climate change and renewable energies, biodiversity, and integrated and sustainable watermanagement together with the fight against desertification. www.facebook.com/FondationPrinceAlbertIIdeMonaco



www.conservation.org



Building upon a strong foundation of science, partnership and field demonstration, CI empowers societies to responsibly and sustainably care for nature, our global biodiversity, for the long term well-being of people. CI was founded in 1987 and has more than 800 employees working in nearly 30 countries on six continents. CI is helping to lead a global conservation with a key message: people need nature to thrive. CI aims to influence the course of global development, demonstrating to governments, institutions and corporations alike that a path that values nature is essential for the well-being of all life on our planet.



www.uncdd.int



Emerging from the 1992 Earth Summit in Rio, the United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment, development and the promotion of sustainable land management. The Convention's 195 signatory Parties work to alleviate poverty in the drylands by promoting a specific global response to desertification, land degradation and drought. Each party is expected to agree and deliver against explicit commitments according to the Convention.



www.wri.org



WRI is a global research organization that works closely with leaders to turn big ideas into action to sustain a healthy environment—the foundation of economic opportunity and human well-being. We envision an equitable and prosperous planet driven by the wise management of natural resources. We aspire to create a world where the actions of government, business, and communities combine to eliminate poverty and sustain the natural environment for all people.



OFFICE FOR COOPERATION WITH CIVIL SOCIETY ORGANIZATIONS

www.franceintheus.org/spip.php?article687

Within the Embassy of France in Washington, the Office's aim is to foster an overseas network of transatlantic civil society organizations (CSOs). The Office facilitates partnerships amongst ISOs and amongst CSOs, fosters collaboration between the philanthropy sectors of the two countries, and works to increase the visibility of French development institutions in the U.S.

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