MAKE OUR



FACING GLOBAL CHANGE: THE FRANCO-GERMAN MAKE OUR PLANET **GREAT AGAIN RESEARCH PROGRAM**

> FINAL JOINT CONFERENCE 6.—7.12.2022 **FUTURIUM, BERLIN**



















CONFERENCE PROGRAM

06.12.2022

8:30 am Registration

9:30 am Opening

Federal Ministry of Education and Research (BMBF)
French Ministry of Higher Education and Research (MESR)

9:50 am Highlights from the MOPGA-Initiative, a Franco-German Partnership

Andreas Goldthau, Willy Brandt School of Public Policy
Matthias Rehahn, Helmholtz-Zentrum Hereon
Delphine Renard, Centre d'écologie fonctionnelle et evolutive
Philip Schulz, Institut Photovoltaique d'Ile de France

10:40 am Coffee Break

11:00 am Keynotes by:

- Antje Boetius, Alfred-Wegener-Institute (AWI), Bremerhaven
- Philippe Ciais, Laboratoire des Sciences du Climat et de l'Environnement (LSCE), Saclay
- Sandra Lavorel, Laboratoire d'Écologie Alpine (LECA), Grenoble
- Karen Pittel, ifo Center for Energy, Climate, and Ressources, Munich

12:30 pm **Lunch**

2:00 pm How can communication between science, politics and economy contribute to a successful knowledge transfer?

Marie Heidenreich, Deutsches GeoForschungszentrum (GFZ) Mark Lawrence, Institute for Advanced Sustainability Studies (IASS) Sandrine Paillard, Future Earth France Clemens Scheer, KIT-Campus Alpin



2:50 pm MOPGA Project Presentations in Climate, Energy and

Earth System ResearchIntroductory storyline by **Monika Jones**

Session 1.1 Trends Based on Past Climate

Gayane Asatryan, Frédéric Bouchard, Alessandro Forte, Pierre Valla, Henry Wu

3:40 pm Coffee Break

4:00 pm Session 1.2 Understanding Processes of Global Change on

Various Scales in the Earth System

Barbara Ervens, Christopher Cantrell, Rainer Kiko, Matthias Tesche,

Helmuth Thomas, Chien Wang

4:50 pm Session 1.3 New Challenges for Earth System Modeling

Julien Boucharel, Edith Cortes, Lou Derry, Jhan C. Espinoza, Alexey Fedorov, Katsumasa

Tanaka, Takaya Uchida

5:40 pm | **Wrap-up**

7:30 pm Gala Dinner at the Museum für Naturkunde

(Invited Guests only)

07.12.2022

9:00 am Welcome

Stefan Brandt, Director Futurium

Monika Jones

9:10 am MOPGA Project Presentations in Climate, Energy and Earth

System Research

Introductory storyline by Monika Jones

Session 2.1 Impacts on Biodiversity and Ecosystems

Jim Clark, Camille Parmesan, Christina Richards, Nuria Texido

10:00 am Session 2.2 Climate Change and the Land Use Sector:

Impacts, Adaptation and Mitigation

Alessandra Giannini, Lorie Hamelin, Ignacio Palomo, Delphine Renard, Clemens Scheer

10:45 am Coffee Break

11:00 am Session 3.1 Alternative Energy Production,

Conversion and Storage

Marion Carrier, Ludmila Cojocaru, Eric Hill, Michael Zürch

11:45 am Session 3.2 Building on MOPGA's successes.

Climate and sustainability research for the future

Jed Kaplan, Esther Schuch, Bruno Turnheim

12:30 am Coffee Break

12:45 pm The Joint Scientific Paper of MOPGA: a common position on

global change

Barbara Ervens, Christina Richards

1:05 pm International and interdisciplinary career paths in science

Yvan Lagadeuc, French National Research Agency (ANR)

Anna Possner, Goethe University Frankfurt **Johannes Quaas**, University Leipzig

Núria Teixidó, Laboratoire d'Océanographie de Villefranche **Sara Todorvic**, Leibniz Centre for Tropical Marine Research (ZMT)

1:45 pm Closing remarks

2:00 pm | Lunch

Futurium Exhibition

(optional)



THE MINISTERS / GERMANY



BETTINA STARK-WATZINGER

GERMAN FEDERAL MINISTER OF EDUCATION AND RESEARCH

Bettina Stark-Watzinger is Federal Minister of Education and Research appointed on 08 December 2021. She has been a member of the German Bundestag since 2017. From 2018 to 2020 she was chairwoman of the Bundestag's Finance Committee, and from 2020 to 2021 she was Parliamentary Secretary of the Free Democratic Party (FDP) in the Bundestag. Stark-Watzinger studied economics at the Johannes Gutenberg University in Mainz and the Goethe University in Frankfurt am Main from 1989 to 1993. After graduating with a degree in economics she initially worked at the BHF Bank. After spending several years abroad in the United Kingdom, she became Academic Manager in the Finance, Accounting, Controlling and Taxation Department of the European Business School Oestrich-Winkel. From 2008 to 2013 she worked as Managing Director of the House of Finance at the Goethe University Frankfurt. Bettina Stark-Watzinger then assumed responsibilities as Managing Director of the research center SAFE — Sustainable Architecture for Finance in Europe from 2013 until her election to the Bundestag in 2017.

THE MINISTERS / FRANCE



SYLVIE RETAILLEAU

FRENCH MINISTER OF HIGHER EDUCATION AND RESEARCH

Sylvie Retailleau is Minister of Higher Education and Research (since 20 May 2022). Sylvie Retailleau graduated from ENS Cachan in 1988 and received her PhD in applied physics from the University of Paris-Sud in 1992. Her research in the Institut d'Electronique Fondamentale (IEF, Université Paris-Sud/CNRS) focused on the theoretical study of the physics of semiconductor components for advanced electronics. She became a professor in 2001 at the Université Paris-Sud renamed Université Paris-Saclav in 2020. She was then in charge of the IST Master's degree (Information, Systems, Technology) until 2008, and led a research operation on «Integrated Quantum Components for NanoElectronics» of the Institute of Fundamental Electronics until 2011. She was Vice president of the physics department of the Faculty of Sciences of Orsay from 2007 to 2008, then Vice dean in charge of training from 2008 to 2011, she was Dean of the Faculty from September 2011 to May 2016. Sylvie Retailleau was then President of the Université Paris-Sud from May 2016 to December 2018. She was strongly involved in the creation of the Paris Saclay Idex project, working on the training plan and on the training research structuring. She also participated in the preparatory work for the French research programming law. She was elected President of the Université Paris-Saclay on March 2, 2020 exercised this mandate until her appointment as Minister of Higher Education and Research on 20 May 2022.

THE MODERATOR

MONIKA JONES



Monika Jones is one of the leading bilingual journalists and presenters in Germany. As an English speaking News Anchor at Germany's global TV broadcaster, Deutsche Welle, she is familiar to a wide international audience in Europe, North America, Asia, Africa and the Middle East. As a bilingual live event moderator, Monika Jones has taken part in major international summits, chairing high-level panels at the G7, the G2O and the United Nations Climate Change Conferences. Her specialist areas include economics, climate change, mobility, health and space sciences. Monika Jones presented one of the largest Livestream events ever as the official presenter of the European Space Agency's historic Rosetta mission, which successfully landed the Philae space probe on a comet.

THE SPEAKERS

ANTJE BOETIUS



Antje Boetius is a polar and deep-sea researcher and director of the Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research. As professor of geomicrobiology and head of the Joint Research Group for deep-sea ecology and technology at the Max Planck Institute for Marine Microbiology, she is involved in the MARUM cluster of excellence at the University of Bremen. Boetius has participated in almost 50 expeditions on international research vessels. Her research focuses on the effects of climate change on the Arctic Ocean and the biodiversity of the deep sea. She is the recipient of the DFG's Gottfried-Wilhelm-Leibniz and Communicator Prizes, the German Environmental Award 2018 and was awarded the Federal Cross of Merit in 2019. As member of the «Leopoldina National Academy» she is heavily involved in science communication and dialogue with society.

PHILIPPE CIAIS



Philippe Ciais is research director at Laboratoire des Sciences du Climat et de l'Environnement in France and professor at The Cyprus Institute. His research focuses on the quantification and understanding of the global terrestrial carbon sink in the recent decades and on the forecast of its future evolution, using atmospheric in-situ measurements, satellite observations and vegetation models. Author of more than a thousand peer-reviewed publications, including many in high profile journals, Philippe Ciais is a highly cited scientist, and was ranked as the top most productive researcher in climate change research. He co-chaired the Global Carbon Project and acted as Convening Lead Author in the 5th IPCC Assessment Report for the Carbon and Other Biogeochemical Cycles. Philippe Ciais is a member of the French Academy of Sciences and foreign member of the Chinese Academy of Sciences.

SANDRA LAVOREL



Sandra Lavorel is a functional ecologist with 20 years' experience in interdisciplinary research on global change, ecosystem services and sustainability, at scales ranging from local to regional and global. She has led international research on plant functional traits and ecosystem services, and collaborative global change programs under the umbrella of IGBP and Future Earth. She is a Highly-Cited Researcher and has authored 282 articles published in high-ranking international peer-reviewed journals. She is a member of the French Academy of Sciences and of the U.S. National Academy of Sciences, and has received multiple prestigious prizes and awards including four in 2020–2021. Her commitment to contributing and stimulating excellent science for environmental policy through participation in regional (e.g. Ecrins National Park), national (e.g. Ministry for Environment) and international institutions (e.g. IPBES) has been recognised through high distinctions from the French government.

KAREN PITTEL



Karen Pittel is Professor of Economics at the University of Munich and Director of the Center for Energy, Climate and Resources at the ifo Institute. Karen is Co-Chair of the German Advisory Council on Global Change (WBGU) and Deputy Chair of the Steering Committee of the Science Platform on Climate Protection which advises the German Government on long-term climate policy. She is also a member of the Bavarian Climate Council and the Board of Directors of the German Academies of Science project «Energy Systems of the Future». Karen Pittel's research interests lie in the areas of energy, climate and resource economics with a focus on the transformation of energy systems and the long-term effectiveness and efficiency of climate and energy policies.



The Franco-German research initiative "Make Our Planet Great Again" (MOPGA) stemming from an idea by French President Emmanuel Macron was launched by the French and German Research Ministries in 2018. It aims at attracting researchers from around the world to perform research of interest at the global scale (earth system sciences, climate change and sustainable development, and energy transition). By gathering international fellows in leading research institutions and universities in France and Germany, the MOPGA initiative provides a framework for enabling scientific cooperation, opening paths for personal professional development and strengthening European attractiveness.

Since the start of MOPGA, more than 50 international scientists and their research teams have been working at French and German research institutions to assess the challenges of global warming and to find applicable solutions to mitigate climate change. Their projects are of great diversity and cover the full spectrum of disciplines: from understanding Earth's climate history in deep time to current, and predicting future atmospheric processes; response of biodiversity and ecosystems, including coupled human-natural systems; and solutions ranging from cutting-edge technology development to political and social adaptation strategies.

The MOPGA initiative is funded by the General Secretariat for Investment (SGPI) for France and by the German Federal Ministry of Research and Education (BMBF). The research initiative is managed by the National Scientific Research Center (CNRS) and the National Research Agency (ANR) on behalf of all French research organizations, and by the German Academic Exchange Service (DAAD) in Germany.

The final joint conference of the MOPGA Program "Facing Global Change" will take place from 6.—7. December 2022 at the Futurium in Berlin. The event will present results of a strong Franco-German research collaboration against the background of an increased global responsibility to support and implement the requirements of the Paris Climate Agreement. On top of fresh inspiration and broad discussion the conference will be a platform for the MOPGA fellows to present their successful research and collaboration of their teams.

The conference is going to be opened by the Federal Ministry of Education and Research (MESR). Keynotes by internationally renowned French and German scientists like Antje Boetius, Philippe Ciais, Sandra Lavorel and Karen Pittel will give cutting-edge insights from climate research, ecosystems and biodiversity, and marine research as well as energy research and exhaustible natural resources. Lively roundtable-discussions will present highlights of the MOPGA program as a unique Franco-German joint venture. The event will offer plenty of space for exchange with stakeholders from science, politics, civil society and industry. Since one of today's crucial challenges is to find strategies to mitigate the effect of global change, the conference will address the question on how communication between science, politics and economy can succeed and contribute to knowledge transfer. This requires transforming scientific knowledge into action and creating solutions for our society. The conference will also highlight some international career paths of MOPGA laureates who came (back) to France and Germany with MOPGA and how they will continue their academic careers.















