

Agenda and Speakers

2022
#GGSD
Forum

Green innovation
and the impact
of economic shocks

22 - 23
November



2022
Green
Growth
and
Sustainable
Development
Forum



OECD

BETTER POLICIES FOR BETTER LIVES

Agenda Overview

Day 1 Tuesday 22 November 2022 Room CC5

14:00 - 15:30	High-Level Opening Session
15:30 - 16:00	Break
16:00 - 17:30	Session 1 - Mission-oriented innovation for a net-zero and energy secure future
17:45 - 19:00	Networking Cocktail, George Marshall Room, OECD Château

Day 2 Wednesday 23 November 2022 Room CC5

19:30 - 11:00	Session 2 - Innovation in bio-economy sectors for a circular economy
11:00 - 11:20	Break
11:20 - 12:50	Session 3 - International Cooperation to accelerate green technology innovation and transfer
12:50 - 14:00	Lunch Break
14:00 - 15:30	Session 4 - Stimulating Green Innovation in SMEs
15:30 - 16:00	Break
16:00 - 17:30	Session 5 - A new push for hydrogen
17:30 - 17:40	Closing Remarks

Background Documents



Do mission-oriented policies for net-zero deliver on their many promises?

Lessons for tackling complex and systemic societal challenges

by Philippe Larrue, OECD

oe.cd/ggsd2022Note-mission-oriented

Will post-COVID-19 recovery packages accelerate low-carbon innovation?

Preliminary findings

by Frida Aulie, Antoine Dechezleprêtre,
Fernando Galindo-Rueda,
Inès Pitavy, Alzbeta Vitkova, OECD

oe.cd/ggsd2022Note-postCOVID19-recovery



OECD (2022), Policy Responses to COVID-19 "Assessing environmental impact of measures in the OECD Green Recovery Database"

by Enrico Botta, OECD

oe.cd/4rD

Annotated Agenda

Introduction

The double shock of the COVID-19 pandemic and Russia's large-scale aggression against Ukraine is likely to reshape the science-policy interface with important implications for the net-zero goal, green growth and sustainable development. The experience with government support to accelerate the development and deployment of vaccines as well as the renewed priority given to energy security could give impetus to mission-oriented innovation to address environmental challenges. In addition, the pandemic has severely hit some key actors of innovation ecosystems such as innovative start-ups and small and medium-sized enterprises (SMEs), which are also more exposed to the consequences of the high-energy prices and supply chain shocks generated by the war in Ukraine. Yet, the support measures introduced to shelter firms from these economic shocks need to be timely phased out to avoid a slowdown in the market exit of polluting non-competitive firms and other unintended consequences. While a number of key decarbonisation technologies needed to meet the carbon neutrality objective implied by the Paris agreement are still at a very early stage of development, early evidence from analysis of recovery packages shows that measures targeting green innovation focus mostly on incentives for the deployment of mature low-carbon technologies (e.g., electric vehicles, solar panels) rather than on R&D support.

The 2022 OECD Green Growth and Sustainable Development (GGSD) Forum will discuss the long-term implications of these recent economic shocks for green innovation. It will address how these recent developments are affecting the discourse on mission-oriented approaches for green innovation, and how to balance support for research on new technologies and for the deployment of green technologies already at the commercialisation stage. The Forum will also shed light on the role that low-carbon hydrogen and the bio-economy sectors could play for a sustainable recovery, and on the specific challenges and opportunities faced by SMEs. Finally, the Forum will also discuss how the lessons learnt from the international scientific cooperation in response to the COVID-19 pandemic might be applied to international STI efforts to address climate change and other environmental challenges.

Day 1 - Tuesday 22 November

12:30 - 14:00 Registration and arrival

14:00 - 15:30 **High-Level Opening Session**

Master of ceremony:

- **Jo TYNDALL**, Director, Environment Directorate, OECD

Moderator:

- **Kerri-Ann JONES**, Deputy Secretary General, OECD

Welcome remarks:

- **Mathias CORMANN**, Secretary-General, OECD

Scene-setting presentation:

- **Mariana MAZZUCATO**, Professor, University College London (UCL) (via ZOOM)

High-Level Keynote speeches and panel discussion:

- **Stuart NASH**, Minister of Economic and Regional Development, Tourism, Small Business and Forestry, New Zealand
- **Michaela SPAETH**, Ambassador, Permanent Representative to the OECD, Germany
- **Javiera PETERSEN**, Undersecretary of Economy and Small Business, Ministry of Economy, Development and Tourism, Chile
- **Jens LUNDSGAARD**, Deputy Director, Directorate for Science, Technology and Innovation, OECD

15:30 - 16:00 Break

16:00 - 17:30 Session 1: Mission-oriented innovation for a net-zero and energy secure future

The ambitious 2050 net-zero targets adopted by many countries and the even more challenging objectives of weaning-off reliance on Russian oil and gas in a shorter timeframe highlight the limitations of traditional STI policies, such as weak directionality and policy mix fragmentation. Mission-oriented innovation approaches (MOIAs), which are defined as co-ordinated policy packages designed to address well-defined societal challenges in a specific timeframe, could play an important role to achieve such time-bounded objectives and could build on lessons learnt from recent experience with government support to the accelerated development and deployment of COVID-19 vaccines and therapeutics. This session will focus on the implications of the recent economic shocks for the design and implementation of mission-oriented innovation policies to address societal environmental challenges. What are the lessons learnt from COVID-19 recovery measures for mission-oriented green innovation? How can governments balance the short-term need of accelerating the adoption of already scalable technologies and the long-term necessity of supporting breakthrough technological development? How can mission-oriented approaches accelerate high-risk and high-reward research in clean energy? What multi-level governance structures are appropriate to drive mission-oriented green innovation approaches?

Moderator:

- **Yongsuk JANG**, Senior Research Fellow, Science and Technology Policy Institute (STEP); Chair, OECD Committee for Scientific and Technological Policy

Scene-setter:

- **Ann METTLER**, Vice-President for Europe, Breakthrough Energy (via ZOOM)

Panellists:

- **Matthias WEBER**, Head of Center for Innovation Systems & Policy, Austrian Institute of Technology
- **Göran MARKLUND**, Deputy Director General, Vinnova, Sweden; Chair, OECD Working Group on Innovation and Technology
- **Jennifer GERBI**, Acting Director, Advanced Research Projects Agency-Energy (ARPA-E), US Department of Energy Technology (via Zoom)
- **Philippe LARRUE**, Policy Analyst, Science and Technology Policy Division, OECD

Policy Questions:

1. What is the expected impact of COVID-19 recovery measures and high energy prices on green innovation and the net-zero emission targets?
2. How can mission-oriented innovation policy approaches (or MOIAs) help governments balance and connect the support to the deployment of available technologies and to break-through innovation? And to accelerate high-risk and high-reward research in green technologies?
3. What governance mechanisms can ensure the coordination required for the successful implementation of mission-oriented approaches?
4. What are the implications of MOIAs for the behavioural and social changes needed for the transition to Net Zero?

17:45 - 19:00 Networking Cocktail, George Marshall Room, OECD Château

Day 2 - Wednesday 23 November

09:30 - 11:00 Session 2: Innovation in bio-economy sectors for a circular economy

As economies pick up stimulated by recovery plans, materials use is projected to increase with related environmental pressures. The bio-economy, generally defined as economic activities based primarily on biogenic instead of fossil resources, offers potential solutions for finding sustainable materials and products. Several countries have introduced national bio-economy strategies or programmes that aim at supporting the transition to a circular economy by developing materials that are easier to recycle and reuse. However, the policy landscape remains complex because of potential sustainability trade-offs due to land and water use, and impacts on biodiversity. This session will focus on the opportunities and trade-offs that the bio-economy could play for a sustainable and resilient recovery. What would be the impact of the larger use of biomaterials and bio-energy for the environment, including land-use change and biodiversity? To what extent bio-materials and bio-energy can help to reduce dependence on Russian oil and gas? What is the role of bio-based innovation in sustainable plastics? Which types of policies would help to spur technological development and the formation of new types of cross-sectoral innovation ecosystems for the transition towards circular bio-economies? How might these arrangements differ across countries due to differences in the types of biomasses and structure of biomass-utilising industries?

Moderator:

- **Christian PATERMANN**, Former Director EU Commission and Advisor to the German Government on bio-economy matters

Scene-setter:

- **Mary MAXON**, Executive Director, BioFutures, Schmidt Futures, United States

Panellists:

- **Ole Jørgen MARVIK**, Special Advisor for Life Sciences, Innovation Norway; Delegate OECD Working Party on Biotechnology, Nanotechnology and Converging Technologies (WPBNCT)
- **Giulia GREGORI**, Head of Strategic Planning & Institutional Communication, Novamont, Italy
- **Gernot KLEPPER**, Chairman, International Sustainability & Carbon Certification (ISCC System)
- **Marta GOMEZ SAN JUAN**, Senior Expert Circular Bioeconomy, Office of Climate Change, Biodiversity and Environment, Food and Agriculture Organisation (FAO)

Policy Questions:

1. How can bio-materials support the transition to a circular and resilient economy? What are the implications for the 2030 Sustainable Development Agenda objectives, including on responsible consumption and production (SDG 12), climate action (SDG 13), and protecting life on land (SDG 15)?
2. What policies can promote innovation and adoption of bio-materials? How do the differences in the types of biomasses and biomass-utilising industries across countries affect innovation policy design?
3. What governance and monitoring mechanisms can increase the coherence of bio-economy strategies (which are inherently multi-sectoral), avoid over-exploitation of biomass resources, and ensure they contribute to the green low-carbon transition?

11:00 - 11:20 Break

11:20 - 12:50 Session 3: International co-operation to accelerate green technology innovation and transfer

The growth of international STI collaboration in recent decades and innovative open science approaches underpinned the international STI response that contributed to the development of COVID-19 vaccines and therapies. International STI cooperation could also help to address global environmental challenges, such as climate change and biodiversity loss, by pooling limited domestic STI resources, promoting knowledge exchange, and diffusion of green technologies. This session will discuss the challenges and opportunities that international collaboration creates for green innovation, and the key lessons learnt from international STI collaboration efforts to address the COVID-19 pandemic. What are the incentives for international cooperation and the possible cost-sharing mechanisms? What governance arrangements have proven to work for international collaboration on COVID-19 research and could they be replicated for initiatives focused on climate change and other key environmental challenges? Will the war in Ukraine affect international cooperation on green STI? How to balance the need for a global deployment of new technologies and private returns on investment (i.e. knowledge transfer, and intellectual property protection mechanisms)? How could these international efforts be financed and what is the role of “blended finance”?

Moderator:

- **Jens LUNDSGAARD**, Deputy Director, Directorate for Science, Technology and Innovation, OECD

Scene-setters:

- **Alessandra COLECCHIA**, Head of Division, Science and Technology Policy Division, Directorate for Science, Technology and Innovation, OECD
- **David ELVIRA**, Head of Global Corporate Public Policy, Sanofi

Panellists:

- **Joanna DRAKE**, Deputy Director-General, Directorate General for Research and Innovation of the European Commission (via Zoom)
- **Amy DIETTERICH**, Director of the Global Challenges Division, World Intellectual Property Organization (WIPO) (via Zoom)
- **Xiaojun Grace WANG**, Director, Ad Interim, UN Office for South-South Cooperation (UNOSSC) (via video message)
- **John-Arne RØTTINGEN**, Ambassador for Global Health, Ministry of Foreign Affairs, Norway (via Zoom)

Policy Questions:

1. What are the challenges, benefits and best practises for international cooperation on green innovation?
2. What are the key lessons learnt from international collaboration on COVID-19 research, and could these be applied to enhance cooperation on climate change and other key environmental challenges? What impacts, if any, is the war in Ukraine having on international collaboration on green innovation
3. Which mechanisms are proving effective to accelerate the global deployment of low-carbon technologies, and how could these be improved?

12:50 - 14:00 Lunch break

Day 2 - Wednesday 23 November

14:00 - 15:30 Session 4: Stimulating green innovation in SMEs

Small businesses, albeit often having a limited environmental impact individually, contribute in aggregate terms up to 60-70 percent of total industrial pollution. Furthermore, innovative small companies and start-ups can play a key role in the development of new technologies and business models for the green transition. However, the debts accumulated during the pandemic, the traditional barriers to SMEs' uptake of green technologies (e.g., lack of information, limited access to funding), and the impact of high energy prices on the balance sheets are likely to constrain research into and adoption of green technologies by SMEs. Furthermore, evidence suggests only 4-5% of green measures adopted as part of Covid-19 recovery packages concern SMEs. This session will take stock of specific measures to support SMEs in national recovery plans and discuss drivers of and barriers to the adoption of green technologies by SMEs in the green recovery in the context of high energy prices. What policies and regulatory frameworks can help new and existing SMEs overcome the barriers to going green? What are the best practises emerging from COVID-19 recovery plans to support the greening of existing SMEs? What approaches are most effective to support and finance green start-ups? What policies can help new and existing SMEs overcome the barriers to going green? How should countries redesign recovery measures and strategies toward long-term sustainability, given the renewed pressure on SMEs generated by high energy prices? What are the lessons learnt in terms of SME innovation and innovative entrepreneurship from previous economic crises?

Moderator:

- **Martin GODEL**, Head of Small & Medium Size Enterprise Policy Division, State Secretariat for Economic Affairs, Switzerland; Chair OECD Committee on SME's and Entrepreneurship (CSMEE)

Scene-setter:

- **Céline KAUFFMANN**, Head of the SME and Entrepreneurship Division, OECD

Panellists:

- **Trond MOE**, Managing Director, Nordic Environment Finance Corporation (NEFCO)
- **Pamela JOUVEN**, Director, SMEs Climate Hub (via ZOOM)
- **Véronique WILLEMS**, Secretary General, SMEunited
- **Arvinder KAINTH**, Industrial Technology Advisor, National Research Council, Canada

Policy Questions:

1. What are the implications of the COVID-19 pandemic and current high-energy prices for the diffusion of greener technologies and business practises in SMEs? And for the creation of new green start-ups?
2. What barriers hold back the greening of SMEs, green entrepreneurship, and the growth of viable green companies? Do existing policy and regulatory frameworks address the specificities of SMEs?
3. What role do measures targeting demand for green solutions and those directly supporting entrepreneurs (e.g. green incubators) play in stimulating innovation and growth of green SMEs? And how do they interact?
4. How to address the financing barriers that often hinder the development of green SMEs? How to scale-up successful firms?

15:30 - 16:00 Break

16:00 - 17:30 Session 5: A new push for hydrogen

Government support to the development of low-carbon hydrogen features in the recovery plans of several countries, and it is a key technology in net-zero emission scenarios by 2050. Low-carbon hydrogen, which can be produced either from natural gas with carbon capture (blue hydrogen) or from water with renewable (green hydrogen) or nuclear-powered electrolysis (purple hydrogen), could be used as feedstock for heavy industries, fuel for transport vehicles and as storage for electricity produced from intermittent renewable energy sources. However, the large-scale adoption of green hydrogen will require substantial cost reduction and massive increases in renewable power generation. At the same time, the adoption of blue hydrogen hinges on the development of CCUS technology and secure supplies of natural gas. This session will explore the role of low-carbon hydrogen in the net-zero transition considering the implications of the renewed urgency to decrease dependency on natural gas in many OECD countries. How to ensure the large availability of cheap renewable electricity needed for the wide adoption of green hydrogen? How does the war in Ukraine affect the prospects for blue hydrogen? How can sectors such as iron & steel, ammonia, or methanol be the lead markets for low-carbon hydrogen, and what policies can promote its adoption? Would new transport infrastructure be needed or can existing infrastructure (such as gas pipelines) be repurposed? What policies can help to reduce risk and uncertainty for investors in low-carbon hydrogen, including the development of standards and certification schemes?

Moderator:

- **Noé VAN HULST**, Chair, International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE)

Scene-setter:

- **Timur GÜL**, Head of the Energy Technology Policy, International Energy Agency (IEA)

Panellists:

- **Eiji OHIRA**, Strategy Architect, Fuel Cell and Hydrogen Technology Office, New Energy and Industrial Technology Development Organization (NEDO), Japan
- **Angel CAVIEDES**, Head of the New Energies Unit, Ministry of Energy, Chile (via ZOOM)
- **Marco ALVERÀ**, CEO, Tree Energy Solutions (TES)
- **Christelle WERQUIN**, General Delegate, France Hydrogène

Policy Questions:

1. What are the benefits, challenges and trade-offs that the different technologies to produce low-carbon hydrogen entail? How does the war in Ukraine affect their prospects?
2. What policies, including standards and certification schemes, can de-risk investment in low-carbon hydrogen production? And what is the role of different stakeholders and organisations in developing them?
3. What sectors could be the first adopters of low-carbon hydrogen, and how to unlock their demand? What infrastructure is needed for its production, transport and large-scale adoption?

17:30 - 17:40 Closing Remarks

Kumi KITAMORI, Deputy Director, Environment Directorate, OECD

Speakers and Panellists

Mathias CORMANN	Alessandra COLECCHIA
Mariana MAZZUCATO	David ELVIRA
Stuart NASH	Joanna DRAKE
Michaela SPAETH	Amy DIETTERICH
Javiera PETERSEN	Xiaojun Grace WANG
Kerri-Ann JONES	John-Arne RØTTINGEN
Jo TYNDALL	Martin GODEL
Jens LUNDSGAARD	Céline KAUFFMANN
Yongsuk JANG	Trond MOE
Matthias WEBER	Pamela JOUVEN
Göran MARKLUND	Véronique WILLEMS
Jennifer GERBI	Arvinder KAINTH
Philippe LARRUE	Noé VAN HULST
Christian PATERMANN	Timur GÜL
Mary MAXON	Eiji OHIRA
Ole Jørgen MARVIK	Angel CAVIEDES
Giulia GREGORI	Christelle WERQUIN
Gernot KLEPPER	Antoine DECHEZLEPRÊTRE
Marta GOMEZ SAN JUAN	Kumi KITAMORI

Opening High-Level Session



Mathias CORMANN
Secretary-General, OECD

Mathias Cormann is the 6th Secretary-General of the Organisation for Economic Co-operation and Development (OECD).

His five-year term commenced on 1 June 2021.

Working with OECD members, his priorities as Secretary-General are to:

- Optimising the strength and the quality of the post COVID recovery while responding to the economic and social impacts of the war in Ukraine.
- Leadership on climate action to help secure global net-zero by 2050 in a way that is effective and fair.
- Seizing the opportunities of the digital transformation while better managing some of the associated risks, challenges and disruptions.
- Helping to ensure well-functioning global markets and a global level playing field with a rules-based trading system in good working order.
- Global engagement: advancing OECD standards, through membership and partnerships and a sound approach to development.

Prior to his appointment to the OECD, Mathias served as the Australian Minister for Finance, the Leader of the Government in the Australian Senate and as Federal Senator representing the State of Western Australia. In these roles, he has been a strong advocate for the positive power of open markets, free trade and the importance of a rules-based international trading system.

Mathias was born and raised in the German-speaking part of Belgium. Before migrating to Perth, Mathias had graduated in law at the Flemish Catholic University of Louvain (Leuven), following studies at the University of Namur and, as part of the European Erasmus Student Exchange Program, at the University of East Anglia. Between 1997 and 2003, he worked as Chief of Staff as well as Senior Adviser to various State and Federal Ministers in Australia and for the Premier of Western Australia.



Mariana MAZZUCATO
Professor, University College London (UCL)

Mariana Mazzucato (PhD) is Professor in the Economics of Innovation and Public Value at University College London (UCL), where she is Founding Director of the UCL [Institute for Innovation & Public Purpose](#) (IIPP). She received her BA from Tufts University and her MA and PhD from the Graduate Faculty of the New School for Social Research. Her previous posts include the RM Phillips

Professorial Chair at the Science Policy Research Unit (SPRU) at Sussex University. She is a fellow of the [UK's Academy of Social Sciences](#) (FACSS) and of the Italian National Science Academy (Lincei).

She is winner of international prizes including the [Grande Ufficiale Ordine al Merito della Repubblica Italiana](#) in 2021, Italy's highest civilian honour, the [2020 John von Neumann Award](#), the 2019 [All European Academies Madame de Staël Prize for Cultural Values](#), and the 2018 [Leontief Prize for Advancing the Frontiers of Economic Thought](#). She is the author of three highly-acclaimed books: [The Entrepreneurial State: debunking public vs. private sector myths](#) (2013); [The Value of Everything: making and taking in the global economy](#) (2018) ; and the newly released [Mission Economy: a moonshot guide to changing capitalism](#) (2021).

She advises policy makers around the world on innovation-led inclusive and sustainable growth. Her current roles include being Chair of the World Health Organization's Council on the Economics of Health for All and a member of the Scottish Government's Council of Economic Advisors, the South African President's Economic Advisory Council, the OECD Secretary General's Advisory Group on a New Growth Narrative, the UN High Level Advisory Board for Economic and Social Affairs, Argentina's Economic and Social Council, Vinnova's Advisory Panel in Sweden, and Norway's Research Council. Previously, through her role as Special Advisor for the EC Commissioner for Research, Science and Innovation (2017-2019), she authored the high-impact report on [Mission-Oriented Research & Innovation in the European Union](#), turning "missions" into a crucial new instrument in the European Commission's Horizon innovation programme.

Stuart Nash
Minister of Economic and Regional Development, Tourism,
Small Business and Forestry, New Zealand



Hon Stuart Nash first entered politics in 2008 as a list MP, and was elected Labour MP for Napier in 2014.

In his maiden speech Minister Nash described himself as first and foremost a public servant, employed by the people of New Zealand; and as a social democrat committed to sustainable economic development and growth. In 2017, he was sworn in as Minister of Police, Revenue, Fisheries and for Small Business.

In the 2020 Labour Government, he was given a suite of portfolios focused on reimagining important sectors of our economy in a post-COVID world, as well as supporting economic activity in our regions, as Minister for Economic and Regional Development, Tourism Minister, Forestry Minister and Minister for Small Business.

Prior to entering politics Minister Nash worked in senior management in small and large organisations in both the private and public sectors. His wide-ranging career has included roles in IT, sales and marketing, business strategy, resource planning, strategic planning and general management.

Minister Nash holds Masters Degrees in Law, Management, and Forestry Science, as well as Postgraduate Diplomas in Business and Forestry.

Michaela SPAETH
Ambassador, Permanent Representative to the OECD, Germany



Ambassador Michaela Spaeth took up her duties as Permanent Representative of Germany to the OECD on 20 August 2020.

Ms. Spaeth holds an M.A. in Economic and Social History, Political Science from the University of Freiburg (Breisgau) and she has attended the Institut d'études politiques in Paris. She also holds an M.A. in Public Administration from the Harvard Kennedy School.

She joined the German Foreign Service in 1987. Her first posting led her to the German Embassy in Dhaka from 1989 to 1992. Ms. Spaeth then served in numerous capacities both in Germany and abroad, in China (Head of the German Trade Promotion Office in Beijing), in Pristina at the UNMIK Mission and as an exchange officer for two years in the British Foreign Service.

From 2008 to 2010, Ms. Spaeth was involved in the setting up of the International Renewable Agency (IRENA) at the German Federal Foreign Office in Berlin. She then headed the Cultural Affairs Section of the German Embassy in Warsaw from 2010 to 2012 and the Energy Policy and International Commodity Policy Division at the German Federal Foreign Office in Berlin from 2012 to 2015. From 2015 to 2018, she was Deputy Head of Mission at the German Embassy in Vienna.

Prior to taking up her duties as Ambassador and Permanent Representative of Germany at the OECD in 2020, Ms. Spaeth since 2018 served as Deputy Director General for Energy and Climate Policy, Business and Human Rights, International Labour Rights and Issues at the German Federal Foreign Office.

Javiera PETERSEN
Undersecretary of Economy and Small Business,
Ministry of Economy, Development and Tourism, Chile



Javiera Petersen has a Bachelor in Economics and a Master in Economic Analysis at the University of Chile, and a Master in Global Economic Governance and Policy at SOAS University of London. She has worked as an external consultant at the World Bank in the Gender Disaggregated Labor Database (GDLD). She also worked as an economic advisor in the Chamber of Deputies of Chile. Other work experience includes working at the Microdata Center at the University of Chile as a Research Assistant, and completing an internship in the Productive Development division of the Economic Commission for Latin America and the Caribbean (ECLAC). Her experience has been focused on contributing to the design of a new development model, based on a productive transformation towards an environmentally sustainable economy, more socially inclusive and with the purpose to create new economic sectors incorporating technology and innovation.



Kerri-Ann JONES

Deputy Secretary General, OECD

Dr. Kerri-Ann Jones, an American national, took up her duties as Deputy Secretary-General of the OECD on 1 July 2022. Her portfolio includes Environment, Development, Science and Innovation, Statistics & Data and Public Governance.

Prior to joining the OECD she served in senior leadership positions working to advance the role of science in programs and policies. Most recently, she served as the Vice President, Research and Science, at the Pew Charitable Trusts. From 2009 -2014, she served as the US Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs (OES). In this position, she led the bureau responsible for bilateral, regional, and multilateral engagement on oceans, environment, science, space, and health, including the role of Special Representative on Avian and Pandemic Influenza. In 2014, she received the U.S. Department of State Foreign Affairs Award for Public Service.

Earlier she served in the White House Office of Science and Technology Policy (OSTP), where she was appointed Associate Director for National Security and International Affairs and served on the National Security Council. During that appointment she served for a period as Acting Director of OSTP. She has also served as Director of the Office of International Science and Engineering at the National Science Foundation (NSF) and held positions with the U.S. Agency for International Development (USAID) and the National Institutes of Health (NIH).

Dr. Jones obtained her Ph.D. from the Department of Molecular Biophysics and Biochemistry at Yale University. She holds a bachelor's degree in chemistry from Barnard College, Columbia University. Her advisory work includes serving on the WHO Advisory Group for Pandemic Influenza Preparedness. She is a Fellow of the American Association for the Advancement of Science (AAAS).



Jo TYNDALL

Director, Environment Directorate, OECD

Jo Tyndall is Director, Environment Directorate at the OECD where she oversees the implementation of the Directorate's programme of work, covering a broad range of environmental issues, including: green growth; climate change; biodiversity; quality of ecosystems; eco-innovation; circular economy; and, resource productivity.

Jo Tyndall was New Zealand High Commissioner (Ambassador) to Singapore from February 2019 to September 2022. Prior to that, Jo served as New Zealand's Climate Change Ambassador, commencing this role in June 2010. From 2016 to December 2018, she also co-chaired the United Nations Framework Convention on Climate Change's (UNFCCC) Ad Hoc Working Group on the Paris Agreement (APA). As Climate Change Ambassador, she was head of delegation to the United Nations climate negotiations with the Ministry of Foreign Affairs and Trade.

Prior to her role as Climate Change Ambassador, Jo Tyndall was Director of the Broadcasting Unit in the Ministry for Culture and Heritage. From 1999 to 2006, she was Chief Executive of the public broadcasting funding body, NZ On Air. She has also served as Chief Executive of two screen industry organisations - the Screen Production and Development Association (SPADA) and Project Blue Sky (1994 to 1999).

Jo Tyndall began her career as a multilateral trade policy specialist with the then Department of Trade and Industry and subsequently the Ministry of Foreign Affairs and Trade.



Jens LUNDSGAARD

Deputy Director, Directorate for Science, Technology and Innovation, OECD

Since 1 October 2022, Jens Lundsgaard is the Deputy Director of the OECD's Directorate for Science, Technology and Innovation (STI) where he helps oversee OECD's work on digital and technology policy, productivity, science and innovation – not least to enable an economy-wide climate transition. From 2011 to 2017, he served as Deputy Permanent Secretary in the Ministry

of Business and Growth in Denmark, leading the preparation of reforms to promote productivity and sustainable growth including in sectors such as energy, water, food, life science and urban economics. Most recently he has served as a resident member of the Board of Directors of the European Bank for Reconstruction and Development (EBRD) in London, UK, Chairing the Bank's first Ethics Committee and developing strategies to transform key sectors such as food and agriculture to climate neutrality and naturepositive solutions. While being a board member, he has also been a regular economic commentator in Danish and international media. From 2001 to 2011, Jens worked at the OECD – as Deputy Head of Division in the Centre for Tax Policy and Administration, as Head of the Sweden and Denmark Unit in the Economics Department, and as an economist on public finance and health. A Danish national, Jens holds an Economics Degree from the University of Aarhus in Denmark.

Session 1 - Mission-oriented innovation for a net-zero and energy secure future

Yongsuk Jang

Senior Research Fellow, Science and Technology Policy Institute (STEPI);
Chair, OECD Committee for Scientific and Technological Policy



Dr. Jang is a senior research fellow of the Science and Technology Policy Institute (STEPI), a policy think-tank for science, technology and innovation (STI) policies in Sejong, Korea. He has served in various positions at STEPI, including as the director for the Global Policy Research Center. He is currently serving as the Chair of the Committee for Science and Technology Policy (CSTP) of OECD.

His primary research interests are STI policies with focus on national and regional innovation systems, R&D program evaluation, industrial R&D collaboration, and international STI cooperation. He has expanded his research interests to innovation for inclusive development, science diplomacy and political economy of innovation.

He has consulted various domestic and foreign government agencies and international organizations including OECD, APEC, World Bank and IDB. He actively publishes and is involved in a number of academic associations. He has served as the managing editor of 'STI Policy Review,' an international journal on STI policies around the world with special focus on Asian countries.

He holds a Ph.D. in Public Policy from the George Washington University and an M.A. and a B.A. both in Public Administration from Kyungbook National University.

Ann METTLER

Vice-President for Europe, Breakthrough Energy



Ann has more than two decades of experience in high-level public policy and strategy, operating at the intersection of technology, innovation, foresight and entrepreneurship.

At Breakthrough Energy, Ann is working with European partners to accelerate clean tech innovation in the pursuit of climate neutrality and a net-zero emissions future. Previously, she served as Director-General at the European Commission where she ran the internal strategy department, reporting directly to the President. An entrepreneur at heart, Ann set up her own think tank which she ran for more than a decade. Her career started at the World Economic Forum where she led the Europe department.

Ann has lived and worked in Germany, Greece, the United States, Switzerland and Belgium. She holds MA degrees in political science and European law and economics, and graduated with distinction from the University of New Mexico, USA, and the Rheinische Friedrich-Wilhelms-University in Bonn, Germany.

Matthias WEBER

Head of Center for Innovation Systems & Policy, Austrian Institute of Technology



Dr. Matthias Weber is Head of the Center for Innovation Systems & Policy at AIT Austrian Institute of Technology and Invited Professor at Université Gustave Eiffel, Laboratoire Interdisciplinaire Science, Innovation, Société. He has a background in process engineering, political sciences and economics, and has been working for more than twenty-five years on the transformation of socio-technical systems, innovation system analysis, foresight, and the governance and evaluation of science, technology and innovation policy. In recent years, he has been member of various expert and advisory groups to the European Commission, the European Council, the OECD and national governments on matters of foresight and transformative/mission-oriented innovation policy. Currently, he is director of the "Foresight on Demand" framework contract in support of the European Commission's Horizon Europe framework programme, and co-leader of the EC-funded TRAMI project on transnational cooperation on the missions approach.



Göran MARKLUND

Deputy Director General, Vinnova, Sweden;
Chair, OECD Working Group on Innovation and Technology

Göran Marklund is Head of Strategic Intelligence and Deputy Director General at Vinnova, the Swedish Innovation Agency. Dr Marklund is also chair of the OECD TIP, Working Group on Innovation and Technology Policy. He has been Associate Professor in Economic History at Uppsala University with the focus on innovation and economic change. Dr Marklund has also been Science and Technology Attaché at the Swedish Embassy in Washington DC and guest researcher at the Centre for International Technology Policy (CISTP) at George Washington University. He regularly gives advice to the Swedish Government on research, innovation and growth policy issues. As an analyst, Dr Marklund has primarily specialized in system innovation for sustainable transitions, competitiveness in transforming value chains, impact of globalization dynamics on R&D, innovation, and national competitiveness, as well as on policy impact studies. In this capacity he is deeply connected to research related to system innovation for sustainable and competitive transformations within the OECD Committee for Science and Technology Policy (CSTP), Transformative Innovation Policy Consortium (TIPC), Mission-oriented Innovation Network (MOIN) as well as other international and national fora.



Jennifer GERBI

Acting Director, Advanced Research Projects Agency-Energy (ARPA-E), US
Department of Energy, USA

Dr. Jennifer Gerbi, Acting Director at the Advanced Research Projects Agency-Energy (ARPA-E), leads the Agency's development, launch, and execution of high-risk, high-reward energy R&D programs.

Previously as a Program Director at the Agency, her programmatic focus at ARPA-E included improving the energy efficiency and management of buildings via advanced sensing systems and storage, novel insulating materials for windows, and renewable energy generation via photovoltaics.

Prior to joining ARPA-E, Gerbi worked at Dow Corning in multiple capacities. She started at the company in 2011 as a Program Leader in the company's Business and Technology Incubator. In this role, Gerbi built and led a next-generation solar portfolio. Gerbi then managed a global team as a Business Builder, leading new business development for a lithium-ion battery program. Gerbi's most recent role at Dow Corning was as an Applied Engineering and Technical Service Leader, where she led an electronics application engineering and development team, working directly with large global customers to enable technical solutions via silicones in consumer and crossover healthcare electronics markets.

From 2007 to 2011, Gerbi served as a Senior Materials Scientist at The Dow Chemical Company, focusing on the copper indium gallium selenide (CIGS) solar technology effort, which included growing a small lab-scale environment into a commercial-scale effort within three years. Gerbi served her postdoctoral fellowship at Argonne National Laboratory, developing thin film diamond coatings for electronics and healthcare markets. She also worked as a Postdoctoral Research Associate at the University of Illinois on novel diffusion barriers.

Dr. Gerbi holds a Ph.D. in Materials Science from the University of Illinois at Urbana-Champaign. She also received an M.S. in Physics from the University of Virginia and a B.A. in Physics from Bard College.



Philippe LARRUE

Policy Analyst, Science and Technology Policy Division, OECD

Philippe Larrue is working at the Directorate for Science Technology and Innovation (DSTI) where he leads several activities related to science technology and innovation governance for sustainability transitions. These include notably the work on mission-oriented innovation policies (MOIPs) and country-specific projects dealing with STI governance issues, for instance for Norway or Slovenia. Philippe is also the lead manager on DSTI side in the Mission Action Lab, a joint initiative with OECD Public Governance and Development Co-Operation directorates – to assist governments in defining, governing and learning from missions. The Mission Action Lab currently supports Austria in its efforts to mobilise and coordinate national activities in the five EU Horizon Europe mission areas.

He also regularly leads or contributes to OECD Innovation Policy Reviews (Malaysia, Sweden, Kazakhstan, Norway, Portugal, Kuwait, Korea). He chairs the Advisory Board of the European Forum for Studies of Policies for Research and Innovation (Eu-SPRI). He joined OECD in 2011 as internal evaluator. He has led and implemented several evaluations of OECD committees and horizontal initiatives and contributed to revise the organisation’s methodology and process.

Prior to joining OECD, he was Director of the French office of Technopolis Group, a leading consulting and evaluation company in the area of research, innovation and economic development policy. He has developed, led and contributed to 50+ projects in a wide variety of contexts and sectors.

He holds a PhD in economics from the University of Bordeaux.



Session 2 - Innovation in bio-economy sectors for a circular economy



Christian PATERMANN

Former Director EU Commission,
Advisor to the German Government on bio-economy matters

Christian Patermann was born in Gliwice, Upper Silesia, in 1942. Following his High School years, he studied Law, Economics and Languages in Germany (Freiburg, Munich, Bonn), Switzerland (Lausanne, Geneva) and Spain (Santander) and completed his Doctoral Thesis in Law at the University of Bonn in 1969.

He entered the German public service in 1971 by joining the Federal Ministry of Science and Education, Bonn. From 1974-1978 he became Science Counsellor at the German Embassy in Washington D.C., USA. He then returned to the Ministry of Research and Technology where he held many positions in Germany and International Organisations, like ESA, ESO, EMBL. In 1988 he became Director of Cabinet of the German Federal Minister of Research and Technology, Dr. H. Riesenhuber. This comprised also the position of the spokesperson of the Ministry. In 1993 he was appointed Deputy Director General of the Ministry.

In 1996 he went to Brussels to become the Programme Director for “Environment” Research at the Research Directorate-General of the European Commission at Brussels.

Since January 2004 he was Programme Director for “Biotechnology, Agriculture & Food” Research at the Research Directorate-General of the European Commission, which from 2007 also comprised Aquaculture and Fisheries as well as Forestry. During these years he was responsible for the elaboration of the new concept of the Knowledge Based Bioeconomy (KBBE), which today is known as biobased Economy or more simply Bioeconomy in Europe.

In August 2007 Christian Patermann retired. He now lives in Bonn and advises public and private institutions and companies, among them the largest German Land NorthRhine-Westphalia , the Fraunhofer Society, the Swiss Agricultural Research Council etc.

Since beginning of 2009 he has been appointed member of the first Research and Technology Council “ BioEconomy “ of the Federal German Government.

The University of Bonn awarded Christian Patermann in November 2011 an honorary doctor’s degree because of his merits to promote European Agricultural

Research .In April 2012 Christian Patermann was appointed member in the Georgofili Academy in Florence, the oldest Science Academy in the area of agrosiences in the world. In 2018 he was appointed Fellow of the International Society of Horticultural Societies in Louvain, the largest international Assembly in Horticulture worldwide. In March 2021 the Bioeconomy Science Center , composed of Institutes of the German Universitites of Bonn, Düsseldorf ,Aachen and the Forschungszentrum Jülich, awarded their annual Bioeconomy Research Prize for excellent doctoral theses for the first time as “Christian Patermann Bioeconomy Award.” He has also been appointed as Honorary Editor of the 2021 founded new EFB Bioeconomy Journal by Elsevier.

Mary MAXON
Executive Director, BioFutures,
Schmidt Futures, United States



Mary Maxon is an Executive Director of BioFutures at Schmidt Futures developing and co-leading the Bioeconomy Program, an effort focused on maximizing the potential of biotechnology toward a circular bioeconomy.

She is on leave from the Lawrence Berkeley National Laboratory where she serves as Associate Laboratory Director for Biosciences. Previously, she was Assistant Director for Biological Research at the Office of Science and Technology Policy where she was the principal author of the Obama's Administration's National Bioeconomy Blueprint. Currently, Mary serves as a US State Department-appointed Delegate to the Organisation for Economic Cooperation and Development's Biotechnology, Nanotechnology, and Converging Technologies Working Party. She is also a member of the Global Bioeconomy International Advisory Council, and a member of the National Academies of Sciences, Engineering, and Medicine's Standing Committee on Biotechnology Capabilities and National Security Needs.

Mary holds a PhD in Molecular Cell Biology from the University of California at Berkeley, and did postdoctoral training in genetics at the University of California, San Francisco.

Ole Jørgen MARVIK
Special Advisor for Life Sciences, Innovation Norway;
Delegate OECD Working Party on Biotechnology, Nanotechnology
and Converging Technologies (WPBNCT)



Ole J. Marvik is a Special Advisor for Life Sciences at Innovation Norway, the main government agency for industry development. Mr. Marvik has a broad background from several start-ups in the medical and industrial biotech sectors. He is currently responsible for Innovation Norway's activities to stimulate new bio-based value chains and carbon recycling (CCUS). He is also the Norwegian delegate to the OECD-BNCT Working Party and active in their initiative on carbon management. Mr. Marvik holds a PhD in molecular biology and a master's degree in business management.

Giulia GREGORI
Head of Strategic Planning and Corporate Communication, Novamont



Giulia Gregori is Head of Strategic Planning and Corporate Communication at Novamont, world's leader in the bioplastics sector and in the development of biochemicals and bioproducts from renewable origins.

She entered in Novamont in 2000, after graduating in Pure Chemistry with a specialization in Bioinorganic (University of Milan, Leiden University). She is responsible for Strategic Research&Innovation Projects and Corporate Communication, managing also external relationships with public and private funding institutions.

She is member of the Governing Board of Circular Bio-based Europe Joint Undertaking (CBE JU), the public-private partnership between the European Commission and the Bio-Based Industries Consortium, and member of the board of directors of the University of Eastern Piedmont. She is Secretary General of the Italian Cluster of Circular Bioeconomy SPRING and member of the National Coordination Group for the Bioeconomy at the Presidency of Council of Ministers, in charge of the development and implementation of the Italian Bioeconomy strategy.



Gernot KLEPPER

Chairman, International Sustainability & Carbon Certification (ISCC System)

Gernot Klepper is a Senior Researcher at the Kiel Institute for the World Economy (IfW). Since 2014, he coordinates the Dialogue on the Economics of Climate Change on behalf of the German Federal Ministry for Education and Research. He has been for many years Head of the Research Center “The Environment and Natural Resources” at the IfW and Speaker of the Kiel Earth Institute. An economist by training, Gernot Klepper received a Ph.D. in Agricultural Economics. His research interests center on climate mitigation with a focus on modeling and analyzing the impact of climate policy instruments. Especially, the role of natural resources such as land and water in the climate system and their contribution to climate change as well as mitigation are among his research topics. He is Chairman of the International Sustainability and Carbon Certification Association (ISCC e.V.).



Marta GOMEZ SAN JUAN

Senior Expert Circular Bioeconomy, Office of Climate Change, Biodiversity and Environment, Food and Agriculture Organisation (FAO)

Ms Gomez San Juan is an Agricultural and Biosystems Engineer in the Office of Climate, Biodiversity and Environment, at the Food and Agriculture Organization of the United Nations (FAO) headquarters in Rome, Italy.

She currently acts as Senior Expert to the [FAO's programme on Circular Bioeconomy in Agri-food systems](#). Marta has been working for eight years at FAO's Bioeconomy unit, supporting policy-makers to develop national and regional bioeconomy strategies and developing knowledge products on sustainable and circular bioeconomy. She coordinates the 'International Sustainable Bioeconomy Working Group', a knowledge-exchange platform focused on sustainability of bioeconomy innovations, policies and practices.

The Working Group and the FAO programme were created after more than 60 Ministers of Agriculture at the Global Forum for Food and Agriculture in 2015, and again in 2021, called FAO to work on a sustainability framework for the bioeconomy. As of January 2022, FAO and its Members have incorporated Bioeconomy as a priority area in the Strategy 2022-2031.



Session 3 - International co-operation to accelerate green technology innovation and transfer

Jens LUNDSGAARD

Deputy Director, Directorate for Science, Technology and Innovation, OECD



Since 1 October 2022, Jens Lundsgaard is the Deputy Director of the OECD's Directorate for Science, Technology and Innovation (STI) where he helps oversee OECD's work on digital and technology policy, productivity, science and innovation – not least to enable an economy-wide climate transition.

From 2011 to 2017, he served as Deputy Permanent Secretary in the Ministry of Business and Growth in Denmark, leading the preparation of reforms to promote productivity and sustainable growth including in sectors such as energy, water, food, life science and urban economics. Most recently he has served as a resident member of the Board of Directors of the European Bank for Reconstruction and Development (EBRD) in London, UK, Chairing the Bank's first Ethics Committee and developing strategies to transform key sectors such as food and agriculture to climate neutrality and naturepositive solutions. While being a board member, he has also been a regular economic commentator in Danish and international media.

From 2001 to 2011, Jens worked at the OECD – as Deputy Head of Division in the Centre for Tax Policy and Administration, as Head of the Sweden and Denmark Unit in the Economics Department, and as an economist on public finance and health.

A Danish national, Jens holds an Economics Degree from the University of Aarhus in Denmark.

Alessandra COLECCHIA

Head of Division, Science and Technology Policy Division,
Directorate for Science, Technology and Innovation, OECD



Alessandra Colecchia is Head of the Science and Technology Policy Division of the OECD Directorate for Science, Technology and Innovation. She oversees the work on science, technology and innovation policy, including work on anticipatory governance of emerging and converging technologies, the Global Science Forum, the Space and Ocean programmes, as well as measurement standards and empirical analysis in the S&T area and the [STI Outlook](#). She is currently leading on a new “S&T Policy 2025” initiative to deliver practical guidance to reorient STI systems towards addressing global challenges, building on lessons from the successful COVID-19 response. Previously she headed the Economic Analysis and Statistics Division, overseeing measurement and empirical analysis of issues related to R&D, innovation, knowledge-based capital, new technologies, firms and industry dynamics and competitiveness. She led the measurement work for the OECD Innovation Strategy in 2010, delivered *Measuring innovation: A New Perspective* in 2014. Between 2011 and 2017 she led the work on the OECD STI Scoreboard, the most comprehensive effort to provide a set of policy relevant and insightful indicators in the areas of science, technology, innovation and competitiveness of nations. In 2016 she led the 2016 Blue Sky Forum initiative, whose outcomes are set to guide future development of science and innovation measurement at the OECD. Most recently she led on Digital measurement and has delivered *Measuring the digital transformation*, that presents key indicators for each of the dimensions of the OECD Going Digital integrated policy framework and sets a Measurement Roadmap for the future.



David ELVIRA-MARTINEZ

Head of Global Corporate Public Policy, Sanofi

David Elvira-Martinez is an experienced health economist with a strong institutional background as a top healthcare policymaker with in-depth knowledge of market access and public affairs activities in the pharmaceutical sector, as well as extensive international consultancy experience related to healthcare system policies, pharmaceutical business, healthcare reimbursement systems, and economic evaluation methods. His main responsibilities included carrying out top management duties in several public healthcare organizations and regional ministries in Spain as well as lobbying entities.

Moreover, he has been in charge of advising at regional (Catalonia), national (Spain), and international (World Health Organization) levels for healthcare policy planning and financing. He has 13 years teaching experience as an adjunct faculty professor in several universities in Spain with over 20 scientific publications as well as experience as a visiting researcher overseas.

He is now heading Global Corporate Public Policy at Sanofi.



Joanna DRAKE

Deputy Director-General,
Directorate General for Research and Innovation of the European Commission

Joanna DRAKE has been the Deputy Director-General of the European Commission's Directorate-General (DG) for Research and Innovation (DG RTD) since 2021. In this role, she provides overall assistance to the DirectorGeneral in the management of the DG, contributing to the definition, coordination and implementation of strategy and policy orientation. She is also Mission Manager for the EU Mission Cancer.

She was previously Deputy Director-General of DG Environment (2016-2021) where she chaired a crosscutting Task Force spear-heading strategic positions for the DG on (inter-alia) the post-2020 Commission financial framework negotiations, Brexit co-ordination, the urban agenda and the future-proofing of the EU's environmental acquis. Between 2010 and 2015 she was director for SME's and Entrepreneurship in the DG for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW). During her tenure in DG GROW she also led the Commission's Task Force on The Collaborative Economy, New Business Models And SME's.

By training, Joanna is a doctor of laws from the University of Malta, where she also lectured full time in the Department of European and Comparative Law. She acquired a post-graduate degree in Advanced European Legal Studies from the College of Europe in Bruges, Belgium. She held various legal and management posts in the private and public sector before joining the European Commission as head of the European Commission Representation in Malta in 2005. She also had a key role in the Malta-EU accession negotiations as member of the Malta-EU Steering and Action Committee.



Amy DIETTERICH

Director of the Global Challenges Division,
World Intellectual Property Organization (WIPO)

Marion "Amy" Dietherich is the Director of the Global Challenges Division at the World Intellectual Property Organization (WIPO).

In this role, she covers Intellectual Property (IP)-related global policy issues in the areas of Global Health, Climate Change, and Food Security.

Amy has twenty years of experience in the fields of public health, water & sanitation, and governance, spanning community-based organizations, international NGOs, global health partnerships, and United Nations institutions. Prior to joining WIPO in 2018, she worked with the International Federation of Red Cross and Red Crescent Societies (IFRC) to ensure stronger community engagement in health systems governance and service delivery, and with the Parliamentary Network on the World Bank and IMF to support parliamentary oversight of development cooperation and financing. Ms. Dietherich earned her academic qualifications in Epidemiology, Biology, and French from the London School of Hygiene and Tropical Medicine (LSHTM) and Bucknell University in 2005 and 2000 respectively.

Xiaojun Grace WANG
Director, Ad Interim,
UN Office for South-South Cooperation (UNOSSC)



Ms. Wang has extensive senior leadership experience in brokering knowledge exchange, facilitating partnerships, and strengthening the capacities of countries to engage in South-South and triangular cooperation. She has dedicated strong efforts to ensure that the larger potential of South-South and triangular cooperation for sustainable development are reflected in both programmes and policymaking dialogues.

Ms. Wang most recently served as the Lead Advisor on South-South and Triangular Cooperation at the United Nations Development Programme's Bureau for Policy and Programme Support.

Prior to that Ms. Wang worked as UNDP's Poverty Practice Manager for five years, overseeing integrated workplans, knowledge management, communications, global programmes and trust funds, as well as office administration and operations. Between 2002 and 2009, Ms. Wang served in the UNDP Country Office in China where she was Team Leader for Democratic Governance and HIV and AIDS, and managed poverty reduction programmes. Before joining UNDP in 2002, Ms. Wang worked with governments, international non-governmental organizations, academic institutions and media outlets. She is a Chinese national and holds a PhD in Education and International Development from the University of London.

John-Arne RØTTINGEN
Ambassador for Global Health at the Ministry of Foreign Affairs, Norway



John-Arne Røttingen is Ambassador for Global Health at the Ministry of Foreign Affairs, Norway. He is Adjunct Scientific Director at the Norwegian Institute of Public Health and Visiting Fellow of Practice at Blavatnik School of Government, Oxford University. He was the founding CEO of CEPI – Coalition for Epidemic Preparedness Innovations; and has been the Chief Executive of the Research Council of Norway; Executive Director of Infection Control and Environmental Health at the Norwegian Institute of Public Health; founding Chief Executive of the Norwegian Knowledge Centre for the Health Services; Professor of Health Policy at the Department of Health Management and Health Economics, Institute of Health and Society, University of Oslo; and Adjunct Professor at the Department of Global Health and Population, Harvard T.H. Chan School of Public Health. He is member of the Norwegian Academy of Science and Letters and the US National Academy of Medicine. He received his MD and PhD from the University of Oslo, an MSc from Oxford University and an MPA from Harvard University.



Session 4 - Stimulating green innovation in SMEs



Martin GODEL

Head of Small and Medium Size Enterprise Policy Division,
State Secretariat for Economic Affairs, Switzerland;
Chair of OECD Committee on SME's and Entrepreneurship (CSMEE)

Martin Godel graduated from the University of Geneva at the Graduate Institute of International and Development Studies and received his Master Degree of Law and Diplomacy at the Fletcher School administered by Tufts and Harvard University, Boston, Massachusetts. Martin Godel assumes the responsibility for Switzerland's Small and Medium Size Enterprise Policy including the reduction of regulatory costs for SME's and ease of access to financing at the State Secretariat for Economic Affairs (SECO). He was in charge of the reform of the federal tax holiday regime on regional aid and led the negotiations with the European Commission and the Forum on Harmful Tax Practices (FHTP). Since 2017 Martin Godel leads the national project for a single platform for Government-to-Business transactions, EasyGov.swiss.

In 2020 he was responsible for the implementation of Federal Covid-19-Liquidity program providing more than 137'000 companies with 17 billion Swiss Franc within a few weeks.

Since 2021 he chairs the OECD Committee on SME's and Entrepreneurship (CSMEE) after chairing its predecessor the OECD Working Group on SMEs and Entrepreneurship.

Martin Godel is Deputy Head of the Promotion Activities Directorate in SECO including Regional Policy, Tourism Policy, Foreign Economic Promotion Policy and SME Policy.



Céline KAUFFMANN

Head, Entrepreneurship, SME and Tourism Division,
OECD Centre for Entrepreneurship, SMEs, Regions and Cities, OECD

Dr. Kauffmann started her career at the OECD in 2000. She joined the OECD Centre for Entrepreneurship, SMEs, Regions and Cities in September 2020, where she heads the Division on Entrepreneurship, SME and Tourism. She was previously Deputy Head of the Regulatory Policy Division in the OECD Directorate for Public Governance, where she led the development of the Regulatory Policy Outlook, as well as the work on international regulatory co-operation and on regulation and innovation. Before that, she was with the Investment Division of the OECD Directorate for Financial and Enterprises Affairs, responsible for the work on private sector participation in infrastructure and on green investment. Prior to that, she was responsible for coordinating the OECD work on the annual African Development Bank / OECD African Economic Outlook Report. Before the OECD, Céline Kauffmann contributed to the 2000 Transition Report of the European Bank for Reconstruction and Development and worked at the London School of Economics as research assistant. Dr. Kauffmann holds a PhD in Economics from the Université Paris I, Panthéon-Sorbonne.

Trond MOE
Managing Director, Nordic Environment Finance Corporation (NEFCO)



Trond Moe is Managing Director of Nefco, the Nordic Green Bank. Originally from Norway, Trond has spent more than 20 years of his career with technology projects in Eastern Europe, Asia and Africa before joining Nefco in 2018.

A Nordic-owned international financial institution and a pioneer in green banking, Nefco focuses on financing the global scale-up of Nordic small and medium-sized companies and it has over 200 Nordic SMEs in its portfolio. Nefco's task is to accelerate the green transition by financing Nordic green solutions that have the potential to be scaled up on global markets – and that would not be financed by traditional banks. Since its establishment in 1990, Nefco has financed and implemented over 1,500 projects in energy efficiency, renewable energy, clean water and sanitation, waste management, circular economy and cleaner industrial processes, among others. www.nefco.int.

Pamela JOUVEN
Director, SME Climate Hub, United Kingdom



As Director of the SME Climate Hub, Pamela works with international partners, multinational companies and governments to accelerate a global movement and develop a one-stop-shop platform mobilizing small and medium-sized enterprises to take climate action on net zero.

Pamela previously served as Head of City Business Climate Alliances at C40, where she was responsible for expanding C40's service offering to member cities relating to the acceleration of climate solutions with local and global businesses. Her experience also includes initiating and leading multi-partner programmes focused on innovation and sustainability for Virgin Unite, the non-profit arm of the Virgin Group, and University of the Arts London.

Véronique WILLEMS
Secretary General, SMEUnited



Véronique Willems is representing Crafts and SMEs in Europe as the Secretary General of SMEUnited (formerly known as UEAPME) since January 2017.

Beforehand and as from 2009, she was the Head of European affairs at UNIZO (SMEUnited Belgian member organisation) and was responsible for advocacy on policies affecting SMEs at EU-level.

In January 2016, she was nominated deputy to the SME-representative for Belgium at the European Economic and Social Committee.

Ms Willems started her career at UNIZO in 1999 as Policy Officer in charge of education, training and SME counselling and went on to work at the regional office (Vlaams-Brabant & Brussel) as responsible for advocacy at regional level, mentorship programs and individual counselling for entrepreneurs.

Ms Willems holds a Law degree from Vrije Universiteit Brussels and a Master's Degree in Commercial sciences / Business management from VLEKHO Brussels.

Arvinder KAINTH
Industrial Technology Advisor, National Research Council, Canada



The National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) is Canada's leading innovation assistance program for small and medium-sized enterprises (SMEs).

NRC IRAP provides advice, connections, and funding to help Canadian SMEs grow, increase their innovation capacity, and take ideas to market. Arvinder is an ITA (Industrial Technology Advisor) with NRC IRAP and advises SMEs in the Energy and Clean-tech Sector. Arvinder is based in Calgary, Canada.

Session 5 - A new push for hydrogen



Noé VAN HULST

Chair, International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE)

Noé van Hulst is Chair of the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE), hydrogen advisor to IEA & Gasunie and a senior fellow at Clingendael International Energy Programme (CIEP). Prior to that, Mr van Hulst was the Hydrogen Envoy at the Ministry of Economic Affairs & Climate Policy in the Netherlands. Van Hulst was the Dutch Ambassador to the OECD from September 2013 to September 2018 and Chairman of the IEA Governing Board in 2017-2018. From 2003 to 2007, he worked at the International Energy Agency (IEA) in Paris as Director of Long-Term Co-operation and Policy Analysis. He then served as Secretary-General of the International Energy Forum (IEF) in Riyadh, Saudi Arabia from 2008 to 2011. He was Director of the Energy Academy Europe in 2012-2013. Before that, Noé van Hulst worked at the Free University in Amsterdam, the Social and Economic Council (SER) in The Hague and the Ministry of Economic Affairs from 1988, his latest appointment being Director-General for Energy.



Timur GÜL

Head of the Energy Technology Policy Division, IEA

Timur Gül has been head of the energy technology policy division (ETP) at the International Energy Agency (IEA) in Paris since 2018, where he analyzes the current state and prospects of clean energy technologies across different energy sectors. Previously, he was a senior energy analyst at the directorate for global energy economics, responsible for the IEA's flagship publication, the World Energy Outlook, from 2009 to 2018. Prior to these positions, Gül was a researcher at Paul Scherrer Institute in Switzerland for three years. He holds a PhD from the Swiss Federal Institutes of Technology (ETH) Zurich as well as a master's degree in environmental engineering from the Royal Institute of Technology (KTH) Stockholm.



Eiji OHIRA

Strategy Architect, Fuel Cell and Hydrogen Technology Office, New Energy and Industrial Technology Development Organization (NEDO), Japan

Eiji Ohira is the Strategy Architect of the New Energy and Industrial Technology Development Organization (NEDO)'s Fuel Cell and Hydrogen Technology Office. In this capacity, he has been responsible the overall strategy, execution and coordination of NEDO's research, development and demonstration project on fuel cell and hydrogen since 2013.

He has also coordinated fuel cell and hydrogen activities with international stakeholders, through International Energy Agency's Technology Collaboration Program (IEA Hydrogen TCP (Vice Chair),

Advanced Fuel Cell TCP), and International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE).

He joined the NEDO in 1992, just after graduation from the Tokyo University of Science. He served as a visiting scholar at the Massachusetts Institute of Technology in 1997-1998.

Before taking up the current position in April 2013, he served in several positions, including

Representative at NEDO Asian Representative Office, Director of the Energy Storage Technology Division.

Angel CAVIEDES
Head of New Energies Unit, Ministry of Energy, Chile



Head of the New Energy Carriers of the Chilean Ministry of Energy and member of the Committee for the Development of a Green Hydrogen Industry. Mr. Caviedes is also member of the board of AtamosTec, the Chilean technology program for the development of a bifacial photovoltaic solution for extremely dry and desertic operational conditions.

Former energy advisor in the Chilean Economic Development Agency and the Solar Energy Committee. Angel is mechanical engineer, Master in Energy Conversion and Management, Master in Innovation and Master in Political Science.

Christelle WERQUIN
General Delegate, France Hydrogène



Christelle Werquin started her career in Brussels, in the European affairs sector, with institutional and private actors. Since 2016, she works as General Delegate of France Hydrogène, the French national Association that gathers today more than 450 members. It brings together all the stakeholders of the French Hydrogen sector structured along the entire value chain:

- major industrial groups developing large-scale projects,
- SMEs and innovative start-ups
- laboratories and research centres of excellence,
- competitive clusters and local and regional authorities.

Antoine DECHEZLEPRÊTRE
Senior Economist,
Productivity, Innovation and Entrepreneurship Division, OECD



Antoine Dechezleprêtre is a Senior Economist in the Productivity, Innovation and Entrepreneurship Division, Directorate for Science, Technology and Innovation (STI), OECD. His work deals principally with the role of innovation and technology diffusion for the green transition and the impact of environmental policies on innovation, technology adoption, carbon emissions, productivity and firm performance.

Antoine's work has been published widely in international scientific journals in the fields of applied microeconomics, environmental economics and energy economics. He holds a PhD in economics from Ecole des Mines de Paris (France) and is the winner of the 2020 European Award for Researchers in Environmental Economics under the Age of Forty.

Before joining the OECD, he was Associate Professor at the Grantham Research Institute of Climate Change and the Environment, London School of Economics, and then headed the Green Growth work stream joint between the Economics Department and the Environment Directorate of the OECD.

Closing Remarks



Kumi KITAMORI

Deputy Director, Environment Directorate, OECD

Since September 2022, Kumi Kitamori supports the Director in overseeing the work of the Environment Directorate, which provides relevant and timely information, analysis and advice to support governments in identifying and implementing the environmental policies needed to support a cleaner, more resourceefficient and low-carbon green growth path, in coordination with other directorates.

As Head of Green Growth & Global Relations Division since 2015, Kumi oversaw the mainstreaming of green growth in the work of various policy committees of the OECD and in member and partner countries. This included a dedicated programme that promotes green growth policies, finance and investment in the Eastern Europe, the Caucasus and Central Asia (EECCA) region. Prior to this, she worked in the OECD Environment Directorate on various issues including emissions trading and taxes, water pricing, climate change, biodiversity, health & environment, among others. She led a flagship project OECD Environmental Outlook to 2050 published in 2012. During 2005-2006, she served as Advisor to the OECD Secretary-General.

Prior to joining the OECD in 2000, Kumi was at the World Bank where she worked extensively in South and Southeast Asia on urban and environmental infrastructure projects (green finance for urban infrastructure, water supply & sanitation, cleaner production, etc). Kumi holds BA and MSc in development and economics from New York University and London School of Economics.

Relevant OECD Committees

The theme of this year's GGSD Forum was developed in consultation with the Committee on Industry, Innovation and Entrepreneurship (CIIE), the Committee for Scientific and Technological Policy (CSTP), the Committee on SMEs and entrepreneurship (CSMEE), the Environmental Policy Committee (EPOC), and the Working Party No. 1 on Macroeconomic and Structural Policy Analysis. The Forum also drew on work of the International Energy Agency (IEA), as well as perspectives of Business at the OECD (BIAC) and the Trade Union Advisory Committee (TUAC).

Key references

- Cordonnier, J. and D. Saygin (2022), “Green hydrogen opportunities for emerging and developing economies: Identifying success factors for market development and building enabling conditions”, *OECD Environment Working Papers*, No. 205, OECD Publishing, Paris, <https://doi.org/10.1787/53ad9f22-en>.
- OECD (2022), *Policies to Support Green Entrepreneurship: Building a Hub for Green Entrepreneurship in Denmark*, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, <https://doi.org/10.1787/e92b1946-en>.
- OECD (2022) Horizontal project on Building Climate and Economic Resilience in the Transition to a Low-Carbon Economy <https://www.oecd.org/env/cc/brochure-horizontal-project-on-climate-and-economic-resilience.pdf>
- Cammeraat, E., A. Dechezleprêtre and G. Lalanne (2022), “Innovation and industrial policies for green hydrogen”, *OECD Science, Technology and Industry Policy Papers*, No. 125, OECD Publishing, Paris, <https://doi.org/10.1787/f0bb5d8c-en>
- OECD (2022), *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options*, OECD Publishing, Paris, <https://doi.org/10.1787/de747aef-en>
- OECD (2022), *Agricultural Policy Monitoring and Evaluation 2022: Reforming Agricultural Policies for Climate Change Mitigation*, OECD Publishing, Paris, <https://doi.org/10.1787/7f4542bf-en>
- OECD (2022), *Enabling Conditions for Bioenergy Finance and Investment in Colombia*, Green Finance and Investment, OECD Publishing, Paris, <https://doi.org/10.1787/20f760d6-en>
- Dechezleprêtre, A. and T. Kruse (2022), “The effect of climate policy on innovation and economic performance along the supply chain: A firm- and sector-level analysis”, *OECD Environment Working Papers*, No. 189, OECD Publishing, Paris, <https://doi.org/10.1787/3569283a-en>
- OECD (2021), *Policies for a Carbon-Neutral Industry in the Netherlands*, OECD Publishing, Paris, <https://doi.org/10.1787/6813bf38-en>
- OECD (2021), “Effective policies to foster high-risk/high-reward research”, *OECD Science, Technology and Industry Policy Papers*, No. 112, OECD Publishing, Paris, <https://doi.org/10.1787/06913b3b-en>
- OECD (2021), *OECD Science, Technology and Innovation Outlook 2021: Times of Crisis and Opportunity*, OECD Publishing, Paris, <https://doi.org/10.1787/75f79015-en>
- Larrue, P. (2021), “The design and implementation of mission-oriented innovation policies: A new systemic policy approach to address societal challenges”, *OECD Science, Technology and Industry Policy Papers*, No. 100, OECD Publishing, Paris, <https://doi.org/10.1787/3f6c76a4-en>
- IEA (2021), *Global Hydrogen Review 2021*, IEA, Paris <https://www.iea.org/reports/global-hydrogen-review-2021>
- IEA (2021), *CCUS in Industry and Transformation*, <https://www.iea.org/reports/ccus-in-industry-and-transformation>
- IEA (2021), *Direct Air Capture*, IEA, Paris <https://www.iea.org/reports/direct-air-capture>
- OECD (2021), “No net zero without SMEs: Exploring the key issues for greening SMEs and green entrepreneurship”, *OECD SME and Entrepreneurship Papers*, No. 30, OECD Publishing, Paris, <https://doi.org/10.1787/bab63915-en>
- OECD (2021), “An in-depth analysis of one year of SME and entrepreneurship policy responses to COVID-19: Lessons learned for the path to recovery”, *OECD SME and Entrepreneurship Papers*, No. 25, OECD Publishing, Paris, <https://doi.org/10.1787/6407deee-en>
- OECD (2021), “Business advice for entrepreneurship and small firms”, *OECD SME and Entrepreneurship Papers*, No. 23, OECD Publishing, Paris, <https://doi.org/10.1787/299705ad-en>
- IEA (2020), *Energy Technology Perspectives 2020 - Special Report on Carbon Capture Utilisation and Storage - CCUS in Clean Energy Transitions*, IEA, Paris, https://iea.blob.core.windows.net/assets/181b48b4-323f-454d-96fb-0bb1889d96a9/CCUS_in_clean_energy_transitions.pdf
- OECD – OPSI (2020), “*Anticipatory Innovation Governance: What is it, how it works, and why we need it more more than ever before*”, <https://oecd-opsi.org/wp-content/uploads/2020/11/AnticipatoryInnovationGovernance-Note-Nov2020.pdf>

OECD (2020), "The effects of R&D tax incentives and their role in the innovation policy mix: Findings from the OECD microBeRD project, 2016-19", *OECD Science, Technology and Industry Policy Papers*, No. 92, OECD Publishing, Paris, <https://doi.org/10.1787/65234003-en>

Borowiecki, M., et al. (2019), "Supporting research for sustainable development", *OECD Science, Technology and Industry Policy Papers*, No. 78, OECD Publishing, Paris, <https://doi.org/10.1787/6c9b7be4-en>

Diakosavvas, D. and C. Frezal (2019), "Bio-economy and the sustainability of the agriculture and food system: Opportunities and policy challenges", *OECD Food, Agriculture and Fisheries Papers*, No. 136, OECD Publishing, Paris, <https://doi.org/10.1787/d0ad045d-en>

Philp, J. and D. Winickoff (2019), "Innovation ecosystems in the bioeconomy", *OECD Science, Technology and Industry Policy Papers*, No. 76, OECD Publishing, Paris, <https://doi.org/10.1787/e2e3d8a1-en>

Philp, J. and D. Winickoff (2018), "Realising the circular bioeconomy", *OECD Science, Technology and Industry Policy Papers*, No. 60, OECD Publishing, Paris, <https://doi.org/10.1787/31bb2345-en>

OECD (2018), *Meeting Policy Challenges for a Sustainable Bioeconomy*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264292345-en>

Related websites

- OECD Green Recovery Hub
www.oecd.org/coronavirus/en/themes/green-recovery
- OECD Green Recovery Database
www.oecd.org/coronavirus/en/themes/green-recovery#green-recovery-database
- IEA - Fuels and Technologies - Hydrogen
www.iea.org/fuels-and-technologies/hydrogen
- IEA - Data and Statistics - Renewables and waste
www.iea.org/data-and-statistics
- OECD - OPSI: Mission-Oriented Innovation: Tackling society's grand challenges
<https://oecd-opsi.org/work-areas/mission-oriented-innovation/>
- OECD Database - Environment-related technology development by inventor country
<https://doi.org/10.1787/data-00760-en>
- OECD Global Plastics Outlook
www.oecd.org/environment/plastics/
- OECD Science, Technology and Innovation Outlook
www.oecd.org/sti/science-technology-innovation-outlook/
- OECD Digital for SMEs Global Initiative
www.oecd.org/digital/sme/
- OECD-OPSI-MBCGI: Achieving Cross-Border Government Innovation
<https://cross-border.oecd-opsi.org/#intro>
- OECD Statistics - International collaboration in technology development (rates)
https://stats.oecd.org/Index.aspx?DataSetCode=PAT_COL_RATES



Previous GGSD Forums

- 2021 - *A green recovery:
Rethinking the built environment and transport*
www.oecd.org/greengrowth/ggsd2021/
- 2020 - *Securing natural capital:
Resilience, risk management and COVID-19*
www.oecd.org/greengrowth/ggsd2020/
- 2019 - *Greening heavy and extractive industries:
Innovation and fiscal implications*
www.oecd.org/greengrowth/ggsd2019/
- 2018 - *Inclusive solutions for the green transition:
Competitiveness, jobs and social dimensions*
www.oecd.org/greengrowth/ggsd-2018/
- 2017 - *Greening the Ocean Economy*
www.oecd.org/greengrowth/ggsd-2017/
- 2016 - *Urban green growth, spatial planning and land use*
www.oecd.org/greengrowth/ggsd-2016/
- 2015 - *Enabling the next industrial revolution:
Systems innovation for green growth*
www.oecd.org/greengrowth/ggsd-2015.htm
- 2014 - *Addressing the social implications of green growth*
www.oecd.org/greengrowth/ggsd-2014.htm
- 2013 - *How to unlock investment in support
of green growth?*
www.oecd.org/greengrowth/gg-sd-2013.htm
- 2012 - *Encouraging the efficient and sustainable use
of natural resources: Policy instruments
and social acceptability*
www.oecd.org/greengrowth/gg-sd-2012.htm

2022 Green Growth and Sustainable Development Forum

For more information:



<http://oe.cd/ggsd2022>



Sign up for the OECD's
Green Growth Newsletter

www.oecd.org/login



@OECD_ENV
#GGSD



https://bit.ly/oecd_env_linkedin



OECD

BETTER POLICIES FOR BETTER LIVES