

2019  
#GGSD  
Forum

26 & 27 November  
OECD, Paris

# Agenda and Speakers

## Greening heavy and extractive industries:

Innovation  
and fiscal  
implications

2019

Green  
Growth  
and  
Sustainable  
Development  
Forum

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# Agenda Overview

## Day 1 Tuesday 26 November 2019

13:00 - 14:00	Registration	
14:00 - 15:45	Opening Session	Room CC 9
15:45 - 16:15	Coffee break	
16:15 - 18:00	Session 1 - Fiscal implications of the low-carbon transition	Room CC 9
18:00 - 19:30	Cocktail Reception	L'Expresso Café, OECD

## Day 2 Wednesday 27 November 2019

09:30 - 11:00	Session 2 - Driving innovation for greening heavy industries	Room CC 9
11:00 - 11:30	Coffee break	
11:30 - 13:00	Parallel Sessions:	
	<b>Session A</b> Room CC 9 Greening extractive sectors: mission possible?	<b>Session B</b> Auditorium International trade and the circular economy
		<b>Session C</b> Room D Regions and extractive industries
13:00 - 14:30	OECD - UNEP lunch side event	Auditorium
14:30 - 16:00	Special High-Level Panel Discussion: The new geopolitics of natural resources	Room CC 9
16:00 - 16:15	Coffee break	
16:15 - 17:15	Closing Session	Room CC 9

# Documents



## **The fiscal implications of the low-carbon transition**

by Assia Elgouacem, Håvard Halland, Enrico Botta and Gurtegh Singh, OECD

<https://bit.ly/2KHxp1>



## **Low and zero emissions in the steel and cement industries: Barriers, technologies and policies**

by Dr. Chris Bataille, Associate Researcher IDDRI & Adjunct Professor, Simon Fraser University

<https://bit.ly/2D5t8jf>



## **Reducing the health risks of the copper, rare earth and cobalt industries: the transition to a low-carbon economy**

by Mike Holland, EMRC and Imperial College London

<https://bit.ly/37zA2eS>

# Annotated Agenda

## Context

Efforts to shift to a low-carbon economy and meet the Sustainable Development Goals will require far-reaching transformations of the heavy and extractive industries. Ending poverty (**SDG 1**), ensuring quality education (**SDG 4**) or providing access to clean water for all (**SDG 6**), will require large investments in infrastructure, driving the growth of several heavy industries such as steel and cement making. At the same time, limiting global temperature increase to 1.5 degrees (**SDG 13**) will require emission reduction in these carbon-intensive sectors. Providing clean energy for all (**SDG 7, SDG 9 and 13**) could lead to a progressive reduction of fossil fuels consumption and drive the demand of minerals that underpin several low-carbon technologies, such as lithium for batteries or rare earths for renewable power generation. Reducing waste (**SDG 12**) will call for higher rates of materials recycling and re-utilisation.

Beyond the heavy and extractive industries, the shift towards a low-carbon economy will create challenges and opportunities for governments as well. For countries that rely heavily on extractive sectors for fiscal revenues, the green transition highlights the need for economic diversification and the risk of stranded assets. Countries that are not resource-rich could also face fiscal challenges as the low-carbon transition erodes the traditional tax base represented by the use of fossil energy. Coordinated national and regional policies are crucial to manage the possible structural adjustments due to the lower demand of fossil fuels in hydrocarbon-rich regions, and to ensure the environment and social sustainability of the mining needed for several low-carbon technologies.

## Overview

The **2019 Green Growth and Sustainable Development (GGSD) Forum** will explore a greener low-carbon future for extractive and heavy industries and discuss its innovation and fiscal implications. **Session 1** will explore the fiscal implications, including the need to identify new sources of revenues and reconsider spending priorities. **Session 2** and **Parallel Session A** will focus on the business and technological innovations required to support the shift of these sectors towards a low-carbon and circular production. **Parallel Session B** will focus on the role of international trade in ensuring that materials stay in the economy as long as possible (circular economy). **Parallel Session C** will discuss the challenges and opportunities that the green low-carbon transition creates for regions rich in hydrocarbons and minerals. Finally, the **Special High-Level Panel** will debate the possible new geopolitical implications of natural resource endowment and the low-carbon transition.

The 2019 GGSD Forum will draw on the work of the OECD Steel Committee, Joint Meeting on Tax and Environment Experts, Policy Dialogue on Natural Resource-based Development, Working Party on Resource Productivity and Waste, Joint Working Party on Trade and Environment, Working Party on Rural Policy, Working Party on Integrating Environmental and Economic Policies, Working Party on Responsible Business Conduct, the Business and Industry Advisory Committee as well as the International Energy Agency.

# Day 1: Tuesday 26 November

13:00 - 14:00 Registration, arrival and seating

14:00 - 15:45 **Opening Session**

**Room CC 9**

## Welcome:

- **Angel Gurría**, Secretary-General, OECD

## Scene-setting presentation:

- **Adair Turner**, Chairman of the Energy Transitions Commission;  
Senior Fellow, Institute for New Economic Thinking (INET)

## Keynote address:

- **Keeyong Chung**, Director-General, Climate Change, Energy, Environment,  
Ministry of Foreign Affairs, Republic of Korea

## OECD Materials Outlook to 2060:

- **Rodolfo Lacy**, Director, Environment Directorate, OECD

## High Level Business-Government Panel Discussion

### Moderator:

- **Masamichi Kono**, Deputy-Secretary General, OECD

### Panellists:

- **Keeyong Chung**, Director-General, Climate Change, Energy, Environment,  
Ministry of Foreign Affairs, Republic of Korea
- **Adair Turner**, Chairman of the Energy Transitions Commission;  
Senior Fellow, Institute for New Economic Thinking (INET)
- **Jerome Schmitt**, Chairman of the Oil and Gas Climate Initiative Executive Committee,  
Senior Vice President Innovation & Energy Efficiency, Total
- **Jenny Svärd**, Director Environmental Policies, Confederation of Swedish Enterprise

**15:45 - 16:15 Coffee break**

## Session 1 - The low-carbon transition: Fiscal implications for resource-rich and importing countries

If global greenhouse gas emissions are to decrease in order to meet the Paris objectives, the consumption of fossil fuels would need to gradually decrease as economies become more electrified and renewables are deployed at a larger scale. The progressive reduction in fossil fuels consumption presents challenges to both resource-rich countries and net importers: the former often rely on these sectors for fiscal revenues and face the challenge of economic diversification; the latter will face shifting tax bases as, for instance, low-carbon electricity progressively replaces fossil fuel energy in the transport sector. At the same time, governments also spend considerable amounts to subsidise fossil fuel production and consumption. Estimates range between USD 373 billion and USD 617 billion over the period 2010-2015 for the 76 economies contributing 94% of global CO<sub>2</sub> emissions while foregone revenues due to under-pricing of carbon emissions is estimated to amount to almost 0.8% of GDP across all OECD and G20. This session will discuss the role that well-designed environmental fiscal reforms could play in managing the fiscal implications of the progressive decarbonisation of the economy. The debate will also focus on the tools available to natural resource-rich countries to effectively manage revenues from their extractive sectors, such as sovereign wealth funds, while pursuing economic diversification.

### Moderator:

- **Grace Perez-Navarro**, Deputy Director, Centre for Tax Policy and Administration, OECD

### Scene-setters:

- **Dastan Umirbayev**, Director, Department of Macroeconomic Analysis and Forecasting Ministry of National Economy, Republic of Kazakhstan
- **Rick van der Ploeg**, Professor of Economics and Research Director, Oxford Centre for the Analysis of Resource-Rich Economies, University of Oxford

### Panellists:

- **Isabel Blanco**, Lead Economist, Economics and Policy Group, European Bank for Reconstruction and Development (EBRD)
- **Øystein Bieltvedt Skeie**, Economist (Chief specialist), Norwegian Ministry of Finance; Delegate, Joint Meetings of Tax and Environment Experts (JMTEE)
- **Bady Baldé**, Regional Director for Africa, Extractive Industries Transparency Initiative (EITI)

### Questions for discussion:

- How would the progressive electrification of energy consumption affect tax systems?
- How can green fiscal reforms help to ensure a more efficient tax system?
- What role for sovereign wealth funds in helping governments whose budget is heavily reliant on the revenues from the oil & gas extraction to diversify their economies?
- What are the key challenges for policy-makers in designing fiscal regimes for the extractive sector? How can governments raise sufficient revenues while providing adequate incentives for investors?

18:00 - 19:30 **Cocktail Reception**

**L'Espresso Café, OECD**

# Day 2: Wednesday 27 November

09:30 - 11:00

Room CC 9

## Session 2 - Driving innovation for greening heavy industries

The products of energy intensive industries, such as cement, chemicals or steel, are ubiquitous in modern society (e.g. buildings, roads and consumer products), thus ensuring the sustainability of their production is crucial to the green low-carbon transition. The growing global demand for steel, cement and other materials and long-lived nature of the associated assets (e.g. production plants and built infrastructure) further underline the urgency of the transition of these sectors. However, the decarbonisation of these industries is constrained by technological, economic and competitiveness challenges. This session will explore the technological, business and regulatory challenges and solutions for their decarbonisation. The role of policies in promoting research and deployment of low-carbon innovations (e.g. green public procurement, reform of building codes, taxes on material consumption) while preserving international competitiveness will be discussed. The debate will also address the role of different approaches to innovation (open versus closed).

### Moderator:

- **Lieven Top**, Delegate of OECD Steel Committee; Senior Advisor, Flemish Ministry of Economy, Science and Innovation, Belgium

### Scene-setter:

- **Mechthild Wörsdörfer**, Director, Sustainability, Technology and Outlooks Division, IEA

### Panellists:

- **William Garcia**, Executive Director, Head of HSE Policies and Responsible Care, European Chemical Industry Council (CEFIC)
- **Ron van der Meer**, Director Public Affairs, HeidelbergCement, Germany
- **Åsa Ekdahl**, Head, Environment and Climate Change, World Steel Association
- **Maarten Neelis**, Principal advisor Sustainability at Rijkswaterstaat, Ministry of Infrastructure and Water Management, The Netherlands

### Questions for discussion:

- What are the key barriers to accelerate the sustainable transition of the heavy industries? Is carbon capture, storage and utilisation (CCUS) a requirement for decarbonising these sectors?
- How can governments support green innovations? What is the role of private, public R&D and co-opetition?
- What mechanisms can foster a wider diffusion of low-carbon technologies. What barriers could hinder their transfer internationally?

**11:00 - 11:30 Coffee break**

**Parallel Session A - Greening the extractive sectors: mission possible?**

The world's consumption of several minerals is expected to increase considerably as the global economy expands and living standards rise, further increasing the pressure on the environment. At the same time, a sustainable exploitation of natural resources is required to meet numerous SDGs, such as ensuring availability and sustainable management of water and sanitation for all (SDG 6), promoting decent work and economic growth (SDG 8), investments in infrastructure (SDG 9), climate action SDG 13, and life on land (SDG 15). In this context, this session will discuss the opportunities and the challenges generated by the green low-carbon transition for the extractive industry. The debate will explore how green technologies and business practises, including renewable energies, digitalisation (e.g. unmanned vehicles and satellites) and responsible business conduct, may help to green the extractive industries. Furthermore, the session will discuss the tools available to governments and to development finance institutions to address existing barriers to the shift towards greener technologies, including financing and skills gaps. The session will also consider opportunities for the integration of resource-rich economies into green value chains.

**Moderator:**

- **Ligia Noronha**, Director, Economy Division, UN Environment Programme (UNEP)

**Scene-setter:**

- **Perrine Toledano**, Head of Extractive Industries, Columbia Center on Sustainable Investment (CCSI) at Columbia University
- **Hans-Jörn Weddige**, Group Coordinator Energy, Climate and Environment Policies, Thyssenkrupp AG

**Panellists:**

- **Malwina Nowakowska**, Deputy Head of Unit, Resource Efficiency and Raw Materials, European Commission (DG GROW)
- **Kakha Kuchava**, Member of Parliament, Georgia, Chair of the Environmental Protection and Natural Resources Committee
- **Håvard Halland**, Senior Economist, Natural Resources for Development Unit, OECD Development Centre

**Questions for discussion:**

- What are the opportunities and the challenges for the extractive sector arising from the green low-carbon transition?
- How can resource-rich countries benefit from the increasing demand for minerals and metals, while ensuring that environmental and climate impacts are minimised?
- What are the barriers to the development and adoption of innovative greener technologies and business practices in the extractive sector?
- How can extractive industries contribute to the broader sustainability agenda beyond reducing environmental impact?

11:30 - 13:00

Auditorium

## Parallel Session B - International trade and the circular economy

The transition towards a more circular economy has broad linkages with international trade. Thanks to global value chains, products cross national borders several times before reaching their final customers and, once they reach their end-of-life, are often re-exported. Efforts to decouple economic growth and material use need to consider domestic consumption as well as materials embedded in imported goods. This session will look at the role that trade can have in closing the material loop, in particular for mineral resources, and promoting a circular economy. The debate will investigate the tension between the long-standing principle of avoiding trade in waste due to potential negative environmental impacts and growing awareness of the importance of waste and secondary materials as tradable commodities. The need of harmonising domestic circular economy policies, such as standards and labelling, in order to ensure international waste trade flows will also be discussed.

### Moderator:

- **Julia Nielson**, Deputy Director, Trade and Agriculture Directorate, OECD

### Scene-setter:

- **Shardul Agrawala**, Head of Environment and Economy Integration Division, Environment Directorate, OECD

### Panellists:

- **Scott Vaughan**, Distinguished Fellow, International Institute for Sustainable Development (IISD)
- **Jenny Svärd**, Director Environmental Policies, Confederation of Swedish Enterprise
- **Keli Yu**, Secretary General of China National Resources Recycling Association
- **Adina Renee Adler**, Assistant Vice President, Institute of Scrap Recycling Industries

### Questions for discussion:

- What are the challenges and opportunities for free trade in secondary materials? Do existing trade policies promote material efficiency?
- What are the consequences of the emerging trade restrictions on waste and scrap; what could be the potential solutions?
- How can national standards be harmonised in order to avoid fragmentation of international markets? Is there room for regional or global harmonization?

11:30 - 13:00

Room D

## Parallel Session C - Regions and extractive industries: Maximising local benefits for sustainable development

Resource-rich regions are engines of growth for many countries. However, they do not necessarily reap the full benefits of the extraction of non-renewable resources and often face issues such as indigenous communities and landowners, remoteness and limited economic diversity, as well as lack of community infrastructure and services. At the same time, the costs associated with the specialisation in mining (e.g. environmental externalities and socio-economic inequalities) also tend to be amplified at the local and regional scale. The transition to low-carbon economies generates new challenges and opportunities, including managing structural adjustment costs for regions dependent on the extraction of hydrocarbons, as well as introducing renewable energy technologies in mining. This session will investigate how place-based development approaches can promote sustainable and inclusive exploitation of finite natural resources. It will also address how mining operations and investment can support local entrepreneurs and SMEs. The role of multi-level governance and sub-national fiscal arrangements, stakeholders' engagement and partnerships with indigenous communities will be discussed, as well as the 'just transition' for mine workers.

### Moderator:

- **Alain Dupeyras**, Head of Division for Regional Development and Tourism, OECD

### Scene-setter:

- **Gavin Bridge**, Professor, Durham University, United Kingdom

### Panellists:

- **Mika Riipi**, County Governor at Regional Council of Lapland, Finland
- **Oliver Sartor**, Senior Research Fellow, Climate and Energy, IDDRI, Paris, France
- **LeRoy Hollenbeck**, Director Social Responsibility & Community Development, Freeport-McMoRan
- **Sébastien Storme**, Senior Advisor, Just Transition Centre at the International Trade Union Confederation
- **Jane Korinek**, Trade Policy Analyst, Trade and Agriculture Directorate, OECD

### Questions for discussion:

- How can subnational governments promote more inclusive development in mining regions in the context of a green energy transition? What mechanisms, competencies and skills are needed and work best to implement places based policies?
- How can mining regions be supported to invest in sustainable long-term growth? What regional planning, multi-level governance and revenue sharing arrangements help achieve this outcome?
- What are the opportunities for regional development that can be harnessed in terms of developing local mining value chains related to the circular economy and green technologies?
- How can governments and mining companies work together to deliver local job opportunities and improve quality of life in mining regions, particularly in the context of increased automation and digitalisation?

13:00 - 14:30 Lunch break

13:00 - 14:30

Auditorium

## OECD - UNEP Luch Side Event - Circular economy in the sustainable management of minerals and metal resources

Analysis from the International Resource Panel and the OECD shows that, unless of fundamental changes in the use of natural resources, global materials use will more than double by 2060. Governments and the private sector will need to act together to adopt more sustainable consumption and production patterns to provide shared opportunities, and support the transition towards inclusive green economies. This joint UNEP – OECD side event will discuss how the circular economy can contribute to promote sustainable consumption and production, the barriers that currently hinder the widespread adoption of circular business models, the role of the private sector in addressing the adverse impacts of extractive sector on local communities through responsible business conduct, and explore how the UNEP approach to and experience in circular economy can promote innovative approaches for the sustainable management of metal and mineral resources.

### Moderator:

- **Shardul Agrawala**, Head of Environment and Economy Integration Division, Environment Directorate, OECD

### Panellists:

- **Janez Potočnik**, Co-chair, UNEP International Resource Panel; former European Commissioner for the Environment
- **Ligia Noronha**, Director, Economy Division, UN Environment Programme (UNEP)
- **Benjamin Katz**, Policy Analyst, Centre for Responsible Business Conduct, Directorate for Financial and Enterprise Affairs, OECD



14:30 - 16:00

Room CC 9

## Special High Level Panel Discussion - The new geopolitics of natural resources

The energy mix that underpins our societies is evolving. The share of fossil fuels, which have powered economic growth and contributed to lifting millions of people out of poverty, will need to be reduced if the world is to achieve net-zero emissions by mid-century. As countries aim to strengthen their energy security by harnessing domestic renewable energy sources, a reduction in the geostrategic importance of oil and gas is a potential consequence. Furthermore, the low-carbon transition could face new resource bottlenecks due to the supply concentration of metals such as lithium or cobalt in a few regions, as illustrated by the 2010 rare earth crisis. Digitalisation, a key enabler of the low-carbon transition for its role in smart grids, may also create cyber security and privacy concerns. This special High-Level Panel will discuss how the green transition may change the geopolitics of natural resources and the implications for the international rules-based framework.

### Moderator:

- **Roger Dungan**, Deputy Permanent Representative to the OECD, New Zealand

### Scene-setter:

- **Janez Potočnik**, Co-chair, UNEP International Resource Panel; former European Commissioner for the Environment

### Panellists:

- **Roman Vakulchuk**, Senior Research Fellow, Norwegian Institute of Foreign Affairs
- **Lisa Fischer**, Senior Policy Advisor, E3G
- **Molly Walton**, Energy Analyst, World Energy Outlook, International Energy Agency (IEA)
- **Andy Wyckoff**, Director, Science, Technology and Innovation Directorate, OECD

### Questions for discussion:

- Would the rise of renewables lead to a reduction in the geostrategic importance of fossil fuels rich regions? Would it lead to new global tensions linked to mineral resource reserves that support renewable energy technologies?
- What kind of governance could ensure a fair and sustainable exploitation of key raw materials to balance the interest of resource-rich countries and importing countries?
- Does the low-carbon transition require to revisit and update the concepts of energy security?

**16:00 - 16:15 Coffee break**

**Closing Session****Moderator:**

- **Kumi Kitamori**, Head of Division, Green Growth and Global Relations, Environment Directorate, OECD

**Reporting back from parallel sessions:**

- **Ligia Noronha**, Director, Economy Division, UN Environment Programme (UNEP)
- **Julia Nielson**, Deputy Director, Trade and Agriculture Directorate, OECD
- **Alain Dupeyras**, Head of Division for Regional Development and Tourism, OECD

**Secretariat response:**

- **Federico Bonaglia**, Deputy Director, Development Centre, OECD
- **Lamia Kamal-Chaoui**, Director, Centre for Entrepreneurship, SMEs, Regions and Cities, OECD
- **Julia Nielson**, Deputy Director, Trade and Agriculture Directorate, OECD
- **Grace Perez-Navarro**, Deputy Director, Centre for Tax Policy and Administration, OECD
- **Rodolfo Lacy**, Director, Environment Directorate, OECD

**Closing remarks:**

- **Masamichi Kono**, Deputy-Secretary General, OECD



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# Speakers and Panellists

Ángel Gurría	Hans-Jörn Weddige
Adair Turner	Malwina Nowakowska
Keeyong Chung	Kakha Kuchava
Rodolfo Lacy	Håvard Halland
Masamachi Kono	Julia Nielson
Jérôme Schmitt	Shardul Agrawala
Jenny Svärd	Scott Vaughan
Grace Perez-Navarro	Keli Yu
Dastan Umirbayev	Adina Renee Adler
Rick van der Ploeg	Alain Dupeyras
Isabel Blanco	Gavin Bridge
Øystein Bieltvedt Skeie	LeRoy Hollenbeck
Bady Baldé	Sébastien Storme
Lieven Top	Roger Dungan
Mechthild Wörsdörfer	Janez Potočnik
William Garcia	Roman Vakulchuk
Rob van der Meer	Lisa Fischer
Åsa Ekdahl	Molly Walton
Maarten Neelis	Andy Wyckoff
Ligia Noronha	Kumi Kitamori
Perrine Toledano	Federico Bonaglia
	Lamia Kamal-Chaoui

# Opening Session



**Ángel Gurría**  
*Secretary-General*  
*OCDE*

As Secretary-General of the Organisation of Economic Co-operation and Development (OECD) since 2006, Angel Gurría has firmly established the Organisation as a pillar of the global economic governance architecture including the G7, G20 and APEC, and a reference point in the design and implementation of better policies for better lives. He has broadened OECD's membership with the accession of Chile, Estonia, Israel, Latvia and Slovenia, and has made the Organisation more inclusive by strengthening its links with key emerging economies. Under his watch, the OECD is leading the effort to reform the international tax system, and to improve governance frameworks in anti-corruption and other fields. He has also heralded a new growth narrative that promotes the well-being of people, including women, gender and youth, and has scaled up the OECD contribution to the global agenda, including the Paris Agreement on Climate Change and the adoption of the Sustainable Development Goals.



**Adair Turner**  
*Chairman of the Energy Transitions Commission;*  
*Senior Fellow, Institute for New Economic Thinking (INET)*

Lord Turner chairs the Energy Transitions Commission, a global coalition of major power and industrial companies, investors, environmental NGOs and experts working out achievable pathways to limit global warming to well below 2°C by 2040 while stimulating economic development and social progress.

He was chairman of the Institute for New Economic Thinking until January 2019, where he remains a Senior Fellow. He is Chairman of Chubb Europe, and a Trustee at the British Museum. In December 2018 he joined the Advisory Board of Envision Energy, a Shanghai-based group focussed on renewable energy, batteries and digital systems.

From 2008-2013, Lord Turner chaired the UK's Financial Services Authority, and played a leading role in the post crisis redesign of global banking and shadow banking regulation.

Lord Turner has held high profile roles in public policy: he was Director General of the Confederation of British Industry (1995-2000); chairman of the UK Low Pay Commission (2002-2006); chairman of the Pensions Commission (2003-2006); he was the first chairman of the Climate Change Committee (2008-2012) an independent body to advise the UK Government on tackling climate change. The recommendations set out in their first report "Building a low-carbon economy" were adopted in 2009.

He became a cross bench member of the House of Lords in 2006.

Amongst his business roles, Lord Turner was at McKinsey&Co (1982-1995); was Vice-Chairman of Merrill Lynch Europe (2000-2006) and a Non-Executive Director of a number of companies, including Standard Chartered plc (2006-2008).

He is Senior Fellow at the Centre for Financial Studies (Frankfurt) and a Visiting Fellow at the People's Bank of China School of Finance, Tsinghua University (Beijing). He writes regularly for Project Syndicate, and has published "Between Debt and the Devil" (Princeton 2015), and Economics after the Crisis (MIT 2012).

He is an honorary fellow of The Royal Society, and received an Honorary Degree from Cambridge University in 2017.



**Keeyong Chung**  
*Director-General, Climate Change, Energy, Environment, Ministry of Foreign Affairs,  
Republic of Korea*



Keeyong Chung, Esq. is the Director-General for Climate Change, Energy, Environment and Scientific Affairs at the Ministry of Foreign Affairs of the Republic of Korea. His current portfolio includes (i) international energy security issues, (ii) climate diplomacy and green economy issues, and (iii) multilateral environment and science issues. Before assuming this role in September 2019, he was seconded to the Global Green Growth Institute as the Director of Governance.

As a career diplomat having served in MOFA since 1993, he was involved and led efforts by the Korean Government on a wide range of issues including the ROK-US alliance, international public law (including maritime delimitation and state responsibility), climate change, personnel laws & regulations, and Korea-Japan historical issues. As overseas assignments, he served as a political officer in Tokyo, Japan; the Deputy Head of Mission in Sofia, Bulgaria; and a minister-counselor in Washington D.C., the United States of America.

With a transdisciplinary background, he is an attorney at law and was the Director of International Legal Affairs, serving as the international legal adviser to the MOFA leadership. He holds a Bachelor of Law(LL.B.) degree from Seoul National University College of Law in Seoul, Korea and a Juris Doctor(JD) degree from University of Pennsylvania Law School in Philadelphia, the United States of America. He is also a member of the New York state bar.

**Rodolfo Lacy**  
*Director, Environment Directorate,  
OECD*



Dr. Lacy holds a Doctorate Degree in Environmental Science and Engineering from the Universidad Autónoma Metropolitana (Mexico), a Master's Degree in Urban Studies and Planning from the Massachusetts Institute of Technology (MIT), a Bachelor's Degree in Environmental Engineering from the Universidad Autónoma Metropolitana (Mexico) and a certificate in Leadership on Environment and Sustainable Development from El Colegio de México.

Dr. Lacy has been Vice Minister of Environmental Policy and Planning at the Ministry of Environment and Natural Resources of Mexico (2012-2018), Chief negotiator of Climate Change (COP19-COP23), Co-chair of the Global Methane Initiative, Member of the High-Level Group of the Global Environmental Outlook (GEO6), and Board Member of the Climate Action Reserve in California, USA.

Dr. Lacy has had extensive experience in policy making in the field of environment. He held the following positions:

- Technical Director at Mario Molina Center for Energy and Environmental Strategic Studies (2005-2012), a policy research NGO lead by Dr. Mario Molina, a chemist Nobel Prize laureated for his scientific work in the depletion of the ozone layer;
- Chief of Staff for the Minister of Environment and Natural Resources (2000-2003);
- Founder President of the Mexican Environmental Engineering Association CINAM (1996-1998);
- General Director of Environmental Projects and Studies and of Environmental Pollution Control and Prevention - Mexico City Government (1989-1997);
- Director of Environmental Planning at the Ministry of Urban Development and Ecology (1982-1987); among other relevant assignments.



**Masamichi Kono**  
*Deputy-Secretary General*  
*OCDE*

Mr. Masamichi Kono was appointed Deputy Secretary-General of the OECD in August 2017. His portfolio includes the strategic direction of OECD policy on Environment, Green Growth, Financial and Enterprise Affairs & Anti-Corruption along with representing the OECD at the Financial Stability Board meetings.

Prior to joining the OECD, Mr. Kono was the Vice Minister for International Affairs, Financial Services Agency, Japan (JFSA) and President of the Asian Financial Partnership Center of the JFSA.

In that capacity, he represented the JFSA in various international bodies and meetings, and was responsible for coordinating policies relating to international affairs for the JFSA.

In relation to this work, he served as Chairman of the International Organization of Securities Commissions (IOSCO) Technical Committee from April 2011 until May 2012, and thereafter as Chairman of the IOSCO Board until the end of his term in March 2013. He was also the Co-chair of the Financial Stability Board Regional Consultative Group for Asia from July 2013 to June 2015, and Chairman of the IFRS Foundation Monitoring Board from February 2013 to June 2016.

He has had a long career in financial supervision and the regulation of financial services, both in Japan and in the international arena, since joining the public service in 1978.

Before joining the Financial Services Agency, Mr Kono was Secretary to the WTO Financial Services Committee between 1994 and 1999, as Counsellor of the Trade in Services Division, World Trade Organisation.

He also served for 4 years at the OECD Secretariat in the Economics Department, at the beginning of his career.

From September 2005 to March 2017, he was a Visiting Professor at the University of Hiroshima, Graduate School of Social Sciences (Finance Program). He was also Research Scholar at Columbia University, School of International and Public Affairs (SIPA), USA from November 2016 to June 2017.

Mr Kono holds a B.A. in law from Tokyo University.



**Jérôme Schmitt**  
*Chairman of the Oil and Gas Climate Initiative Executive Committee,*  
*Senior Vice President Innovation & Energy Efficiency, Total*

Jérôme Schmitt is the Chairman of the Oil and Gas Climate Initiative Executive Committee. He is responsible for advancing and implementing the strategy set by the OGCI CEOs and building consensus among the team of senior executives representing OGCI's member companies.

Jérôme is also Senior Vice President M&A, Total SA.

Previously, he was Group Senior Vice President Sustainable Development & Environment, leading the Group's sustainability and climate roadmaps ahead of COP21 and working on the creation of OGCI. Jérôme holds a Civil Mining Engineer (S.E.).



**Jenny Svärd**  
*Director Environmental Policies, Confederation of Swedish Enterprise*

Jenny Svärd has been the Director of Environmental Policy at the Confederation of Swedish Enterprise since October 2017 and handles policy issues both nationally in Sweden and at EU level. In her role at the confederation, Jenny works closely with the different business sectors to promote a well-functioning business environment and now focuses specifically on creating fertile conditions for the new circular business models. Prior to this, Jenny worked in the aviation sector as Environmental Manager at two of Sweden's largest airports, Stockholm Arlanda and Stockholm Bromma. Jenny also has many years' experience as a consultant and was the section manager at a large consulting co-op within the environmental field.

# Session 1 - The low-carbon transition: Fiscal implications for resource-rich and importing countries

**Grace Perez-Navarro**  
*Deputy Director, Centre for Tax Policy and Administration,  
OECD*



Grace Perez-Navarro is the Deputy Director of the OECD's Centre for Tax Policy and Administration. As such, she plays a key role in all of the OECD's tax work including the tax challenges of digitalisation, the Base Erosion and Profit Shifting (BEPS) Project, improving international tax cooperation, tackling illicit financial flows, promoting better tax policies and engaging developing countries in OECD tax work. Since joining the OECD in 1997, she has held several key positions, including having led the OECD's tax work on bank secrecy, e-commerce, harmful tax practices, money laundering and tax crimes, countering bribery of foreign officials, and strengthening all forms of administrative cooperation between tax authorities.

Prior to joining the OECD, she was a Special Counsel at the IRS Office of the Associate Chief Counsel (International) where she coordinated guidance to field offices on international tax issues, oversaw litigation of international tax issues, negotiated TIEAs and treaties, and reviewed regulations, rulings and other policy advice. In 1993, she was seconded to the OECD to launch the revision of the OECD's Transfer Pricing Guidelines.

**Rick van der Ploeg**  
*Professor of Economics and Research Director,  
Oxford Centre for the Analysis of Resource-Rich Economies, University of Oxford*



Rick van der Ploeg, Professor of Economics at the University of Oxford, Research Director of the Oxford Centre for the Analysis of Resource Rich Economies, Adviser of Aurora Energy Research, Chair of the Scientific Council of CESifo, Munich, Research Fellow of CEPR, London, and adjunct Professor of Economics at VU University Amsterdam. His research is nowadays mainly on the economics of climate change and the economics of resource-rich economies, focusing mainly on macroeconomic growth and open economy issues, financial questions and public economic questions such as taxation. In the past, he has been at the University of Cambridge, London School of Economics and Political Science, various Dutch universities and the European University, Florence. He has also been a Chief Financial Spokesperson in the Dutch Parliament, State Secretary for Education, Culture and Science in the Netherlands, and Vice Chair of the UNESCO World Heritage Committee.

**Dastan Umirbayev**  
*Director, Department of Macroeconomic Analysis and Forecasting  
Ministry of National Economy, Republic of Kazakhstan*



Mr Dastan Umirbayev took up his duties as Director of the Department of Macroeconomic Analysis and Forecasting of the Ministry of National Economy of the Republic of Kazakhstan in April 2013.

Mr Dastan Umirbayev was born in 1982 in Kyzylorda, Kazakhstan. He holds MSc in Financial Economics from the University of Manchester, which he obtained in 2019. In 2006 he obtained BSc in Applied Mathematics and Computer Science from L.N.Gumilyov Eurasian National University in Astana, Kazakhstan. In 2002 he obtained Specialist in Banking from Jambyl Kazakh – Turkish college of Economics, Kazakhstan.

From February 2008 to April 2013 Mr Dastan Umirbayev served as Deputy Director of the Center of macroeconomic and applied mathematical economics research in JSC "Economic Research Institute", Astana, Kazakhstan.

Mr Dastan Umirbayev has such awards as Anniversary medal "25 Years of Kazakhstan's Independence" (2016), Kazakhstan Government medal for labor perfection in the field of economy, social sphere and public administration.



**Isabel Blanco**  
*Lead Economist, Economics and Policy Group,  
European Bank for Reconstruction and Development (EBRD)*

Isabel Blanco is the Lead Economist dealing with Green Economy Transition issues in the Sector Economics and Policy Group. Isabel has got 20 years of experience in sustainable energy and climate change, with a focus on policy dialogue and regulatory analysis. She has led the design of the Transition Impact assessment methodology for green projects and the methodology to conduct an economic assessment for use in EBRD projects with high greenhouse gas emissions, using shadow carbon prices. Isabel leads a number of strategic initiatives like “Green Just Transition” and the “Fiscal Impact of Climate Policies for Fossil Fuel Rich Countries”.

Prior to joining the EBRD, she managed the department of regulation at a large international renewable energy company and taught macroeconomics and development economics for 14 years at the Spanish University of Alcalá (Madrid). Isabel holds a Ph.D. in Energy Economics by the University of Alcalá (Madrid, Spain) and a BA in Environmental Economics by the University of Leeds (UK).



**Øystein Bieltvedt Skeie**  
*Economist (Chief specialist), Norwegian Ministry of Finance;  
Delegate, Joint Meetings of Tax and Environment Experts (JMTEE)*

Øystein Bieltvedt Skeie is Chief Specialist at the Norwegian Ministry of Finance where he is Deputy Head of the Section for Indirect Taxation in the Ministry’s Tax Policy Department. The Tax Policy Department deals with the economic aspects of the tax system and is responsible for preparing the annual tax proposals outlined in the budget.

Skeie has 15 years of experience as a tax economist. At the Ministry of Finance, he has mainly worked on environmental taxation and related topics, but he has also worked on personal and corporate income taxation. He has been a member of the secretariat of The Indirect Tax Commission (NOU 2007: 8) and The Tax Commission (NOU 2014: 13). Skeie has also been working two years at the OECD, where he was working on the economic implications of multinational tax planning.

Skeie is a Norwegian delegate to the Joint Meeting of Tax and Environment Experts at the OECD.

Skeie holds a Master’s Degree in Economics from the University of Oslo.



**Bady Baldé**  
*Regional Director for Africa, Extractive Industries Transparency Initiative (EITI)*

Mamadou Bady Baldé is the Regional Director for Africa, a role in which he supports and monitors EITI implementation across the organisation’s 24 African member countries. Bady also leads the Secretariat’s work on transparency in commodity trading between State-Owned Enterprises (SOEs) and international trading companies, and provides support on other policy work, including transparency in Artisanal and Small-Scale Mining (ASM), Supreme Audit Institutions (SAIs) and Public Financial Management (PFM). He is also member of the Secretariat’s senior management team.

Before joining the Secretariat, Bady worked at the Central Bank of Guinea, the German Development Corporation and as a Consultant at the World Bank. In 2012, Bady was seconded as an expert in Natural Resources Governance in the Governance, Economic Reforms and Financial Management Department of the African Development Bank in Tunis.

He holds a Master’s Degree in Public Administration in International Development from the Harvard University Kennedy School of Government and a Maîtrise en Gestion des Entreprises from the University of Conakry).



## Session 2 - Driving innovation for greening heavy industries

**Lieven Top**

*Delegate of OECD Steel Committee;*

*Senior Advisor, Flemish Ministry of Economy, Science and Innovation, Belgium*



Mr. Lieven Top is a senior Climate & Industry Advisor to the Flemish Ministry of Economy, Science & Innovation. From 2016, he served as Vice Chair and Chair of the OECD Steel Committee, currently serving as a member of the Bureau of this Committee.

He studied political and economic sciences at the universities of Ghent and Padova. After a traineeship at the European Commission, he served as policy advisor in the personal Cabinet of four ministers. During which time he organized the development and implementation of instruments incentivizing energy intensive sectors and companies. The well-balanced combination of energy-climate-competitiveness in these industrial sectors is a thread through his activities at regional, national and international level. He also plays an active role in various international networks and plurilateral collaborations with this same objective.

**Mechthild Wörsdörfer**

*Director, Sustainability, Technology and Outlooks Division,  
IEA*



Mechthild Wörsdörfer joined the IEA on 1 October 2018 as Director of Sustainability, Technology and Outlooks (STO).

Ms Wörsdörfer plans and co-ordinates the IEA's work on energy sustainability, encompassing energy technology policy and climate change policy. She oversees several of the IEA's major analytical reports including long-term scenarios and technology roadmaps.

Ms Wörsdörfer has been an active participant in the Governing Board of the IEA representing the European Union, as well as the EU contact at the Clean Energy Ministerial (CEM) and Mission Innovation (MI). Over the years, she served as Director for renewables, research and innovation and energy efficiency, as well as Director of Energy Policy at the European Commission. Ms. Wörsdörfer headed the adoption of the Energy Roadmap 2050, the Energy and Climate Policy 2030 Framework and the Clean Energy Package. She has served in the cabinet of Commissioner Erkki Liikanen on competitiveness issues, digital economy and international relations.

Ms. Wörsdörfer, a German national, holds a Master's degree in Economic Policy and Management from the Brussels University, a Bachelor's degree in Applied Economics (Finance) from the University of Montpellier and a Bachelor's Degree in Applied Economics, French and Spanish from the Ruprecht-Karls University Heidelberg.

**William Garcia**

*Executive Director,*

*Head of HSE Policies and Responsible Care,  
European Chemical Industry Council (CEFIC)*



With more than 25 years of experience in chemical manufacturing, William Garcia is a seasoned corporate leader. In his career for LyondellBasell (LBI), Mr. Garcia has managed world-scale manufacturing sites and global corporate teams.

Before joining Cefic, he was Global Director in charge of operational excellence at LyondellBasell (LBI), leading the manufacturing management processes integration and auditing initiative. He has a strong experience in general manufacturing management and leading large organizations through re-engineering. As part of his role for Cefic, Mr. Garcia leads the industry federation's safety, health, environment, Responsible Care and logistics strategies and shapes its political agenda.

Mr. Garcia was recently appointed Vice-Chairman of the Business@OECD (BIAC) Energy and Environment Policy Committee representing the industry interests toward the OECD organisation. He is leading the European Chemical Industry Mid-Century Vision development project. William Garcia holds a Master of Science Degree in mechanical and civil engineering from the School of Mines in Ales, France.



**Rob van der Meer**  
*Director Public Affairs, HeidelbergCement, Germany*

Rob van der Meer is Director EU Public Affairs at HeidelbergCement.

As chemical engineer he started his career in public services as responsible for environmental permitting with focus on emissions to the air, for the Provincie Limburg in the Netherlands.

In 1996 he started in the cement industry as a process engineer in the Maastricht plant of ENCI. Later (2004), he was appointed CO<sub>2</sub> coordinator for HeidelbergCement in Heidelberg (Germany).

At the moment he is in charge of EU Public Affairs in the department of Goup Communications & Investor Relations of HeidelbergCement in Heidelberg (Germany).

Rob van der Meer graduated in 1991 as a chemical engineer from the Technical University Twente in the Netherlands.



**Åsa Ekdahl**  
*Head, Environment and Climate Change,  
World Steel Association*

Åsa Ekdahl is the Head of Environment and Climate Change at World Steel Association where she leads to work of the global steel industry both related to best practice exchange and policy development.

Åsa runs the Environment Committee and represents the industry in a number of international forums. She has been working at worldsteel since 2008 and has a background at both the Swedish and European steel associations.



**Maarten Neelis**  
*Principal advisor Sustainability at Rijkswaterstaat,  
Ministry of Infrastructure and Water Management, The Netherlands*

Maarten Neelis holds a Master's degree in Chemical Engineering from Delft University of Technology and a PhD in Sustainable Development from Utrecht University. He has spent over a decade of his career at Ecofys (now Navigant consulting). At Ecofys, he supported various trade organizations with their energy and climate strategies. He advised the European Commission on the benchmark-

based allocation of emission allowances in the EU Emissions Trading Scheme. He also had several management roles, including leading Ecofys' China office for two years and managing the international Industrial Processes and Market Based Mechanisms units.

Early 2018 he moved to Rijkswaterstaat, the part of the Dutch Ministry of Infrastructure and Water Management responsible for the design, construction, management and maintenance of the main infrastructure facilities in the Netherlands. In his role as Principal Sustainability Advisor, he advised the board of director on strategic decisions in the field of sustainable development. Starting September 2019, he is Director Market in Transition. In this role, he coordinates and drives Rijkswaterstaat's efforts in the transition to a vital market situation where Rijkswaterstaat, together with a healthy civil engineering and wider infra sector, continues to be able to meet societal needs.



# Parallel Session A - Greening extractive sectors: mission possible?

**Ligia Noronha**  
*Director, Economy Division,  
UN Environment Programme (UNEP)*



Ligia Noronha was appointed Director of UN Environment's Economy Division in April 2014.

Before joining UN Environment, Dr Noronha was Executive Director (Research Coordination) at TERI and Director of the Resources, Regulation and Global Security Division.

She was Secretary, Asian Energy Institute - a network of Asian and non-Asian institutes, (2005-2011); Coordinator, Renewable Energy and Energy Efficiency Partnerships (REEEP) South Asia, (2005-2009); and Michael Hintze Energy Security Visiting Senior Fellow at the Centre for International Security Studies (CISS), University of Sydney, Australia, 2009-11. In 2004-2005, she was Team Leader, Ecosystem approaches to Human Health, at the International Development Research Centre of Canada.

She has served on the National Security Advisory Board of the Government of India, and on several expert committees and panels of the Government of India and the Government of Goa, including the Expert Committee on Climate Change, the Western Ghats Ecology Expert Panel, and the Task Force on Natural Resources of the Commission on Centre State Relations. She was also a member of the Planning Board of the Government of Goa and Member of the Goa Jubilee Development Council tasked to produce the Goa Vision 2035. She was Member of the External Review Committee, Sustainability Reporting, Shell International, and Member of the Global Assurance Group, Minerals, Metal and Sustainable Development (MMSD) Project.

Dr Noronha has published nationally and internationally on issues relating to energy and resource security, climate change, India's environmental and coastal policy, responsible mining, and resource federalism.

She has a Masters in Economics from the University of Bombay, a Masters in Sea Use Law, Economics, and Policy, and a PhD from the London School of Economics.

**Perrine Toledano**  
*Head of Extractive Industries,  
Columbia Center on Sustainable Investment (CCSI) at Columbia University*



Perrine Toledano heads the Center's focus on extractive industries and sustainable development that she co-developed in 2010. She leads research, training and advisory projects on fiscal regimes, financial modeling, leveraging extractive industry investments in rail, port, telecommunications, water and energy infrastructure for broader development needs, local content, revenue management, contract transparency and optimal legal provisions for development benefits. To this traditional portfolio, she has recently added research and advisory work on the impact of the energy transition and the Sustainable Development Goals on extractive industry investments and resource rich countries. She has led projects in DRC, Liberia, Paraguay, Mozambique, Sierra Leone, Tanzania and Timor-Leste, and assisted many more government teams remotely. She is a research advisor at the The Jerusalem Institute for Policy Research, Milken Innovation Center. She also jointly developed curricula for a masters and an executive course on extractives and sustainable development taught at Columbia University. She is the co-editor of two volumes published by Columbia University Press: Rethinking Investment Incentives: Trends and Policy Options and The New Frontiers of Sovereign Investment. Prior to joining CCSI, she worked as a consultant for several non-profit organizations, including the World Bank, DFID and Revenue Watch Institute, and private sector companies, including Natixis Corporate Investment Bank and Ernst and Young. Her experience includes auditing, financial analysis, IT for capital markets, public policy evaluation and cross-border project management. She has a Masters of Business Administration from ESSEC in Paris, France, and a Masters of Public Administration from Columbia University.



## Hans-Jörn Weddige

*Group Coordinator Energy, Climate and Environment Policies, Thyssenkrupp AG*

Dr Weddige coordinates all Energy, Environmental and Climate Policy activities at thyssenkrupp, a diversified industrial headquartered in Germany with nearly 160.000 employees around the world with activities from elevators to steel making, plant manufacturing to materials trading, or automotive parts to components for renewable energies. He oversees strategic and group-wide issues and coordinates regional and business specific activities. He is involved in many forward looking technology projects in energy and climate such as Carbon2Chem, Oxyfuel Cement Making, Alkaline Water Electrolysis or MULTI. His special portfolio includes looking after “Technology, Innovation and Sustainability” in thyssenkrupp’ Indian operations including the setting up of the TechCenter Data Analytics and Software Engineering India. He was granted power of attorney for the thyssenkrupp AG.

Before he has been VP Environment and Energy for the thyssenkrupp Group 2011-2014; responsibilities included setting up group wide energy efficiency activities, improving environmental and energy controlling approaches, and German and European regulatory affairs. He joined the corporate headquarters after being Head of Climate Policies for its steel subsidiary since 2008.

He joined the thyssenkrupp Group from a career at the worldsteel association (then International Iron and Steel Institute – IISI) where he held positions as diverse as General Manager Sustainability and Market Development, Head of Steel Business (economics department), or Project Director “China 2010” and later “India 2020” [www.worldsteel.org]. Prior to that, he worked in academia at Technical University and Mining Academy Freiberg (Germany) and at Mc Gill University in Montreal (Canada) until 2002.

His co-ownership and advisory board membership of a German SME active in Zinc recycling and Aluminium and Zinc die-casting offers an additional angle on business. Another stems from his membership of the Industrial Advisory Panel, Department for Materials, Oxford University (UK). He maintains relevant lecturing assignments and is commissioned as a Reserve Officer of the German Army.

He chairs the BIAC Environment and Energy Committee at the OECD and is a long-term member of the ICC commission on Energy and Environment, and a chair and member of several committees in his field, including ERT, BDI, VDMA, econsense.

He currently represents the business community as the formal “BINGO” observer in the UNFCCC TEC Task Force on Technology Needs Assessment (TNA) and has ensured active business involvement in this work stream and related events at COPs and elsewhere. He is a frequent participant at UNFCCC COP, B20 and other international events.

His education includes a Ph. D. in ferrous metallurgy from Technical University and Mining Academy Freiberg (Germany) 2001 and an M. Eng. in Metallurgy, Economics and Management from Oxford University 1990-1994, as well as management training at INSEAD (France) and courses in business law at Fernuniversität Hagen (Germany).



**Malwina Nowakowska**  
*Deputy Head of Unit, Resource Efficiency and Raw Materials,  
European Commission (DG GROW)*



Malwina Nowakowska is the Deputy Head of Unit in DG GROW at the European Commission responsible for Resource Efficiency and Raw Materials. She coordinates trade and international aspects of the Raw Materials Initiative as well as non-metallic mineral products and forest-based industries.

A trade economist by background she specialises on trade analysis and international policy aspects, responsible and sustainable business conducts and project management. Prior to joining the European Commission she was a researcher at the Swiss Institute for International Economics, Switzerland, member of the Global Trade Alert Team by CEPR and University of St. Gallen. She authored several trade-related research papers on the GSP, rules of origin and protectionism spread in the post-crisis era.

She holds an M.A. in International Economic Relations from Warsaw School of Economics, Poland and CEMS Master in International Management from University of St. Gallen, Switzerland

**Kakha Kuchava**  
*Member of Parliament, Georgia,  
Chair of the Environmental Protection and Natural Resources Committee*



Mr. Kuchava comes with the corporate law experience of up to 20 years. His career started at the Georgian law firm. Later, Kakha worked for numerous international organizations, such as IFC (a member of the World Bank Group), International Chamber of Commerce, Chemonics International, and others. His area of expertise includes, but is not limited to, investment practices, corporate law/corporate governance, environment and natural resources. From 2005 he worked on legal reforms easing business doing, changes in the law on securities market and fully reforming the public registry system.

He graduated from Tbilisi State University in 2001 (B.A. in Law with Honors) and completed his Master's Degree at Nottingham Law School, the UK in 2004 (LL.M. in Corporate Law).

For the first time in the history of the Georgian Parliament, under Mr. Kuchava's chairmanship, Environment Committee initiated and successfully carried out Committee Inquiry and Post-Legislative Scrutiny (PLS) practices, later reflected also in Rules of Procedure of the Parliament.

**Håvard Halland**  
*Senior Economist,  
Natural Resources for Development Unit, OECD Development Centre*



Håvard Halland is a Senior Economist at the Natural Resources for Development Unit, of the OECD Development Centre. His work focuses on the effects of the low-carbon transition on the economics, fiscal management, and public finances of resource-rich countries; on the role of sovereign wealth funds and strategic investment funds in the low-carbon transition; and on how climate change affects these funds.

From 2012 to 2018, he was an Economist / Senior Economist at the World Bank, where he provided advice to governments on the establishment and operations of strategic investment funds and sovereign wealth funds, and on the public economics of the extractive industries sector. While at the World Bank, he was the lead author or joint author of three books and several papers on these topics. He earned a PhD in Economics from the University of Cambridge, and was during the academic year 2018/19 a Visiting Scholar at Stanford University.



# Parallel Session B - International trade and the circular economy



**Julia Nielson**  
*Deputy Director, Trade and Agriculture Directorate,  
OECD*

As Deputy Director of the OECD Trade and Agriculture Directorate (TAD), Ms Nielson helps oversee work to develop and communicate evidence-based advice to governments with the aim of helping them improve the domestic and international performance of their policies in the areas of trade, food, agriculture and fisheries.

Ms. Nielson has over 20 years' experience in multilateral trade and development, strategy and management. She was previously Head of the Emerging Policy Issues Division in TAD, with responsibility for issues including digital trade, and the level playing field. Prior to that, she worked for the World Bank Group (WBG), including in the office of the then-President of the WBG, Bob Zoellick.

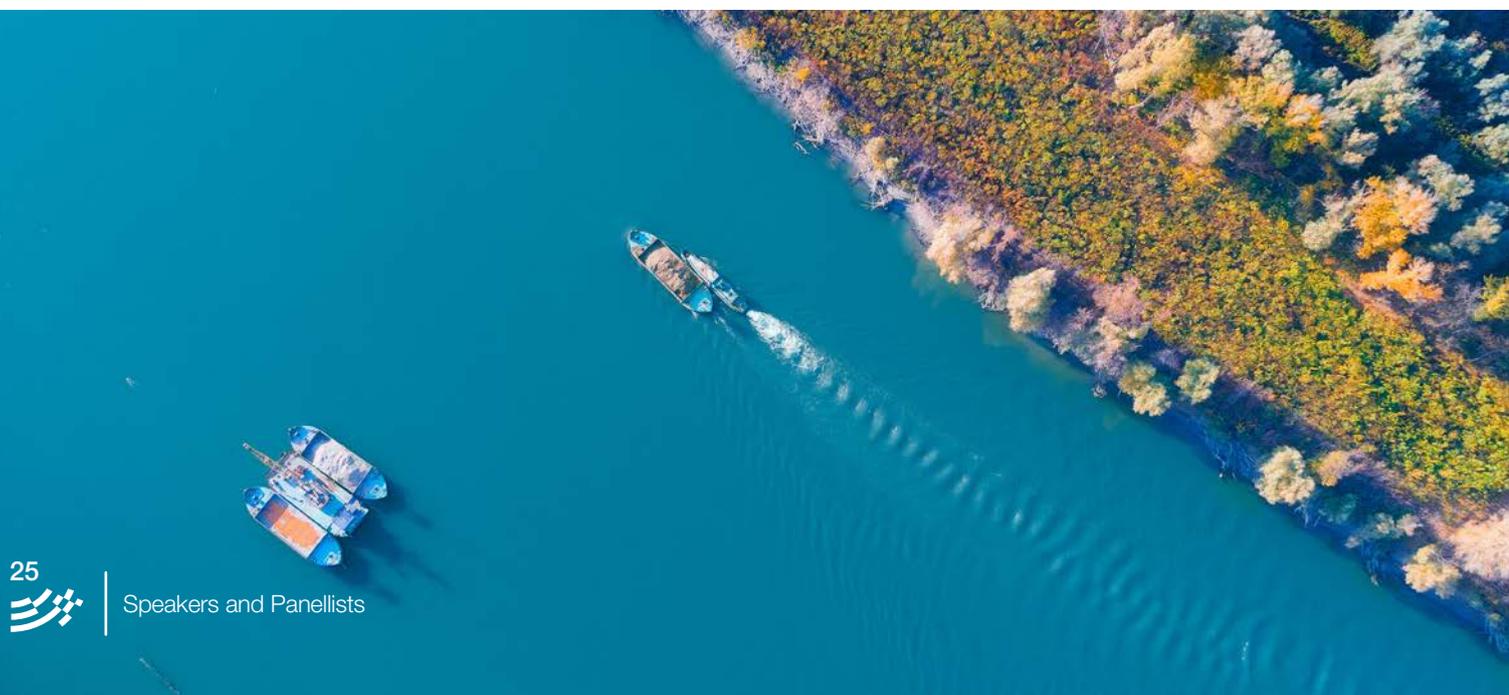
Ms. Nielson began her international career in the Australian Department of Foreign Affairs and Trade, following which she joined the OECD Trade Directorate, working on trade in services. Ms Nielson left the OECD in 2005 to join the Trade Department of the WBG. Ms Nielson holds a Bachelor of Arts Hons (1st class) and a Masters in Foreign Affairs and Trade from the Australian National University.



**Shardul Agrawala**  
*Head of Environment and Economy Integration Division, Environment Directorate,  
OECD*

Shardul Agrawala is Head of the Environment and Economy Integration Division at the OECD Environment Directorate. He took up duties in July 2013. In this capacity, Dr. Agrawala leads the Directorate's work on economic-environmental modelling, empirical analysis of environmental policies, trade and environment, and on resource productivity and waste.

At the OECD since 2002, Dr. Agrawala has previously served as Senior Advisor to the OECD Secretary General, Co-ordinator of the OECD-wide initiative on New Approaches to Economic Challenges, Acting Head of the Climate Change Biodiversity and Development Division, and Senior Economist Climate Change. Dr. Agrawala has published extensively on climate change. He has led teams of international experts for chapters of the Fourth and Fifth Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC). He received his PhD from Princeton University and has previously held research positions at Princeton University, Harvard University, Columbia University and at the International Institute of Applied Systems Analysis (IIASA).



**Scott Vaughan**  
*Distinguished Fellow,*  
*International Institute for Sustainable Development (IISD)*



Scott Vaughan is the International Chief Advisor to the China Council for International Cooperation on Environment and Development (CCICED), and an IISD Senior Fellow. Until early 2019, he was the President and CEO of IISD. Previously, he was Canada's federal Commissioner of Environment and Sustainable Development, Director of the Department of Sustainable Development, Organization of American States (OAS), Visiting Scholar at the Carnegie Endowment of International Peace, Head of Economics and Trade, NAFTA Environment Commission, and Counselor, World Trade Organization (WTO).

At UN Environment, he initiated the UNEP Financial Initiative (UNEP FI), headed the UNEP Environment and Trade work, and worked in the office of the UNEP Executive Director. Scott has also worked in the economic and corporate affairs of the head office, RBC Financial Group, and in the office of the Canadian federal Minister of the Environment. He is an associate editor of the Chinese Journal of Urban and Environment Studies, an associate with the Loyola Sustainability Research Centre, on the advisory committee of the Global Development Center, Boston University, was a founding member of the Circular Economy Leaders Coalition (Canada), and participated in the World Circular Economy Forums in 2017 and 2018.

**Keli Yu**  
*Secretary General*  
*China National Resources Recycling Association*



Mr. Keli Yu is a holder of a Master of Environmental Engineering (Tsinghua University) and a Bachelor of Environmental Science (Inner Mongolia University). He is Secretary General of China National Resources Recycling Association (CRRRA). He is a senior engineer and a Fellow of Chinese Society For Environmental Sciences as well as a Fellow of China management Science Society. Mr.Keli Yu has sound experience in solid waste management, e-waste recycling and management, plastics recycling, Extended Producer Responsibility(EPR), Multilateral Environmental Agreements (MEAs) training and capacity building for developing countries; import/export control of chemicals and waste, circular economy. Over the years, he worked for the following organizations:

- China National Resources Recycling Association
- United Nations Environment Programme (UNEP)
- Basel Convention Regional Centre for Asia and the Pacific/Tsinghua University
- BMEI (Beijing Machinery and Electricity Institute) CO., Ltd.

Furthermore, as main contributor, he participated in the writing and compilation of more than 30 academic books and papers including *Management, Treatment and Disposal Technology of Hazardous Waste (Series)*; *Hazardous Waste Pollution Prevention Theories and Technologies*; *Controlling Transboundary Movement of Hazardous Waste and Its Disposal – Twenty Years of The Basel Convention and Circular Economy, Energy Conservation and Carbon Reduction*.

**Adina Renee Adler**  
*Assistant Vice President,*  
*Institute of Scrap Recycling Industries, Washington, U.S*



Adina joined ISRI in December 2016 to represent the industry in international negotiations and to advocate trade-expanding opportunities for the scrap recycling industry. Prior to ISRI, Adina was Director of Global Government Affairs for Alcoa/Arconic and International Government Relations Advisor for Shell Oil Company – both positions based in Washington – to advise business leaders on trends in U.S. trade and international policy. Adina also served in the U.S. Government as Director for South Asia in the Office of the United States Trade Representative (USTR) and International Trade Specialist at the U.S. Department of Commerce, both assignments responsible for U.S. commercial and trade policy with the countries of South Asia. Adina has a B.A. from The George Washington University and M.A. from The Johns Hopkins University School of Advanced International Studies (SAIS) and has lived in and traveled to more than 75 countries for business and pleasure.



# Parallel Session C - Regions and extractive industries: Maximising local benefits for sustainable development



**Alain Dupeyras**  
*Head of Division for Regional Development and Tourism,  
OECD*

As Head of the Regional Development and Tourism Division in the OECD (Organisation for Economic Co-operation and Development) Centre for Entrepreneurship, SMEs, Regions and Cities, Alain Dupeyras oversees OECD work on tourism, on rural development and on other regional and territorial policy issues. Alain works closely with Members and Partners, the private sector and international institutions to develop policies that address major challenges in all these policy areas. The Tourism Committee and its Working Party on Tourism Statistics, the Regional Development Policy Committee, and the Working Party on Rural Policy are key OECD fora to assist governments in the assessment and improvement of these policies.



**Gavin Bridge**  
*Professor,  
Durham University, United Kingdom*

Gavin Bridge is an economic and resource geographer whose research centers on the extractive industries of oil, gas and mining. He completed an undergraduate degree in Geography at the University of Oxford in 1991, and holds a PhD from the Graduate School of Geography at Clark University, Massachusetts. At the core of his research is a desire to understand the spatial and temporal dynamics of natural resource development. Through work on extractive resources, his work problematizes the treatment of biophysical processes within modern economic geography, a field that has largely defined itself by bracketing out 'nature' as an object of inquiry. His work on the geographical political economy of natural resources has been funded by the US National Science Foundation, the National Geographic Society, the British Academy, and the UK Energy Research Centre.



**Mika Riipi**  
*County Governor at Regional Council of Lapland,  
Finland*

Mika Riipi is the County Governor of the Regional Council of Lapland. He started in this position on March 1, 2013. Previously he has been the Municipality Director in Posio (2006-2013), town secretary in Haapavesi (2004-2006), and senior adviser in the Municipality department at the Ministry of the Interior (2002-2004). Mr. Riipi holds a Master's degree in Administrative Sciences, majoring in municipality jurisdiction. He graduated from the University of Tampere in 2002.



**Oliver Sartor**  
*Senior Research Fellow, Climate and Energy, IDDRI,  
Paris, France*



Oliver Sartor is a Senior Research Fellow at the Institute for Sustainable Development and International Relations. He is an expert in EU climate policy, decarbonisation policy for energy-intensive trade-exposed industries, circular economy policies, coal sector transition and long-term strategies for climate neutrality.

His recent publications include: “Creating a business case for carbon-neutral basic materials: How Carbon Contracts-for-Difference could help kick-start commercial-scale projects”; “Building blocks for an EU industrial strategy for climate neutrality: Policies to create markets for a climate-friendly products and use of materials”; and “Implementing coal transitions: Insights from case studies of major coal-consuming economies”.

Before joining IDDRI, Oliver Sartor worked for CDC Climat, a subsidiary of the French public investment bank, the “Caisse des Dépôts et Consignations”. Prior to that he worked for the Center for Energy and Environment Markets (CEEM) at the University of New South Wales in Sydney, Australia. He holds an PhD in Economics from Paris-Sorbonne University and a Bachelors Degrees in both Commerce and Arts from the University of New South Wales.

**LeRoy Hollenbeck**  
*Director Social Responsibility & Community Development,  
Freeport-McMoRan*



Currently Director, Social Responsibility and Community Development for Freeport McMoRan, Phoenix, Arizona, U.S., responsible for providing advice and guidance on community programs, stakeholder engagement and social investments at PT Freeport Indonesia operations in Papua, Indonesia.

In addition, over four decades of experience throughout Asia and the Pacific region, including 35+ years in Indonesia (12+ in Papua province), Mr. Hollenbeck was the CEO of the The John Fawcett Foundation (2012-2015), a Bali-based eye health care NGO providing free cataract surgeries to poor Indonesians; he was Director of the United Nations Asian and Pacific Center for Agricultural Engineering and Machinery (UN-CSAM), Beijing (2010-2012); a Senior Economics Affairs Officer at UN-CAPSA in Bogor, Indonesia (2009-2010); a Senior Advisor to three successive Governors in Aceh province, Indonesia (2005-2008) at an USAID-funded Aceh Technical Assistance Recovery Project; a Senior Advisor for ExxonMobil’s VP Public Affairs (2008-2009), East & Central Java, Indonesia, at an oil and gas development project; a Chief of Party for the USAID-funded DFLGI Project (2001-2005), and established a sustainable Indonesian foundation to improve local governance. He also served as Senior Manager for PT Freeport Indonesia’s (PTFI) Sustainable Development Department (1995-2001). He started his international development career in 1972 as a US Peace Corps volunteer in the Philippines.

Received a M.Sc. (1985) in Agriculture & Resources Economics, University of Hawaii (East-West Center), and a B.Sc. (1972) in Resources Development, Michigan State University.

**Sébastien Sorme**  
*Senior Advisor,  
Just Transition Centre at the International Trade Union Confederation*



Sebastien has a Master in Political Sciences – International Relationship, and a Master in Environmental Management and Land-use Planning by the Institute for Environmental Management and Land-use Planning (Institut de Gestion de l’Environnement et d’Aménagement du Territoire – IGEAT) both of them at the Université Libre de Bruxelles – ULB.

He started his career as a researcher at the “Centre d’Etude Economiques et Sociales de l’Environnement”, (ULB). He worked then at the Federal Planning Bureau, Task Force Sustainable Development, on a project “Sustainable Development Indicators Plateform”. He worked for 4 years to the Labor Party, as sustainable development advisor in charge of Sustainable Development, Climate Change, Energy, Water and mobility policy. Finally, he worked for 10 years at the FGTB, one of the two biggest Unions in Belgium, as advisor on Sustainable Development, Climate Change, Energy, Environment and Mobility. He joined the Just Transition Centre of the International Trade Union Confederation (ITUC) in September 2018, as senior advisor.



# Special High-Level Panel Discussion - The new geopolitics of natural resources



**Roger Dungan**  
*Deputy Permanent Representative to the OECD,  
New Zealand*

Roger Dungan is New Zealand's Deputy Permanent Representative to the OECD, and his work for the New Zealand Ministry of Foreign Affairs and Trade has had a strong trade and economic focus. Before coming to Paris in 2016 he was New Zealand's lead negotiator on climate finance and climate adaptation at COP21, and was a member of the UNFCCC Standing Committee on Finance. Before joining the foreign service Roger was an award-winning environmental scientist, focusing on the carbon dynamics of New Zealand's indigenous forest ecosystems.

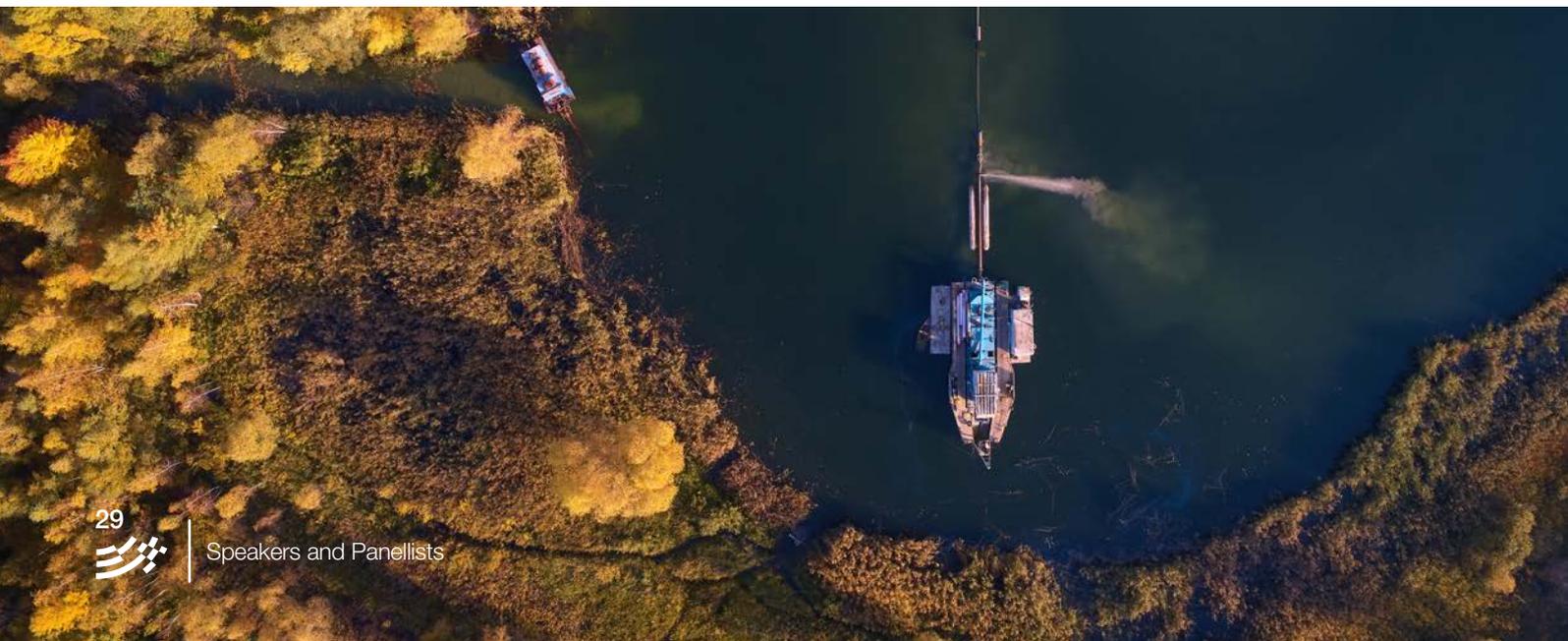


**Janez Potočnik**  
*Co-chair, UNEP International Resource Panel;  
former European Commissioner for the Environment*

Dr. Janez Potočnik (1958) graduated from the Faculty of Economics at the University of Ljubljana, Slovenia (Ph.D. degree 1993). He was awarded the honorary degree of Doctor of Science by London Imperial College and by Ghent University in 2008 and 2009 respectively, and Doctor of Science in Economics and Business Administration by Finland Aalto University in 2016.

After a successful career starting in 1989 in Slovenia as a researcher at the Institute of Economic Research, Director of the Institute of Macroeconomic Analysis and Development (1994). He was appointed Head of Negotiating Team for Accession of Slovenia to the EU (1998). He was also Director of Government Office for European Affairs (2000), Minister Councillor at the Office of the Prime Minister (2001) and Minister responsible for European Affairs (2002). In 2004 he joined the European Commission, first as "shadow" Commissioner for Enlargement and then as Commissioner responsible for Science and Research. In 2010 Dr Potočnik became Commissioner for Environment, his term ended on November 1st 2014.

In November 2014 he was appointed as a member and Co-Chair of International Resource Panel hosted by United Nations Environment Programme. In the same month he was also appointed as a Chairman of The Forum for the Future of Agriculture and the RISE Foundation and a Member of the European Policy Centre's Advisory Council.



**Roman Vakulchuk**  
*Senior Research Fellow,  
Norwegian Institute of Foreign Affairs*



Roman Vakulchuk works as a Senior Researcher at the Norwegian Institute of International Affairs (NUPI), Norway. He is also Adjunct Professor at Business School of Nord University in Norway. Roman holds a Ph.D. in Economics obtained from Jacobs University Bremen (2013). He has extensive work experience as a project leader and expert within research and consulting projects organized by the Asian Development Bank (ADB), the Global Development Network (GDN), the German Development Cooperation (GIZ), the Natural Resource Governance Institute (NRGI), the Organisation for Economic Co-operation and Development (OECD), the Research Council of Norway, the World Bank and other. Roman has three years of experience in project evaluation and impact assessment and carried out projects for the Norwegian Agency for Development Cooperation (Norad) in Mozambique and Rwanda. He was a visiting research fellow at School of Advanced International Studies at Johns Hopkins University in Washington, DC. Roman also worked at the oil company Shell in Germany. His main geographical specialization is Kazakhstan, other emerging markets of Central Asia and Southeast Asia. Roman specializes in energy, natural resource management, renewable energy governance, geopolitics of renewable energy, climate change, economic transition, trade, investment climate, infrastructure and transport, and public sector reform. Roman speaks Russian (native) and is also fluent in English and German. He has also working knowledge of French, Kazakh and Norwegian. Recent publications include: “*The GeGaLo Index: Geopolitical Gains and Losses after Energy Transition*”, “*China’s Belt and Road Initiative through the Lens of Central Asia*”, “*Public Administration Reform and Its Implications for Foreign Petroleum Companies in Kazakhstan*”.

**Lisa Fischer**  
*Senior Policy Advisor,  
E3G*



Lisa Fischer works as a Senior Policy Advisor in E3G’s London office. Lisa’s work concentrates on EU energy, infrastructure and climate change policy. A key element to her work is increasing alignment between EU member states’ and EU policy with regards to the clean economy transition – having kicked off and leading the Clean Economy Briefing Service.

Received a M.Sc. (1985) in Agriculture & Resources Economics, University of Hawaii (East-West Center), and a B.Sc. (1972) in Resources Development, Michigan State University.

Lisa joined E3G in July 2016. Her experience spans the climate change, transport and renewable energy sectors. Lisa worked for the UK Department of Energy and Climate Change (now BEIS) as the lead economist on international forestry, gathering experience in international development and negotiations. She then moved to the UK Department for Transport, leading the economic input into the development of future rail investment plans in England and on various major rail infrastructure investments and procurements. Previously she had work experience with the solar panel manufacturer First Solar, the German Department for the Environment (BMUB) and the German Development Agency (GIZ).

Lisa holds a MSc in Political Economy of Development from the School of Oriental and African Studies as well as a BA in International Relations from the Technical University of Dresden in Germany, and has lived in France, Argentina and Algeria.



**Molly Walton**  
*Energy Analyst, World Energy Outlook,*  
*IEA*

Ms. Molly A. Walton is an energy analyst with the World Energy Outlook (WEO) at the International Energy Agency (IEA) based in Paris, France. In this capacity, she manages and designs the IEA's analysis and engagement on the water-energy nexus. She has also led work on strategies for natural resource development for the WEO-2019 Africa Energy Outlook and co-led the WEO-2017 special report on energy access. Previously, Ms. Walton worked for the Energy and National Security Program at the Center for Strategic and International Studies (CSIS) in Washington D.C., where she focused on the geopolitical and national security implications of US unconventional oil and gas and energy industry best practices/social license to operate. Prior to working at CSIS, she was a reporter for Circle of Blue, an online platform that reports on global water issues. Ms. Walton received her BA in communications and international relations from Wheaton College (IL) and her MA in environmental policy and analysis and international relations from Boston University. She has lived and worked in Washington D.C., Beijing and Paris.



**Andy Wyckoff**  
*Director, Science, Technology and Innovation Directorate,*  
*OECD*

Andrew W. Wyckoff is the Director of the OECD's Directorate for Science, Technology and Innovation (STI) where he oversees OECD's work on innovation, business dynamics, science and technology, information and communication technology policy as well as the statistical work associated with each of these areas.

Mr. Wyckoff was previously Head of the Information, Computer and Communications Policy (ICCP) division at the OECD which supports the organisation's work on information society as well as consumer policy issues. Before heading ICCP, he was the head of STI's Economic Analysis and Statistics Division which develops methodological guidelines, collects statistics and undertakes empirical analysis in support of science, technology and innovation policy analysis.

His experience prior to the OECD includes being a program manager of the Information, Telecommunications and Commerce program of the US Congressional Office of Technology Assessment (OTA), an economist at the US National Science Foundation (NSF) and a programmer at The Brookings Institution.

Mr. Wyckoff is a citizen of the United States, holds a BA in Economics from the University of Vermont, and a Master of Public Policy from the JFK School of Government, Harvard University.



# Closing Session

**Kumi Kitamori**

*Head of Division, Green Growth and Global Relations, Environment Directorate,  
OECD*



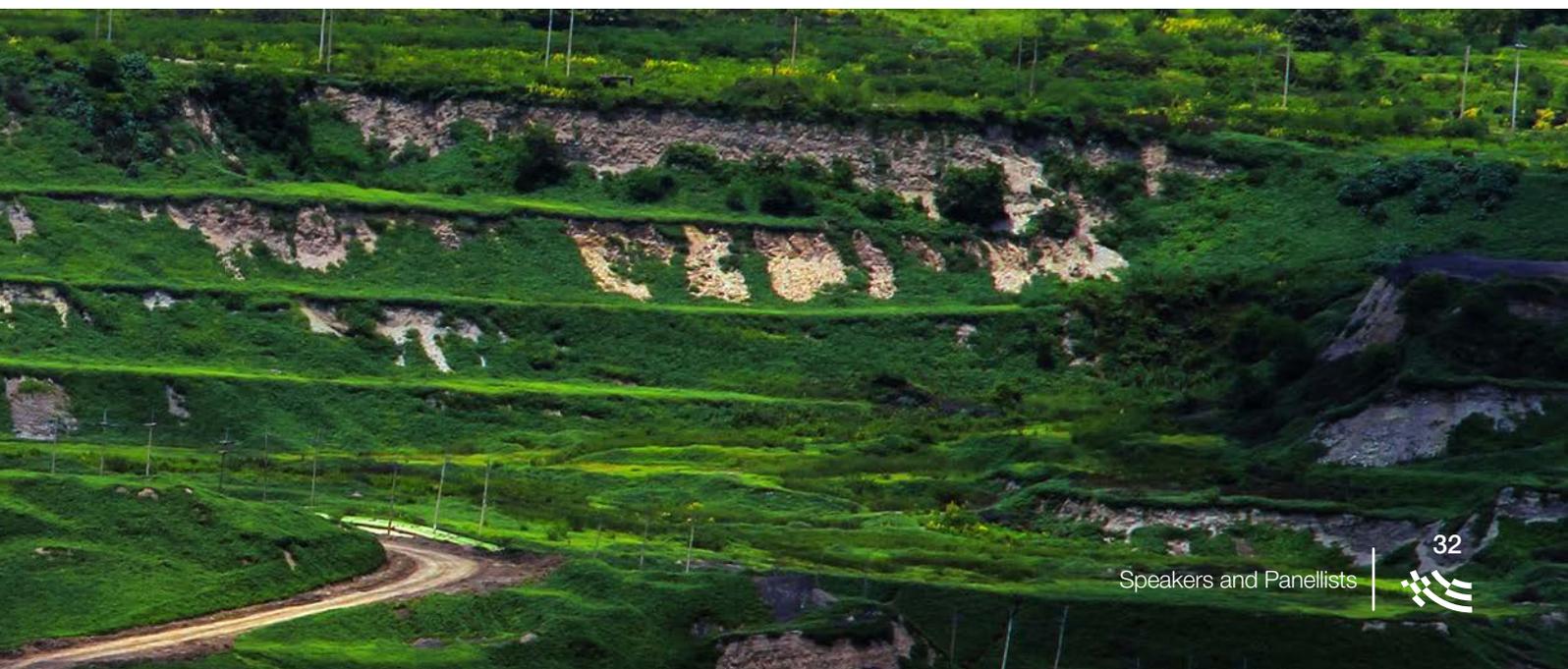
Ms. Kitamori oversees the mainstreaming of green growth in the work of various policy committees of the OECD, as well as member and other partner countries. This includes a dedicated programme that promotes green growth policies, finance and investment in the Eastern Europe, the Caucasus and Central Asia (EECCA) region. Prior to this, she worked in the OECD Environment Directorate on various issues including tradable permits and taxes, water pricing, climate change, biodiversity, health & environment, among others. She led the 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, Ms Kitamori 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).

**Federico Bonaglia**

*Deputy Director, Development Centre,  
OECD*



Federico Bonaglia is Deputy Director of the OECD Development Centre. In this capacity, he supports the Director in the effective management of the Centre and the implementation of its programme of work. Amongst his responsibilities, Mr Bonaglia supervises the Centre's activities with Africa, Latin America and the Caribbean as well as the Centre's Perspectives on Global Development and its work on rural and territorial development, migration, and natural-resource based development. He also manages the Centre's Governing Board, where representatives from 57 member countries and the European Union provide strategic guidance and oversight and engage in policy dialogue on a wide range of development policies. In addition, Mr Bonaglia represents the OECD in the G20 Development Working Group and supports the OECD Sherpa Office in coordinating the OECD's contributions to the G20 and G7 in the area of development. Mr Bonaglia is an economist by training and holds a Master degree with honours in Economics and Social Sciences (1997) and a Master in Economics (1999) from Bocconi University, Milano. Mr Bonaglia has led several research projects and authored several reports in the areas of measuring structural reforms, foreign direct investment, private sector development, aid for trade, labour market policies and well-being.





**Lamia Kamal - Chaoui**

*Director, Centre for Entrepreneurship, SMEs, Regions and Cities,  
OECD*

Supported by a team of over 130 staff, Ms. Kamal-Chaoui leads the Organisation's work in the fields of: SME and entrepreneurship policy; regional, urban, rural and local development; subnational statistics; multi-level governance and decentralisation; and tourism.

As a key member of the OECD Senior Management team, Ms. Kamal-Chaoui supports the Secretary-General in achieving the OECD's mission to advance economic growth and social progress as well as contributing to other global agendas such as the G20, the Paris Agreement on Climate Change and the implementation of the United Nations Sustainable Development Goals.

Ms. Kamal-Chaoui has held several senior positions at the OECD since 1998. From 2012 to 2016, she served as Senior Advisor to the OECD Secretary-General. In this role, she supported the Secretary-General's strategic agenda and led the OECD Inclusive Growth initiative, the Knowledge-Sharing Alliance programme, the development of the Global Deal and the implementation of the OECD Strategy on Development. From 2003 to 2012, she was Head of the Urban Programme in the Directorate for Public Governance and Territorial Development. She has also previously worked in the Trade Directorate and the Directorate for Financial and Enterprise Affairs. Before joining the OECD, Ms. Kamal-Chaoui worked for a university-based research institute as well as several media outlets.

Ms. Kamal-Chaoui is a French and Moroccan national. She holds a Master's Degree in Macroeconomics from the University of Paris Dauphine and a Master's Degree in Foreign Languages and History from the University of Paris Diderot. She recently received the "Women of the Decade in Enterprise and Leadership" award of the Women's Economic Forum.

## Relevant OECD Committees

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This Forum will draw on work from the Committee on Fiscal Affairs (CFA) and its Joint Meetings of Tax and Environment Experts (JMTEE), Environment Policy Committee (EPOC)'s Working Party on Resource Productivity and Waste (WPRPW), Joint Working Party on Trade and Environment (JWPTE) and Working Party on Integrating Environmental and Economic Policies (WPIEEP), Governing Board of the OECD Development Centre and its Policy Dialogue on Natural Resource-based Development (PD-NR), the Steel Committee, Investment Committee's Working Party on Responsible Business Conduct, Regional Development Policy Committee's Working Party on Rural Policy and International Energy Agency (IEA).



# OECD and IEA Background Publications and Websites

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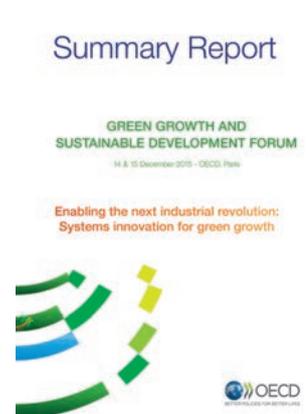
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## Websites

- [www.oecd.org/dev/policy-dialogue-on-natural-resource-compendium.htm](http://www.oecd.org/dev/policy-dialogue-on-natural-resource-compendium.htm)
- [www.oecd.org/trade/topics/trade-in-raw-materials/](http://www.oecd.org/trade/topics/trade-in-raw-materials/)
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