

Environmental Policies: Social and Economic Outcomes

Summary Report

23-24 June 2022
Virtual Zoom meeting



This document is a summary of the OECD Expert Workshop on Environmental Policies: Social and Economic Outcomes that took place on 23-24 June 2022. The workshop involved a number of participants from academia and international institutions who shared their expertise on social and economic implications of environmental policies. It was organised with financial support of the European Union.

Introduction

Policy makers face the challenge of supporting both inclusive economic development and a healthy environment. To respond to this challenge, regulators need tools and insights to assess the consequences of policies on the environment, the economy and social outcomes. From a policy perspective, a desirable outcome is one that achieves the greatest environmental benefits while limiting the adverse economic and distributional impacts.

Empirical research has shed light on the impact of environmental policies on social and economic outcomes. However, gaps in understanding still remain. The aim of the OECD Expert Workshop on Environmental Policies: Social and Economic Outcomes was to facilitate a discussion among policymakers, regulators, experts in empirical analysis, modelling and statistical analysis on the latest research on the impact of environmental policies on social and economic outcomes. The discussion was guided by three questions:

- What is the impact of environmental policies on innovation in clean technologies, and in turn, economic performance of firms and sectors directly and indirectly impacted by those policies?
- What is the impact of environmental policy stringency on employment?
- What are the distributional effects of environmental policies and how can policy packages minimise the trade-off between efficiency, equity and cost-effectiveness?

This document provides a brief summary of each session with additional information available on a dedicated workshop [webpage](#).

Opening remarks

During his opening remarks, Alain de Serres, Acting Director of the OECD Environment Directorate, emphasised the timeliness of the workshop in the context of growing environmental concerns, recovery from the COVID-19 pandemic, Russia's invasion of Ukraine, and the cost-of-living crisis. This calls for a multi-disciplinary approach to ensure both economic and environmental resilience. Next, Stephen White, Economist in DG Environment at the European Commission and chair of the OECD Working Party on Integrating Environmental and Economic Policies (WPIEEP) highlighted the continued need for empirical analysis to better understand the link between environmental policy and employment, the distributional aspect of such policies, and the differentiation between their short- and medium-term impacts.

Session 1 – Empirical evidence on the implication of environmental policies

The first session was chaired by Shardul Agrawala, Head of Environment and Economy Integration Division of the Environment Directorate of the OECD. The aim of the session was to provide an overview of the empirical evidence on the impact of environmental policies on social and economic outcomes.

Antoine Dechezleprêtre, Senior Economist, Directorate for Science, Technology and Innovation of the OECD

Antoine Dechezleprêtre provided an overview of OECD work on the economic impacts of environmental policies.¹ Insights show that the overall impact on firms' performance and innovation is limited, as small negative short-term effects are found to dissipate in the long-term. However, the distribution impacts are uneven across sectors and countries. High-productivity firms in low polluting sectors tend to benefit from increasing environmental policy stringency in terms of trade, employment and productivity while low-productivity firms in high polluting sectors lose out. Given the urgent need to scale-up and accelerate climate action, Antoine Dechezleprêtre emphasised the need for more stringent environmental policies. He also highlighted the need for further improvements in policy design to limit the negative impacts on firms' performance and to preserve their competitiveness, e.g. in the context of border carbon adjustments or the elimination of environmentally harmful subsidies.

Anna Alberini, Professor in the Department of Agricultural and Resources Economics at the University of Maryland

Anna Alberini provided an overview of recent research on environmental policies related to transport and energy, two high emitting sectors that contribute to various externalities. Both sectors are characterised by the presence of a small number of equipment producers for a large number of equipment users. This makes them similarly responsive to policies. On the producer side, emission trading schemes are an example of regulation with a potential positive impact on environmental outcomes and innovation. On the consumer side, measures such as taxes and subsidies have the potential to drive environmentally positive outcomes, but the effectiveness of such policies are highly dependent on policy design. Anna Alberini noted the importance of considering price elasticity as well as political acceptability during the policy design phase to limit the negative distributional impacts.² Overall, assessing distributional impacts and heterogeneity in responses is crucial in order to adopt policies that are effective at achieving their environmental goals and are neutral or positive regarding social and economic outcomes.

Carolyn Fischer, Research Manager in the Sustainability and Infrastructure Team in the Development Research Group of the World Bank and Professor of Environmental Economics at the Vrije Universiteit

Carolyn Fischer emphasised the importance of designing environmental policies that optimally consider social and economic outcomes. She highlighted examples of policies which have been successful in achieving environmental objectives while minimising negative externalities, such as recycling tax revenues towards complementary measures benefitting low-income households or policies tackling air pollution.³ However, Carolyn Fischer highlighted the difficulty for policy makers to ensure that parts of the population are not disproportionately affected by such policies, as consumption patterns vary across income groups and geographical location and may be difficult to assess. An example from Mexico City was used to illustrate how policies targeting air pollution could have both progressive and regressive outcomes depending on whether people were located in urban or rural areas.

Discussion

¹ OECD (2021), *Assessing the Economic Impacts of Environmental Policies: Evidence from a Decade of OECD Research*, OECD Publishing, Paris, <https://doi.org/10.1787/bf2fb156-en>.

² See, for example, Alberini, A., Prettico, G., Shen, C. and Torriti, J. (2019). Hot weather and residential hourly electricity demand in Italy. *Energy*, Vol.177, p.44-56. <https://doi.org/10.1016/j.energy.2019.04.051>

³ For some examples see: Cleary, K., Fischer, C., Palmer, K. (2021). Handbook on Electricity Markets, Chapter 14: Tools and policies to promote decarbonization of the electricity sector. *Economics 2021*. <https://doi.org/10.4337/9781788979955>

During the discussion, Anna Alberini pointed to the example of gasoline tax reductions that were introduced in the United States in 2022 to counter inflation. She highlighted how this measure would ease the financial burden on lower income households, but that the tax relief is too small to induce any change in behaviour, as elasticity to gasoline price is shown to be relatively low. Antoine Dechezlepretre emphasised the need to couple empirical and modelling work in order to account for the plethora of mechanisms at play in any policy scenario.

Session 2 – Environmental policy, clean innovation and productivity

The second session was chaired by Antoine Dechezleprêtre, Senior Economist, Directorate for Science, Technology and Innovation of the OECD. The session focused on the links between environmental policies, innovation, economic performance and the competitiveness of firms.

David Popp, Professor in Public Administration and International Affairs at Syracuse University

David Popp provided an overview of the literature on policies that promote innovation in clean technologies. The past decades of research have shown that market failures such as environmental externalities and the lack of incentives for innovators need to be addressed jointly through market-based and technology-specific policies. Indeed, while pricing policies do encourage innovation, they might induce a decrease in consumption rather than a shift in consumption mode and favor already-emerging technologies that are not necessarily cost-optimal. David Popp highlighted that carbon pricing is not sufficient on its own, and should be complemented by technology-targeted policies to drive innovation. On the other hand, government R&D policies are key to promote innovation and complement market-based policies, but are not a substitute to demand-side policies as consumers may be slow in adopting new technologies otherwise. As public authorities face the challenge of managing high-risk/high-reward innovation, David Popp highlighted the example of the US Advanced Research Projects Agency-Energy, which has built successful initiatives to promote risky breakthrough energy-related innovations.

Damien Dussaux, Economist in the Environment and Economy Integration Division of the Environment Directorate of the OECD

Damien Dussaux presented recent OECD research on the intersection between environmental and economic performance and innovation. Research that examines the effect of policy-induced low carbon innovation on firms' economic performance has shown that environmental policies do have a positive impact on the environmental performance of firms as well as on green innovation.⁴ At the same time, there is no evidence that policy-induced low-carbon innovation harms or improves the economic performance of firms. Ongoing OECD work analyses the economic benefits of early green innovation and focuses on the car manufacturing sector of 8 OECD countries. Results show that past green innovation does pay off after several years when price signals get stronger. The analysis also highlights that high salience of fuel prices accelerates the adoption of cleaner car technologies by consumers and the economic returns for early green innovators.

Jacquelyn Pless, Fred Kayne (1960) Career Development Professor of Entrepreneurship and Assistant Professor at the MIT Sloan School of Management

Jacqueline Pless focused on three frequently overlooked policy considerations for directing green innovation. The first consideration is policy interactions, i.e. whether policy measures act as a complement or substitute. To illustrate, Jacqueline Pless shared findings from her own research showing that increasing R&D tax credits enhances the effect of direct grants on R&D spending for small firms, but dampens it for

⁴ Dechezleprêtre, A., 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>.

larger firms.⁵ The second consideration regards human capital, which is a necessary requirement to boost green innovation. There is limited research on how to produce and steer potential inventors, including PhD students. The third consideration relates to the limitations of divestment from brown technologies, which might not translate into further investment into green technologies. This was illustrated by research that concludes that there is no apparent impact of Environmental, Social and Governance (ESG) divestiture strategies on the price or cost of capital of firms.⁶ Jacquelyn Pless concluded that there needs to be a broader knowledge of what management practices and strategies are important to successfully boost innovation.

Junjie Zhang, Director of the Initiative for Sustainable Investment at Duke Kunshan University and Associate Professor in Environment Economics at Duke University

Junjie Zhang discussed the impacts of carbon pricing on firm competitiveness with a focus on China's regional emissions trading systems (ETS).⁷ Several of his contributions conclude that ETS lead to technical changes by improving the quality and quantity of low-carbon patenting. Further, they are found to be effective in reducing emissions through energy conservation and fuel switching. On the other hand, there has been no evidence that ETS induce negative financial impacts, as firms tend to compensate the reduction in inputs by improving productivity. However, Junjie Zhang noted that regional ETS cause carbon leakage by relocating production across regions. Local and national policies should therefore be harmonised in order to avoid pollution displacement and ensure a global decrease in pollution.

Yuko Kanamori, Senior Researcher of National Institute for Environmental Studies in Japan

Yuko Kanamori provided insights on how to achieve a carbon neutral society using an Asia-Pacific Integrated Model (AIM) with the example of Japan. She noted that the net-zero emissions target set to 2050 by Japanese authorities is reachable via reductions in energy consumption, the use of lower carbon energy sources and electrification, in addition to a major social transformation. A social transformation would reduce energy demand, in part via increased digitalisation and circular economy, but it would also translate into a greater acceptance of lower carbon technologies. Yuko Kanamori highlighted that innovation in negative emission technologies is also necessary to increase the certainty to reach the net-zero emissions target considering the difficulty to fully eliminate GHG emissions.

Discussion

The second session concluded with further discussion on policy mixes that promote green innovation. This included a discussion on the role of R&D subsidies and whether they should precede or follow carbon pricing in order to maximise welfare. The speakers highlighted the importance of designing policies that encourage breakthrough innovation with important spillovers in order to better handle environmental issues. Further, it was noted that policies need to consider and facilitate the time it takes for innovations to mature. It was suggested that one approach could be to facilitate collaboration between different R&D actors such as academia and national laboratories and to give broader access to specific research set-ups.

⁵ Pless, J. (2021). Are « complementary policies » substitutes? Evidence from R&D subsidies in the UK. Available at SSRN: <https://ssrn.com/abstract=3379256> or <http://dx.doi.org/10.2139/ssrn.3379256>

⁶ Berk, J.B., van Binsbergen, J.H. (2021). The Impact of Impact Investing. Stanford University Graduate School of Business Research Paper, Law & Economics Center at George Mason University Scalia Law School Research Paper Series No. 22-008, Available at SSRN: <https://ssrn.com/abstract=3909166> or <http://dx.doi.org/10.2139/ssrn.3909166>

⁷ Cui, J., J. Zhang, and Y. Zheng (2022). "The Impacts of Carbon Pricing on Firm Competitiveness: Evidence from the Regional Carbon Market Pilots in China". Working Paper.

Cui, J., J. Zhang, and Y. Zheng (2018). "Carbon pricing induces innovation: Evidence from China's regional carbon market pilots". AEA Papers & Proceedings 108, pp. 453–57.

Session 3 – Employment implications of environmental policies

The third session was chaired by Elisa Lanzi, Senior Economist, Modeler and Head of the Modelling Team in the Environment and Economy Integration Division of Environment Directorate of the OECD. The session focused on the heterogeneity of the impact of environmental policies on employment across sectors and policy types, as well as the possible tools to mitigate negative employment effects and potentially enhance job creation.

Natalia Fabra, Professor of Economics at Universidad Carlos III de Madrid

Natalia Fabra presented research that examines the lack of political acceptance of some green technologies by local communities.⁸ Specifically, the research assesses whether local communities bear a disproportionate share of the costs, and only a limited share of the benefits, from investments in renewable energy in Spain. Over the period 2000-2020, the paper observes an overall positive employment effect. However, this employment effect differs across investments types with investments in wind farms showing no significant effect on employment while investments in solar farms having a positive effect, but mostly in the short-term during the construction phase. There is also heterogeneity between urban and rural areas. Natalia Fabra noted that the results should not be extrapolated to the whole renewable energy sector and are valid for a specific region and time period.

Balazs Stadler, Economist in the Environment, Transitions and Resilience division of the Environment Directorate of the OECD

Balazs Stadler presented OECD research examining the effect of energy prices and environmental policy stringency on manufacturing firms.⁹ The paper finds that both an increase in energy prices and environmental policy stringency have a short-term negative impact on employment and increase the probability of firm exit over the period 2000-2014 in OECD countries. The impact is relatively small and mostly affects energy-intensive firms. There is a small positive employment effect in surviving firms in the medium-run, since a decrease in competitors allow them to expand. Balazs Stadler highlighted the importance of complementing environmental policies with labor market policies to facilitate the relocation of workers across sectors.

Francesca Borgonovi, Policy Analyst and Head of the Skills Analysis team at the OECD Centre for Skills

Francesca Borgonovi provided insights on the link between environmental conditions and the development and use of skills. She noted that an increase in the number of days with hot weather has been linked to a decrease in performance in the global PISA test. Forthcoming OECD ENV-Linkages model estimates further show that the green transition favors some skills over others and disproportionately impacts employment levels for some segments of the population. This contributes to both adverse economic and environmental consequences, as unemployment is found to have a negative impact on the willingness to prioritise the environment over economic growth. To increase the adaptability to changing environmental conditions, Francesca Borgonovi noted that regulators should in the short-term focus on mitigation strategies such as prevention, investment in infrastructures and upskilling/reskilling the workforce through sectoral adjustments, and in the long-run design education policies to provide workers with sustainable skills.

⁸ Fabra, N., Gutiérrez, E., Lacuesta, A., Ramos, R. (2022). Do renewables create local jobs? CEPR Discussion Paper No. DP17206, Available at SSRN: <https://ssrn.com/abstract=4121381>

⁹ Dechezleprêtre, A., D. Nachtigall and B. Stadler (2020), "The effect of energy prices and environmental policy stringency on manufacturing employment in OECD countries: Sector- and firm-level evidence", OECD Economics Department Working Papers, No. 1625, OECD Publishing, Paris, <https://doi.org/10.1787/899eb13f-en>.

Luke Haywood, Economist and Policy Analyst at the Mercator Research Institute on Climate Change in Berlin

Luke Haywood presented his research on the welfare costs of job loss and decarbonisation focusing on the German coal sector.¹⁰ The paper finds that a decrease in job security is the first cost perceived by workers, followed by the decrease in wages. This suggests that the perceived costs associated with a coal phase-out primarily arise from the loss of good working conditions that the coal sector offers rather than unemployment per se. A proposed policy recommendation could therefore be to support workers in the coal phase-out by compensating their wage losses, rather than the current policies of subsidising their early retirement.

Discussion

During the subsequent discussion, the speakers highlighted the importance of workers benefitting from environmental policies to enhance their acceptability. It was noted that if workers benefit from training on green technologies there are more incentives for firms to hire locally. The twin transitions of green and digital technologies are linked through shared skills requirements that also need to involve actors from conventional technologies. Culture and identity are other factors that influence policy acceptability.

Session 4 – Social and distributional concerns

The last session was chaired by Tomasz Kozluk, Economic Counsellor to the Chief Economist at the OECD. The session focused on social and distributional impacts of environmental policies.

Francesco Vona, Professor, University of Milan, Fondazione Eni Enrico Mattei (FEEM), French Economic Observatory of Sciences-Po (OFCE)

Francesco Vona shared insights from his research on the distributional effects of environment and climate policies.¹¹ The paper highlights three factors that contribute to the regressive impacts of some environmental policies. The first factor is the time and investment required to adjust labour skills and infrastructure to new technologies. Low-skilled manual workers would switch to green jobs where unionisation is less powerful and that offer lower wages. The second factor is the spatial disparities of winners and losers. Environmental policies tend to benefit areas where green skill endowment is already high, and to a lesser extent areas where the uptake of conventional technologies is more prevalent. The third factor comes from preferences and behaviours, as high-income voters tend to value environmental improvements more than low-income voters. To address these three factors contributing to distributional impacts, policymakers should prioritise the availability of training programmes, in particular in areas with limited green technology endowment.

Joseph Shapiro, Associate Professor in the Agricultural and Resource Economics Department and in the Economics Department of the University of California Berkeley

Joseph Shapiro presented research that assesses the link between pollution and environmental justice.¹² The paper seeks to determinate whether the benefits from environmental policies tackling air pollution are equally distributed across space. The study was conducted in several American States and concluded that

¹⁰ Haywood, L., Koch, N., Janser, M. (2021). The welfare costs of job loss and decarbonization – Evidence from Germany's coal phase out. Discussion paper series No. 14464. Institute of Labor Economics

¹¹ Vona, F. (2021), "Managing the distributional effects of environmental and climate policies: The narrow path for a triple dividend", OECD Environment Working Papers, No. 188, OECD Publishing, Paris, <https://doi.org/10.1787/361126bd-en>.

¹² Shapiro, J.S., Reed W. 2021. "Where Is Pollution Moving? Environmental Markets and Environmental Justice." AEA Papers and Proceedings, Vol.111, p.410-14.

those policies led to no substantial differences in the distribution of pollution reduction across communities with differing shares of minority or low-income populations. Moreover, the benefits of additional pollution reduction greatly exceed associated costs overall. This work tends to validate the equity and efficiency of the U.S. Clean Air Act. However, Joseph Shapiro highlighted a limit to the positivity of this conclusion, which is that low-income neighbourhoods might start from a relatively higher air pollution level prior to the policy implementation, and consequently remain worse-off compared to high-income neighbourhoods.

Ira Irina Dorband, Economist in the Equitable Growth, Finance, and Institutions Practice Group of the World Bank

Ira Irina Dorband focused on the equity implications of climate-fiscal reforms in low-income countries and the role those reforms have on sustainable development. She noted that the consumption incidence associated with the introduction of a carbon tax is found to be progressive and neutral in most countries, as low-income households are generally less impacted by carbon taxes than higher-income households. This presents opportunities for more structural redistribution. Secondly, structural changes in employment usually affect jobs and workers across the whole economy. On the other hand, environmental policy outcomes are heterogenous across countries, sectors, income groups and policy designs. Ex ante policy analysis is therefore critical for optimizing the policy design and ensuring a fair distribution of costs and benefits. Ira Irina Dorband also introduced the forthcoming World Bank- International Monetary Fund Carbon Pricing Assessment Tool, which will facilitate access to metrics such as emissions, consumption and health co-benefits and the Multi-Regional Input-Out Model used to model employment and competitiveness effects with price-endogenous technology.

Vincent Marcus, Deputy Director on Economy and Evaluation at the French Ministry for the Ecological Transition

Vincent Marcus focused on two French environmental policies and the lessons learned in terms of distributional impacts. The first policy was the carbon tax increase and its impact on the transportation sector. The impact of this policy was strongly regressive since the lower income quartiles account for a large share of the ownership of high-emitting vehicles. Moreover, the policy was implemented at a time when energy prices were on the rise, raising the salience of the tax. Further, the lack of alternative transportation modes for the most impacted consumers was an issue. This gave rise to the yellow vest movement that eventually resulted in the cancellation of the policy. The second policy was the car scrapping scheme, which provides a financial incentive for households and firms to replace their polluting vehicles with more energy-efficient models. Contrary to the carbon tax, this measure is progressive and benefits primarily lower income households, while still being efficient in greening the vehicle fleet. This suggests that some policies may be more effective in tackling pollution while at the same time limiting the negative distributional externalities. However, such policies tend to be costly.

Discussion

During the discussion, panelists highlighted the importance of including environmental targets in development plans, which can be challenging for developing countries. Various types of policy design, including subsidies and coercive policies, are needed to achieve the Sustainable Development Goals, in both developed and developing countries. Policy design also needs to consider the local context and the political acceptability of environmental policies.

Annex - Workshop agenda

Day 1

14:00-14:10	<p>OPENING REMARKS</p> <p>Alain de Serres, Acting Director, Environment Directorate, OECD Stephen White, Economist, DG Environment, European Commission and Chair of the OECD Working Party on Integrating Environmental and Economic Policies (WPIEEP)</p>
14:10 – 14:50	<p>1. EMPIRICAL EVIDENCE ON THE IMPLICATION OF ENVIRONMENTAL POLICIES</p> <p>This session provides an overview of the empirical evidence on the implication of environmental policies on economic and social outcomes, including employment and innovation. Further, it will highlight environmental policy approaches that have proven effective in achieving both environmental objectives and economic and social outcomes.</p> <p>Chair: Shardul Agrawala, Head of Environment and Economy Integration Division, Environment Directorate, OECD</p> <p>Speakers</p> <p>Anna Alberini, Professor, Department of Agricultural and Resources Economics, University of Maryland Antoine Dechezlepretre, Senior Economist and Head of the , Innovation, Entrepreneurship and Technological Transitions team in the Directorate for Science, Technology and Innovation, OECD</p> <p>Discussant</p> <p>Carolyn Fischer, Research Manager for Sustainability and Infrastructure in the Development Research Group at the World Bank and Professor of Environmental Economics at the Vrije Universiteit</p>
14:50 – 16:15	<p>2. ENVIRONMENTAL POLICY, CLEAN INNOVATION AND PRODUCTIVITY</p> <p>Large-scale investments in clean technologies are required to achieve multiple environmental objectives including the net zero carbon transition. However, evidence on patent-filings shows a decline in clean innovation – potentially indicating the need for environmental policies to better incentivise firms to innovate. This session presents state-of-the-art empirical studies on the impact of environmental policies on innovation, as well as the less studied impact of clean innovation on firm performance.</p> <p>Chair: Antoine Dechezlepretre, Senior Economist and Head of the Innovation, Entrepreneurship and Technological Transitions team in the Directorate for Science, Technology and Innovation, OECD</p> <p>Speakers</p> <p>David Popp, Professor, Public Administration and International Affairs, Maxwell School of Citizenship and Public Affairs, Syracuse University Damien Dussaux, Environmental Economist, Environmental Policies, Social and Distributional Outcomes, Environment Directorate, OECD Jacquelyn Pless, Assistant Professor, Fred Kayne (1960) Career Development Professor of Entrepreneurship and Assistant Professor at the MIT Sloan School of Management Junjie Zhang, Director, Initiative for Sustainable Investment, Duke Kunshan University and Associate Professor, Nicholas School of the Environment, Duke University</p>

	Yuko Kanamori , Senior Researcher, National Institute for Environmental Studies, Japan Q&A
16:15	<i>End of part 1</i>

Day 2

14:00 – 15:15	<p>3. EMPLOYMENT IMPLICATIONS OF ENVIRONMENTAL POLICIES</p> <p>Despite its significant policy relevance, there is limited empirical evidence on the employment implications of environmental policies. Experts will present existing work and discuss challenges in terms of methodology and data. This will be complemented by insights from government representatives on the implications for their policy processes.</p> <p>Chair: Elisa Lanzi, Senior Economist and Head of the Modelling team in the Environment Directorate, OECD</p> <p>Speakers</p> <p>Natalia Fabra, Professor of Economics, Universidad Carlos III de Madrid</p> <p>Balazs Stadler, Environmental Economist, Quantitative Evaluation of Climate Change, Environment Directorate, OECD</p> <p>Francesca Borgonovi, Senior Policy Analyst, Centre for Skills, OECD</p> <p>Luke Haywood, Economist, Mercator Research Institute on Climate Change</p> <p>Q&A</p>
15:15 – 16:30	<p>4. SOCIAL AND DISTRIBUTIONAL CONCERNS</p> <p>Beyond improving environmental quality while limiting the economic implications, environmental policies face the challenge of minimising the trade-off between equity, efficiency and cost-effectiveness. This session will convene experts to discuss how policy packages can minimise uneven distributional effects.</p> <p>Chair: Tomasz Kozluk, Economic Counsellor to the Chief Economist, OECD</p> <p>Speakers</p> <p>Francesco Vona, Professor, University of Milan, Fondazione Eni Enrico Mattei (FEEM) and French Economic Observatory of Sciences-Po (OFCE)</p> <p>Joseph S. Shapiro, Associate Professor, University of California Berkeley</p> <p>Ira Irina Dorband, Economist, World Bank Chief Economist Office, Equitable Growth, Finance and Institutions</p> <p>Vincent Marcus, Sous-directeur économie et évaluation, Ministère de la Transition Écologique et Solidaire, France</p> <p>Q&A</p>
16:30-16:40	<p>CLOSING REMARKS</p> <p>Nicolina Lamhauge, Coordinator, Environmental Policies, Social and Distributional Outcomes, Environment Directorate, OECD</p>
16:40	<i>End of meeting</i>

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