The last Meeting of the Environment Policy Committee (EPOC) at Ministerial Level took place in 2016, soon after the signing of the Paris Agreement. Six years on, the demand for urgent and ambitious global action on climate and the environment has only strengthened, with countries sending a strong signal through the Glasgow Climate Pact at COP26 despite the challenges of the worst pandemic in 100 years. Since then, Russia’s aggression against Ukraine and the cascading impacts on energy price stability, global supply chains and food security, have up-ended near-term priorities. Nevertheless, these events shine a stark spotlight on the need to stay the course for transformative environmental policy, particularly in the context of maintaining the global transition to net-zero emissions by 2050. The lessons of today – whether in the context of Russia’s large-scale aggression against Ukraine, the devastating impacts of plastic pollution and climate change, or on-going impacts of COVID 19 – all point to the need for strong leadership on resilient environment and climate policy in a changing world. While the implications of the Russia-Ukraine war are too recent to be fully integrated throughout this document, it is clear that they form an inevitable backdrop to discussions at the Ministerial. This includes the global ramifications for action on climate and energy security, as well as the regional environmental impacts of the war itself, and the need to focus on the future reconstruction of Ukraine when the time comes.

The 2022 EPOC Ministerial represents a vital opportunity for ministers to drive action on environment and climate issues in this context, and provide direction on the future course for the OECD’s work on these topics. The occasion also marks EPOC’s 51st anniversary, reaffirming its leading role as a pathfinder and standard setter. For over a half century, EPOC has worked on a broad and interlinked range of topics, from climate change, biodiversity, water, innovation and the environment through to resource efficiency, chemicals and waste. It has developed more than 75 legal acts on the environment, spearheaded the OECD’s strong expertise in environmental indicators, data and modelling, developed an extensive system of environmental country reviews, and supported work on environmental policy development in emerging and transition economies. The breadth of topics covered – and the strong collaboration both within the Environment Directorate and with other OECD directorates and agencies – makes this meeting a crucial venue for ministers to engage on environmental issues with their peers.
The Ministerial consists of two plenary sessions:

1. **Climate change**: At COP26 in Glasgow, world leaders agreed to pursue efforts to limit global temperature increase to 1.5°C above pre-industrial levels. Now we must translate these pledges into concrete action and outcomes. Involving two sessions, the plenary provides an opportunity for ministers to chart the next steps, focusing especially on mitigation and adaptation measures, climate finance, carbon pricing and bridging the gap between longer and near-term climate goals.

2. **Plastics**: There is an urgent need to reduce the amount of waste and hazardous substances entering the environment, while making more efficient use of scarce resources. The backdrop to this is the release of the OECD’s *Global Plastics Outlook*, a first-of-its-kind comprehensive assessment of current and projected trends in plastic production, use and their environmental impacts. Discussions focus on technological change, global value chains and the circular economy.

The Ministerial also provides opportunities for ministers to meet in smaller break-out groups to share their national experiences and challenges on key environmental and policy topics, including biodiversity loss, environmental justice, trade, digitalisation and the ocean, as well as to exchange informally with the private sector and with youth advocates during working lunches.

This Key Issues Paper sets the scene for the plenaries, break-out sessions and working lunches, and poses a few questions for each session to help drive discussion.
WELCOME ADDRESSES

ENABLING A RESILIENT AND FAIR TRANSITION TO NET ZERO
This roundtable examines private sector-led trends and specific initiatives that are shaping the course of implementation, specifically focusing on the integration of just transition priorities into net-zero transition strategies in firms and across the financial sector.

MOVING TO NET ZERO
Closing the ambition gaps on climate mitigation and adaptation
This plenary highlights how the OECD Environmental Policy Committee and the OECD at large can play a leading role in supporting the transition towards net zero while adapting effectively to the impacts of climate change. It focuses on discussing immediate plans for accelerating climate action through regulations and policy approaches in the areas of greening infrastructure, resource and water efficiency, explicit and implicit carbon pricing, and decision making in the context of climate risks.

MOVING TO NET ZERO
Aligning financial flows with climate and environmental goals
This plenary discusses priority actions for policymakers, standard setters and financial actors to align financial flows with the net-zero transition, climate resilience and other international environmental goals such as biodiversity while avoiding the risk of greenwashing. The session also discusses key policy priorities and opportunities for international collaboration to mobilise and channel investment in environmental activities at scale and pace.

Theme 1
ACCELERATING ACTION TO ADDRESS BIODIVERSITY LOSS
This session focuses on the range of economic instruments available to governments to address biodiversity loss. It focuses on discussing barriers to scaling them up and on highlighting countries’ ambitions for the post-2020 Global Biodiversity Framework.

Theme 2
ALIGNING THE DIGITAL TRANSITION WITH A SUSTAINABLE, NET-ZERO ECONOMY
This session discusses the role of digitalisation to support environmental policy, and how the OECD can support countries in better harnessing the digital transformation for environmental goals and addressing the challenges raised.

Theme 3
ENHANCING ENVIRONMENTAL JUSTICE AND THE MEANINGFUL INVOLVEMENT OF ALL PEOPLE IN DECISION-MAKING PROCESSES
This session discusses how countries can strengthen environmental justice, and how the effectiveness and public acceptance of climate and environmental policies can be increased through socially inclusive measures.

DINNER FOR MINISTERS AND HEADS OF DELEGATION

11:30 – 12:00
Room CC9
Ministerial Working Lunch
12:00 – 13:30
Room CC9
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13:30 – 15:00
Room CC9
Plenary Session

15:30 – 16:30
Room CC9
Plenary Session

16:45 – 18:15
Room CC13
Parallel Break-Out Sessions (Part I)

16:45 – 18:15
Room CC15

16:45 – 18:15
Room CC1

19:00 – 21:00
Room C

DINNER FOR MINISTERS AND HEADS OF DELEGATION
Theme 4
MAXIMISING SYNERGIES BETWEEN TRADE AND ENVIRONMENTAL POLICIES
This session discusses the intersection of trade and environment policies and their potential impacts, and the role of Environment Ministries in taking action. It focuses on the challenges, limitations and knowledge gaps in tackling these overlapping trade and environmental issues.

Theme 5
STRENGTHENING ENVIRONMENTAL PROTECTION TO IMPROVE HUMAN HEALTH AND SAFETY
This session discusses the impacts of environmental degradation on health and the costs of policy inaction, as well as the benefits of taking health into account in environmental decision making. It focuses on key knowledge gaps and key priorities for policy action.

Theme 6
HARNESSING POLICIES FOR SUSTAINABLE OCEAN MANAGEMENT
This session discusses how policies can improve conservation and sustainable use of ocean and marine ecosystems, and what the OECD can do to help countries to better address marine litter and resilience of coastal and marine communities in the face of climate impacts.

CITIZEN AGENCY, EDUCATION AND PUBLIC AWARENESS IN ADDRESSING ENVIRONMENTAL CHALLENGES
This session explores how governments can equip students and citizens with the skills to build more sustainable cities, start sustainable businesses, push the innovation frontier for green technologies, rethink individual lifestyles, and back ecologically responsible policy making.

ADDRESSING THE GLOBAL PLASTICS CHALLENGE
This plenary discusses the key findings of the OECD’s Global Plastics Outlook. It allows Ministers to share current and planned domestic policy interventions to reduce plastics waste and encourage the development of more circular economy approaches to plastics. Ministers are also encouraged to highlight areas where further OECD support could be helpful, and where international co-operation is making a difference.

DISCUSSION AND DECISION ON MINISTERIAL OUTCOMES

CLOSING SESSION
The Covid-19 pandemic along with the unprovoked Russian attacks on Ukraine have further exacerbated economic and social inequalities and exposed many vulnerabilities. Governments are called upon to live up to the commitments of the Paris Agreement and achieve the goals of the SDGs by 2030. To do this, we need more speed in addressing climate change adaptation and mitigation, biodiversity loss, resource use and its related social challenges. We need expediency in implementing new budgeting approaches, and ensuring financing for the climate and environmental emergency.

Carole Dieschbourg  
Co-Chair – Luxembourg  
Minister for the Environment, Climate and Sustainable Development

In the six years since the last OECD Environment Ministerial, the climate crisis has deepened, we are contending with COVID-19 and now, more than ever, we are standing for democracy and the rule of law, in the face of Russia’s horrible and unjust war against Ukraine. The OECD member countries have a responsibility to work together to ensure a healthy and equitable future for all people including the most vulnerable among us, to take bold action to confront the climate crisis, and to support a robust and sustainable economy that creates good jobs.

Michael S. Regan  
Co-Chair – United States  
Administrator of the Environmental Protection Agency
At the heart of the Secretary General’s new strategic whole-of-Organisation approach to climate lies support for the transformational policy needed to tackle climate change while making economies and societies more resilient in a changing world. Specifically, the OECD’s Horizontal Project on Integrating Climate and Economic Resilience takes a broad approach to resilience, focusing on reducing the severity of climate change by decreasing greenhouse gas emissions globally, building resilience to the physical impacts of climate change, and paying close attention to social and distributional impacts.

With emissions still rising in 2021, a genuine shift towards a global net-zero trajectory requires significantly ramping up policy ambition and investment, as well as the transformation of business models and behaviour. Recent years have seen increasing focus on the “just transition” – an internationally recognised term for a broad range of policy priorities that are essential to winning widespread public support for action on climate. While this includes a focus on jobs and workers, the concept has continued to evolve and often includes the distributional impacts of net-zero transitions and of climate change itself. However, how these priorities are translated into accountable and measurable action by both policy makers and the private sector requires further exploration.

In this roundtable discussion, Ministers will hear about private sector-led trends and specific initiatives that are shaping implementation of firms’ net-zero plans. The discussion will also focus on the integration of just transition priorities into net-zero strategies in firms and across the financial sector. Ministers have the opportunity to engage in an informal dialogue with private sector representatives to improve understanding of what is being done by businesses – and what they need from policy-makers – to lead net-zero transitions that are resilient, fair and equitable. The discussion also contributes to OECD-wide strategic engagement on just transition priorities – including expanding high-level dialogue with the private sector on these issues.

Key issues

- As governments grapple with the need to accelerate policy efforts towards net zero in the context of high energy costs and rising inflation, how can policy makers better support and co-operate with the private sector in implementing their own ambitious transformations towards net-zero operations?
- Drawing on experiences within your sector or area of expertise, how are you addressing the urgent need to implement business-wide net-zero strategies whilst taking into account social implications and safeguards?
At COP26, countries stressed the urgency of enhancing ambition and action on mitigation, adaptation and finance in this critical decade of action, in order to implement the goals of the Paris Agreement and the 2030 Agenda for Sustainable Development. The OECD, including through EPOC, has been supporting ambitious international action on climate change, working with member countries to improve the enabling conditions for accelerating the net-zero transition. Key OECD contributions at COP26 included new research on losses and damages from climate change, new data tracking and projecting climate finance, the launch of the IPAC Climate Action Monitor, and technical support for negotiations through the OECD/IEA Climate Change Expert Group (CCXG).

Despite a widespread strengthening of long-term climate targets, most countries’ trajectories fall far short of the needed transition pathway. A step change is required if we are to stand a genuine chance of limiting warming to 1.5°C. We urgently need to bridge the gap between mid-century mitigation goals and near-term commitments. This will mean strengthening Nationally Determined Contributions (NDCs) for 2030 and ramping up policy action today. Delivering on NDCs also means...
strengthening coherence across and within policy areas, including for example on fossil fuel subsidies. NDCs and transition strategies also need to be designed to be resilient to global disruptions, as highlighted in the Horizontal Project on Climate and Economic Resilience. This is particularly pertinent in the current international context. It is important that despite urgent near-term priorities – with highly volatile energy prices and renewed focus on short-term energy security – governments maintain momentum on the net-zero transition as the means to build security and resilience for the longer term.

In parallel, countries need to increase their adaptive capacity and their ability to manage impacts from climate change, climate variability and extreme weather events, especially those arising from crossing climate tipping points. With 2021 being one of the seven warmest years on record,1 and the third-costliest year for weather-related disasters,2 there is no time to waste.

Closing the ambition gaps – on adaptation, as well as on mitigation – requires a co-ordinated policy response across all areas of government. To enhance the OECD’s ability to support those efforts, in 2021 OECD Secretary General Mathias Cormann developed a new strategic OECD-wide climate change approach that draws on the multidisciplinary richness of the Organisation.

It rests on five pillars:

- policy pathways to net zero
- adaptation and resilience to climate change
- public and private finance, investment and business-led action
- monitoring and measuring progress towards climate ambitions
- multilateral and multidisciplinary approaches to build co-operation and drive progress.

Across the OECD, most directorates are now contributing important work on climate, as reflected by the wide OECD participation at COP26 in Glasgow. The work being done at the OECD, and included in the new strategic approach on climate, reflects the rich expertise embodied in the Organisation. This includes work on the implications for trade and agriculture for the net-zero transition, the recently launched Framework to Decarbonise the Economy, the role of responsible business conduct in action on climate change, and behavioural insights for green governance, among other projects.

EPOC will maintain a critical role in spearheading horizontal efforts on climate through its deep expertise on climate issues, its strong and collaborative relationships with other parts of the OECD family, and its ability to take a systems approach to climate that also includes wider environmental and policy concerns. It is already doing so via the Horizontal Project on Climate and Economic Resilience, co-ordinating expertise from across the OECD to maximise policy impact and to derive effective, coherent messaging. EPOC will also play a key role in the OECD’s proposed Inclusive Framework on Carbon Pricing, an important new initiative aiming to improve policy comparability on both explicit and implicit carbon pricing efforts. Moreover, EPOC will continue to provide important support to Members through its breadth of projects, bringing together the latest findings from climate science with insightful analysis and recommendations on policies for mitigation, resilience and adaptation, losses and damages, and finance.

Climate change will make the future increasingly unrecognisable
Changes in the climate are rapid, widespread and intensifying, and human influence on this change is unequivocal. The heatwaves, wildfires, floods and tropical storms that have affected many parts of the world in recent years provide a foretaste of the future. Unchecked, climate change will affect all aspects of human life and the natural world, leading to increasing impacts, both economic and social.

Recent EPOC work explores the various types of uncertainties underlying the risks of losses and damages from climate change and their implications for reducing and managing those risks. Climate change will make the future increasingly unrecognisable. Extreme heat is one example. Figure 1 shows the levels of global mean temperature increase leading to two

Changes in the climate are rapid, widespread and intensifying, and human influence on this change is unequivocal.

1. WMO (2022), “2021 one of the seven warmest years on record, WMO consolidated data shows”, press release.

ENSURING A RESILIENT & HEALTHY ENVIRONMENT FOR ALL – MOVING TO NET ZERO
thresholds of extreme heat being exceeded at the local level. Extreme temperatures could threaten the human “habitability” of many areas.

Policy action on climate change is not increasing fast enough
Since 2019, there has been a rapid increase in the number of countries committing to net-zero emissions. By the end of 2021, after COP26, 65 countries covering 83% of global CO₂ emissions had net-zero targets for the coming decades (Figure 2), as highlighted through recent work of the OECD International Programme for Action on Climate (IPAC). If announced but not yet formally adopted pledges are included, the total number of countries nearly doubles.

Figure 1. Unprecedented extreme heat will become the new normal

A step change is required if we are to stand a genuine chance of limiting warming to 1.5°C. We urgently need to bridge the gap between mid-century mitigation goals and near-term commitments.

Figure 2. Net-zero targets have been increasing, but implementation must catch up

Note: TXx = the hottest day of the year. Panels (a) and (b) estimate the global mean temperature increase (using RCP8.5) required to cross two thresholds: Panel a: when the hottest day of an average year in the new climate would have been considered rare in the past (+3σ); and Panel b: when the hottest day of even the coolest year in the future would still exceed the hottest temperatures ever experienced in the past (+6σ). Even at the levels of warming already experienced (Panel a), extreme heat considered rare in the past is becoming the norm for many regions of the world.

Source: OECD (2021), Managing Climate Risks, Facing up to Losses and Damages, https://doi.org/10.1787/55ea1cc9-en

Note: More than 75 countries have announced pledges to be in line with the Paris Agreement’s goal of limiting warming to +2°C. A step change in the rate of implementation is required to limit warming to +1.5°C (IPAC). The data show that pledges have increased since 2015, with a rapid increase in net-zero targets in the last two years. Figure 2 may be adapted from OECD (2021). The Annual Climate Action Monitor, https://www.oecd.org/climate-action/ipac/the-annual-climate-action-monitor-5bcb405c/ Data from IEA (2021), Net-zero by 2050, https://www.iea.org/reports/net-zero-by-2050

Source: OECD (2021), Managing Climate Risks, Facing up to Losses and Damages, https://doi.org/10.1787/55ea1cc9-en
Near-term implementation of those pledges – through meaningful, comprehensive and effective policy action – is still lacking and remains urgent. For example, recent OECD work on carbon pricing shows mixed progress across countries. Although there are some bright spots (such as in the European Union), 60% of carbon emissions are still unpriced across OECD and G20 countries.3

Systems approaches that consider policy effects across the whole system, rather than focusing on individual policy outcomes, can help improve overall effectiveness of net-zero strategies. For example, recent EPOC work4 on reducing emissions from the transport sector highlights the benefits of a system approach, rather than focusing purely on electrifying private vehicles. Policies to make walking, cycling, micro-mobility (e.g. electric scooters) and public transport the most convenient means of transport can help cut car use and urban sprawl. Such systemic changes have the potential to drastically reduce emissions while improving quality of life and well-being.

This plenary showcases recent EPOC work and highlights how EPOC, and the OECD at large, can continue to play a leading role in supporting the transition towards net-zero economies, while adapting effectively to current and future impacts of climate change. It also provides a forum for ministers to discuss immediate plans for accelerating action across their governments through regulations and policy approaches in the areas of greening infrastructure, improving resource and water efficiency, adopting explicit and implicit carbon pricing, and better understanding climate risks to inform government decision making. This plenary session on climate is an opportunity for ministers to show global leadership and support further achievements on climate change.

Relevant OECD publications

- OECD (2021), The Annual Climate Action Monitor - Helping Countries Advance Towards Net-zero
- OECD (2021), Managing Climate Risks, Facing up to Losses and Damages
- OECD (2021), Transport Strategies for Net-Zero Systems by Design

A person’s choice to drive a car is strongly influenced by the prevalence of transport and urban systems organised around personal vehicle use, rather than solely by individual preferences.

Achieving the necessary transition to low-emission, climate-resilient and environmentally sustainable pathways will require an unprecedented acceleration and increase in volume of financial investment in low-emission, climate-resilient and nature-positive approaches. Article 2.1c of the Paris Agreement calls for “making finance flows consistent with a pathway towards low greenhouse gas (GHG) emissions and climate-resilient development”. This applies to all forms of finance, whether public, private or a blend of both. This shift is necessary in developed, emerging and developing economies alike, and is essential if climate objectives are to be achieved. The re-allocation of capital implied by the Paris Agreement objectives will require finance to become environmentally sustainable. Trillions of dollars will be needed to help companies transition to low GHG emissions technologies and activities, and to realign their business models with net-zero emission pathways. The OECD, through its work on transition finance, climate finance, finance for renewable energy and green infrastructure, is supporting countries in this realignment.

Questions for discussion

- What are the priority steps for policy makers and financial actors to align finance with the Paris Agreement temperature and climate resilience goals?
- What are the key opportunities for international collaboration to facilitate the net-zero transition and mobilise investment in low-emission, climate-resilient pathways at scale and pace?
- How can the OECD support countries in their efforts to align financial flows with climate and other environmental objectives, such as biodiversity, sustainable ocean, and clean water?
The world is a long way from aligning financial flows with net zero

The Paris Agreement has already stimulated a wide range of initiatives for aligning financial flows within the financial sector. However, the world is still a long way from aligning financial flows with net zero5 (Figure 3) and climate resilience, as well as with broader international environmental goals. There are significant gaps between financial actors’ net-zero commitments and the emissions trajectories of their portfolios. That is why the OECD’s support is critical.

Finance is also essential for addressing other critical global environmental challenges. For example, countries are a long way from halting the global loss of biodiversity and ecosystem services. These are being destroyed at an unprecedented and accelerating rate, with 25% of all plant and animal species now threatened with extinction. Finance for biodiversity must also increase in tandem with finance for the net-zero transition.

Green infrastructure investment – which is key to achieving environmental objectives – has continued to prove challenging. OECD and G20 pension fund and insurance companies alone have at least USD 64 trillion of assets under management (AUM). However, an OECD study shows that these institutional investors hold only USD 1.04 trillion in infrastructure assets, of which only USD 314 billion are green infrastructure assets (Figure 4 and Figure 5). The study finds that investment regulations are not the constraining factor, as is sometimes posited, because they would allow up to USD 11.4 trillion in infrastructure assets. Although environmental, social and governance (ESG) investing and broader sustainable finance have increased rapidly in the past few years, there are significant greenwashing and market integrity concerns.6

Redirecting finance flows to achieve low GHG emissions and climate-resilient development, as well as broader environmental goals, will require policy makers, financial regulators, investors and other financial actors to pay far greater attention to the climate and broader environmental impacts of finance. Governments need to set the right incentives to redirect finance away from emissions-intensive or unsustainable projects, and to ensure policy frameworks drive a transformational — not

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Figure 4. Institutional investment in infrastructure amounts to USD 1.04 trillion
Holdings of institutional investors domiciled in OECD and G20 countries, February 2020

Figure 5. Institutional investment in green infrastructure amounts to only USD 314 billion
Holdings of institutional investors domiciled in OECD and G20 countries, February 2020

Note: The figure excludes direct stock holdings. Further, while some nodes appear to have unequal left and right sides, this is just a visual effect and they are always balanced.

incremental — approach to greening the economy. Alongside tailored national policies in the real economy, the systemic nature of climate change, biodiversity and other environmental goals demands systemic changes in how the global financial system works if it is to deliver the financing needed to transition to a green economy and sustainable development. Attention also needs to be focused on mitigating greenwashing in sustainable finance.

This session discusses key options for moving to net zero, including priority actions for policy makers, standard setters and financial actors to align financial flows with the Paris Agreement.

The session also shares emerging insights on the options for aligning financial flows with climate resilience and other international environmental goals such as biodiversity. The session discusses key priorities to ensure the financial system is fit for purpose to deliver the financing needed to move towards net zero, climate resilience and other environmental goals, achieve environmental integrity and avoid the risk of greenwashing. The session also discusses key policy priorities and opportunities for international collaboration to mobilise and channel investment in low-emissions, climate-resilient and other environmental activities at scale and pace.

There are significant gaps between financial actors’ net-zero commitments and the emissions trajectories of their portfolios.

Relevant OECD Publications

- OECD 2021, Clean Energy Finance and Investment Policy Review of Indonesia
- OECD 2021, Clean Energy Finance and Investment Policy Review of Viet Nam
- OECD (2021), Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data
Biodiversity underpins all human well-being and economic activities. It provides critical life-supporting ecosystem services, including the provision of food and clean water, as well as largely invisible but crucially important services such as pollination, flood protection, nutrient cycling and water filtration. Despite these crucial services, biodiversity is largely unvalued, and animal and plant species and terrestrial, marine and other aquatic ecosystems are being destroyed and degraded at an unprecedented rate through land and sea-use change, over-exploitation of natural resources, climate change, pollution and invasive alien species. Discussions are currently underway to develop an ambitious and effective post-2020 Global Biodiversity Framework that can deliver the transformational changes needed to halt and reverse biodiversity loss. These would be a follow up to the 2011-2020 Aichi Biodiversity Targets under the Convention on Biological Diversity (CBD), most of which were not achieved.

By helping to capture and reflect the true value of biodiversity in economic activities, economic instruments such as biodiversity-relevant taxes, fees and charges, tradable permits, and payments for ecosystem services are a key tool to mainstream biodiversity across sectors. They provide continuous incentives for more sustainable production and consumption, and can achieve environmental objectives more...
cost-effectively than traditional regulations. In addition to aligning incentives for biodiversity – critical for transformational change – they can also often mobilise finance or generate revenue.

The use of economic instruments for biodiversity has been encouraged in various fora, including the 2004 OECD Council Recommendation on the Use of Economic Instruments for Biodiversity Conservation and Sustainable Use. They were a key component of Aichi Target 3, and are currently also referred to in proposed Target 18 of the First Draft of the Post-2020 Global Biodiversity Framework: “ensure that incentives, including public and private economic and regulatory incentives, are either positive or neutral for biodiversity”.7

The OECD’s unique database on Policy Instruments for the Environment (PINE) tracks a number of biodiversity-relevant economic instruments across more than 120 countries. Data suggest, however, that progress is stagnating (Figure 6 and Figure 7).8


Biodiversity-relevant economic instruments are critical to mainstream biodiversity across sectors.

This session focuses on the range of economic instruments available to address biodiversity loss, take stock of their use and consider the need to scale them up. It provides ministers with an opportunity to share the actions being taken in their countries, discuss barriers to scaling up the use of economic instruments, and outline their ambitions for the post-2020 Global Biodiversity Framework in this context.

Relevant OECD publications

- OECD (2021), Tracking Economic Instruments and Finance for Biodiversity – 2021
- OECD (2021), Biodiversity, Natural Capital and the Economy: A Policy Guide for Finance, Economic and Environment Ministers
- OECD (2020), A Comprehensive Overview of Global Biodiversity Finance

Figure 7. There has been little recent increase in biodiversity-relevant economic instruments

The world’s digital transformation provides substantial opportunities to support environmental objectives, but it also raises new challenges. Although digitalisation is transforming our economies and lifestyles with astonishing speed and depth, achieving climate goals and other environmental objectives will require an even deeper transformation. In this context, it is essential for policy makers to better understand the synergies between these two transitions and the key trade-offs that need to be addressed.

Digitalisation and environmental challenges interact in many different ways. For example, technologies such as smart meters, active power grids and sensors, and artificial intelligence, can greatly enhance the transition to zero-carbon power systems and reduce energy consumption. Digital technologies also offer great potential to improve environmental monitoring and enforcement, both through local sensing and even through earth observation techniques from space. Digital technologies are also increasingly embedded in climate-related goods and services and there is much potential for them to contribute to low-carbon innovation, including through greater connectivity and encouraging changes in consumer behaviour.

At the same time, digital technologies themselves have a large and growing emissions footprint.

Questions for discussion

- What concrete steps can governments take to ensure that rapid digitalisation is aligned with climate and environmental goals and that trade-offs are minimised?
- In what ways could digitalisation further accelerate progress towards net-zero emissions?
One key example is the energy use by data centres and servers. While impressive gains in energy efficiency and “hyperscale” data centres have so far almost kept pace with the phenomenal growth in traffic, there are signs that energy use is now set to rise rapidly. Another example is the use of blockchain technologies, including cryptocurrencies. Although they can create opportunities for more sustainable business models, such as improving supply chain traceability, their computer processing power generate significant emissions, and can be an incentive to continue fossil fuel-based power generation.9

Digitalisation also offers both great potential and challenges for the circular economy. Recent EPOC work highlights how digital technologies can support the uptake of circular activities through new business models and by supporting more effective policy design and enforcement. For example, digital passports providing an auditable record of a product’s journey from design to end of life. Digital technologies can also help to improve the design of circular economy policies (Figure 8. Many circular economy activities are enabled by the power of digital technologies) by enabling access to unprecedented volumes of crowdsourced and online data. The greatest opportunities come not from individual technologies used in isolation, but by combining them to solve system-wide challenges.

However, rapid growth in digital technologies also creates the mounting problem of dealing with electronic waste, as well as tackling social and environmental sustainability challenges in the supply of critical minerals that are essential for many digital technologies (and for the energy transition, such as batteries).

This session allows ministers to share experiences on the role of digitalisation to support environmental policy, and to discuss how the OECD can support countries in better harnessing the digital transformation for environmental goals. This includes both addressing the challenges raised by the digital transformation, such as the emissions footprint, as well as many ways that digitalisation can help enable the net-zero transition.

**Relevant OECD publication**


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Though definitions vary, environmental justice generally comprises three broad aspects: (i) addressing disparities in the distribution of exposure to environmental risks and access to amenities (e.g. parks); (ii) fair distribution of the benefits and costs of environmental policies; and (iii) non-discriminatory and meaningful participation in environmental decision making and access to justice.

Governments have agreed to accelerate action to meet climate and other environmental objectives, while ensuring that this is done in a fair and equitable manner. How regions are affected by the net-zero transition will depend on their geography and economic opportunities (Figure 9). The preamble of the Paris Agreement underlines the imperative of a just transition. The need for a people-centred transition also underpins several Sustainable Development Goals (SDGs), including Goal 8 on decent work and economic growth and Goal 10 on reduced inequalities. Similarly, the Aichi Biodiversity Targets emphasise the importance of full and effective participation of indigenous and local communities, as well as equitable sharing of benefits.

Questions for discussion

- How does environmental degradation affect different socio-economic groups in your country?
- What are the key challenges to ensuring that all people, regardless of income, age, race and gender, benefit from efforts to foster a clean and healthy environment?
- What approaches have been effective in your country to ensure that national and local policies to support the net-zero transition enhance environmental justice for all? How can the public acceptance of environmental policies be increased by promoting a better distributional outcome of policies?
However, vulnerable segments of society are disproportionately exposed to risks from pollution and climate change. Low-income households tend to be more vulnerable to their impact because of lower baseline health, limited access to quality healthcare or ability to invest in defensive measures (e.g. air filtration). The impact of environmental degradation on the productivity of sectors crucial to rural economies, such as agriculture and fisheries, may exacerbate the urban-rural divide. Outdoor workers, who tend to be lower skilled, are likely to be the most affected by the increased frequency and intensity of heat waves due to climate change. Research also suggests that lower socio-economic groups tend to have relatively less access to environmental amenities such as green spaces.

Since the most vulnerable and underserved segments of society are often more exposed to pollution and environmental degradation, effective environmental policies tend to improve equity. However, mechanisms may also be necessary to ensure that the benefits and costs of such policies are equitably distributed. For example, higher taxes on gasoline can disproportionately burden rural residents while a rise in energy prices would hit poorer households more severely. Vulnerable and underserved populations also tend to have lower engagement with decision-making processes due to lack of information, low bargaining power, and fewer resources for organising collective action.

OECD research has helped improve understanding of the distributional implications of environmental policies and good practices in enhancing environmental justice, including the labour implications of climate and circular economy policies, and the consequences of environmental degradation and of environmental policies on well-being.13 The OECD Environmental Performance Reviews of individual countries also regularly assess public participation in decision making, as well as citizens’ access to information, justice and environmental education.14 OECD analysis on innovative participation practices shows how countries can harness new forms of participatory decision making for climate policies.15 Forthcoming OECD analysis exploring

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**Figure 9. Coal jobs at risk by 2030 in the EU28 vary by region**

![Map showing coal jobs at risk by 2030 in the EU28](image)

**Potential job losses**

<table>
<thead>
<tr>
<th>Until 2030 (cumulative)</th>
<th>&lt;1000</th>
<th>1000-3000</th>
<th>3000-6000</th>
<th>6000-15000</th>
<th>&gt;15000 (up to 41000)</th>
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<tr>
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The forced closure of many uncompetitive operations between 2015 and 2018, including those currently benefiting from State Aid, might lead to the loss of around 1.2% of current overall jobs (27,000) by 2020. Thereafter and until 2030, the closure of coal mines will mainly be aligned with the decommissioning rates of coal power plants: by 2025 total cumulative job losses in power plants and mines are likely to increase to 77,000 jobs and by 2030 to around 160,000 jobs.

The map below shows the cumulative coal direct jobs at risk by 2030. Several regions are expected to be particularly hard hit by the transition: one region in Poland may lose up to 41,000 jobs, and a further three (in the Czech Republic, Romania and Bulgaria) look likely to lose above 10,000 jobs each. The regions with the highest number of jobs at risk are in Poland, Czech Republic, Romania, Bulgaria, Germany and Greece.

In regions with mining infrastructure the dependency on the coal industry resulted in limited development of other economic sectors; most coal regions have a lower GDP/capita than the national average. The social impact of an interruption of coal activities seems to be higher in Greece, Bulgaria, Czech Republic, Poland, Romania and Germany where the share of coal jobs amongst the economically active population is higher. On the other hand, this impact is likely to be amplified in regions where the women’s participation in environmental decision making also highlights the need for more evidence and indicators on the topic.13

Environmental justice must also include a gender dimension. Recent work under EPOC has found that environmental impacts affect men and women differently, exposing underlying discrimination, resource access inequalities and physiological factors that determine vulnerability.14 Gender equality and environmental goals are mutually reinforcing, with slow progress on environmental actions affecting the achievement of gender equality, and vice versa. A recent analysis of the OECD Green Recovery Database15 shows only 2.5% of the 700 measures assessed are gender-relevant. Yet these measures are likely to have positive impacts on the environment, implying that gender and environmental goals can go hand-in-hand.

This session gives ministers the opportunity to discuss efforts to strengthen environmental justice in their country, and how the effectiveness and public acceptance of climate and environmental policies can be increased through socially inclusive measures. The discussion also includes measures to support access to justice and decision making, as well as opportunities to enhance the effective governance of our environmental public health programmes. While OECD countries have made important progress in improving participation in environmental decision making, challenges remain.

**Relevant OECD publications**

- OECD Environment Working Papers, No. 188 (2021), “Managing the distributional effects of environmental and climate policies: The narrow path for a triple dividend”.

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15. A database which catalogues policy measures introduced by over 44 countries and the EU in response to the COVID-19 pandemic that are likely to have an impact across one or more environmental dimensions: https://www.oecd.org/coronavirus/policy-responses/the-oecd-green-recovery-database-47ae0f0d/
Policy issues on trade and environment often intersect. For example, trade policies have direct and indirect impacts on emissions, as they often favour trade of emission-intensive goods. Environment policies can also have impacts on global competitiveness. OECD work highlights the need for greater alignment between trade and environmental policies. Increasingly interconnected and globalised value chains can make it difficult for governments to take ambitious environmental action without considering trade-related dimensions. These considerations are both economic and environmental in nature, including the impact of stringent environmental policies on maintaining a level playing field and fair competition for domestic industries, concerns over carbon leakage, increased environmental footprints, as well as increased plastics pollution and biodiversity loss. Trade can also bring benefits to the environment, such as increased access to environmental goods and services to promote a more circular and low-carbon economy.

International momentum is growing to bring the trade and environment communities together to enhance trade-related environmental benefits. For example, in September 2019 a diverse group of mostly OECD countries kicked off negotiations on the Agreement on Climate Change, Trade and Sustainability (ACCTS).
The EU announced the European Green Deal in December 2019, which includes proposals for a Carbon Border Adjustment Mechanism and deforestation-free supply chains.

Discussions at the World Trade Organization are also evolving, with ministerial statements issued on trade and environmental sustainability in December 2021. The EU and US issued a Joint Statement on Trade in Steel and Aluminium in October 2021, indicating their strong commitment to harness trade policy to confront the threats of climate change and global market distortions.

**Figure 10. There are increasing developments at the trade and environment nexus, 1990-2020**

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The OECD has contributed actively to these processes through analytical work on the trade-offs and synergies of policy options, providing robust information and data, and as a platform to allow countries to discuss (rather than negotiate) and interact. In particular, the Joint Working Party on Trade and Environment (JWPTE) has been exploring the interface between trade and environment for the past three decades. A recent retrospective of trade and environment issues between 2008 and 2020\footnote{OECD (2021) OECD Work on Trade and Environment: A retrospective, 2008-2020, https://www.oecd.org/env/retrospective-trade-environment-2008-2020.htm.} highlights the broad range of the OECD’s work to: (i) support multilateral and plurilateral efforts on environmental goods and services, and reforming government support; (ii) secure coherence in regional trade agreements and the environment; (iii) cover global environment issues, policy responses, and their linkages with trade; and (iv) develop trade and environment indicators and quantitative analysis.

The implications of environmental policies for competitiveness and trade are becoming increasingly important to understand as countries increase their level of environment and climate ambition. Trade policies and environmental policies need to work hand in hand to facilitate the transition to a resource-efficient, net-zero economy. This EPOC Ministerial Level Meeting provides an important opportunity to highlight the central role of Environment Ministries in this endeavour.

This session gives ministers the chance to discuss the intersection of trade and environment policies, and the potential impacts. Of particular interest are the challenges, limitations and knowledge gaps in tackling these overlapping trade and environmental issues, the role of Environment Ministries in taking action, and how the OECD can add value.

**Relevant OECD publications**


ENSURING A RESILIENT & HEALTHY ENVIRONMENT FOR ALL – TRADE AND ENVIRONMENT
Thursday 31 March, PARALLEL BREAK-OUT SESSIONS | 25

Part 2, Theme 5

STRENGTHENING ENVIRONMENTAL PROTECTION TO IMPROVE HUMAN HEALTH AND SAFETY
Thursday 31 March 2022, 10:30 – 12:00

Questions for discussion

- What are the key knowledge gaps in the linkages between environmental protection and health?
- What are the priority policy actions to mitigate environmental risks to human health and enable the health system to absorb existing risks?

Key issues

Though economic development has brought major benefits to human well-being, it has also been associated with significant environmental degradation and negative consequences for health. The links between environmental protection and health take many forms. Air pollution can trigger cardiovascular and pulmonary diseases. Exposure to chemicals such as lead is a risk factor for a large array of symptoms and diseases. Man-made climate change increases the frequency of extreme weather events such as natural disasters or heat waves, which can have significant death tolls. Biodiversity loss and pressure on the natural environment can make the spreading of zoonotic diseases and epidemics more likely.

Inaction to protect the environment generates large costs for our society, including from premature death (mortality) and morbidity (including disutility, health expenditures, reduced labour productivity) and reduced agricultural yields. The OECD has been working actively to measure and project the current and future costs of inaction on outdoor air pollution, climate change and exposure to lead (Figure 11 and Figure 12).

Air pollution remains one of the most common and serious environmental risks to health. In many places, concentrations of particulate matter and ozone are well above the levels recommended by the World Health Organization (WHO) air quality guidelines, particularly in big cities and highly populated areas. In 2019 alone, ambient particulate matter caused 4.1 million premature deaths (more than twice the 1990 levels), implying a welfare cost equivalent to 5.8% of the world’s GDP.
Greater research efforts are needed on the damage caused by chemical pollution and climate change, and especially the regional economic consequences of triggering important tipping points.

The climate crisis is also an environmental health issue, with significant and complex impacts. For example, climate change-induced heat stress has direct health effects such as dehydration, strokes, and blood clots, as well as indirect effects by putting strain on water, energy and transportation systems and threatening food security. Climate change-induced heat stress caused 145,000 premature deaths in 2015, and is projected to cause 1 million premature deaths in 2050 in the absence of additional policies. When assessing the costs and benefits of ambitious climate policy action, governments should take into account the risks of severe health consequences and premature deaths.

However, policy makers need more, and regularly updated, data on the monetary benefits of health protection. Without knowing the full monetary benefit of avoiding diseases associated with environmental degradation, policy makers cannot accurately weigh the costs and benefits of policy action. Greater research efforts are needed on the damage caused by chemical pollution and climate change, and especially the regional economic consequences of triggering important tipping points.

This session gives ministers the chance to discuss the impacts of environmental degradation on health and the costs of policy inaction, as well as the benefits of taking into account health in environmental decision making. It identifies key knowledge gaps as well as key priorities for policy action to protect the environment and reduce health impacts.
Figure 11. The economic costs of premature deaths caused by environmental pollution are high

Panel A: Premature deaths

Panel B: Welfare cost of premature deaths


Figure 12. The impacts of environmental degradation on mortality are projected to rise steeply

Panel C: Heat stress mortality

Panel D: Welfare cost of outdoor air pollution


Relevant OECD publications

- OECD (2016), The Economic Consequences of Outdoor Air Pollution
- OECD (2015), The Economic Consequences of Climate Change
Part 2, Theme 6
HARNESSING POLICIES FOR SUSTAINABLE OCEAN MANAGEMENT
Thursday 31 March 2022, 10:30 – 12:00

Questions for discussion

- Ahead of the UN Ocean Conference this year, ministers are invited to share country experiences with domestic policies and international/regional cooperation to improve conservation and sustainable use of ocean and marine ecosystems.

- How could the OECD help countries to better address marine plastic litter and other land-based marine pollution; conservation and sustainable use of marine biodiversity; and resilience of coastal and marine communities in the face of climate impacts?

Key issues

The ocean is vital for human well-being. It contains rich, biodiverse habitats, provides invaluable ecosystem services, is central to global food security, and absorbs significant amounts of heat and carbon dioxide. The ocean also presents opportunities for employment, economic growth, and development. The ocean economy spans multiple sectors – including oil and gas, fishing, aquaculture, shipping, tourism, offshore wind energy and marine biotechnology – and is growing rapidly. Prior to the COVID-19 pandemic, the OECD projected a doubling of the ocean economy from 2010 to 2030, to reach USD 3 trillion and employ 40 million people. However, the ocean is under growing pressure from a wide range of human activities – pressure that will increase unless governments take bold action to ensure the protection of marine resources. Pollution from plastics, offshore oil and gas, shipping, sewage, and fertiliser and agricultural runoff are significant challenges. Rapid urbanisation of coastal zones further aggravates pollution, habitat loss and resource pressure. Climate change impacts (sea-level rise, ocean warming and ocean acidification) further increase the strain on many species and habitats. Governments must manage the ocean well, use its resources sustainably, and reduce environmental pressures if it is to realise the full potential of the ocean economy.

The OECD is helping governments reconcile the ever-growing use of marine resources with the need to safeguard and improve the health of ocean ecosystems. The policy analysis and guidance developed by the OECD helps countries to work towards fulfilling their international commitments on the ocean, including Sustainable Development Goal (SDG) 14 on Life below Water; the Convention for Biological Diversity’s Post-2020 Global Biodiversity Framework to be agreed this year; the United Nations Convention on the Law of the Sea as well as regional seas conventions; and the Paris Agreement on climate change. The OECD advocates for an integrated “whole-of-government” approach that responds to the complex challenges facing the ocean by mobilising expertise across many policy fronts, covering environmental, economic, financial and social dimensions.

Recent EPOC work could be further developed to support OECD and partner countries:

- **Tracking policy and financing approaches for marine conservation and sustainable use**: Despite recent progress, the pace of policy action is not keeping up with the pressures on oceans. For example, marine protected areas (MPAs) have been expanded in recent years, but their effectiveness and coverage of marine life remain weak. They must be better integrated into emerging marine spatial planning instruments to increase their effectiveness, and be complemented with a robust mix of other policy instruments to address the multiple pressures on the ocean. The OECD Policy Instruments for the Environment (PINE) database, to which 120 countries currently report, has untapped potential to expand economic policy instruments for ocean conservation and its sustainable use.

**Figure 13. There is untapped potential to expand economic policy instruments for ocean conservation and its sustainable use**

Number of instrument by environmental dimension

Note: Based on 120 countries reporting to the database. Multiple tags per instrument are possible, so instruments can be included more than once. Only active instruments are shown; discontinued instruments are excluded.


Marine protected areas (MPAs) have been expanded in recent years, but their effectiveness and coverage of marine life remain weak.
CONTRIBUTE (Figure 13), enables us to identify policy instruments that are relevant to SDG 14 (to conserve and sustainably use the oceans, seas and marine resources).

- Curtailing marine plastics pollution: 87% of plastic leakage originates from the inadequate collection and disposal of waste on land. As a result, 6.1 million tonnes (Mt) of plastics end up in aquatic environments, of which 1.7 Mt flows into the ocean every year. Recent OECD work has examined both plastic waste prevention and adequate end-of-life treatment of plastic waste, as well as better policies to address single-use plastics and microplastics (see the Second Plenary section above). OECD work on marine plastics pollution has also focused on co-operation with countries in Southeast Asia. Recent estimates suggest that marine debris in general (not only plastics) directly costs ASEAN countries USD 2.1 billion each year.

- Adapting to rising seas and developing resilient coastal infrastructure: Coastal infrastructure and communities are disproportionately affected by the impacts of climate change and rising sea levels, including coastal flooding and erosion, saltwater intrusion and habitat destruction. Without adaptation, flood damage under a high-end sea-level rise scenario (1.3 metres) would amount to approximately 4% of world GDP annually. Recent OECD work reviewed how countries approach shared costs and responsibilities for coastal risk management, and how this encourages or hinders risk-reduction behaviour by households, businesses and different levels of government.

This session discusses how policies can improve conservation and sustainable use of ocean and marine ecosystems. Ministers are also asked to reflect on what the OECD could do to help countries to better address marine plastic litter and other land-based marine pollution, conservation of marine biodiversity, and resilience of coastal and marine communities in the face of climate impacts.

Relevant OECD publications

- OECD (2022), Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options
- OECD (2017), Marine Protected Areas: Economics, Management and Effective Policy Mixes
Ministerial Working Lunch
CITIZEN AGENCY, EDUCATION AND PUBLIC AWARENESS IN ADDRESSING ENVIRONMENTAL CHALLENGES
Thursday 31 March 2022, 12:00 – 13:30

Questions for discussion

● How can the environment community better inform education policy to achieve the urgent action needed to reach ambitious environmental targets?
● What lessons can we draw from local approaches to build public acceptance of policies to curb environmental degradation?

Topic description

The stakes have never been so high for the role of public awareness and education in shaping how people interact with the environment. Education can provide young people and citizens with the skills, attitudes and values they need to make responsible and well-informed choices. An educated and aware public can play a key role in supporting the climate transition as active community members, consumers, voters and decision makers. Education can also help the most vulnerable adapt to the consequences of climate change. Similarly, accompanying green measures with communication campaigns can increase understanding of their benefits, as shown in recent OECD work on re-thinking local transport.28

But are education systems and governments fit for purpose to prepare today’s society for the climate transition? Results of the OECD Programme for International Student Assessment (PISA) show that solid scientific knowledge is a key predictor of a realistic appreciation of the climate challenge by youth, and for their interest in the environment.29 However, PISA also shows a persistent gap between students’ strong interest in the climate agenda and their sense of agency and empowerment. Across OECD countries, only 57% of students think that they could make a difference in addressing global issues such as climate change.

Complex environmental challenges require students and citizens to move beyond cause-effect analysis of events and patterns. Now more than ever there is a need for developing systems-thinking skills. Increased sense of agency and systems-thinking go hand-in-hand, as systems awareness make citizens aware of actions that make a difference that are not immediately apparent otherwise. At the same time, trust in government is a significant factor in citizens’ willingness to support climate policies. The upcoming OECD Survey on Drivers of Trust in Public Institutions will help governments understand how trust in public institutions affect support for different climate policy alternatives and build a positive feedback loop.

Schools and governments can do better in developing individuals’ sense of agency to enable them to take a proactive role in building a sustainable future. Bringing education and environment communities together can foster understanding of the challenges ahead.

This session explores how governments can equip students and citizens with the skills to build more sustainable cities, rethink individual lifestyles, consume differently, and back ecologically responsible policy making.

An educated and aware public can play a key role in supporting the climate transition as active community members, consumers, voters and decision makers, and be part of a green economy.

Global plastics production has grown relentlessly in recent decades. Highly versatile, light and affordable, plastics are used in countless industrial applications and have become extremely useful for modern society. They help us preserve food, improve medical care, insulate buildings, and make vehicles more fuel-efficient, among other things. Yet the sheer magnitude of plastics production and use results in a high carbon footprint and large volumes of waste. The impacts of persistent plastics pollution and litter include harm to human health, wildlife and ecosystems, as well as socio-economic costs in the tourism and fisheries sectors. The need to take strong action is being recognised both nationally and internationally, bolstered by the recent United Nations Environment Assembly resolution “End plastic pollution: Towards an international legally binding instrument”.

The OECD has worked actively on plastics in the last few years. Outputs include the recently launched Global Plastics Outlook, as well as publications on markets for secondary materials, plastics innovation, policies addressing single-use-plastics, and the sustainable design of plastics from a chemicals perspective.

Questions for discussion

- What are the priority domestic policy interventions to stop plastic pollution and incentivise more sustainable design and a transition to a more circular economic model?
- Where is international co-operation going to be crucial to support domestic efforts and what could the OECD do to help, in particular to support the United Nations Environment Assembly Intergovernmental Negotiating Committee to forge in two years an internationally binding instrument to end plastic pollution?
- What are the possible metrics, targets and time frames to transform the plastic industry and consumption that the OECD can explore and define?

Key issues

Global plastics production has grown relentlessly in recent decades. Highly versatile, light and affordable, plastics are used in countless industrial applications and have become extremely useful for modern society. They help us preserve food, improve medical care, insulate buildings, and make vehicles more fuel-efficient, among other things. Yet the sheer magnitude of plastics production and use results in a high carbon footprint and large volumes of waste. The impacts of persistent plastics pollution and litter include harm to human health, wildlife and ecosystems, as well as socio-economic costs in the tourism and fisheries sectors. The need to take strong action is being recognised both nationally and internationally, bolstered by the recent United Nations Environment Assembly resolution “End plastic pollution: Towards an international legally binding instrument”.

The OECD has worked actively on plastics in the last few years. Outputs include the recently launched Global Plastics Outlook, as well as publications on markets for secondary materials, plastics innovation, policies addressing single-use-plastics, and the sustainable design of plastics from a chemicals perspective.
The Global Plastics Outlook shows how the annual production of plastics has more than doubled in the last two decades – soaring to 460 million tonnes (Mt) in 2019 – accompanied by a more than doubling of plastic waste – from 156 Mt in 2000 to 353 Mt in 2019. Yet only 9% of this plastic waste was recycled in 2019: 19% was incinerated, almost 50% went to sanitary landfills. The remaining 22% was disposed of in uncontrolled dumpsites, burned in open pits or leaked into the environment (Figure 14).

Although the COVID-driven lockdowns and decline in economic activity during 2020 reduced plastics use by 2.2% from 2019 levels, the increase in the use of protective personal equipment and single-use plastics has exacerbated plastic waste. As the economy rebounds, plastics use is projected to pick up again, leading to a renewed growth in waste and plastic pollution.

Figure 14. Only 9% of the 353 million tonnes of plastic waste were recycled in 2019

More circular lifecycles will reduce the environmental footprint of plastics

In 2019, more than one-fifth of plastic waste was mismanaged (i.e. inadequately collected or disposed of, such as through open pit burning or dumping), leading to significant leakage into the environment. OECD modelling suggests that to date 109 Mt of plastics have built up in rivers, and 30 Mt in the oceans (Figure 14) – in 2019 alone, 6.1 Mt of plastic waste leaked into aquatic environment. Macroplastics account for 88% of plastics leakage, with 22 Mt of plastic materials leaking into the environment in 2019 alone. Microplastics, which are polymers with a diameter smaller than 5 mm and are often derived from larger fragments of plastic, account for the remaining 12%. Now widespread in freshwater and terrestrial environments, as well as in foods and beverages, microplastics contribute substantially to ecosystem damage and human exposure.

Mismanaged waste is an especially widespread problem in developing countries, implying that major investments in basic waste management infrastructure are needed. To finance the estimated annual costs of EUR 25 billion in low and middle-income countries, all available sources of funding will need to be mobilised – official development assistance currently covers only 2% of the financing needs.

The carbon footprint of plastics is significant, contributing 3.4% of global greenhouse gas emissions throughout their lifecycle. In 2019, plastics generated 1.8 billion tonnes of greenhouse gas emissions, 90% of which came from their production and conversion from fossil fuels.

Strong markets are needed for recycled plastics

Secondary (recycled) plastics still make up only 6% of total feedstock, even though global production of secondary plastics has more than
quadrupled in the last two decades (Figure 15). Since secondary plastics are mainly considered substitutes for primary plastics, rather than a valuable resource in their own right, the secondary plastics market remains small and vulnerable. Some countries have successfully strengthened their markets by “pushing” secondary plastics supply – for example, through extended producer responsibility (EPR) schemes – as well as “pulling” demand via recycled content targets. The recent decoupling of prices for primary and secondary polyethylene terephthalate (PET) in Europe and increasing innovation in recycling technologies are positive signs that combining these policies can work.

Innovation in sustainable plastics lifecycles can deliver significant environmental benefits by finding ways to reduce the amount of primary plastics needed, prolong the useful life of products and facilitate recycling. Yet innovation in plastic waste prevention and recycling makes up only 1.2% of all plastics-related innovation. International co-operation is another vital channel to make plastics value chains more circular, improve material safety and achieve net-zero plastic leakage. This includes improving material safety and circularity through sustainable design and chemical selection, and ensuring that the design process of plastic materials and products considers the health and environmental impacts across the lifecycle, embedding approaches such as sustainable chemistry thinking in order to improve the safety and circularity of materials.32

Figure 15. Though growing, secondary plastics make up only 6% of total plastic production
In million tonnes (Mt), 1990-2019

A policy roadmap can guide action on plastics

More ambitious policies and actions are needed, including investments in innovation and interventions to increase demand for plastics that have a circular lifecycle, while restraining plastics consumption overall. Countries must strengthen their domestic policies to close leakage pathways, create incentives for recycling, and restrain demand while optimising plastics design. The OECD’s inventory of key regulatory and economic instruments in 50 countries suggests that the current plastics policy landscape is fragmented and can be strengthened significantly. The Global Plastics Outlook includes a policy roadmap that can be adopted by all countries to reduce the leakage of macroplastics, involving three increasingly ambitious phases (Figure 16):

This session provides ministers with an opportunity to discuss the key findings of the Global Plastics Outlook, and share current and planned domestic policy interventions to reduce plastics waste and encourage the development of more circular economy approaches to plastics. Ministers are also encouraged to highlight areas where further OECD support could be helpful, and where international co-operation is making a difference.

A policy roadmap can involve a stepped approach

Macroplastics account for 88% of plastics leakage, with 22 Mt of plastic materials leaking into the environment in 2019 alone.

Relevant OECD publications

- OECD (2022), Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options
- OECD (2021), A Chemicals Perspective on Designing with Sustainable Plastics: Goals, Considerations and Trade-offs
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