

Chapter 1. Synthesis and key messages

1.1. A critical opportunity for transformative action on biodiversity

2020 marks a critical juncture for one of the defining global challenges of our time: the loss of biodiversity and ecosystem services, which underpin nearly all of the Sustainable Development Goals (SDGs). Transformative changes are needed to ensure biodiversity conservation and sustainable use, and the delivery of the ecosystem services upon which all life depends. This report sets the economic and business case for urgent and ambitious action to halt and reverse global biodiversity loss. It presents a preliminary assessment of current biodiversity-related finance flows, and discusses the key data and indicator gaps that need to be addressed to underpin effective monitoring of both the pressures on biodiversity and the collective responses currently being implemented.

1.2. Global biodiversity loss and the international context

Biodiversity loss is one of the greatest risks of the 21st century. It undermines human health and well-being, societal resilience and progress towards the SDGs. It places severe costs on our economies and makes addressing other global challenges, such as climate change, much more difficult.

The planet is facing its sixth mass extinction, with the current rate of species extinction estimated to be as high as 1 000 times the background (pre-human) rate. In addition, widespread and rapid population declines are affecting even common species that are fundamental to ecological processes: since 1970, the world has lost 60% of its global vertebrate population, and more than 40% of insect species are declining rapidly.

Humans have transformed the majority of the world's ecosystems, destroying, degrading and fragmenting terrestrial, marine and other aquatic habitats, and undermining the services they provide. Natural forests declined by 6.5 million hectares per year from 2010 to 2015 (an area greater than the United Kingdom in 5 years), mangroves declined by 20% from 1980 to 2005, and natural wetlands declined by 35% between 1970 and 2015. **Business-as-usual projections are bleak:** coral reefs, for example, are projected to decline by a further 70-90% at a global average warming of 1.5° Celsius above pre-industrial levels, or by more than 99% if warming reaches 2° Celsius.

Ecosystems are moving closer to critical thresholds and tipping points which, if crossed, will result in persistent and irreversible (or very costly to reverse) changes to ecosystem structure, function and service provision, with the potential for profoundly negative environmental, economic and social consequences.

Key pressures on terrestrial, marine and other aquatic biodiversity include habitat loss and fragmentation (particularly from agricultural expansion and intensification), over-exploitation of natural resources (e.g. fish), pollution, invasive alien species and climate change. The root cause of biodiversity is the growing demand for food, fuel, water and land, combined with well-documented inefficiencies and resource misallocation in global production and consumption systems.

The G7 Environment Ministerial Meeting in May 2019 takes place at a crucial time. The year 2020 marks the end of the 2011-2020 Strategic Plan for Biodiversity (and, therefore, nearly half of the targets

under SDGs 14 and 15). Governments will meet in China to agree on a post-2020 global biodiversity framework. The new framework will influence national goals and policies, and thus our collective ability to stop biodiversity loss and deliver on the SDGs.

1.3. The socio-economic case for action

The socio-economic case for more ambitious biodiversity action is clear. Thousands of valuation studies are available at the local, regional and global scales, providing estimates of the benefits delivered by biodiversity and ecosystem services (e.g. pollination, climate regulation and water purification). The most comprehensive global estimate suggests that ecosystem services provide benefits of **USD 125-140 trillion (US dollars) per year** i.e. more than one and a half times the size of global GDP.

The costs of inaction on biodiversity loss are high and are anticipated to increase. The world lost an estimated USD 4-20 trillion per year in ecosystem services from 1997 to 2011, owing to land-cover change and an estimated USD 6-11 trillion per year from land degradation. Specifically, biodiversity loss can result in reduced crop yields and fish catches, increased economic losses from flooding and other disasters, and the loss of potential new sources of medicine (as the majority of drugs used for healthcare and disease prevention are derived from biodiversity).

Conserving, sustainably using and restoring biodiversity is vital to achieving many other policy objectives, including human health, climate-change mitigation and adaptation, disaster risk reduction, and water and food security. The associated economic values can be considerable: for example, the annual market value of crops dependent on animal pollination ranges from USD 235 billion to USD 577 billion.

The benefits derived from biodiversity and ecosystem services are considerable, but are systematically undervalued or unvalued in day-to-day decisions, market prices and economic accounting. Conventional accounting approaches and measures of economic performance (such as GDP) provide only a limited picture of an economy's health, and generally overlook the costs of ecosystem degradation.

Ongoing efforts to better assess and value biodiversity and ecosystem services, and integrate these values into decision-making are vital for halting biodiversity loss. National ecosystem assessments, which map, assess and value ecosystems and their services in order to inform and influence policy decisions, and natural capital accounting can support these efforts.

1.4. The business case for action

Business and financial organisations can have adverse impacts on biodiversity and ecosystem services through their operations, supply chains and investment decisions. The luxury group Kering, for instance, estimated the 2017 impact of its activities on the environment (e.g. carbon emissions, air and water pollution, and water consumption) at EUR 482 million (euros). **Valuing of biodiversity impacts by businesses and financial organisations, however, remains limited.**

Business and financial organisations also depend on biodiversity and ecosystems services for the production of goods and services. Coral reefs alone generate USD 36 billion per year for the global tourism industry. Biodiversity loss can have direct implications on business operations and value chains, e.g. by increasing input costs.

Business impacts on biodiversity can result in “responsible business conduct” risks to society and the environment. Biodiversity impacts and dependencies also create risks to business and financial organisations. Relevant risks to business and financial organisations include ecological risks, i.e. operational risks related to biodiversity impacts and resource dependency, scarcity and quality; liability risks, i.e. risk of legal suits; regulatory risks; reputational and market risks, linked to stakeholders' pressures or preferences changes; and financial risks.

The conservation, sustainable use and restoration of biodiversity can provide significant business opportunities, including long-term viability of business models; cost savings and increases in operational efficiency; increased market shares; new business models, markets, products and services; and better relationships with stakeholders. The global organic food and beverage market, for instance, is expected to grow 16% per year, to reach USD 327 billion by 2022.

Businesses' awareness of and commitment to biodiversity action remain too limited, despite some forward-thinking companies' growing awareness of biodiversity. A few companies have adopted industry-led commitments (e.g. the 2018 French Act4Nature initiative) and launched various biodiversity initiatives. Financial organisations, on the other hand, are less engaged with biodiversity than businesses, and much less engaged with biodiversity than climate change.

Business and financial organisations need to integrate biodiversity factors across key dimensions of business and investment decision-making, including strategy; governance; impact assessment and risk management; due diligence; disclosure and external reporting; industry standards, labels and certification schemes; and communication. Several accounting approaches are available to help businesses assess and measure their biodiversity impacts, dependencies and risks.

Policy makers, businesses, financial institutions and civil society need to co-operate to strengthen the business case for biodiversity and ecosystem services. Policy makers could notably:

- require business and financial organisations to publish long-term plans factoring in the assessment and management of biodiversity
- mainstream quantitative biodiversity assessments in reporting requirements (e.g. the EU Non-Financial Reporting Directive and its guidelines), impact assessments and risk-management tools
- set policies promoting improved due diligence for responsible business conduct (e.g. France's 2017 Duty of Vigilance Law), drawing on OECD Due Diligence Guidance for Responsible Business Conduct
- raise awareness among financial regulators of the systemic implications of biodiversity factors, which do not only have local impacts
- encourage businesses, financial organisations and other stakeholders to make and share commitments and contributions to biodiversity through the Sharm El-Sheikh to Kunming Action Agenda for Nature and People, in order to mobilise action in advance of COP15.

1.5. Opportunities for cost-effective restoration

The opportunities for restoration are vast. Globally, up to 6 billion hectares of land are degraded (i.e. 20 times the size of France). Ecosystem restoration can bring species back from the brink of extinction, reverse the trends in ecosystem decline and help overcome major societal challenges, such as climate change, disaster risk and achieving inclusive economic growth.

Restoration can deliver multiple benefits. Restored mangroves, for example, can protect society from storms, hurricanes and coastal erosion, sequester carbon, provide a nursery ground for fish, offer a source of fuel and support ecotourism. Recognising the multiple benefits of ecosystem restoration, governments and businesses have committed to this goal through several high-level global initiatives (e.g. the Bonn Challenge) and international agreements (e.g. SDG 15 and Land Degradation Neutrality under the United Nations Convention to Combat Desertification).

The benefits of restoration can far exceed the costs, particularly for inland and coastal wetlands, grasslands and forests. For example, achieving the Bonn Challenge target of restoring 46% of the world's degraded forests could provide USD 7-30 in benefits for every dollar spent. The net benefits depend on the objectives, degree of degradation, and ecosystem type and location, as well as the opportunity costs. In general, preventing the degradation and loss of an ecosystem is more cost-effective than restoring it.

Restoration can also offer new economic and business opportunities. In the United States, for example, restoration work provides direct employment to an estimated 126 000 workers and generates USD 9.5 billion annually in economic output.

Restoration action at a landscape scale can help maximise synergies and manage potential trade-offs between ecosystem services, as well as balance competing demands for land or ocean resources. It is important, therefore, to integrate restoration into broader land-use and marine spatial planning. Large-scale restoration should be an inclusive process, requiring the participation of a range of stakeholders, such as local and indigenous communities, local and national governments, and the private sector.

1.6. Data and indicator gaps on pressures and responses relevant to biodiversity

Tackling the biodiversity challenge requires a better understanding of the pressures on biodiversity and the range of actions (i.e. responses) that are being put in place to address the pressures. These actions include response measures such as policies, legislation, governance and finance.

Data and indicators pertaining to pressures on biodiversity have improved steadily over the past decade, but gaps remain. For example, information on the extent and ecological impacts of pollution (e.g. pesticides and marine plastics) is insufficient to target policies effectively, despite the risks posed to society and the economy.

Comparable and consistent data on the actions implemented are already collected in a harmonised way across countries for several responses – e.g. data pertaining to a selection of positive incentives (Aichi Biodiversity Target 3) and protected area coverage (Aichi Target 11) – **but lacking in many others.** For example, although mainstreaming biodiversity into national and sector-level plans, policies and processes is essential to improving biodiversity outcomes, it remains challenging to monitor progress across countries in a comparable way.

Establishing specific, measurable and (to the greatest extent possible) quantitative targets for the post-2020 framework is essential to improving the ability to monitor progress. More specific and measurable targets can enhance clarity on the actions needed by government, the private sector and civil society, and would improve the ability to monitor progress. Targets and their associated indicators need to be developed synergistically and iteratively, to ensure stronger linkages between the two.

A key challenge in monitoring aggregate progress towards the 2011-2020 Aichi Biodiversity Targets has been the lack of comparability across national-level indicators. While the CBD Indicator Framework lists 98 indicative indicators for use, uptake of these indicators at the national level has been low.

A proposal to adopt categories of indicators under the post-2020 global biodiversity framework, including a smaller set of headline indicators for which data are comparable and consistent across countries, could help prioritise the efforts of national governments and international organisations in addressing data and indicator gaps. This would also enable aggregation of national contributions to the common, global set of biodiversity targets.

International organisations, such as the OECD and the FAO, that collect and track data across countries in a consistent and comparable manner can offer substantial support. For example, more than 100 countries currently report to the OECD Policy Instruments for the Environment database, which covers biodiversity-relevant economic instruments relevant to Aichi Target 3 on incentives and the finance they mobilise. More comprehensive reporting by countries would further enrich the collective ability to monitor progress on this and other Aichi and post-2020 Targets.

Open and user-friendly data can help address data gaps. Governments can also improve the range and quality of data available by harnessing new and innovative technologies and approaches (e.g. citizen science, artificial intelligence and earth observation) for monitoring and analysing data.

1.7. Global biodiversity finance: A preliminary update

There is a major gap in the finance needed to halt biodiversity loss. Finance flows (i.e. expenditures) for biodiversity come from both domestic and international public and private sources. There are substantial opportunities to scale up biodiversity finance from all sources.

There remain considerable gaps and inconsistencies in biodiversity finance reporting and tracking. Data for several types of finance flows are not reported consistently and comparably across countries. For example, some Parties reporting to the CBD Finance Reporting Framework also include extra-budgetary and private finance in their finance on domestic biodiversity-related activities, whereas others do not. Consolidated data on biodiversity finance from multilateral development banks do not exist. There also exist several important data gaps on private finance flows. For example, finance from biodiversity-relevant bonds are difficult to isolate, given the divergence in nomenclature and definitions of relevant bonds (e.g. green bonds, environmental bonds and sustainability bonds).

The disparate and inconsistent nature of the available data sets on finance flows also entails significant risks of double counting and undercounting, undermining the robustness of any resulting estimates. Significant further analysis is needed to reach a more robust estimate of total global finance flows for biodiversity. France, which currently holds the G7 Presidency, has called on the OECD to undertake this task as one of the follow-up areas requested to this report.

With these caveats in mind, partial data on **domestic finance on biodiversity-relevant activities, as reported to the CBD Clearing House Mechanism by 40% of the Parties, was estimated at approximately USD 49 billion in 2015.** This estimate is based predominantly on finance from central (and in some cases, state and local) government budgets.

Drawing on several other data sources – most of which do not include domestic central public biodiversity finance – preliminary estimates suggest that finance flows to biodiversity amount to roughly USD 39 billion. This estimate includes finance flows from economic instruments (such as biodiversity offsets), philanthropy and impact investing, and may feature some double counting owing to the way the data are reported across different data sets. It is important to note that these two estimates are partial and incomplete, and cannot be added due to a degree of overlap. As noted above, further work is required to develop robust estimates of global biodiversity finance.

It is at least equally important to track, report and reform finance flows (e.g. subsidies) that are potentially harmful to biodiversity. The OECD conservatively estimates these flows at USD 500 billion per year (based on fossil-fuel subsidies and government support to agriculture that is potentially environmentally harmful), an order of magnitude ten times higher than global finance flows for biodiversity conservation and sustainable use. There exists large scope, therefore, to reform these types of finance flows to channel them towards biodiversity-friendly activities, or at least towards activities that are not potentially environmentally harmful.

It is also important to **evaluate better the effectiveness of existing finance flows – and the related policy and finance instruments** – in achieving biodiversity impacts. Both reforming harmful subsidies and reinforcing the effectiveness of biodiversity policy could come at no additional budgetary cost. Recent OECD work finds that few rigorous impact-evaluation studies have been conducted for terrestrial biodiversity, and even fewer for marine biodiversity. The OECD encourages rigorous impact-evaluation studies and the development of strategic criteria to help identify which policies, programmes or projects require more stringent evaluation.

1.8. Opportunities to scale up action for biodiversity

1. **Pursue and advocate for a clear, effectively structured and operational post-2020 global biodiversity framework that catalyses effective international action to halt and reverse biodiversity loss**
 - establish post-2020 targets that are as specific, measurable and quantitative as possible
 - ensure that targets and supporting indicators are closely linked in order to track progress and enhance the effectiveness of appropriate policy interventions
 - develop and agree on a focused set of headline indicators across state, pressure and response (i.e. action) indicators that are consistent and comparable across countries.
2. **Mobilise action through the *Sharm El-Sheikh to Kunming Action Agenda for Nature and People* in advance of COP15**
 - encourage business, financial organisations and other stakeholders to establish and share commitments and contributions to biodiversity through the *Sharm El-Sheikh to Kunming Action Agenda for Nature and People* and its online platform.
3. **Promote policy coherence to harness synergies and reduce trade-offs for biodiversity**
 - develop specific, measurable and ambitious post-2020 national targets for biodiversity, in consultation and co-ordination with a broad range of stakeholders, and clearly assign roles and responsibilities for action
 - integrate biodiversity goals and considerations into the national development plans and policies of key economic sectors and policy areas, such as agriculture, fisheries, energy, mining, urban development, trade and climate change
 - harness the potential of restoration and other nature-based solutions to deliver on multiple policy objectives, such as those listed under the SDGs, the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification, the United Nations Framework Convention on Climate Change and the Sendai Framework on Disaster Risk Reduction.
4. **Scale up policy instruments for biodiversity and get the economic incentives right**
 - strengthen ambition and scale up policy instruments for biodiversity conservation and sustainable use (including economic instruments, such as payments for ecosystem services, biodiversity-relevant taxes, fees and charges)
 - increase the extent and strengthen efforts to improve the management effectiveness of protected areas; enhance connectivity of natural terrestrial and marine areas through land-use and marine spatial planning instruments
 - monitor and evaluate the effectiveness of policy responses and other actions in achieving biodiversity outcomes and impacts; consolidate evidence to enable sharing of best practice and lessons learned among policy practitioners.
5. **Scale up and align finance for biodiversity from all sources**
 - scale up public and private finance for the conservation, sustainable use and restoration of biodiversity to address funding gaps, with support from public and development financial institutions and relevant financial instruments; in particular, better harness the ability of economic instruments to direct finance flows to biodiversity.
6. **Strengthen finance reporting and tracking frameworks**
 - develop finance tracking and reporting frameworks for public finance that are more consistent and comparable across countries. The Paris Collaborative on Green Budgeting is well placed to support these efforts

- develop finance tracking and reporting frameworks for private-sector finance that are more consistent and comparable across companies.

7. Reform subsidies harmful to biodiversity

- identify, assess and reform subsidies harmful to biodiversity at the national level, and expand internationally comparable information on those subsidies
- consider a peer-review process to reform subsidies harmful to biodiversity among Group of Seven (G7) and other countries.

8. Facilitate integration of biodiversity by businesses and financial organisations

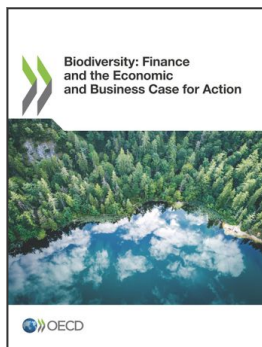
- mobilise G7 leadership to develop a consensus among stakeholders on a common approach for measuring and integrating biodiversity factors (impacts, dependencies, risks and opportunities) in business and investment decisions, notably calling on the OECD to launch a multi-stakeholder advisory group on biodiversity, business and finance
- invite the OECD to develop, as part of these efforts or independently, a set of practical actions on due diligence and biodiversity to support efforts by business, drawing on the *OECD Due Diligence Guidance for Responsible Business Conduct*
- harness the momentum and visibility of the SDGs, and enhanced climate action by business and financial organisations, to raise awareness on the need also to integrate biodiversity considerations in business and finance.

9. Assess and communicate socio-economic dependencies and impacts on biodiversity at geographic scales relevant to decision makers

- develop and reinforce the strategic and operational character of National Ecosystem Assessments (or similar assessments) – including through mapping and socio-economic valuation of ecosystem services – to ensure biodiversity-relevant decisions are well informed at the national and local scales
- develop and refine tools and methodologies for integrating the values of ecosystem services and the costs of ecosystem degradation into national accounts and decision-making.

10. Ensure an inclusive and equitable transformative change

- evaluate the distributional implications of policy changes, paying special attention to potential impacts on lower-income households, as well as local and indigenous communities
- develop a robust evidence base on the costs and benefits of action, including who stands to benefit and who stands to bear the costs
- devise targeted measures to address potential regressive impacts on the distribution of income and assets, and implement them together with the policy actions for biodiversity conservation, sustainable use and restoration
- reinforce direct public involvement in policy making and harness the potential of innovative methods to this aim (e.g. digital public consultations and deliberative polls)
- ensure that the benefits of biodiversity and ecosystem services are equitably shared across society today and for future generations.



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