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Reversing biodiversity loss – the case for urgent action

This statement has been created by the Science Academies of the Group of Seven (G7) nations. It represents the Academies' view on the magnitude of biodiversity decline and the urgent action required to halt and reverse this trend. The Academies call on G7 nations to work collaboratively to integrate the multiple values of biodiversity into decision-making, and to pursue cross-sectoral solutions that address the biodiversity, climate and other linked crises in a coordinated manner.

At its simplest, biodiversity describes life on Earth – the different genes, species and ecosystems that comprise the biosphere and the varying habitats, landscapes and regions in which they exist.

Biodiversity matters.

- Humans emerged within the biosphere and are both inseparable from it and fully dependent on it. Biodiversity has its own intrinsic value distinct from the value it provides to human life. For all species, it provides food, water shelter and the functioning of the whole Earth system. For humans, it is also an integral part of spiritual, cultural, psychological and artistic wellbeing[1].

- Almost every pressing issue for humanity is inextricably linked to biodiversity. Growth in global population, production, consumption and trade place increased stresses on biodiversity and the ecosystems that sustain us. Climate change dislocates species and their habitats. And the rise and spread of new pathogens (such as the coronavirus that causes COVID-19) can be linked to the loss of pristine landscapes, the wildlife trade and increased livestock production.

Biodiversity, the threats it faces, and the values different cultures attach to it, are locally and regionally specific.

However, there is a clear global trend – biodiversity is under serious threat.

- Today the Earth is losing biodiversity at a rate not seen since the end of the Cretaceous Period 66 million years ago, with the best available data suggesting that we are on the brink of a mass extinction event. Humans are the cause, with our demands on nature far exceeding its capacity to provides us with the goods and services we depend on[2].

- Despite clear and growing evidence, and despite ambitious global targets, our responses to biodiversity decline at the global and national levels have been woefully insufficient. The 2020 Global Biodiversity Outlook[3] reported that none of the 20 Aichi Biodiversity Targets, set out in the Strategic Plan for Biodiversity 2011 – 2020, had been fully achieved. Since the ratification of the UN Convention on Biological Diversity (UN CBD) in 1992, more than a quarter of the tropical forests that were standing then have been cut down.

But there is hope for a better way forward.

- To halt and reverse biodiversity loss by 2030, nothing less than transformational change[4] across technological, political, cultural, economic and social domains – locally, regionally and globally – is required.

- Just as nature's processes do not follow national borders, biodiversity loss is a global problem that requires coordinated action between countries. Biodiversity must be given far higher prominence and urgency in policy choices, and the opportunity presented by the adoption of a new UN Global Biodiversity Framework at the COP15 biodiversity conference must not be wasted. The publication of the Dasgupta Review on the Economics of Biodiversity[5] and the COP26 climate conference also provide opportunities for global thought leadership on the value of biodiversity and its centrality to human wellbeing.

- The G7 nations have a great capacity and responsibility to support the transformation that is needed. They directly experience significant levels of biodiversity loss and play a major role in the consumption of goods that rely on, and put pressure on, biodiversity worldwide. With only about 10% of the world population, these nations are consuming about 40% of the Earth's total sustainable biological productivity. Yet they also possess the resources to make a difference – from research networks to political influence to spending power.

- Understanding the multiple values of nature, which reflect the range of value systems around the world, will be central to addressing the biodiversity crisis[6].

- New approaches to valuing and accounting for biodiversity are required so that economies no longer decouple economic growth from the long-term sustainability of the biosphere. These might include natural capital accounting, green investments, ecosystem service valuation, nature-related financial disclosures and other forms of national and corporate accounting that change the behaviours of companies and investors.

- However, methods for ascribing monetary values to the biosphere are only part of the solution. They generally reflect nature's 'instrumental' value to humans and have limited capacity to describe nature's wide range of 'intrinsic' and 'relational' values[7], which are more difficult (or even impossible) to monetise but no less important.

- Beyond simply recognising multiple values, these values need to be understood and integrated into all forms of decision-making that relate to human wellbeing. This includes integration into national economic policies so that they consider a wider range of human wellbeing measures beyond Gross Domestic Product (GDP).

Transformational change will also require cross-sectoral solutions built on integrated Earth system thinking.

- Biodiversity and its destruction are inextricably linked to multiple Earth system interactions that couple human, economic and social activities to the biosphere, atmosphere, hydrosphere and lithosphere. This complexity makes tackling biodiversity loss challenging, but it also presents numerous opportunities for strategic action.

- Urgent action on biodiversity must happen in those sectors that cause biodiversity loss, whether directly or indirectly. This is particularly true of the global food and agriculture system, which represents the single greatest threat to Earth's biodiversity[8]. The sustainable development of agriculture – which will include maintaining or increasing sustainable agricultural yields while simultaneously protecting and restoring natural habitats – will be central to halting and reversing biodiversity loss.

- The biodiversity crisis intersects with the climate crisis. Climate change, if left unchecked, is likely to overtake land use change as the primary cause of biodiversity loss. Contributions to addressing both crises can be achieved through locally appropriate use of nature-based solutions to mitigate and build resilience to climate change, while also enhancing biodiversity and human wellbeing. These links can be recognised and exploited by countries through well-coordinated national climate plans (including adaptation plans) and National Biodiversity Strategies and Action Plans.

- Reversing biodiversity loss also requires rethinking consumption, including how the impacts of production and consumption are distributed geographically. Achieving this will require explicitly and transparently pricing into goods the impacts of production on biodiversity throughout the supply chain[9]. Widespread shifts in lifestyle, including a shift towards plant-based diets, will also be crucial.

In order to know whether attempts to halt and reverse biodiversity loss are effective, international monitoring networks need to be strengthened.

- Although some nations and regions have set up biodiversity monitoring systems, they are not globally connected and integrated. Many nations, particularly in the biodiversity-rich tropics, lack the resources to establish and maintain biodiversity monitoring systems. Moreover, while global research networks such as the Group on Earth Observations Biodiversity Observation Network[10] are in place to support the development of national and regional biodiversity observation networks, they do not receive direct funding from the G7.

- There is a clear opportunity for international cooperation to support a coherent global monitoring network for biodiversity observation, data management, forecasting and reporting. This will be an important feature of discussions at the COP15 biodiversity conference because it will enable Parties to assess progress against the targets in the new Global Biodiversity Framework. It will also serve regional and global assessments and support conservation planning and environmental impact assessments.

- Despite the importance of monitoring, current gaps in data are not good reasons to delay the urgent action that should be taken now to halt biodiversity decline. Equally, understanding the success of various interventions will rely not only on monitoring biodiversity itself, but also on monitoring the drivers of biodiversity loss.

Recommendations

Recognising the urgency and importance of addressing biodiversity loss in a concerted multilateral way, G7 nations should work together to raise the ambition to halt and start to reverse biodiversity loss by 2030.

RECOMMENDATION 1

Working in close collaboration with a broad range of stakeholders, including the private sector, civil society, indigenous groups and the scientific community, G7 nations should develop new approaches to valuing and accounting for biodiversity:

- in ways that recognise the multiple values of nature and the multiple dimensions of human wellbeing;
- in ways that can be integrated into all forms of decision-making, including national economic policy;
- in ways that reduce economic, social and health inequalities associated with the impacts of biodiversity loss;
- so that biodiversity is addressed in national and corporate accounting procedures; and
- so that economies no longer decouple economic growth from the long-term sustainability of the biosphere.

RECOMMENDATION 2

G7 nations should apply integrated Earth system thinking to generate cross-sectoral solutions that address the biodiversity, climate and other linked crises in a coordinated manner. For example, by:

- Establishing pathways that combine sustainable agricultural yields, improved nutrition for a growing human population, and biodiversity and climate protection;
- Incentivising the protection and restoration of natural habitats and the provision of ecosystem services, including by setting ambitious quantifiable targets for the coverage of designated land and marine protected areas and by encouraging the recovery of nature in rural and urban landscapes;
- Managing biodiversity and trade to minimise the emergence and spread of diseases;
- Using locally and regionally appropriate nature-based solutions to restore biodiversity while building resilience to climate change and contributing to net-zero climate targets;
- Building traceability into supply chains, as well as explicit transparency around the impacts of production and consumption on biodiversity, in order to influence individual and corporate purchasing decisions; and
- Supporting changes in lifestyles towards lower environmental footprints, including encouraging a shift towards plant-based diets.

RECOMMENDATION 3

G7 nations should support the development of a global monitoring network to strengthen countries' attainment of biodiversity targets, assist with regional and global assessments, and support conservation planning. For example by:

- Building human and technical capacity to monitor biodiversity in regions currently lacking the resources to track rates of change at the necessary resolution;
- Establishing a global knowledge and information system to support open data production and sharing, and to assist in the rapid detection and forecasting of trends to support conservation policy; and
- Harnessing technologies for monitoring biodiversity on the ground, from the air, and from space.

The G7 nations working together can help to halt and reverse biodiversity decline to ensure we have a thriving planet fit for future generations.

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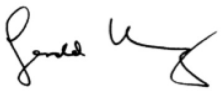

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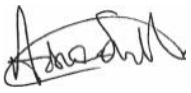

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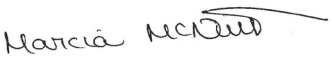

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