



Integrating biodiversity into sustainable production and consumption activities

The way forward for businesses

WG4 - Working Group on Biodiversity Communication

Key messages

- Biodiversity loss and the degradation of ecosystem services (ES) are among the greatest systemic risks to the global economy and the health of people and the planet.
- Protecting and restoring biodiversity is vital to avoiding future pandemics while tackling other global environmental challenges like climate change or land loss.
- Meeting the growing demand for agricultural commodities, biogenic resources and minerals has severe and significant impacts on biodiversity and on the provision of ecosystem services, on which business actors rely.
- There is urgent need to re-think consumption and production and take action to protect biodiversity and ecosystem services. The benefits of strong and early action outweigh the costs.
- Businesses must become game changers in shaping the required transformation towards sustainable production and consumption. The following action points describe ways to integrate the protection of biodiversity and ecosystem services into business activities:
 - Systematically integrate protection, restoration and sustainable use of biodiversity into business models. Risk management shall be improved through impact assessments, goal setting and developing tailored approaches to biodiversity protection.
 - Ensure transparency and traceability, as well as efficient use of materials along the value chains to guarantee sustainable production and, moreover, to gain the trust of consumers on the basis of reliable and verifiable information.
 - Consistently integrate the protection and sustainable use of biodiversity and ecosystem services at all stages of the product life cycle. Establishing circularity and durability as pivotal aspects in product design can reduce pressure on material consumption and associated impacts on biodiversity and ecosystem services.
 - Engage and participate in business coalitions for biodiversity to increase adoption of best-practices and to promote the wider dissemination of measures for biodiversity protection and restoration.
 - Use sustainability standards that include ambitious biodiversity protection criteria and independent certification systems for reliable consumer communication.

The urgent need for transformative change towards sustainable production and consumption

Nature and its essential ecosystem services (ES) provide the basis for societal well-being and all current and future economic activities. At present, however, biodiversity is being lost at an alarming speed; it is estimated that 23 % of global land area is already degraded. Over 85 % of wetlands have disappeared since 1970 and 32 million hectares of primary forest or recovering forest in the tropics were lost between 2010 and 2015 and, according to IPBES, about 1 million species are threatened with extinction if no action is taken [11]. The current, unprecedented loss of biodiversity therefore presents one of the greatest systemic risks to the global economy and the health of people and the planet [24]. Both production and extraction of raw materials for consumer goods are linked to impacts which include the conversion of biodiverse ecosystems (e.g. large-scale deforestation) as well as the overexploitation and pollution of land and seas [12]. The irreversible decline of biodiversity and ES in recent decades as well as recent global developments such as the Covid-19 pandemic are evidence that our current economic activities are exceeding the planetary boundaries, i.e. the safe operating space for humanity [17, 25]. The Dasgupta Report [6] highlights the need for far-reaching transformative change in society and business to conserve the natural capital that our economy depends on. We must act now to halt the devastating impacts of prevailing production and consumption patterns on biodiversity and ES worldwide while remembering that the benefits of strong and early action outweigh the short-term costs [6].

International momentum has developed around the global agenda for biodiversity. The number of upcoming regulations and policy strategies aiming to align all production activities and financial flows with biodiversity values [4] represent a turning point for traditional business models. Simultaneously, consumers are increasingly aware of the environmental impacts of their consumption choices. Hence, the demand for sustainable products is expanding. Although all value chains are dependent on biodiversity and ecosystem services, nature-related risks are undervalued in business decision making. There are legal requirements for businesses to account for the environmental risks to their operation and reputation, however, few take meaningful action to promote positive impacts resulting from their activities. Failing to integrate protection, restoration and sustainable use of biodiversity into business activities poses not only operational and financial risks, but also misses a chance for innovation, increasing resiliency of supply chains and gaining recognition in this field.

Business actors must be the game changers who actively shape the required transformation towards sustainable production and consumption. There are already several companies that have systematically identified the environmental impacts of their supply chains and encourage active and long-term engagement of their suppliers. Possible effective measures for the protection, restoration and sustainable use of biodiversity and ES range from increasing transparency along the supply chain through committing to sustainable sourcing to streamlining resource use. Other measures include embedding circularity in business models by producing durable and recyclable products, as well as promoting sustainable consumption choices through better consumer information.

This policy brief provides general recommendations and concrete starting points for business actors in integrating biodiversity into production and consumption. In the following, priorities for practical action in different key sectors are described and finally, concluding remarks about the way forward are presented.

Calls for action: Business actors have a key role to play!

Business actors are called to prioritise biodiversity and ES in all activities across their value chains and along the entire life cycle of their products. This issue must be systematically integrated in all economic sectors, both upstream and downstream. However, implementation should go beyond mere communication activities. Business actors can make significant contributions to the protection of biodiversity and ES through concrete and feasible measures such as:

- **Assessing the business impact on nature across all value chains and involvement of suppliers**

First, it is important to understand the impacts, hotspots, and improvement opportunities in the context of biodiversity. Companies are called upon to apply due diligence mechanisms to collect relevant information about their suppliers, raw materials, and production practices. In contrast to climate change, impact assessments for biodiversity and ecosystem services consider specific geographical aspects. The involvement of suppliers and local stakeholders in this process is crucial to build trust and cooperation along value chains [21].

- **Identifying priorities for goal setting and defining the approach for protection, restoration and sustainable use of biodiversity**

Based on the impact assessment, priorities can be identified and used as a frame for setting goals. The Science-Based Targets for Nature [16] will provide a good framework for companies to define, advance and measure progress towards concrete goals while addressing the drivers of biodiversity loss and operating within planetary boundaries. Depending on the defined approach, these goals can include commitments to zero deforestation or land conversion.

- **Ensuring sustainability of business and value chain activities through traceability and transparency**

The demand for transparency is increasing among consumers. According to the UEBT 2020 Biodiversity Barometer, 82 % of respondents consider that companies have a moral obligation to ensure a positive impact on people and biodiversity, and transparency ranks higher on the list of consumer expectations year after year [20]. Transparency requires knowledge of the state of value chains and communication both internally and externally. The tracking of products from source to consumer along the whole life cycle chain is essential for a trustful impact assessment and risk management [2, 8, 14]. Transparency, traceability and information about the actions for minimizing the impacts will be rewarded with trust and brand loyalty. Natura Cosmetics, for example, has gained recognition for sourcing with respect for people and biodiversity in Brazil, its home market. A survey carried out in 2020 by the Union for Ethical Biobased Trade revealed that 55 % of consumers surveyed in Brazil knew the company and its efforts [20].

Interested business actors can find further information, resources, guidelines and inspiring examples for biodiversity communication in a [Toolkit](#) provided by the One Planet network's Consumer Information Programme.¹

¹ <https://www.oneplanetnetwork.org/programmes/consumer-information-scp/biodiversity>

- **Comply with voluntary sustainability standards**

Voluntary sustainability standards (VSS) offer guidance to businesses by focusing on relevant actions to address biodiversity concerns along value chains and promote the protection of biodiversity. Moreover, VSS provide platforms for knowledge exchange and showcasing best practices, thus providing a source of inspiration for others. Complying and collaborating with credible and independent VSS and their networks translates into benefits for business actors such as improving measurability and transparency with respect to the actors' biodiversity-related performance. Standards that include external independent third party verification should be preferred due to higher credibility [20].

- **Support and adhere to existing eco-labelling schemes that include biodiversity criteria**

Eco-labelling can be used in B2B, B2C and B2G² communication to demonstrate preferable products, services or companies based on environmental, social, health and safety criteria or other performance metrics. Moreover, by requesting suppliers to meet the relevant ecolabel requirements, businesses can drive forward improved production processes. There are already standards and Type I eco-labels which include biodiversity considerations taking a life-cycle perspective by requiring the protection of virgin forests, prohibiting the use of pesticides or the use of aquatotoxic chemicals in the production process. The utilisation of these eco-labels supports business actors in promoting consumer information about their products and services and strengthening their trademark.

Business actors can access information about applicable eco-label schemes for their sector and region in the [Global Ecolabelling Network](#)³.

- **Consistent consideration of biodiversity and ecosystem services in all product stages**

Biodiversity and ecosystem services can be integrated in business activities already in the stages of design and product development. Eco-design and alternative business models can contribute to increased circularity (e.g. design for recycling and durability; Product as a Service; second-hand, repair and remanufacturing services) and create closed material loops of critical and scarce resources, thereby avoiding extraction and the high impacts on biodiversity hotspots associated with it. This approach represents additional benefits in terms of innovation and brand differentiation but also efficiency and waste minimisation. Transparency and traceability are linked to this action point, helping to understand where raw materials come from and enabling improved prioritising of action in those supply chains where biodiversity risks are identified.

- **Strengthen business collaboration and coalitions for biodiversity**

Business actors are called to initiate, participate, and collaborate in relevant stakeholder coalitions for biodiversity protection. The work of similar coalitions follows a cross-sectoral and multi-level cooperation approach to coordinate the necessary efforts as well as increase the adoption and outreach of the measures [18]. They also bring together stakeholders from all stages of the value chains such as producers, retailers, and consumers around efforts to address the protection of biodiversity and ES. Engagement and multi-level stakeholder collaboration is part of the way forward.

More detailed information about current state and future requirements in information, communication and international cooperation for biodiversity, including good practice examples and examples of relevant stakeholder coalitions, can be found [here](#)⁴.

² B2B: Business to Business, B2C: Business to Consumer, B2G: Business to Government

³ <https://www.globalecolabelling.net/eco/green-certification-by-country/>

⁴ Teufel et al. (2021): Sustainable consumption for biodiversity and ecosystem services – current state and future requirements in information, communication and international cooperation. <https://tinyurl.com/communication-biodiv>

Key sectors and priorities for action

• Food and Agriculture

The impacts of this sector on biodiversity and ES are primary linked to land use changes and greenhouse gas emissions from intensive agricultural production systems worldwide. These systems are connected to agrochemical inputs and overuse of natural resources with consequences such as biodiversity loss, eutrophication, a decline in soil organic matter, soil erosion, compaction and salinisation [3]. The agricultural and food sector accounts for 40 % of quantified biodiversity losses in most countries and regions and therefore requires urgent action to ensure global food security [5], [13], [22].

Business actors in this sector are responsible for ensuring that the supply of primary agricultural products is not linked to deforestation or destruction of ecosystems. Traceability and transparency are especially needed in the case of commodities used for animal feed and the meat industry such as palm oil, soy, and fish. Products from organic farming, or alternative practices such as agroforestry systems or regenerative agriculture can have major environmental benefits. Purchasing certified products is one way to include more trustworthy products in business supply.

• Textiles & Clothing

Most environmental impacts in this sector (water use, carbon emissions, waste, water and air pollutants) [15] are linked to the production of raw materials for natural and synthetic fibres. However, biodiversity impacts and risks are present in all stages of the lifecycle of textile products [12]. The complexity of textile and clothing value chains which results from its global distribution and diverse range of raw materials, manufacturing facilities, and consumer markets [1], makes transparency and traceability in this sector even more relevant. To embed biodiversity into their business strategy, actors must assess their impacts (considering materials, technology, and processing-location) in each specific geospatial context [19]. Relevant action points include switching to organic production of natural fibers, reducing chemicals use, reducing waste and all forms of pollution, and working towards resource efficiency through design for durability and circularity. Certification is a meaningful way to prove the implementation of these measures.

For more information about concrete action priorities in the textile value chain see 2020 UNEP's [Global Stocktaking on Sustainability and Circularity in the Textile Value Chain](#)⁵.

• Housing & Construction

Besides the loss of land for new infrastructure, the most relevant activity for the protection of biodiversity and ecosystem services in the housing and construction sector is the extraction of building materials like wood as well as sand and gravel. For this reason, business actors from this sector are urged to contribute to closing material cycles by increasing the reuse and upcycling of building materials, thereby reducing the need for new building materials. Additional actions to contribute to biodiversity protection and restoration in this sector involve increased efforts to develop and include bio-based and low carbon solutions (e.g. wood, natural isolation materials) in construction and measures to ensure a legal and sustainable sourcing of timber products.

⁵ https://www.oneplanetnetwork.org/sites/default/files/unep_sustainability_and_circularity_textile_value_chain_1.pdf

- **Tourism and Leisure**

Tourism and conservation are closely related. Not only do many parts of this sector rely directly on biodiversity and ES [23], such as nature-based tourism and ecotourism, but also many protected ecosystems depend on tourism revenue. Mobility, infrastructure, gastronomy, and certain outdoor activities are also directly linked to concrete environmental impacts [9], [10] and must therefore be addressed as part of the measures for biodiversity protection and restoration in this sector.

In biodiversity-rich areas, tourism actors must integrate the sustainable management of biodiversity and include ES in the design of tourism-related projects and services to contribute to raising consumer awareness for the issue of biodiversity protection. In areas foreseen for tourism activities, impact assessments must always be conducted, and local communities should be involved from the early stages of planning and in the operation stage. Small local enterprises, operators and agencies shall be encouraged to benefit from tourism and sustainable use of biodiversity, for example by training and providing qualified guides from local communities. Other “on location” actions include sourcing local produce where possible, reducing animal products in food and catering, developing strategies against food waste and pollution, and strengthening waste management practices, particularly in terms of plastic reduction.

- **Information and Communication technologies (ICT)**

The extraction of specific resources for products in the ICT sector (smartphones, laptops, etc.) depends on mining activities located all around the world. The impacts of mining on biodiversity and ES differ both in type and magnitude. However, techniques like open-cast mining (e.g. gold, copper) are often located in very sensitive (tropical) natural areas, causing the direct destruction of biodiverse hotspots [7].

To contribute to biodiversity protection, actors in the ICT sector are called upon to increase transparency and traceability along their complex value chains and to implement resource efficiency measures in their production. This is particularly relevant for all minerals and critical raw materials required for electronic devices. In terms of product design, this sector can take action by increasing their efforts on extending product lifetimes and innovation cycles as well as on design for circularity.

Concluding remarks: The way forward

The alarming data on significant biodiversity loss and the degradation of ecosystem services show the acute need for all societal actors to unite to halt this loss. In the face of a post-2020 global biodiversity framework, business actors need to work together with governments and civil society to address environmental issues. All actions taken in this regard shall pursue the transformative changes in economic activities and consumption patterns required to move beyond unsustainable systems in the business-as-usual scenario.

The course of action is clear. In this policy brief, a series of action points have been described. The different ways in which business actors can address current environmental challenges are already known and forerunners in this field have demonstrated exemplary approaches. It is time to act now. The way we consume and do business cannot continue at the cost of destroying our natural capital, the basis of human life.

A central point for business actors is to focus their efforts on integrating biodiversity considerations into their value chain management, to identify hotspots, improve their performances and minimize impacts on biodiversity and ES. A systematic approach is key, based on impact

assessments, transparency, science-based targets and defining actions and indicators for progress monitoring. Business actors cannot rely on technology alone to remediate biodiversity impacts resulting from their activities. While networking and communication activities should be part of the work, it is important to remember that this does not substitute the implementation of measures required to achieve positive outcomes for biodiversity protection and restoration in business activities.

The paradigm of seeking economic growth at the expense of damaging nature is not sustainable. The linkages between consumption, trade, habitat loss and global health are now clearer than ever, as we can now imagine the potential social and economic damages resulting from future zoonotic pandemics. Business-as-usual will only impair value chains and destabilize markets in the short term, and result in even more dramatic consequences in the long-term.

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