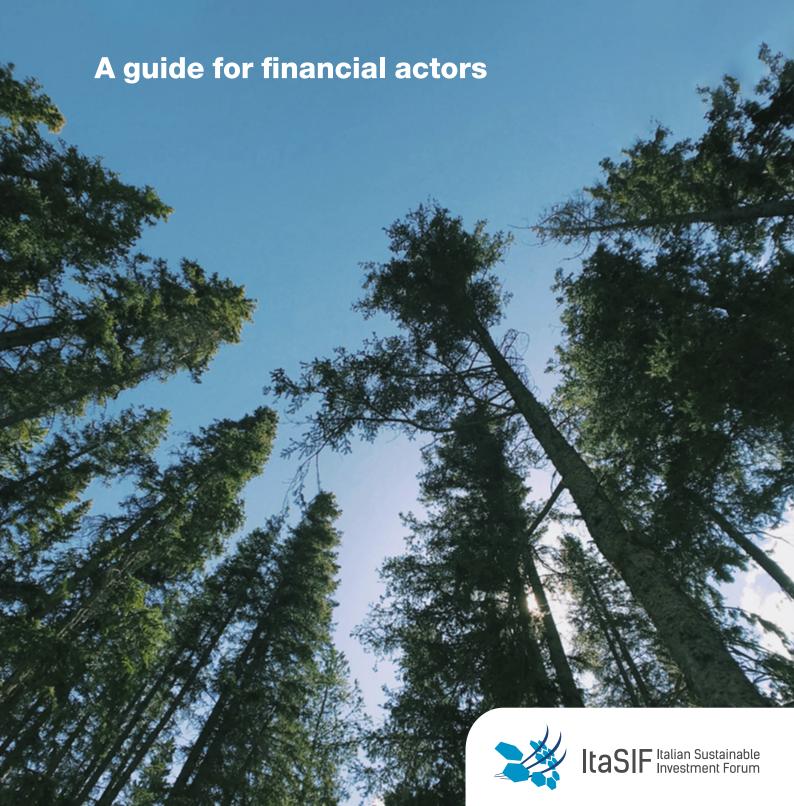
Sustainable finance and biodiversity



Executive summary

Human well-being and survival depend on the complex interactions between living organisms in nature. An adequate level of biodiversity maintains ecosystem balance, providing essential benefits for humans, including clean air, drinking water, climate regulation, pollination, soil regeneration, habitat creation and maintenance, and the prevention of hydrogeological instability. Furthermore, biodiversity represents a crucial factor in mitigation (thanks to the absorption of CO₂) and adaptation to climate change.

To enhance the understanding of the topic and increase awareness of the economic and financial value of biodiversity, the Italian Sustainable Investment Forum (ItaSIF) has launched a working group exclusively for its members, which is intended for dissemination and informational purposes. Additionally, it aims to provide guidelines for financial operators on integrating biodiversity into financial policies, processes, and products.

BIODIVERSITY TODAY

Despite the benefits mentioned, human activities generate highly negative impacts on biodiversity: every day, around 50 living species disappear, a rate that is estimated to be up to 1,000 times higher than the natural extinction rate (ISPRA 2024b).

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) identifies several direct and indirect causes of the ecosystem crisis (IPBES 2019). Direct causes of biodiversity loss include: direct exploitation (for example, fishing or intensive agriculture); changes in land and/or sea use (for example, deforestation); climate change; air, soil and water pollution, and presence of alien and invasive species. The impact of these factors varies by geographical area; however, on a global scale, the main culprits are changes in land and/or sea use and the direct exploitation of resources (IPBES 2019).

At the international level, the most significant initiative for biodiversity conservation is the Kunming-Montréal Global Biodiversity Framework (GBF), signed by 196 countries. Its goal is to preserve, improve, or restore ecosystems and prevent species extinction.

THE ECONOMIC VALUE OF BIODIVERSITY

Awareness of the economic and financial significance of biodiversity is increasingly spreading. In fact, more than half of the world's GDP (around US\$44 trillion) is closely tied to natural resources (World Economic Forum 2020), and entire economic sectors directly rely on ecosystem services (for example, agriculture and the food industry, textiles, tourism, construction). The economic damages associated with biodiversity loss and environmental degradation are enormous. For example, costs related to invasive alien species have quadrupled every decade since 1970, reaching US\$423 billion in 2019 (IPBES 2023).

There is a direct connection between the stability of the natural ecosystem and that of the economic system: the loss of biological diversity increases the risk of extreme climate-related events and jeopardises food and water security. Furthermore, habitat loss and species decline can diminish agricultural and fisheries productivity, causing direct adverse economic impacts for these sectors.

From a double materiality perspective, it is necessary to consider both the risks stemming from the loss of biodiversity and the impacts of economic activities on ecosystems. Regarding risks, these can be categorised similarly to climate risks: physical risks (related to disruption in ecosystem balances and the loss associated with essential services) and **transition risks** (resulting from challenges companies and investors face in anticipating regulatory, market, and technological developments). These risks, in turn, can impact **financial risks** such as credit and counterparty, operational, market, and liquidity risks. Therefore, financial institutions must carefully evaluate and manage these risks, as highlighted by the Network for Greening the Financial System (NFGS).

Furthermore, achieving a global reversal of the biodiversity decline trend by 2030 will require an annual investment ranging between US\$722 and US\$967 billion over the next decade. However, there remains a significant financing gap estimated at a range between US\$598 and US\$824 billion per year (Paulson Institute 2020). In contrast, current public and private financial flows associated with negative environmental impacts amount to almost US\$7 trillion annually (UNEP 2023). Therefore, it is essential to redirect finan-

cial flows away from sectors and projects with negative environmental impacts towards those that positively contribute to its protection and restoration.

INTEGRATING BIODIVERSITY INTO FINANCIAL PROCESSES AND PRODUCTS

Financial actors have different tools, methodologies, and approaches at their disposal to integrate biodiversity considerations into their processes and products. These include indicators to analyse issuers' transition plans; exclusions and disinvestment from sectors, companies and countries with the most negative biodiversity impacts; green bonds and Sustainability-Linked Bonds to finance ecosystem conservation or restoration projects; nature-related certificates and biodiversity credits to demonstrate measurable improvements; ad-hoc insurance coverage to mitigate physical and transition risks, leveraging nature-based solutions.

In conclusion, financial actors can follow some guidelines to reduce negative impacts on biodiversity and increase positive outcomes. Firstly, it is crucial to incorporate biodiversity analyses and assessments (covering both risks and impacts) into governance frameworks, internal decision-making processes, and the offering of products and services. Additional recommendations include: publishing a sustainability report annually that incorporates, where relevant, the ESRS E4; encouraging investee, financed or insured companies to collect and publish data on biodiversity-related risks and impacts; joining global initiatives such as the Finance for Biodiversity Pledge; engaging in dialogue and collaboration with other stakeholders (financial and otherwise) to **improve standards** for assessing and measuring biodiversity-related risks and impacts; integrating biodiversity protection in all lobbying and advocacy activities with public institutions.

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