



DIGITAL WAYS FOR BIODIVERSITY CONSERVATION

PRIORITIES AND RECOMMENDATIONS FOR A SHARED AGENDA



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CÁTEDRA UNESCO EM
BIODIVERSIDADE E CONSERVAÇÃO
PARA O DESENVOLVIMENTO SUSTENTÁVEL
UNESCO CHAIR IN
BIODIVERSITY SAFEGUARD
FOR SUSTAINABLE DEVELOPMENT

FOREWORD

Biodiversity is the infrastructure of life. It underpins every economy, every supply chain, every community, and every business. The food we produce, the water we use, the materials we extract, the energy systems we build, and the resilience of our societies all depend on healthy ecosystems and the natural capital they provide. The accelerating loss of biodiversity is therefore not only an environmental crisis—it is an economic, social, and strategic challenge that will define the resilience and competitiveness of nations and industries in the decades ahead. This is also a defining moment for digital technology.

Digital technologies are becoming the operating system for the biodiversity transition. Artificial intelligence, satellites, remote sensing, sensors, blockchain, advanced analytics, and shared data platforms are enabling us to monitor ecosystems in real time, strengthen supply-chain transparency, reduce nature-related risks, mobilize finance, and measure progress with a level of precision that was unimaginable only a few years ago. The convergence of digital innovation and sustainability is creating the foundation for a new generation of solutions capable of protecting and restoring nature at scale.

For business leaders, this is not a peripheral sustainability issue. It is a core strategic agenda. Organizations that understand their dependencies on nature, integrate biodiversity into their operations and value chains, and deploy digital technologies responsibly will be better positioned to manage risk, strengthen resilience, drive innovation, attract investment, and create long-term value. Biodiversity stewardship is increasingly becoming a source of competitiveness, trust, and leadership. Responsible digital innovation can help businesses move beyond compliance towards measurable impact, enabling a more resilient and sustainable global economy.

This report reflects GeSI's conviction that digital technology should be a force for good. Our mission is to harness the transformative power of digital innovation to accelerate sustainable development, and biodiversity is one of the most urgent frontiers of that mission. The recommendations presented here are more than a collection of ideas—they constitute an implementation agenda. They call for measurable biodiversity metrics, shared digital infrastructure, responsible governance of emerging technologies, stronger collaboration between science, business, finance, and government, and sustained investment in the capabilities required to scale solutions globally. Most importantly, they call for partnership. No single company, institution, or government can solve the biodiversity challenge alone. The future will be built through ecosystems of collaboration that connect digital innovators, conservation scientists, policymakers, indigenous communities, investors, and business leaders around a shared purpose.

I would like to express my deepest gratitude to Professor Helena de Freitas, Chair of the UNESCO Chair in Biodiversity Safeguard for Sustainable Development at the University of Coimbra, whose scientific leadership, vision, and unwavering commitment have been instrumental in shaping this work. Her ability to bridge science, policy, and society exemplifies the collaborative leadership that the biodiversity agenda requires. We are living through a defining decade for humanity's relationship with nature. The decade to 2030 will determine whether we merely document biodiversity loss—or help reverse it. The future of business and the future of nature are no longer separate conversations; they are the same conversation. Our task now is to ensure that the digital revolution becomes a biodiversity revolution. I hope this report serves as a catalyst for implementation, investment, innovation, and collective action, and that together we can build a future where digital technologies help nature, business, and society thrive together.



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FOREWORD

BIODIVERSITY FUTURES: CONNECTING TECHNOLOGY, NATURE AND PEOPLE

When Biodiversity Futures was launched in 2023, its central premise was clear: the biodiversity and digital agendas could no longer evolve separately. Digital technologies were rapidly transforming our capacity to observe, understand and monitor the living world: from satellites, sensors and environmental DNA to artificial intelligence, bioacoustics and citizen science. The challenge was, and remains, to turn that technological potential into meaningful outcomes for nature and society.

Today, this challenge is even more urgent. The Kunming–Montreal Global Biodiversity Framework (GBF) has established a shared global ambition and 23 targets to be achieved by 2030. With only a few years remaining, the question is no longer simply what technology can do for biodiversity, but how it can help deliver measurable change at the scale and speed required.

This renewed phase of Biodiversity Futures will therefore focus on where technology is already making a difference, but also on how it can help reshape the relationship between people and nature. Biodiversity conservation ultimately takes place in landscapes and seascapes that people inhabit, use, value and contest. Successful solutions must therefore recognise communities not simply as beneficiaries or sources of data, but as active participants in knowledge creation, decision-making and stewardship.

This becomes particularly important where conservation, livelihoods, infrastructure, agriculture, energy and other land and sea use compete for the same space. We need new forms of governance capable of navigating complexity and conflict, combining scientific evidence, local and Indigenous knowledge, participatory approaches and digital technologies. Properly designed, technology can help make different values and trade-offs visible, support transparent deliberation, explore alternative scenarios and create the conditions for more informed and legitimate consensus-building. This extends an important principle already present in the original programme: digital tools should support the co-management of natural resources and integrate biocultural diversity, rather than simply provide more data.

At the same time, biodiversity must become a much more explicit dimension of spatial and territorial planning. Protecting isolated areas will not be sufficient. Ecological connectivity — allowing species, genes and ecological processes to move across increasingly fragmented landscapes and seascapes — must become a fundamental planning principle. Digital mapping, Earth observation, AI and scenario modelling can help us move towards planning systems that are genuinely biodiversity-inclusive, identifying where development can occur, where ecological functions must be maintained or restored, and how connected networks of nature can coexist with human activities.

The ambition of Biodiversity Futures is therefore broader than showcasing technological innovation. It is about demonstrating how technology, combined with ecological knowledge, new governance approaches and meaningful participation, can help societies live with nature, make better collective decisions and redesign landscapes and seascapes for both biodiversity and people.

Biodiversity Futures is ultimately about connecting what has too often been treated separately: technology and ecology, people and nature, conservation and development, turning those connections into practical pathways for achieving the Global Biodiversity Framework by 2030.



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02 | Executive Summary

ABOUT THIS DOCUMENT

This report aims to provide technology and science stakeholders with recommendations on how to accelerate the role of digital technologies in biodiversity knowledge and conservation, based on discussions at the Digital with Purpose Global Summit 2023 in Lisbon, expert opinion, and literature.

KEY MESSAGES

Biodiversity Crisis: Biodiversity, encompassing species diversity, genetic resources, and ecosystems, is essential for human well-being. However, human activities have significantly impacted the planet's biodiversity, with 1 million species facing extinction.

Urgency for Action: Despite global promises set out in the Aichi Biodiversity Targets and the Sustainable Development Goals, progress has been slow. With only seven years to fulfil new targets for 2030, urgent action is needed to address the crisis.

Technology's Role: Digital technologies play a crucial role in understanding, monitoring, and conserving biodiversity. They offer diverse solutions, from remote sensing to citizen science apps, providing new tools for conservation efforts.

Opportunities and Challenges: Digital solutions offer immense potential, but also face limitations and challenges. These include concerns about technology and data accessibility, environmental impact, and technical limitations, as well as the need for collaboration and effective communication.

KEY ACTIONS

- **SOLVE:** Commit to reverse biodiversity loss and address its drivers.
- **UNDERSTAND:** Accelerate efforts to comprehend the diversity of life on Earth and its contributions to society.
- **COLLABORATE:** Emphasize active cooperation between technology companies, biodiversity experts and conservationists, local and indigenous populations, and other stakeholders.
- **DEVELOP:** Create solutions through bottom-up dialogue, considering business models, tools, and environmental impacts within an ethical framework.
- **SUPPORT:** Ensure adequate funding for long-term projects, investment in research infrastructure, and capacity building, with fair redistribution of resources and knowledge.
- **TRAIN:** Provide targeted training in digital technologies while preserving and sharing traditional skills and knowledge systems.
- **COMMUNICATE:** Effectively convey the importance of biodiversity, make scientific knowledge accessible, and engage all sectors of society.

RECOMMENDATIONS

- 1.** Harness digital technologies to develop a universally accepted biodiversity metric for assessing progress towards concrete biodiversity targets.
- 2.** Foster collaboration between technology and biodiversity stakeholders to enhance mapping of life on Earth, establish priorities and fill data gaps.
- 3.** Establish a global catalogue of vernacular names of flora, fauna and fungi to complement scientific names, valuing and preserving local and indigenous knowledge.
- 4.** Intensify efforts to digitize and provide open access to scientific collections and data worldwide, maximizing the power of information provided by biological specimens.
- 5.** Prioritize the development of technologies for understanding the ocean, as current methodologies have strong limitations.
- 6.** Facilitate targeted, collaborative meeting opportunities, addressing specific needs and recommendations, intensifying north-south and south-south collaborations.
- 7.** Encourage further citizen involvement in data collection and conservation through participatory science initiatives, fostering a deeper appreciation for biodiversity's significance.
- 8.** Foster digital tools for co-managing natural resources, integrating biocultural diversity considerations, to craft sustainable solutions for effective nature conservation.
- 9.** Create guidelines for the responsible use of digital technologies in biodiversity, taking into account sustainability, fairness, privacy, accessibility, cultural diversity, and ethical considerations.
- 10.** Kickstart a networking initiative involving stakeholders from the financial, biodiversity, and technology sectors to discuss funding needs and opportunities.
- 11.** Develop databases and monitoring platforms to track the commitment to increase financing for biodiversity to USD 200 billion per year by 2030.
- 12.** Facilitate open discussions to pinpoint training requirements and standards for the advancement and implementation of digital technologies in biodiversity.
- 13.** Find innovative ways to raise awareness, train, and involve the media in biodiversity communication using digital technologies and available biodiversity data online.
- 14.** Produce maps of biodiversity in local environments to enhance knowledge of 'everyday nature' and connect people to biodiversity issues.
- 15.** Establish a permanent repository for sharing available technologies to address specific biodiversity needs, building on existing initiatives and providing regular reports.



03 | DIGITAL WAYS FOR BIODIVERSITY CONSERVATION

This report aims to provide technology and science stakeholders with recommendations on how to accelerate the role of digital technologies in biodiversity knowledge and conservation. Based on discussions at the Digital with Purpose Summit 2023 in Lisbon, expert opinion and literature, it provides an overview of existing biodiversity-related digital technologies, identifies challenges and opportunities, and proposes steps to strengthen the link between technology and the biodiversity agenda. The 'Biodiversity Futures' programme at DwP2023 was co-organised by António C. Gouveia and Helena Freitas, with the collaboration of Ricardo Garcia in the production of this document.

BIODIVERSITY IN DANGER AND WE ARE NOT DOING ENOUGH ABOUT IT

Biodiversity is the variety of life forms and habitats on Earth. It encompasses the diversity of species, genetic differences among them, and the array of ecosystems they form. It provides us with goods and services, material and immaterial, that are essential to our existence and well-being. Only by protecting biodiversity can we ensure the functioning of the ecosystems that sustain nature's contributions to people.

But we all know that the world is facing a biodiversity crisis due to human activities. The most comprehensive assessment of global biodiversity to date¹ tells us that we have significantly altered most of the Earth's land surface and impacted its oceans. Some 85% of the world's wetlands and 50% of its coral reefs have been destroyed. Forest cover has declined in highly biodiverse regions, particularly in the tropics. One in four known animal or plant species that have been studied in detail is threatened with extinction. A total of 1 million species could become extinct soon, at a rate unprecedented in the last 10 million years.



Yet, we are not doing enough to halt biodiversity loss and degradation. The Aichi Biodiversity Targets, set by the United Nations (UN) in 2010, were largely missed by the 2020 deadline. Just six of the 20 targets were met, and only partially². We are now far from delivering on the promises made in 2015 to protect and sustainably use marine and terrestrial ecosystems and natural resources by 2030, as set out in the Sustainable Development Goals. Halfway to that deadline, less than 30% of progress indicators for Goals 14 ('Life under Water') and 15 ('Life on Land') are on track to be met³. Problems such as ocean pollution, overfishing, desertification, forest loss and the lack of sufficient protected areas are not being adequately addressed.

In December 2022, governments adopted the Kunming-Montreal Global Biodiversity Framework, a fresh round of commitments to preserve Earth's living environment. The framework established 23 new biodiversity targets for 2030. Now, we have just seven years to fulfil these renewed promises – a split second compared to the centuries of aggression against nature that created the problems we are now trying to solve.

We do not have time on our side. We must act, and fast.

TECHNOLOGY IS NEEDED, AND IT IS ALREADY HELPING

Technology has always played a role in biodiversity knowledge and conservation. Early naturalists relied not only on pencil and paper to document species and habitats during their expeditions, but also on plant presses, compasses, binoculars and microscopes. As technology evolved, so did the understanding of how our interactions with nature affected ecosystems and resources.

Technological innovation is now seen as a lever for the transformative change society must undergo to address the biodiversity crisis. The scale of the challenges we face requires new tools to amplify our capacity to collect, analyse and share data, to scale up our conservation efforts and make them more efficient, to identify and predict trends, to generate awareness among all sectors of society, and to foster collaboration between different sectors and stakeholders. This is where the digital and sustainability agendas meet.

The good news is that digital technologies already offer a wide range of solutions for understanding, monitoring and protecting biodiversity. Satellites, drones, sensors and smartphones have improved our ability to observe, monitor and catalogue the functioning and health of ecosystems. Artificial intelligence is being used to compile and analyse large data sets in ways that were unimaginable just a few years ago. Technologies that have been used for decades, such as camera traps, are now coupled with computer vision and machine learning. Mobile apps promote citizen science and conservation awareness among the public. Online repositories, libraries and other platforms facilitate data sharing and collaboration across the scientific community. Blockchain, bioacoustics, virtual reality and many other technologies are adding to the menu of new tools for biodiversity research and conservation.

The list is immense and inspiring. A simple search conducted during the preparation of this report yielded information on nearly 300 projects, infrastructures and applications. There are many areas that illustrate the vast scope of today's use of digital technologies for biodiversity purposes:

- Carbon offsetting
- Citizen science
- Climate adaptation
- Data collection, analysis and sharing
- Digital arts and storytelling
- Disease surveillance
- DNA barcoding
- Ecosystem assessment and valuation
- Education and awareness
- Financial instruments
- Fisheries management
- Management of natural areas
- Fundraising
- Genome conservation
- Geospatial analysis
- Prevention of illegal activities
- Mobile field guides
- Pest monitoring and forecasting
- Pollution monitoring
- Predictive modelling
- Species identification
- Sustainable consumption
- Sustainable tourism
- Preservation of traditional knowledge

BOX 1: EXAMPLES OF TECHNOLOGIES USED TO OBSERVE, STUDY AND PROTECT NATURE

- **Remote Sensing**

Remote sensing uses a variety of technologies such as satellites, drones, radar, LiDAR, GPS, GIS and sensors to map and monitor ecosystems and detect illegal activities such as poaching, logging and illegal trade. Online forest monitoring platforms, for example, combines satellite imagery and radar data to create maps that allow anyone to track deforestation, forest fires, ghost roads and other changes in forest cover around the world in real time.

- **Artificial intelligence**

AI is a powerful tool for monitoring nature on a larger scale. Machine learning has been instrumental in collecting and analysing large amounts of data and predicting changes in ecosystems, using historical and environmental variables. Computer vision makes it possible to identify species and their behaviour from images taken by camera traps or satellites – currently, the most common application of AI for biodiversity monitoring. There are several AI devices available for the detection of illegal activities related to nature.

- **eDNA**

DNA from soil and water samples collected with easy-to-use devices provides detailed information about the species that are present in a given area – a leap forward from the traditional method of assessing biodiversity based on what we can actually see. “Environmental DNA (eDNA) - as the technology is called - can be used for many purposes, including environmental impact assessments. DNA sequencing and analysis technologies, including DNA barcoding and metagenomics, are creating large online genetic databases.

- **Computational Bioacoustics**

Acoustic monitoring of animals has been in use as early from as the beginning of the 20th century⁴. In recent decades, however, computational bioacoustics has developed dramatically, driven by modern and affordable equipment and the power of computing. Bioacoustics has been applied to monitor the abundance, behaviour and whereabouts of birds, frogs, bats, marine mammals, bees, mosquitoes, and even the health of coral reefs⁵.

- **Blockchain**

Blockchain is particularly useful for tracking the legal and environmental integrity of products derived from natural resources, by tracing their origin at any point in a supply chain. Finance is another area where blockchain is already present, especially in cryptocurrencies. Blockchain was the main financial technology applied to biodiversity among 60 tools were analysed by a report in 2026.

- **Mobile apps**

User-friendly applications that allow anyone with a smartphone to collect and share data about the natural world and how we interact with it are revolutionising the role of citizen science (see below for more on citizen science). By reporting species sightings and other observations, citizens are helping to build knowledge about biodiversity and contribute to research and management of natural areas. Mobile apps are integrated with AI algorithms that identify species and automate data analysis and sharing.

- **Virtual Reality**

By immersing users in digital environments that are otherwise inaccessible, virtual reality (VR) and augmented reality (AR) offer a wealth of opportunities for research, education and conservation projects. Many nature parks offer 360° virtual tours with video that can be accessed on computers and headsets. Other projects offer VR experiences to raise awareness of biodiversity loss. VR and AR also has the potential for training^{7,8} and for fundraising efforts⁹.

- **Data Sharing Platforms**

Online data-sharing platforms are essential to facilitate access to the growing amount of biodiversity information for everyone – researchers, conservation policymakers, students or the general public. There are already many research infrastructures, both regional and global, that act as one-stop platforms linking different data repositories on life on Earth.

BOX 2: CITIZEN SCIENCE APPS ARE ON THE RISE

Citizen science biodiversity projects involve the public in collecting and sharing data about what they see in nature. They are not new but have grown significantly with the shift from structured projects, such as surveys of plants or animals in a region over a period of time, to less structured and decentralised projects, free from protocols or commitments, where citizens use mobile applications at their own pace and will¹⁰.

A dense constellation of apps is available to anyone who wants to report sightings, learn about biodiversity and contribute to the production of scientific knowledge. Their aims are diverse, ranging from simply collecting data on major taxonomic groups such as plants, insects, birds, mammals or reptiles, to focusing on specific objectives such as monitoring invasive species, combating illegal logging or mapping marine litter.

Given the existence a myriad of apps mobilizing millions of citizens around the world, it is legitimate to ask what impact they really have on biodiversity knowledge and conservation. For sure, large amounts of data are being produced. One of the most widely used biodiversity apps, eBird, have so far contributed to a major biodiversity data portal with more than 1.2 billion observations. But what is actually done with such huge amount of information?

Citizen science clearly contributes to biodiversity research¹¹. An example: data collected by a citizenscience application was used by researchers to assess bird diversity in urban areas in the United States¹². Other examples include the use of citizen science data for studying birds and butterflies in Natura 2000 sites in Europe¹³ or sea slugs in the Tasman Sea¹⁴. In Denmark, a citizen science project found 197 species of fungi new to the country and 15 presumably new to science¹⁵.

Citizen science apparently has an impact on citizens themselves. A survey of participants of 63 projects in Europe, Australia and New Zealand found positive outcomes in terms of knowledge and skills acquisition, interest in science and the environment, and behaviour changes towards the environment¹⁶.

Despite their potential, citizen science faces some challenges. Biodiversity apps tend to be used by people who live in urban areas, creating a bias in the data collection. They might also be affected by errors and analytical limitations. There is no doubt, however, that digital technologies are fuelling momentum to the field of citizen science

DIGITAL TECHNOLOGIES OFFER OPPORTUNITIES, BUT ALSO FACE HURDLES

Looking at the array of existing technologies and the promise of new ones, it is fair to say that there are as many potential digital technologies as there are biodiversity-related challenges to be addressed. Cataloguing nature is only the most straightforward task that could be better and faster accomplished as technology evolves. But there is no end to the range of possibilities where digital technology can play a role.

Consider the following example. There is concern that new roads are being built at a rapid rate, cutting through natural areas without much planning. By 2050, the world is expected to have an additional 25 million kilometres of roads¹⁷. This expansion could exacerbate habitat fragmentation, poaching, illegal logging, land grabbing and all sorts of other impacts that are known to seriously affect biodiversity, especially in tropical forests. Mapping these roads on a large scale is a difficult and time-consuming task. Satellite imagery, for example, is very useful for tracking deforestation, but not so much for detecting new roads hidden under the canopy. Artificial intelligence could be used to fill in the data gaps and periodically generate road maps on a global scale.

By monitoring the natural world in new ways, technology can be a powerful tool for goals other than biodiversity conservation. For example, the University of Oxford has developed a system to identify and locate mosquito species using a smartphone application that records their flight sounds. The system makes it possible to more effectively identify vectors of diseases such as malaria, which kills more than 600,000 people per year, mostly in developing countries¹⁸.

Predicting adverse events – pest infestations, the spread of invasive species, pollution events or environmental changes due to climatic conditions – is another area that can benefit from the power of digital technologies, with results that cut across multiple sectors. For example, new technologies for pest control could prove essential for adapting agriculture to the redistribution of species due to climate change. Or conversely, technologies for assessing species redistribution due to climate change could be essential for pest management and ultimately food production.

Technology can also play a role in understanding and maintaining the links between cultural and biological diversity. This is essential for the preservation of traditional knowledge, a task that faces language barriers that digital technologies could help to overcome.

Along with these opportunities, however, digital technologies come with their own limitations and challenges. A recent report by the Global Partnership on Artificial Intelligence details how AI can play an important role in understanding biodiversity trends and drivers, and in supporting and optimising policymaking and action. However, in some circumstances it may not add significant value, or it may produce poor and biased results. It can also increase inequality if the rights and capacities of local communities are not taken into account¹⁹. A major concern is that technologies that produce knowledge at the macro level through automation may end up marginalising traditional knowledge at the local level.

The fact that more and more biodiversity information is being collected and stored through citizen science applications and other technologies also raises concerns about data privacy and accessibility. While technology can lend its power to gather and make sense of vast amounts of information, it is worth asking who the gatekeeper would be to so much data, and who would actually be able to access the information, and for what purpose.

Another factor to consider when adopting digital technologies is their own impact on the environment and on the use of natural resources. Sensors, drones, satellites, smartphones, cameras – all digital devices require energy to function. They include rare materials in their composition. And when they are no longer in use, they need to be disposed of properly.

There are many practical hurdles to overcome if we are to accelerate the role of digital technology in biodiversity conservation. A recent study and report by Wildlabs, based on a survey of 248 people in 37 countries, mapped the strengths and weaknesses of 11 types of technology^{20,21}. Some of the limitations are technical, such as batteries or connectivity issues that limit the effectiveness of camera traps and networked sensors. Other barriers to the uptake of these technologies are more systemic, including their cost and the simple fact that some of them are not easy to use. In short, although a wide range of digital conservation technologies are available, they are far from being plug-and-play solutions that can be easily deployed anywhere.

A key message of the report is that while there has been significant progress in conservation technologies, it is not happening fast enough in the face of the biodiversity crisis. And this reinforces the need for pathways to bring the two agendas closer together.

WHAT SHOULD WE DO?

Based on expert opinion and discussions at the 2023 Digital With Purpose Summit, several key priorities for biodiversity knowledge and conservation have been identified. These priorities are grouped here into seven actions, each with a set of recommendations. We encourage all stakeholders to review these needed actions and explore how they can contribute.

We need to:



Recommendation 1.1: We should make best use of digital technologies to contribute to the development of an internationally agreed, monitorable and adaptable biodiversity metric that can be used everywhere to assess our progress towards concrete biodiversity targets.



Recommendation 2.1: Technology and biodiversity stakeholders should work together on digital solutions that can further help to map life on Earth and fill data gaps using a generative approach, avoiding duplication and making the best use of what is already available.

Recommendation 2.2: We should find an expeditious way to create a global catalogue of vernacular names of flora, fauna and fungi, or how people categorise and understand nature, as an indispensable complement to scientific names and to prevent the loss of local and indigenous knowledge through the disappearance of languages.

Recommendation 2.3: Efforts should be intensified to digitize and provide open access to scientific collections and data worldwide, maximizing the power of information provided by biological specimens.



Recommendation 3.1: Technology and biodiversity stakeholders should develop targeted opportunities for collaborative meetings - such as workshops, focus groups and other co-creation formats - with specific agendas that address the needs and recommendations outlined in this and other similar documents, with a particular focus on poorer economies or regions and intensifying North-South and South-South cooperation.

Recommendation 3.2: Participatory science initiatives actively including citizens in data collection, research strategies and conservation efforts, should be further promoted, stimulating a greater understanding and appreciation of the importance of biodiversity.

Recommendation 3.3: Digital solutions should be developed to promote co-management of natural values and develop sustainable practices, taking into account biocultural diversity to create effective solutions for protecting nature.



Recommendation 4.1: A framework of best practices for the development and use of digital technologies for biodiversity purposes should be established, addressing their limitations and risks, including issues such as sustainability, equity, equality, data protection, accessibility, cultural diversity and ethical considerations.



Recommendation 5.1: A networking initiative should be launched, involving stakeholders from the financial, biodiversity and technology sectors, to promote discussion on funding needs and opportunities to support the use of digital technologies for biodiversity knowledge and conservation, with particular attention to the specific needs of less affluent countries and traditional communities.

Recommendation 5.2: Databases and monitoring platforms should be developed to track the commitment to increase financing for biodiversity to USD 200 billion per year by 2030, as set out in Target 19 of the Kunming-Montreal Global Biodiversity Framework.



Recommendation 6.1: A focused dialogue should be held to identify training needs for the development and adoption of biodiversity-related digital technologies, and to inform action and direct funding towards capacity building.



Recommendation 7.1: Stakeholders should find innovative ways to raise awareness, train and involve the media in biodiversity communication using digital technologies and the vast amount of biodiversity data already available online.

Recommendation 7.2: Maps of biodiversity of where we live and work could be produced as a tool to increase our knowledge of 'everyday nature' and to connect people to biodiversity issues.

Recommendation 7.3: Stakeholders should build on existing initiatives and produce regular reports and a permanent repository of available technologies that can be used to address specific biodiversity needs.

04 | ACKNOWLEDGEMENTS

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