DIGITAL WAYS FOR BIODIVERSITY CONSERVATION

Priorities and recommendations for a shared agenda

ABOUT THIS DOCUMENT

This brief 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 DWP Summit 2023 in Lisbon, expert opinion, and literature. The 'Biodiversity Futures' program at DwP2023 was co-organised by António C. Gouveia and Helena Freitas, with the collaboration of Ricardo Garcia in the production of this document.

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:** Global commitment on reversing biodiversity loss and addressing its causes.
- **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 an equitable and 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 society sectors.

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 funga 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. Facilitate open discussions to pinpoint training requirements and standards for the advancement and implementation of digital technologies in biodiversity.

8. Create guidelines for the responsible use of digital technologies in biodiversity, taking into account sustainability, fairness, privacy, accessibility, cultural diversity, and ethical considerations.

9. Kickstart a networking initiative involving stakeholders from the financial, biodiversity, and technology sectors to discuss funding needs and opportunities.

10. Develop databases and monitoring platforms to track the commitment to increase financing for biodiversity to USD 200 billion per year by 2030.

11. Find innovative ways to raise awareness, train, and involve the media in biodiversity communication using digital technologies and available biodiversity data online.

12. Produce maps of biodiversity in local environments to enhance knowledge of 'everyday nature' and connect people to biodiversity issues.

13. Establish a permanent repository for sharing available technologies to address specific biodiversity needs, building on existing initiatives and providing regular reports.

14. Encourage further citizen involvement in data collection and conservation through participatory science initiatives, fostering a deeper appreciation for biodiversity's significance.

15. Foster digital tools for co-managing natural resources, integrating biocultural diversity considerations, to craft sustainable solutions for effective nature conservation.

Digital with Purpose Global Summit

For the full version of the report on the Biodiversity Programme, please visit the website.