

Collaborative Research Action - short note

Biodiversity 3

Leveraging Long-Term Ecological Data for Evidence-Based Biodiversity Policy and Action

Contextual framework

Global change is overwhelmingly studied through the lens of climate change, however this narrow focus risks overshadowing the central role of biodiversity as both a driver and a foundation of Earth system dynamics, raising the question of whether biodiversity loss should be treated as a secondary crisis or a co-equal priority.

- Planetary boundaries are already transgressed, driving a sixth mass extinction.
- 1 million species are at risk; 75% of Earth's land is severely altered by human activity.
- Economic cost of ecosystem service loss: \$125 trillion/year (e.g., pollination, carbon sequestration, water regulation).

Challenges

We lack long-term data to understand how species and ecosystems adapt to global change. Current solutions are often fragmented (by discipline, country or sector). Although scientific knowledge remains insufficiently shared with citizens, policy-makers, and businesses, recent work by the IPBES, including its [Business and Biodiversity Assessment](#), marks important progress in bridging science, policy and economic actors.

Description of the BIODIVERSITY3 CRA proposal

BIODIVERSITY3 ambitions to transcend long-term monitoring programs to address the above-mentioned challenges through transdisciplinarity. It aims to adopt a holistic approach to the biodiversity crisis by combining science, technology, and societal engagement.

Based on existing long-term monitoring programs, BIODIVERSITY3 proposes to:

- Study the spatiotemporal dynamics of ecosystems and species over long time (10+ yrs), taking into account the interactions between biodiversity and societies,
- Identify critical thresholds and tipping points in ecosystems,
- Analyse the evolutionary processes enabling species to adapt to global changes,
- Filling gaps in understudied biodiversity compartments,
- Using innovative tools to collect and analyse data.
- Develop a holistic biodiversity science anchored in transdisciplinary principles, improving reflexivity, integrating power dynamics, and anticipating transformative change through theory of change.

BIODIVERSITY 3 proposes to strengthen the links among **existing infrastructure**:

- Connect research networks: Collaborate with infrastructures such as [ILTER](#), [NEON](#), or [GBIF](#) to expand the geographical and thematic coverage of monitoring programmes,
- Create open platforms: Develop accessible and interoperable databases, including biodiversity indicators and predictive models to inform public policy.

BIODIVERSITY 3 proposes to engage **citizens, local communities, businesses and governments** by:

- Co-developing 'living labs' involving citizens, communities, industry and decision-makers to test adaptive solutions and refine them in real time.
- Integrating local and traditional knowledge to enrich conservation and resource management strategies.
- Informing public decision-making by providing scientific evidence to assess the effectiveness of policies
- Raise awareness and educate to improve the visibility of biodiversity issues

BIODIVERSITY 3 will contribute to the **Sustainable Development Goals** (SDGs 3-5, 13-15) by:

- Supporting inclusive spatial planning (SDG 15.1, GBF Target 1).
- Promoting the restoration of 30% of ecosystems (GBF Target 2) and the conservation of 30% of land and sea areas (GBF Target 3)
- Strengthening communities' resilience to epidemics (link to global health, SDG 3.d)

Expected Outcomes

- **For science:** a better understanding of ecosystem resilience mechanics
- **For society:** practical tools and good practices to protect, conserve and restore biodiversity
- **For the planet:** direct contributions to the Sustainable Development Goals and the Kunming-Montreal Global Biodiversity Framework

Call to Action: Join us to

- Co-design an inclusive and sustainable Collaborative Research Action!
- Share your data, expertise and ideas. Maybe even meet new partners!
- Act together for a future where humans and nature thrive in harmony.

Target audience: researchers, policy-makers, practitioners, indigenous peoples, NGOs, businesses, working on long-term monitoring of biodiversity, conservation and restoration policies, etc.

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You can read more about BIODIVERSITY 3 in the full concept note.