

FORESIGHT ON LAND AND SEA USE

Addressing the degradation of ecosystems through scenario-making

By Emma Coroler

The key to biodiversity's preservation? Fostering collaborations between the scientific community and policymakers by using a future-oriented mindset.



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The agreement made by the UN member states on the 5th of March on the protection of marine biodiversity in international waters signals the increasing importance of biodiversity preservation on the international political agenda. It stresses the urgent need to conserve and sustainably use the Earth's biodiversity, considering the rapid extinction rates around the world's most important nature sites.

It took more than 10 years of negotiations to reach this agreement, which highlights the complexity of balancing competing interests among different countries and stakeholders to address the concerns arising from scientific evidence. The European Union is also taking steps to tackle these challenges and develop effective measures for biodiversity preservation, as part of the European Green Deal.

Additionally, the EU's Horizon 2020 Framework Programme includes several initiatives aiming at research for the protection and preservation of biodiversity, including the 21 BiodivScen [research](#)

[projects](#) funded by the BiodivERsA network, the predecessor of the European Biodiversity Partnership (Biodiversa+), jointly with the Belmont Forum. BiodivScen is one example of a programme that uses scenario-making as a core component of its research. The programme aims to develop and evaluate scenarios of future changes in biodiversity and ecosystem services, and to provide decision-makers with information and tools to support effective biodiversity conservation policies and practices.

The growing degradation of plants, animal species and ecosystems, providing essential services to humans, calls for new approaches to protect our biodiversity. Scenario-development, as well as an increased engagement of stakeholders, could be the cornerstone of a renewed ambition for mitigating the negative effects of human activity on biodiversity.

Magnus Tannerfeldt, Programme coordinator of BiodivScen, Vice chair of Biodiversa+, and expert of The Swedish research council for sustainable development (FORMAS), is a firm believer in training and building capacity for policy making.

Tannerfeldt highlights the need to consider a range of potential future scenarios in order to identify risks, develop strategies, prioritise actions, and improve decision-making. By developing and testing multiple scenarios, stakeholders can gain a better understanding of the complex interactions between biodiversity, human activities, and environmental change, and can identify more effective strategies for promoting positive outcomes, such as addressing the causes of biodiversity loss, implementing sustainable management practices in agriculture, and ensuring that biodiversity conservation and management are integrated into all relevant policies and programs at local and international levels.

BiodivScen is part of a broader trend towards using scenario-making as a key tool for biodiversity conservation and sustainability¹. Other initiatives, such as the Nature Futures Framework developed under IPBES, aim to develop scenarios of positive futures for nature. The framework incorporates various knowledge systems across multiple scales and sectors to help inform assessments of science-based policy options.

¹ For a handbook on the use of biodiversity scenarios, see: <https://www.biodiversa.org/1823/download>

Beyond the development of scenarios, a better connection between scenario-making and policymaking is crucial to ensure that scientific knowledge is effectively used to inform decisions. “There is a need to strengthen the production of knowledge for monitoring biodiversity, for the research, for systems analysis, for scenario making”, Tannerfeldt says, to better inform decision-makers in the public and the private sector.

He emphasises the importance of training and building the capacity of decision-makers for incorporating scientific findings in policy-related decisionmaking. Therefore, there is a need for increased efforts to inform decision-makers on the potential benefits of using scientific data and analysis in policymaking leading to more informed and effective policies.

What’s more, it will be crucial to increase public awareness and citizen engagement to ensure that biodiversity preservation is addressed by many different interest groups. That’s why, in the future, Tannerfeldt hopes that biodiversity preservation will become a central and transversal theme of society debates. For this to happen, there is a need for a change in the dominant narrative around biodiversity preservation. “Negative scenarios have dominated too much”, he says. “There is a need to create narratives that look at the possibilities and what we need to do, scenarios and models of a desirable future, to give hope to people”.

Different forms of regulations will be needed to ensure that policies are designed with a focus on long-term sustainability rather than short-term gains. That is notably the case for the regulation of agriculture, fishing, forestry, and over-harvesting.

On a more practical note, the Programme coordinator argues in favour of the “de-compartmentalisation of policymaking to encourage strategic long-term integrated thinking at all levels”, which could be driven by the creation of scientific advisory bodies ensuring that policies are based on the best available scientific evidence. “Our hope would be that the real societal transformation that we see is needed, is at least beginning to happen in several cities, regions and maybe countries, where you could integrate nature, economy and human wellbeing.” By using these tools, we can better understand the complex and far-reaching impacts of human activities on the environment and take the necessary steps to protect and restore biodiversity before it’s too late.



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