The challenge of addressing biodiversity loss:

Are we ready for a 2030 Strategy?

Overview

Biodiversity loss is a major concern. The EU Biodiversity Strategy 2020 [1] was a commitment to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020. The Strategy aimed to increase the contribution of agriculture to maintaining and enhancing biodiversity, among other targets. The Strategy, however, has not achieved the expected results [2,3].

The EU Biodiversity Strategy to 2030 is underway and as an integral part of the European Green Deal [4]. The 2030 Strategy should emerge from a fundamental reconsideration of the current thinking about biodiversity decline and conservation, a critical refection on the measures developed and implemented so far to halt biodiversity loss, and the development of a breakthrough strategy for a real change.

EU biodiversity policies and instruments in a nutshell:

- The EU Biodiversity Strategy 2020 stemmed from the conclusion that previous EU biodiversity policies were not achieving the targets [1]
- Despite some achievements, the 2020 Strategy largely failed [2,3]
- Targets and means were not effective [7] and progress insufficient [2]
- A new EU Biodiversity Strategy to 2030 is currently under discussion
- Biodiversity is an integral element of the European Green Deal [3]
- Now is the time to take action [3, 6]

The challenge to address biodiversity loss

Addressing biodiversity loss entails acknowledging the complexity and uncertainty inherent to the biodiversity itself [5,6]:

First, the quantitative assessment of biodiversity is still a challenge due to technical incommensurability of the different aspects of biodiversity that are observable only across different levels and scales [5,6]. A range of indicators exist to measure biodiversity, but any indicator selected will only provide partial information about biodiversity (one aspect and one scale at a time). In fact, the selection of any indicator is associated with a pre-analytical choice and a particular interpretation of the term and the issue. Agriculture therefore can be detrimental to biodiversity or enhance it, depending on the aspect of biodiversity measured, the context, the scale and the indicator used [5,6]. That may introduce a bias in the identification of the biodiversity to conserve and the method to deploy.

Second, the relationships between the socio-ecological context, the environment and the local processes underlying biodiversity are not fully understood. Hence, there is uncertainty about the impact of a measure on “all species” at the moment of implementation and in the long run. Effects from a measure, moreover, may appear with long delay in time. Hence, monitoring becomes extremely complex and costly (going beyond policy mandates).

MAGIC NEXUS

Third, despite an agreed upon definition, the notion of biodiversity differs among individuals (them being citizens, consumers, researchers, farmers, policymakers, NGO members, etc.), locations and institutions. While there is agreement on a generic "biodiversity or nature conservation", there is no convergence on "what, where and how to conserve". MAGIC project emphasized that aspect (Fig. 1) using the Dutch dairy sector as a case study [6]. From a reference situation (Fig.1, a), experts envisioned contrasting alternative scenarios of land use for biodiversity conservation. Targeted conservation approaches (b), considering particular species as target (i.e. black-tailed godwit (Limosa limosa)), contrast with generic approach (c) at habitat and landscape scale.

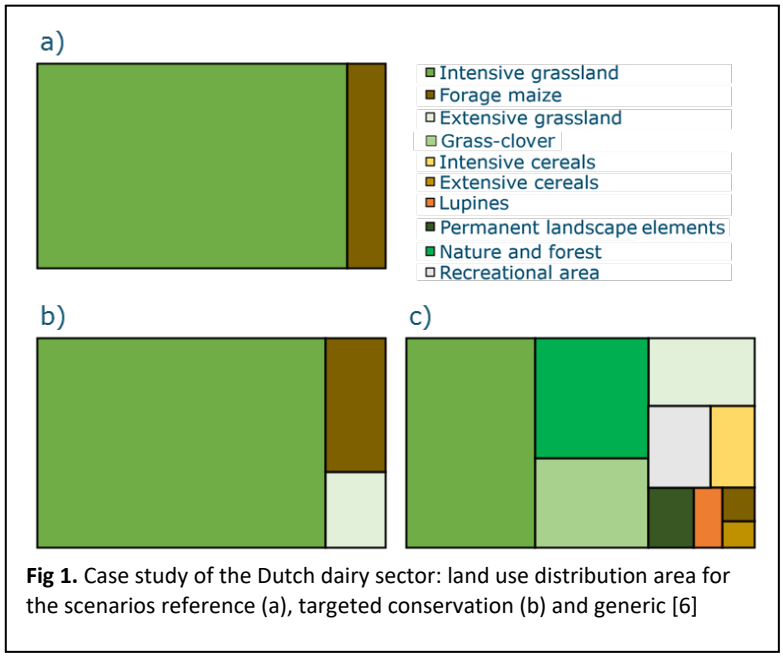

Fig 1. Case study of the Dutch dairy sector: land use distribution area for the scenarios reference (a), targeted conservation (b) and generic [6]

Alternative situations to conserve biodiversity were always at the expense of agricultural production. The 2030 Strategy, therefore should question current socio-economic systems (including agriculture). For instance, are the aims of the EU in line (e.g. biodiversity conservation and competitiveness in agriculture or economic growth) with each other? In case aims are conflicting, what are the priorities? Are there procedures in place for handling the analysis and the implications of these conflicts? In the end, the use of natural and socio-economic resources for biodiversity conservation (e.g. land, biomass, water, labor or capital) entails posing restrictions on other human activities. This implies carrying out a difficult assessment and comparison of the impact of measures for biodiversity conservation on both the environment and the socio-economic sectors.

Fourth, the choice of targets, their implementation and monitoring should be more effective. All relevant institutions and policies should foster biodiversity aims. There should be coordination between the different policy levels (e.g. EU, national and regional Governments), departments (e.g. DG Agri, Env, Clima, Energy, RTD and so on) and on the implementation on the ground. The policy process should ultimately serve to enforce and validate the strategy, rather than obstructing and diminishing the ambition and reaching effects of policies [7].

CONCLUSION:

If a strategy is meant to halt biodiversity loss due to human activity (through overexploitation, destruction and disturbance of habitats, climate change, invasive species, etc.), we should ultimately question the "action of humans" as socio-ecological systems. A strategy that does not question the way we live and "thrive" will be a lost opportunity.

References

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