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Ecological planning, a key tool for biodiversity: a literature review

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After being long forgotten, planning is making a comeback in public policy. Once considered too technocratic, rigid, laborious and centralizing, it had put off a number of countries. However, faced with the proliferation of public policies for the environment and the need for coherence, several governments have chosen to bring ecological planning back into play. What do we really mean by ecological planning? And how can it become an essential lever for fully integrating biodiversity, the second pillar of the ecological transition, into public action? Enriched by the findings of existing literature, this blog post provides an overview of this approach and the criteria for its successful implementation.

Why associating the concept of planning with biodiversity? Because the degradation of biodiversity continues, despite efforts to integrate it into various policies—what the Convention on Biological Diversity (CBD) calls ‘mainstreaming’. In other words, the aim is to ensure that biodiversity and the services it provides are considered in policies and practices among sectors other than conservation, such as agriculture. However, these efforts remain timid in comparison with the progress made on climate change, which is relatively well integrated. For example, there are policies and strategies for preserving and managing water resources, but what has been achieved on the ground in terms of reducing pesticides or restoring wetlands and watercourses is still insufficient compared to what is

needed. Ecological planning offers a structured and coherent framework to fill these gaps and ensure that different policies are consistent with each other. Most biodiversity policies focus on reducing negative impacts, without tackling the root causes of this loss. However, given the profound interactions between social, economic and environmental systems, ignoring these multiple factors compromises the potential success of all environmental transitions.

Ecological planning offers a framework to address these issues. It allows biodiversity to be integrated into development and land-use planning, while relying on close coordination between players at different levels (national, regional, local) to ensure coherence. Countries such as [Brazil](#), the [Netherlands](#) and, more recently, [France](#), are banking on this approach to accelerate and territorialize the ecological transition, an approach that IDDRI analyzes in a Policy Brief on regional COPs for ecological planning and lessons to be learned for biodiversity governance ([IDDRI, 2024](#)). But what do we really mean by ecological planning? To gain a better understanding of this concept, we have explored the academic literature to identify its main characteristics.

Setting the framework for ecological planning: a multi-dimensional approach

Defining ecological planning precisely is no easy task, given the wide variety of approaches. Nevertheless, a number of common points have emerged from work on the subject. It is based on the use of scientific, biophysical, social and economic data to guide consultation, while promoting effective coordination of actions. These data make it possible to grasp the ecological challenges of an area, assess the constraints and potential of the land, and set planning criteria. This facilitates trade-offs and decision-making, and ensures that changes to the landscape are as closely aligned as possible with the way ecosystems function.

The literature reveals four key dimensions of ecological planning. The **spatial dimension** takes account of the configuration and specific features of the landscape, whether rural, urban, peri-urban, natural or covering catchment areas. The **sectoral dimension** encompasses activities related to development, infrastructure, land use, agricultural practices, water management, as well as recreational and tourism activities, ensuring that the health of the natural environment aligns with economic interests. The **social dimension** focuses on cultural practices, attachment to the landscape and the quality of life of locals. Finally, the **temporal dimension** involves planning the implementation of actions in the short, medium and long term.

Thinking in terms of scales of governance and the way in which dialogue takes place

Ecological Planning is also a process designed to encourage synergies between public players (the State, regions, local authorities, etc.), civil society and experts (anthropologists, foresters, geographers, town planners and specialists in natural environments) to create dialogue at all relevant levels of governance. The literature often emphasizes this decentralized vision, which seeks to unite around a shared vision, co-constructed with all the stakeholders on the basis of inclusive consultation, but it does not really delve into the 'how' of this dynamic. In France, since the 2000s, this multi-level coordination has been based on national strategies and plans ([biodiversity](#), [climate](#), [adaptation](#)) and various regional and local planning documents, in addition to thematic documents such as [SDAGes](#) for the management of aquatic resources and ecosystems, and [SCREs](#) for the preservation of green and blue corridors. However, their multiplicity makes institutional coordination complex, slow and tedious ([IDDRI, 2023](#)). Ultimately, consultation is often fragmented, with public participation bodies multiplying without any real synergy.

between them. On top of this, local populations are not sufficiently involved in these processes, which affects the legitimacy of the projects adopted.

Towards a more transparent, flexible and inclusive model

Some European countries have decided to innovate. In the Netherlands, Integrated Landscape Management illustrates a successful transition from a top-down model to collaborative governance, involving local authorities, associations, businesses and citizens to come up with locally-adapted solutions. In Sweden, ecosystem-based planning for adaptation to climate change is organized in two stages: national objectives set by the government, followed by detailed plans, revised every four years by the municipalities, for long-term management (10 to 25 years).

Our [review of the literature](#)¹ has enabled us to identify five criteria for the success of ecological planning, which go beyond biodiversity or the reduction of greenhouse gas emissions alone, and underline the need for an integrated approach to all the issues an area has to face and their interactions.

- **Clear definition of objectives:** setting precise objectives in time and space for measurable planning.
- **Collection and analysis of data:** integrating a cross-cutting overview of the system's interactions through in-depth data collection and analysis.
- **Relevance of proposals:** enriching planning with socio-economic data (use of forests, industrial weight, cultural sensitivities) so that biodiversity is taken into account as a whole.
- **Alternative scenarios and consultation:** proposing alternative scenarios makes it possible to broaden the scope for consultation and facilitate negotiations between stakeholders, by seeking consensus on objectives and methods.
- **Implementation, monitoring and assessment:** ensuring rigorous monitoring with clear roles, taking into account political support at all levels and sectoral and territorial priorities.

These recommendations underline the importance of '**spatializing**' the dialogue, in order to identify points of tension and pinpoint the areas where action is most relevant. Modelling tools such as cartography and geographic information systems are effective for this purpose, provided that they are easy to interpret so that everyone can understand and use them. In addition, creating the right conditions for consensus-building from the earliest stages of plan development remains a major challenge. Finally, although the participatory approach requires significant human and financial resources, it is often essential for strengthening collaboration, aligning stakeholders' interests and building a common language, which is key to the success of ecological planning ([IDDRI, 2024](#)).

¹ This literature review is based on a compilation of 80 articles published between the 1970s and the present day, 10 of which were selected for in-depth analysis. It should be noted that this research did not aim to evaluate the public planning plans or policies mentioned in the literature.