The "Trame verte et bleue" French policy: what territorial coherence does it offer?

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Introduction

Can the territorial coherence concept facilitate the implementation and the assessment of the French public policy called "Trame verte et bleue" (TVB)?

Coherence is inherent to TVB and is expressly noted in French law. The TVB policy has to be coherent at different territorial levels, from national to local and between adjacent territories. Policy goals linked to landscape ecology concepts have to provide synergies with other territory goals: economic activity, housing, tourism...

How can TVB project coherence be supported? In our work, we rely on the territorial coherence concept which we believe, has yet to be studied in the inter-scale assessment framework of public policy.

In this communication, we aim to describe the territorial coherence concept and propose an analytical framework for testing this concept in our research for TVB projects.

Background

The TVB policy aims at preserving and restoring ecological networks. It is implemented at different scales, ranging from national to regional and to local. Regions are presently developing or finalizing their regional ecological network schemes which have to integrate national policy guidelines. It will be the reference framework to be taken into account in (inter-)municipal planning documents (in particular urban planning documents).

TVB policy coherence across spatial and governance scales is mandatory under French law. Indeed, according to the French law n°2010-788 of July 12th 2010, more familiarly known as « Grenelle II »), TVB policy has to comply with the principle of subsidiarity. French law provides three levels of opposability that governs "higher" and "lower" policy standards. It is the "taking into account" level, which is the lowest legal requirement level (after "conformity" and "compatibility"), which has been chosen for the TVB policy. The "Conseil d'Etat", the highest administrative jurisdiction, specifies that "taking into account" forces policy makers to not deviate from the basic

guidelines (i.e. compliance with the higher legal standard) except, under judicial supervision, for a reason which can be justified by its general interest. Therefore, territories have a wide margin for interpretation and implementation of this policy, which paradoxically, is both a source of coherence and incoherence.

The 2011-2020 national strategy for biodiversity states in its objective n°5 that the TVB policy should be coherent at all territorial levels and that the building of a network of terrestrial and marine protected areas, which promotes ecological coherence and solidarity, is an essential component for the establishment of a national ecological infrastructure.

Coherence is difficult due to the complexity of the concepts used; the diversity and the heterogeneity of methods, tools and data; the plurality of contexts; and the great number of ecological, landscape, social, economic, political and cultural stakes involved; or even the multiplicity of stakeholders and their specific interpretations and interests. The TVB policy is open to multiple interpretations/adaptations, and decision makers must make choices to harmonise, as much as possible, the interactions between social systems and ecological systems (Folke et al., 2007).

Inconsistencies between the scales, especially spatiotemporal and governance ones can have severe consequences for the environment. According to Cumming et al. (2006), case studies detailing ways of resolving inter-scale inconsistencies are rare. In particular, the interactions between the dynamics of ecosystems and territorial governance have yet to be analysed (Folke et al., 2007; Guerrero et al., 2013). Two main difficulties can explain these deficiencies concerning TVB:

— scientific knowledge about the functioning of ecological networks is: heterogeneous, specific (difficult to generalize), incomplete, subject to debate, or even contradictory. The “patch, corridor, matrix” model can be subject to significant and dangerous simplifications, particularly regarding representations that cannot translate the complexity of interactions of living organisms and/or that reflect the visions of a particular group of stakeholders (Bourhis, 2007; Vimal, 2010);
— considering the relative reliability of existing and available information and their valorisation (Roqueplo, 1997; Vimal, 2010), policy makers “managing uncertainty” have significant latitude for interpretation and action.

Based on an interdisciplinary scientific approach, knowledge of the subject matter could be deepened (Cumming et al., 2006) so that possible incoherencies could be anticipated (including spatial, temporal and/or functional inconsistencies, Lee, 1993) and measures for improvement put forward.

Goals and objectives

We present some preliminary results on (i) the concept of TVB cross-scale coherence and (ii) how this coherence can be measured and analysed. This is achieved in order to:

— define concepts linked with TVB "territorial coherence";
— specify factors of success as well as some sources of inconsistencies, incompatibilities or uncertainties occurring between TVB projects at different scales;
— offer some tools, to the policymaker in particular, to improve cross-scale project interactions.

Our work is an applied and concerted research approach based on significant document analysis and semi-structured interviews. We work on case studies on "nested" territories from national to regional and to local levels, in two French regions Bretagne and Languedoc-Roussillon(-Midi-Pyrénées). These regions are chosen for their different landscape and cultural contexts. This choice should allow us to develop a general understanding of our subject and to give nuance our results.

Territorial coherence concept

Coherence between political projects (schemes, plans, programs, etc.) is often highlighted in public policies but its definition is still very loose in its cross-scale dimension. The coherence concept is used in several contexts and is often considered either: « in absolute terms », or with reference to common sense, logical relations, harmony and unity, or with the absence of contradiction in the sequence of a set of parts. This polysemy helps to promote consensus or, at least, "productive misinterpretation" (or "malentendu productif", in French). On these foundations, it is hard to stabilize and build up knowledge (Hufty et al., 2007). However, when the law reflects this concept, legal disputes become increasingly likely. Therefore a more precise assessment of the expected coherence effects is required.

Because the TVB policy is associated with a territory, defined as a "geographical space and social construction, which is culturally typed and institutionally delineated" (Tonneau, 2008), we focus our reflection on the TVB "territorial coherence" concept.

Above all, this coherence is spatial and is linked, as much as possible, to the compatibility of the different functions overlaying the same space (different functions segregation or integration).

Territorial adoption of a policy requires coherence. Spatialization requires choices and territorial coherence. A space is typified by its cover: be it a crop, a forest or a paved area. However, its use can be multifunctional: a forest can be an area dedicated to biodiversity preservation, and to production (fruit harvesting, etc.) and to leisure activities (walking, etc.), all subject to the definition of rules. The goals of TVB policy must be coordinated with other goals.

Territorial engineering and territorial development initiatives are based on the search for synergies between projects and various injunctions or even contradictory injunctions. These initiatives can help harmonise diverse projects and can help TVB project choices to be better taken into consideration by other projects with which they may interact.

Two dimensions for territorial coherence

With this perspective in mind, it is essential to make ensure that the ecological dimension, i.e. the central plank of TVB, integrates with other dimensions of sustainable development.

To analyse TVB territorial coherence, we distinguish two key dimensions:

— the ecological dimension. The first objective of TVB is to ensure the free movement of the different taxa over the territory in order to favour its ecological functionality. The Convention for the Protection of the Marine Environment of the North-East Atlantic (called "OSPAR", which has been in force since 1998) identifies four criteria to achieve ecological coherence: adequacy/viability (size, shape), representativeness of marine ecosystems, replication of ecological features, and network connectivity (OSPAR, 2007). These criteria are based on the three dimensions, i.e., structure, function and composition (Noss, 1990) that are often used to describe biodiversity, from genes to landscapes. We propose to adapt this approach for terrestrial and aquatic habitats which are the targets of the TVB policy, while focusing on the "ecological functionality" concept of spaces.

  This territorial coherence is assessed at different scales: spatial, temporal (ecosystem dynamics in the context of global change, for instance) and living organism organization, linked to the high interdependency of ecosystems and taxa that constitute them. We notably use the hierarchy

theory, which is at the heart of landscape ecology, according to which a hierarchical approach is needed in order to better understand system heterogeneity and thus their functionality.

— (ii) the societal dimension. TVB policy is implemented in a space, in territories, where the biodiversity protection is just one function among many others (for instance, production, housing, well-being). The TVB opposability level is set at « taking into account ». The wager here is that a more flexible but reasonable "case by case" regulation framework should be more effective than rigid regulations that are likely to be widely flouted (Beuret et al., 2006). This case by case reasoning implies negotiation mechanisms on territories and the invention of specific practices. A balance has to be found between different functions within and between territories, implying compromises between stakeholders who oftentimes have various interests. In fact as the planning process concerns increasingly smaller territories, local stakeholders feel more concerned, and are therefore more prone to argue about space sharing.

This reality requires innovative modes of governance that enable players to operate within networks and who are actively involved in building their own territories and their TVB projects. This is the wager taken in French law that gives territories a certain margin of appreciation. However, the question remains will this scope for interpretation be actually used?

Beyond the implementation territory, the TVB territorial coherence is assessed at different scales: spatial, temporal (political calendars, etc.) and governance scales, in relation with the high interdependency of territories. Cultural and historical dimensions must also be analysed, linked to the history of each territory and thus the past, present and potential future activities occurring on these spaces to be shared.

Ecosystem services help to link both ecological and societal dimensions, while the governance processes at work must permit to build joint.

TVB territorial coherence depends on the collective ability to regulate interdependencies, or even contradictions, between different uses and land cover. Thus, to achieve TVB territorial coherence, the territories, need to integrate and to recognize from the outset the concept of ecological solidarity defined as "the interdependence of living beings in the context of spatial and temporal variation in their physical environment". This is a pragmatic compromise between ecocentrism and anthropocentrism via a moral bond between human and non-human (Mathevet et al., 2010).

The approach spans several spatial, temporal and governance scales, and is characterised by high interdependency of the territories. This is designed to

prevent "blind spot effects" when stakeholders identify their ecological networks on a given scale: "the whole is, in most cases, different than the sum of its parts" (Huber et al., 2010).

Territorial coherence analysis

We propose a territorial coherence evaluation grid based on this coherence definition (two dimensions) and on the interdependence of these "social-ecological" systems. The positive characterization of coherence is difficult as Ardron (2008) notes: "Individual tests cannot indicate if the goal of eco-coherence has been achieved; rather, they can only indicate whether it has not been achieved". Several analysis criteria, classified as indicators, are identified to explore and measure this coherence form. The provisional evaluation grid will evolve throughout the study, until 2017.

We will discuss the criteria used in our multi scale evaluation framework of the territorial coherence of TVB projects. We organise these criteria in three phases: (1) for the ecological dimension, four criteria which are those described by OSPAR (adequacy/viability, representativity, replication, connectivity); (2) for the multifunctionality, two criteria (complementarity between ecological functions and others, ecosystem services contribution); and finally (3) for the governance (relevance of tools and governance processes).

In addition, our preliminary results on case study areas will be presented before discussing differences between TVB idea logics and TVB action logics, as they can play an essential role in policy territorial coherence. Our first analysis, based on our "nested" territories comparison, will concern namely:

— data, information and knowledge about ecological networks: for instance, we will discuss their heterogeneity and the oversimplification of projects that often results; knowledge hybridization between scientists-naturalists, experts and local people or between people who work on biodiversity and on water;
— goals, methods and compromises during the decision-making process with an analysis of the governance and systems of actors;
— finalized TVB projects with a discussion on maps (grain, zoning in urban plans, tools derived, etc.) and action plans articulation.

The analysis will be completed by semi-directive interviews, in the autumn.

In our presentation, we will conclude with perspectives on the French legislative context which is evolving: we will discuss the potential effects on TVB policy of the new territorial organization of the republic, and of the Law project on biodiversity.

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