



Effectiveness of the legal framework for natural areas protection relative to French road projects

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ABSTRACT

Major changes to natural environments are related to the construction and the use of roads. Thus, in France, despite legal commitments, each year natural areas are disrupted. Forty-three legal instruments of natural areas protection and environmental assessments have been identified and classified according to the hierarchy of rules applicable under French law. A comprehensive and detailed hierarchical classification of these national, European and international instruments is presented. It sheds lights on the complex structure of the whole system, often contradictory or redundant. The effectiveness of the whole legal framework in protecting natural areas relative to road projects is analyzed on the basis of official legal texts and case law. The Natura 2000 network appears to be the most effective and relevant instrument. However, its applicability is limited in light of the EU requirements. National instruments are generally legally ineffectual. Among the natural areas, forest is the best protected by binding instruments. Despite the effectiveness of the protection offered by few instruments, overall they have failed to stem the loss of biodiversity. Introducing the concept of green and blue networks – thus connection – the Grenelle law II could compensate today shortcomings of conservation, provided it based on coercive obligations. Environmental assessment instruments – including EIA – show a disappointing reach toward actual protection and they occur relatively late in the decision process of projects. Establishing nature sanctuaries and enforcing existing instruments are necessary short term means of improvement of protection. However, introducing binding green and blue networks and ecosystem functioning into environmental assessments would be a way to sustainably improve the system of legal instruments.

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Introduction

Almost all land ecosystems have been, and continue to be, significantly disrupted by human activity (WRI, 2000). Some major modifications are related to the construction, use and maintenance of roads. Road infrastructure has an impact on both the structure and dynamics of ecosystem functioning, whose components including flora and fauna are affected directly. The increased attention paid by scientists to the ecological effects of roads has led to the emergence of a new “science”: *road ecology* (Forman et al., 2003).

In France, the conduct of road project is framed by a complex legal process that involves environmental assessments associated with natural environment protection instruments applicable at the national level, as well as supranational such as European Community and international levels. These instruments, introduced during the authorization phase of the road project, are required in order to be granted control over land use. As an example, the Natura 2000 network encompasses and protects 68,000 km² of natural

zones (i.e. 12.4% of the French metropolitan area (MEDEM, 2010)). Other instruments, such as environmental assessments, feature an analysis of a proposed project's consequences on the environment at the time of preliminary project design. In the French territory, legal instruments have contributed to the progress achieved over the past 50 years, yet have failed to limit the overall degradation to natural habitat caused by road projects. It appears that the designation “protected area” does not necessarily lead to real protection of the targeted space, nor does it assign any legitimacy to it (Cans and Clap, 2008). In this light, the array of legal devices can be more or less binding and mandatory for protecting natural areas.

The objective of this study was to assess the effectiveness of such a legal system in protecting natural areas relative to road projects at the stage of horizontal alignment choice, i.e. at the environmental impact assessment (EIA) stage. Within this frame, the effectiveness of legal instruments is defined by the ability of the text to produce real and direct effect of protection of objects. The effectiveness allows assessing the practical legal validity of the text. Since few years, it is examined in some countries concerning particularly EIA systems (Glasson and Bellanger, 2003; Pölonen et al., 2011; Bassi et al., 2012).

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In France as in many countries around the World, the national legal instrument framework designed to protect natural areas is a controversial system (Benidickson, 2009; Paterson, 2009; Solano, 2009; Guigner and Prieur, 2010; Boer and Gruber, 2010; La Viña et al., 2010). Hence, in order to assess the effectiveness of the whole system in protecting natural areas relative to road projects, drawing the overall picture of the whole device from the national to the European and international level, was an indispensable preliminary step. A determination of the effectiveness of texts was thus carried out, with respect to the legislative hierarchy, and on the basis of case law analysis relative to road projects (indicated in footnotes in the article). System improvements at national level are proposed. While objectives assigned by nations and the issue of assessment of actual results in the conservation of natural areas are becoming major challenges across the World (White, 2005; Jenkins and Joppa, 2009; Quintero et al., 2011), such proposals can concern various countries.

Principles to assess the legal effectiveness of protection instruments

Legal instruments applied to road projects

In France, ever since the statute of 22 July 1960¹ was adopted to establish the system of national parks, a wide array of protection-based instruments have been developed and applied throughout the national territory.

The protection instruments studied herein are those likely to be taken into consideration during the stage of horizontal alignment choice of road projects. Excluded from this analysis are Strategic Environmental Assessment (SEA), because the study does not take into account plans and programs, as well as those instruments responsible for regulating certain activities (e.g. fishing reserves), or that prohibit the implementation of a certain activity (e.g. Departmental Quarry Master Plan, Departmental Waste Treatment Master Plan), or that protect international marine and continental areas (e.g. International Convention for the Regulation of Whaling, Convention on Conservation of Nature in the South Pacific, Antarctic Treaty).

Categories of legal instruments

The study of legal instruments leads to a classification into several categories relative to:

- their original purpose, i.e. scientific knowledge (denoted A), natural area protection (B), and environmental assessment (C);
- their position in the legislative hierarchy, i.e. international law (denoted level 3), law of the European Communities (level 2), and French national law (level 1). A legal rule issued by a lower level cannot supplant higher-level documents to which they must comply. Moreover, within the national legislative framework, three sublevels can be distinguished, namely: statutory documents (denoted a), regulatory documents (b), and agreements (c);
- the manner (whether more or less direct) these instruments protect natural areas, i.e. a strict protection of natural areas, habitat protection for specific species, heritage protection and land use planning.

¹ L. No.60-708, dated 22 July 1960 of the Environmental Code, JO (Official Journal), 23 July, 1960.

Degree of effectiveness

Legal effectiveness is assessed through official documents and existing French case law relative to road projects. Effectiveness is established when litigation leads to compliance with legal rules (Thibierge et al., 2009). In cases where no published case law could be identified pertaining to the road project, the effectiveness was deduced using the available legislative texts. The main documentary sources for this exercise were: the Environmental Code (Cans et al., 2010), the Website www.legifrance.gouv.fr (Legifrance, 2010), the “Environmental and sustainable development” section of the *JurisClasseur* encyclopedia (Cans and Clap, 2008), the tool for natural area protection (Crozet, 2005), and the Technical handbook from the Roads and Highways Technical Agency (*Service d’Etudes Techniques des Routes et Autoroutes, SETRA*) (Sanson and Bricker, 2004).

An instrument is considered to be legally binding once it imposes coercive site protection measures on a road project. The degree of legal effectiveness in this article has been divided into three levels:

- 1 = low or negligible legal effect, no protection measures to be respected;
- 2 = effect imposing constraints that do not jeopardise project implementation;
- 3 = a binding effect, strict site protection, capable of hindering project implementation.

Legal protection instruments: from “soft law” to “hard law” (Maljean-Dubois, 2006)

Forty-three legal instruments were identified in the survey. Fig. 1 presents, using a synthetic format, the aim, organization and hierarchy of rules applicable under French law. In the French system, the Constitution serves as the supreme law. The black, grey and white colors indicate the main protection objective, i.e.: a strict protection of natural areas (51% of instruments), habitat protection devoted to specific species (14%), and indirect protection of natural areas through heritage protection and land use planning (35%).

Fig. 2 provides a means to clarify and describe the complex structure of all legal instruments of protection. The black color represents the highest degree of legal effectiveness, and the white one, the lowest. All instruments have been arranged on three parallel planes (i.e. international, European and national levels) to distinguish the hierarchy of standards. In any given plane, the arrangement of parallelograms is based on the relationships between instruments on both the intra- and inter-levels, according to their objects of protection and their legal relations. As an example, the Bern, Bonn and Ramsar Conventions, as well as the Hague Agreement, protect wetlands and habitats of waterbirds. Moreover, the Hague agreement was concluded under the Bonn Convention. The arrangement of the instruments of a level is related to that of the upper levels. As an example, the Coastal law (national level) is related to the Montego Bay Convention that protects natural coastal environments (international level). A marked cell indicates the presence of an instrument at a higher level. National Parks, starting point for the multitude of national instruments, are located in the center of the rectangular plane. The references “1” to “6” and “a” to “g” provide benchmarks among levels.

The Natural Areas of Interest for Fauna and Flora (ZNIEFF) are linked to the three levels. Use of assessment instruments depends on the usage of protection and inventory instruments.

The Natura 2000 network (referenced at the coordinate 2-2d in Fig. 2) and the Water Resource Development and Management

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