

# IMPLEMENTING EU NATURA 2000 AT THE PROJECT LEVEL: LESSONS FROM THE VELUWE BORDER LAKES IN THE NETHERLANDS

---

VERA VIKOLAINEN, HANS BRESSERS AND KRIS LULOFS

The implementation of the European Union Bird and Habitat Directives in the field of water infrastructure has caused severe project disruptions in the past. The prevalence of negative experience has triggered a new approach, which aims to integrate site-specific characteristics of ecosystem and project objectives during the development of the initial project design. This is termed integrated nature design. In this paper we advance the hypothesis that applying integrated nature design in Natura 2000 areas can increase the chances of a project being approved in case appeal is made to the courts. To test our hypothesis we have carried out a quasi-experimental comparison of two coastal zone development projects in the Netherlands. Our analysis demonstrates that a coastal development project in a Natura 2000 area has a greater chance of success if its design integrates nature, provided that the project administration and scientific findings are favourable.

## INTRODUCTION

The European Union (EU) Bird and Habitat Directives (79/409/EEC and 92/43/EEC) provide the legal basis for the Natura 2000 biodiversity network (EEC 1979, 1992). The Directives oblige authorities to assess the ecological effects of intended projects on the integrity of a Natura 2000 site (Directive 92/43/EEC, art. 6). In the field of waterways and ports these assessments have been challenged very frequently by environmental non-governmental organizations (NGOs), resulting in severe delays and the cancellation of many water infrastructure projects in North West Europe (van Hooydonk 2006). Prominent examples in the Netherlands are the extension of Mainport Rotterdam (7 months delay) and Western Scheldt Container Terminal (cancelled). Unsurprisingly, in recent correspondence with the president of the European Commission, the former Dutch Prime Minister argued that Natura 2000 threatens the balance between economic and natural development (Balkenende 2009).

The prevailing negative experience is forcing the authorities and practitioners to rethink their strategies for dealing with environmental obligations under the Bird and Habitat Directives. Politicians, their policy staff, and project implementers have realized that it is necessary to consider environmental issues as early as possible in the project design stage. This is the goal of an emerging approach in the field of water infrastructure, known as 'Building with Nature' (Waterman 2008, 2010; Aarninkhof *et al.* 2010), or 'Working with Nature' (PIANC 2008). At the EU level this approach has been discussed in the working group established by the European Commission's DG Environment. The group comprised representatives from the Member States, stakeholder organizations, and environmental NGOs. The consensus was that 'working with nature' is the best way forward for all those involved, and this has been laid down in the 'Guidelines on the Implementation of the Birds and Habitat Directives in Estuaries and Coastal Zones' (European Commission 2011).

The crux of the approach is to integrate site-specific characteristics of the ecosystem and project objectives while developing the initial project design. In the Netherlands it has

---

Vera Vikolainen, Hans Bressers and Kris Lulofs are in the School of Management and Governance, University of Twente, the Netherlands.

been applied to coastal development using large-scale sand nourishment and ecological landscaping in sand extraction areas (Aarninkhof *et al.* 2010). However, too few cases have been implemented to allow the best practices of the approach to be established, at least within the European context. So it is still an open question whether the new approach will improve project implementation within the existing framework of the Bird and Habitat Directives. In this article we limit this broad implementation question, confining ourselves to the chances of a project being approved by an administrative court. We conceptualize this as a policy implementation problem because public authorities admit that court decisions are often one of the 'hurdles' in project implementation. We refer to the new approach as 'integrated nature design', defined as a design that achieves the economic goals of the project given the particular site-specific characteristics of a Natura 2000 site, rather than an assessment of the environmental consequences of a predefined project design. Our hypothesis is that the application of integrated nature design in Natura 2000 areas can increase the chances of a project's approval by the Dutch Council of State.

To test our hypothesis we chose two rather similar coastal development projects located in the same Natura 2000 area of the Veluwe border lakes in the Netherlands: Waterfront-North Harderwijk (hereafter referred to as Waterfront Harderwijk) and Coastal Zone Zeewolde. An active local NGO dedicated to the protection of birds lodged an appeal against both projects. Despite similar degrees of biodiversity loss, geographical location, and operative legislative frameworks, the Administrative Jurisdiction Division of the Dutch Court of Appeal ruled differently in each case: Harderwijk was reversed and Zeewolde was approved, in 2008 and 2009, respectively (Case 200706044/1 and 200706194/1; Case 200800948/1). Zeewolde's judicial success seems to be accounted for by its having a project design that integrates nature and recreation needs; the absence of such a design seems to explain the failure of Harderwijk. This made the projects a suitable test for our hypothesis.

## THEORETICAL FRAMEWORK

The hypothesis we have posed links three elements:

- The EU Bird and Habitat Directives.
- Specific type of project design.
- Project approval in court.

The literature on the implementation of EU directives focuses predominantly on explanatory factors such as the EU policy design, the transposition of EU legislation into national legal order, or the institutional 'fit' between national structures and supranational requirements (Bennett 1993; Knill 1998; Jordan 1999; Smith 2000; Steunenberg and Voermans 2006; Müller *et al.* 2010). It also looks at transposition and formal implementation in different EU member states (Jordan 1993; Ward *et al.* 1995; Rood *et al.* 2005; Bovens and Yesilkagit 2010; Zubek 2011). It takes policy as a given and evaluates the subsequent implementation process in terms of compliance. This body of literature does not shed any light on what happens beyond the formal implementation stage. The literature that addresses implementation at the project level does so by looking at a specific sector of economic activity (Backes *et al.* 2007; Zonneveld *et al.* 2008; van Apeldoorn 2011). This work is mostly descriptive or legalistic, and is only rarely theoretically underpinned. Case law on the Bird and Habitat Directive in the Netherlands has been the subject of legal

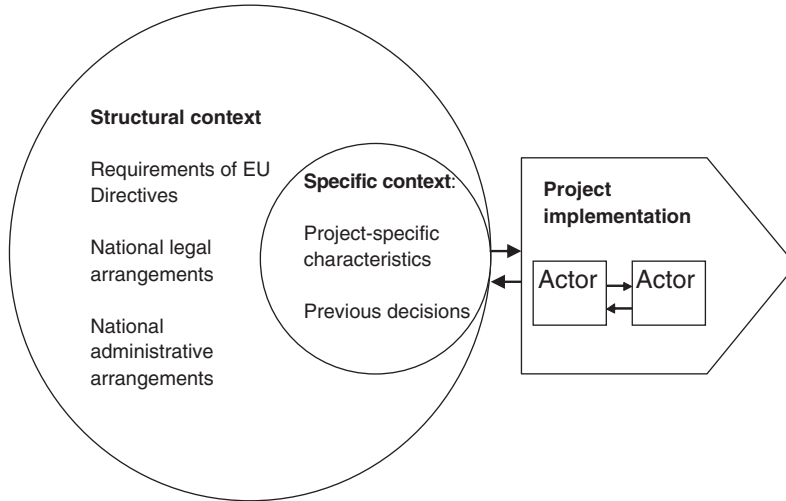


FIGURE 1 *Contextual Interaction Theory of project implementation*

analysis (Bastmeijer and Verschuuren 2003, 2004; Beijen 2010) limited to the national legal context. Although each perspective is helpful in understanding one particular element of our research question, it is really a combination of three different contexts that will provide us with a useful answer. Such a synthesis of theoretical perspectives is offered by 'third generation' theories, which provide a fuller, more valid perspective on understanding implementation (O'Toole 2000, 2004). One such perspective is the Contextual Interaction Theory (CIT) of policy implementation (Bressers 2004, 2009).

CIT considers that policy implementation comprises a social interaction process among the actors involved. It distinguishes different layers of contextual factors that influence this interaction process. Among these factors, it includes all three elements of our hypothesis. The factors are considered influential only when and insofar as they influence actor interaction.

Apart from linking different contexts, CIT helps to simplify the vast contextual field and locate the possible independent variables ( $X_i$ ). This is particularly useful since we are not sure whether integrated nature design is the only independent variable that accounts for the outcome. Two layers of independent variables are specified in our analysis (figure 1):

- Structural context: the requirements of EU directives under study, as well as national administrative and legal arrangements used to transpose them.
- Specific context: project-specific circumstances like geographical, ecological, and hydrological case characteristics, as well as previous project plans or ideas.

The dependent variable ( $Y$ ) is defined in this paper as project implementation. Project implementers view court decisions as one of the 'hurdles' in project implementation, so we focus on this particular stage of implementation, defined in terms of the decision of the Administrative Jurisdiction Division of the Council of State (the highest Dutch administrative court, hereafter referred to as the Court) as successful when a project is approved (Zeewolde) and unsuccessful when a project is dismissed (Harderwijk). At the time of writing, neither of the projects has actually been completed on the ground.

In line with the theoretical assumptions, our analysis identifies contextual factors that could potentially explain why the implementing actors defended their project in Court in the way they did. The implementing actors in our study are the public organizations involved in the project: the municipality of Harderwijk, the municipality of Zeewolde, the Province of Gelderland, the Province of Flevoland, and a bird protection NGO (Vogelbeschermingswacht Noord-Veluwe).

## DATA COLLECTION

A series of semi-structured interviews were held with key informants from the organizations mentioned above, as well as with officials from the Ministry responsible for implementation of Natura 2000 in the Netherlands. Data collection was done in August and September 2009, gathering relevant project documentation, including reports, minutes, correspondence, decisions, technical designs, as well as other related material. Court decisions were retrieved from the official website of the Administrative Jurisdiction Division of the Council of State ([www.raadvanstate.nl](http://www.raadvanstate.nl)).

## METHODOLOGY

This paper presents a qualitative causal explanatory study. We are interested in the causal link between one specific contextual factor (integrated nature design) and one stage of implementation (Court decision) of coastal development projects in Harderwijk and Zeewolde. Causality is defined in terms of processes through which it operates, or causal mechanisms (Little 1991, cited in King *et al.* 1994). To unpack the causal mechanism we have compared two municipalities that are similar in all relevant respects: the degree of biodiversity lost as a result of coastal development needs, location within the Natura 2000 network (Veluwe border lakes area), and the presence of an active environmental NGO (Vogelbeschermingswacht Noord-Veluwe). One of the municipalities (Zeewolde) administered a project with a more integrated nature design, while the other proceeded with a less integrated design. An appeal against both projects was lodged by the same environmental NGO. The Court's decision has been compared for both cases. This type of comparison is known as quasi-experimental (Gerring 2007, p. 154), or factor-centric small-N design (Gschwend and Schimmelfennig 2007, p. 14).

The essential properties of the research design are illustrated in table 1. '?' indicates that the value of the dependent variable (Y, Court decision) is the major objective of the analysis.  $X_1$  marks the key independent variable (integrated nature design); its initial value is denoted as '-' and its change of status as '+' (intervention).  $X_2$  represents rival independent variables, or other contextual factors. Part of  $X_2$  is held constant (biodiversity

TABLE 1 *Quasi-experimental research design*

	$t_1$		
Treatment case: Zeewolde (intervention = more integrated nature design)	Y	?	Project approved
	$X_1$	+	More integrated nature design
	$X_2$	-	Rival explanations (partly const.)
Control case: Harderwijk (no intervention)	Y	?	Project reversed
	$X_1$	-	Less integrated nature design
	$X_2$	-	Rival explanations (partly const.)

loss, location, NGO, appeal). The outcome of the  $X_1/Y$  interaction is observed at time  $t_1$ : after the Court decision was issued.

## METHODOLOGICAL LIMITATIONS

The proposed methodology has several drawbacks. To begin with, there are limitations associated with causal inferences that rely on a small number of cases (Lieberson, 1991). We assume the existence of one primary cause (integrated nature design), but the chances are that more than one independent variable is associated with the difference in outcome. Therefore we need to be aware of rival independent variables ( $X_2$ ) and identify them. At the same time, the number of cases ( $n = 2$ ) is probably much smaller than the number of independent variables we can potentially locate, yet we do not know the probabilities of judicial success for each independent variable. Furthermore, the relationship between the independent variables and the dependent variable is distorted when cases are deliberately selected to differ in terms of the dependent variable, rather than sampling from all of the cases. For the same reason, the influence of constants (which is only part of  $X_2$ ) is not really taken into account: their measurements are the same for both cases.

Another important limitation of the proposed methodology is that causal inference can never be known for certain. This is known as the fundamental problem of causal inference (Holland 1986, cited in King *et al.* 1994). In any one real project we can only observe an approval or reversal in Court, never both. Nor can we observe a decision before and after the intervention. Therefore, we try to estimate how a causal mechanism operates, as opposed to knowing it for certain. When we construct a quasi-experiment the assumption is that two units (projects in this case) are 'homogeneous': the same value of the explanatory variables causes the same expected value of the dependent variable. However, the two projects might differ in some unknown way that would bias our causal inference, as any two social phenomena will differ in some way. This assumption of causality is ultimately untestable (King *et al.* 1994).

One way of thinking about the small-N methodology is to visualize a very small sample taken from a larger population (Lieberson 1991, p. 315). The question then becomes, what is the likelihood that the application of the same method will reproduce the patterns observed for the larger universe?

## METHOD OF DATA ANALYSIS

Given the limitations outlined above, we need additional analysis to address rival causal variables ( $X_2$ ) that could possibly interfere with our main explanatory variable. Hence, we use the modus operandi method, also known as the 'detective paradigm' (Scriven 1976). The method's goal is to account for all rival causal variables by identifying their characteristic causal chains (or certain distinctive features of this chain). These causal chains are an associated configuration of events, processes, or properties, usually in time sequence, connecting the cause with the effect, known as the modus operandi (MO) of a particular cause. The general nature of an MO inquiry is that of pattern recognition, with the following sequence of tasks.

First, all possible explanations of the Court decision are drawn. Scriven argues that it is not hard to list, and it is easier still to recognize, most and nearly all of the likely causes of a given, substantial, and highly specified social phenomenon (Scriven 1976, p. 107). One should simply include any possible cause, in any pragmatic sense of 'possible'. For our analysis, the initial focus for locating possible causal explanations is provided by

our theoretical framework (CIT, figure 1). CIT serves as a 'map' of the contextual field that helps us to 'see' where potential explanations could possibly be located. We then narrow down the contextual field based on the available literature. Thereafter, a series of semi-structured interviews is held with key actors involved in the project. Respondents are asked for their opinion as to what factors explain the outcome in order to minimize the risk that important causal explanations are left out. Second, explanations provided by the interviews are checked against the collected project documentation and the motivation given in the Court decisions. The final list of causal explanations is then drawn up. Third, each causal explanation is assigned a characteristic causal chain, which outlines its distinct pattern of properties ('if – then' description, or MO). In the end, the explanatory power of each causal explanation is estimated based on the presence of its distinct pattern of properties based on data gathered from both cases.

The goal of the analysis is thus to discover how many complete patterns of properties (MOs) are present. If only one MO is complete, the causal explanation with which that MO is associated is the cause. If more than one complete MO is present, the associated factors are co-causes. Therefore Scriven does not rule out the possibility of several (interrelated) causes. In that case, it is still possible to distinguish one rival explanation from another according to the most distinctive features of their respective causal chains, even though the causal chains had crossed each other at some point.

Following the logic suggested by CIT, the presence of an MO for specific context factors is checked first. Thereafter, structural context factors are checked for the presence of a complete MO. The ones that display no MO are ruled out and the remaining ones are appraised for their explanatory power.

## BACKGROUND

The Veluwe border lakes were designated as a protected area under the Bird and Habitat Directives in 2000 and 2003. The amended conservation objectives were published in 2007.

The Waterfront Harderwijk project encompasses a redevelopment of almost 5 kilometres of coastal zone along the Veluwe lake coast. Its main aims are the relocation of old industrial areas, improvement of recreation and housing facilities, and strengthening the natural and water functions. The municipality of Harderwijk (Gemeente Harderwijk 2006) argues that the loss of 8.5 hectares of habitat and forage areas can be neutralized by the creation of a green zone and nature-friendly areas, which would be suitable as new habitat for birds, fish, and mussels, while the transformation of a nearby pastureland into marshes would make the area attractive for water and grassland birds, creating a water retention area.

The Zeewolde project envisages a park zone, two beaches, an island with recreational facilities connected to the shore by a bridge or a dam, and a row of islands that would create a lagoon area (open area between the island and the shore). The municipality of Zeewolde (Gemeente Zeewolde 2007) maintained that a permanent loss of 10 hectares of sanctuary and forage area for birds does not threaten the favourable conservation status, since the coastal lagoon, parts of which have shallow water, will support the recovery or even improve the habitat of the protected species.

## RESULTS

Using the methodology described above, seven causal explanations have been identified. This section explains each of them separately, following the theoretical assumptions of the analysis.

### Integrated nature design

The main independent variable of interest is integrated nature design, defined as a design that achieves the economic goals of the project given the particular site-specific characteristics of the Natura 2000 site, rather than assessing environmental consequences of a predefined project design. For the two projects we analyze here, this translates into a discussion of whether nature design elements should be considered as a mitigation of adverse ecological effects or as part of the original project design. In the case of Harderwijk the Court ruled that 'Mitigation measures should not be taken into account to exclude the significant effects [on the Natura 2000 area] and can only be taken into consideration in the subsequent appropriate assessment procedure' (Case 200706044/1 and 200706194/1, para. 2.11.3). In the case of Zeewolde, the Court 'saw no reason to doubt the accuracy of data in Table 4.5 of the expert assessment report [importance of the project area for protected species]' (Case 200800948/1, para. 2.8.1.) and stated that 'The Bird protection NGO has failed to show that the above mentioned effects [rest and forage area for birds, underwater vegetation] will not take place' (Case 200800948/1, para. 2.8.2). The complete MO of this factor would therefore consist of a stronger integrated design in Zeewolde, which is distinct from the Harderwijk case.

The analysis of project documentation shows that the first nature development plans in Harderwijk date back prior to the Natura 2000 implementation. The negotiations between the municipality and nature conservancy groups commenced simultaneously with the first project plan: in 1998. Three agreements were signed as a result, with a fourth one underway. Furthermore, the municipality was motivated to combine different functions (water retention area, nature mitigation measures) and to take account of the interests of various actors (nature conservancy groups, recreation, and industry). The resulting zoning plan contains an extensive assessment of ecological effects but does not provide an entirely consistent nature development plan. The exact functions of the nature-friendly banks remained unclear until the Court hearing, when a written defence contradicted the argument advanced forward by one of the defending parties.

The Zeewolde coastal development plan originated from the regional development programme for the whole Veluwe border lakes area. Coastal development as a separate project was only negotiated with local residents and nature conservancy groups after they had produced their response. From the outset, the municipality was motivated to create a plan that would pass the legal assessment: it maintained the same nature design from the initial project document to the final zoning plan. Considerable elaboration and fine-tuning of the design to the requirements of the Bird Directive can be traced in the ecological assessment reports. Even though several documents refer to the intended nature design as a 'mitigation measure', the municipality and the province argued in its written defence and during the Court hearing that their plan was nature-inclusive. They asserted that they had chosen nature over recreation as a starting point for their plans as early as the project's inception.

In its legal appeal against Zeewolde, the bird protection NGO did not present any extensive ecological arguments against the intended nature design. It simply mentioned that the proposed island added no value to the current ecological situation. The main argument against both projects was the same, being based on the Leybucht case (Case 57/89): any decrease of a Natura 2000 area is allowed only in exceptional cases. However, the Court saw insufficient scientific evidence to doubt the positive contributions to nature of the Zeewolde plans, and left the issue of Natura 2000 area loss aside.

This points to a conclusion that the Zeewolde authorities were able to make a convincing argument in Court in favour of a nature-inclusive plan, which is very much in line with our definition of integrated nature design. This prevented 'mitigation' from being brought into the legal discussion (as happened in Harderwijk). The foregoing confirms the presence of this factor's MO.

### **Project administration**

Correctly following administrative procedures is an absolute prerequisite for pursuing a successful case in an administrative court. Administrative procedures like those for the zoning plan are directly handled by project administration. The administrative follow-up, in turn, depends on the actors involved in the project, preparation time, and amendments to the project's design. The more complex administrations, which take a longer time and involve more actors, generally run a greater risk of engaging in an incorrect administrative follow-up.

From the very start of the Waterfront redevelopment project, multiple interests were at stake: industry, recreation, nature, and housing. The municipality therefore chose to engage in an open decision making process, involving multiple actors. The entire Waterfront project was divided into several zoning plans (Waterfront-North, Waterfront-South, and Waterfront-West), but they proceeded as one coherent spatial development plan. It took eight years from the drafting of initial plans in 1998 to finalize Waterfront-North. During this time the municipality did its best to absorb the emerging legislation and case law, as well as the interests of the various parties. The design of the project also underwent changes, when the decision was made to relocate the industrial area from the West to the North. The fact that the Waterfront area was under the authority of two Provinces (Flevoland and Gelderland) did not make things easier. By 2006 the municipality was already under quite a lot of pressure to enact the zoning plan, while the implications of the Natura 2000 framework were still crystallizing. Shortly after the enactment of the zoning plan (December 2006) the Ministry of Agriculture, Nature and Fisheries published the renewed conservation objectives for the Natura 2000 Veluwe border lakes (first half of 2007). To safeguard their position, the municipality initiated a new assessment of the plan in light of the latest ministerial decree. The fact that the effects were assessed post-enactment is an administrative error to which the Court pointed: 'The new assessment provides the most recent data. . . . It is not clear why this new data and information, or at least the relevant part of it, was not reported prior to enacting the zoning plan. . . . The Court holds that the information as it was available at the time of enactment was insufficient' (Case 200706044/1 and 200706194/1, para. 2.11.1).

In the case of Zeewolde, the coastal zone was initially part of the residential development plan. However, on the advice of the Province of Flevoland, the municipality separated the residential area and coastal development at an early stage. Coastal zone development proceeded after the residential area zoning plan had been settled. The overall design of the coastal zone plan did not undergo any major changes, and it took two years to proceed from the initial plans to the zoning plan's enactment. No significant legislative developments occurred during this time. Furthermore, the municipality was not involved in negotiations with nature conservancy groups until they had produced their response to the (proposed) zoning plans.

There is a noticeable difference in the way each administration handled its project. Zeewolde's step-by-step approach allowed for the rapid realization of the coastal zone project, while the overarching administration of the Waterfront was one step behind



the events, with an improperly timed assessment report due to increasing pressure. Furthermore, early de-coupling of residential (economic) interests in the Zeewolde case shifted attention towards the more prominent role of nature in coastal development and a more tailor-made design. In contrast to this, the Harderwijk administration chose a closer coupling of the zoning plans, which were eventually dominated by industry and residential development needs, in the absence of a consistent nature development plan. It is therefore plausible that project administration acted in parallel to integrated nature design, or may have even triggered it. In any case, this factor's MO was present.

### **Presentation of scientific data**

Both Court decisions refer to the Cackle fisheries case (Case 127/02), which holds that the plan can be approved without an appropriate assessment procedure if, based on the objective data, significant effects on the area in question have been excluded; or, likewise, if an appropriate assessment provides certainty that the project or other activities have no damaging effects on the natural characteristics of the area. This refers to a case where no reasonable scientific doubt remains as to the absence of damaging effects. Neither Harderwijk nor Zeewolde authorities conducted an appropriate assessment procedure: zoning plans were enacted on the premise that significant effects are excluded. The MO of this factor is that good quality scientific data enabled the actors to exclude significant effects and to argue in Court that no appropriate assessment was necessary.

In the case of Harderwijk, a total of four scientific reports were published; the last of them revised existing data in light of the new ministerial information. Prior to this report the effects were uncertain, and the conclusions of different ecologists were sometimes contradictory. The municipality and the province argued that the goal of the revised report was to update the information to gain better insight into the situation; while the Court saw it as 'essential circumstances, [which are] partly the result of different policy insights and, contrary to what was argued during the hearing, are not limited to the update of information only' (Case 200706044/1 and 200706194/1, para. 2.11.1). Furthermore, the Court highlighted the confusion concerning the appropriate assessment procedure. 'The Province of Flevoland asserts in the challenged decision [zoning plan approval] that the conclusion as to the absence of significant effects on the area is correct ... and that appropriate assessment is not necessary. [The Province's] Court defence reads that the zoning plan procedure incorporated an appropriate assessment procedure and that all reports together represent an appropriate assessment' (Case 200706044/1 and 200706194/1, para. 2.4.). The revision report itself states that it can be seen as an 'appropriate assessment'.

Finally, the Court pointed out that the conclusions of the two reports were formulated differently: '[based on the reports available at the time] significant effects of the zoning plan could be excluded. The revised report states that significant effects are not to be expected. Moreover, the revised report as well as the approval decision by the Province of Flevoland argue that the revised report itself can be seen as appropriate assessment. ... Insofar as the revised report can be seen as appropriate assessment, its conclusion that significant effects are not to be expected does not provide the degree of certainty that an appropriate assessment should provide' (Case 200706044/1 and 200706194/1, para. 2.11.2). Document analysis shows that 'significant effects are not to be expected' is the conclusion drawn for the 'Veluwe Natura 2000 area'. The concluding chapter states that Waterfront-North has no effect on most conservation objectives for Veluwe border lakes. It is therefore not clear why the formulation that 'significant effects are not to be expected'

was taken as an overall conclusion of the report by the Court, and why the effects needed to be mentioned at all if the species are not found in the area.

The municipality of Zeewolde had approximately six years' experience with the application of Natura 2000 regulations preceding the Coastal zone project. The municipality's experience in residential area development (originally jointly with coastal development, but separately later) has been analyzed in the literature (Backes *et al.* 2007). Two scientific reports were published, and the Province provided some data on bird counting. When the publication of the first research report did not provide the level of certainty needed, the authorities decided to halt the project and wait for the second report. Even though the second report focused on a larger area, and indicated the effects of the Coastal zone project as 'slightly negative', the municipality considered that a sufficient degree of certainty about the effects had been achieved. The Province and the municipality referred to the report as a screening and have not called it an 'appropriate assessment'.

The bird protection NGO referred to the Leybucht case (C-57/89) in both of the appeals, arguing that where the loss of Natura 2000 area is implied, significant effects cannot be excluded and therefore an appropriate assessment should have been conducted.

What follows from this analysis is that it is not so much the (objective) scientific certainty provided by the data but the actors' interpretation of when exactly the required level of certainty is reached. Admittedly, scientific information in ecology always comes with uncertainty. This, in the absence of objective criteria provided in the legal framework, is what makes the actors' perception of the quality of the scientific data the decisive factor. The interpretation of scientific data can be further strengthened by the following factors: consistent use of terminology (appropriate assessment or not); actors' prior experience; and the exact wording of reports, conclusions, and the interpretation thereof by the Court. Integrated nature design could, albeit indirectly, have contributed to the actors' confidence in their own design and the required level of scientific underpinning (Zeewolde), while in Harderwijk the actors tried to investigate the effects to the extent of the available knowledge. The MO of this factor was present and could have operated as a consequence of integrated nature design.

### **Geographical borders of Natura 2000 area**

One of the possible rival explanations is that the borders of the Natura 2000 area have influenced the judicial decision. The Zeewolde project area lies entirely within a Bird Directive area, while parts of Waterfront are within both Bird and Habitat areas. Furthermore, the Natura 2000 border along the coast of Harderwijk allegedly takes part of the intended project activities into account, exempting it from legal requirements. This factor would explain the outcome if the absence of the Habitat directive in the case of Zeewolde made the legal assessment less strict, and the advantage of partial exclusion from Natura 2000 area was helpful to Harderwijk.

Even though the Zeewolde project is located outside the Habitat directive area, the legislation in force required the authorities to apply the Habitat directive assessment framework. Furthermore, document analysis shows that the ecological assessment did not exclude the adjacent Habitat area. With regard to Harderwijk, the authorities did indeed try to change the borders of the Natura 2000 area, but the Court reversed their attempt. Moreover, a project location outside of the Natura 2000 area would not guarantee an easier procedure, since its external effects on an adjacent Natura 2000 area would still have to be assessed.

The exact location of both projects in relation to the Natura 2000 area could therefore have had no influence on the Court's decision. With no MO present this explanation is ruled out.

### **Court procedures**

The judicial review used by the Court is a factor that could explain the outcome of the Harderwijk case in particular. The MO of this factor consists of a procedural decision based on (formal) legal considerations with no interpretation of project contents and underlying scientific data.

The allegedly 'procedural' issue in the Waterfront case was the submission of the revised research report after the zoning plan had been enacted. Here the Court judged that not all scientific data was available at the moment of approval by the municipal council, while the municipality maintained that it was merely an 'update' of scientific data. In its judgment the Court relied on the Nature Protection Act (1998) in combination with the General Administrative Law Act (1994). The role of the General Administrative Law Act is significant in respect of the Court's function as a guardian of procedural 'decency' and the principle of proper administration: 'When preparing an order an administrative authority shall gather the necessary information concerning the relevant facts and the interests to be weighed' (art. 3:2). The Court's judgment was therefore in line with its function and was sufficiently content related from a lawyer's perspective. One of the ways to prevent 'procedural' instances is to anticipate the kind of legal requirements that are applicable in case of an appeal as early as the preparation phase of the project. This will ensure that the research and administrative approval are correct and judge-proof. For our analysis it means that legislative procedures do not explain a decision as a stand-alone factor, as they are applicable by default to all projects. This allows us to rule out this explanation.

### **Access to court**

Project delays or cancellation as a result of Court appeals are directly linked with the accessibility of administrative courts to interested parties (legal entities). To establish this factor's MO, one would expect to find an active environmental NGO in the Veluwe border lakes area which had ready access to the Court.

International comparative research does confirm that – thanks to certain features of the Dutch legal system – frequent appeal procedures are more common in the Netherlands than in other EU countries. In addition to this, Dutch administrative courts issue a decision on average within one year after an appeal has been lodged, which is relatively quick in comparison to other EU countries (VROM Raad 2008).

However, it is important to note that in both cases it was the same NGO acting in the same geographical region and the same appeal criteria were complied with. This factor has thus no explanatory power for the success of one case and the failure of another. Perhaps if two different NGOs were present (one less active than the other), or if the cases were located in two different EU countries with distinct legislative traditions, the role of this factor would be more prominent.

### **Implementation of Bird and Habitat Directives in Dutch legal order**

In the course of investigation, the following features of Dutch implementation of EU directives emerged that could potentially have influenced the Court decision.

First, Dutch implementation of the Habitat Directive in the amended Nature Protection Act left important concepts like 'significant effects' and 'appropriate assessment'

unspecified. Second, Dutch legislation uses a stricter assessment framework than that of the Habitat Directive, which allows economic, social, and cultural requirements, and regional and local characteristics considerations to be taken into account (92/43/EEC, art. 2 para. 3). Finally, the process for designating Natura 2000 areas in the Netherlands is rather complex. Consequently, conservation objectives for the Veluwe border lakes area have undergone a number of changes, with the last update published in 2007. In the case of Harderwijk, these became available after the enactment of the zoning plan, later on leading to the publication of a research report.

Ultimately, the same legislative concepts and the same assessment framework were applied in both projects, because the majority of research reports were drawn up after the amendment of the Nature Protection Act (three of four reports in the case of Harderwijk and all reports for Zeewolde). As explained previously, the evolving legislative framework became a disadvantage for Harderwijk predominantly as the result of the lengthy project preparation (eight years as opposed to two years in the case of Zeewolde). All in all, our conclusion is that these factors highlight several potential pitfalls in the application of Habitat and Bird Directives, but they do not constitute significant barriers to project implementation. Furthermore, they are not helpful in explaining judicial outcome, given that in the case of Zeewolde all of the same pitfalls were overcome.

The foregoing analysis ruled out four rival explanations with no MO: geographical borders of the Natura 2000 area; access to court; court procedures; and the implementation of Bird and Habitat directives in Dutch legislation. The influence of these factors was constant and the same in both cases. In theoretical terms, all of these factors are structural (figure 2).

## CONCLUSION AND DISCUSSION

In this paper we have posed the hypothesis that the application of integrated nature design in Natura 2000 areas can increase the chances of a project’s approval by the Dutch Council of State. We defined integrated nature design as a design that achieves

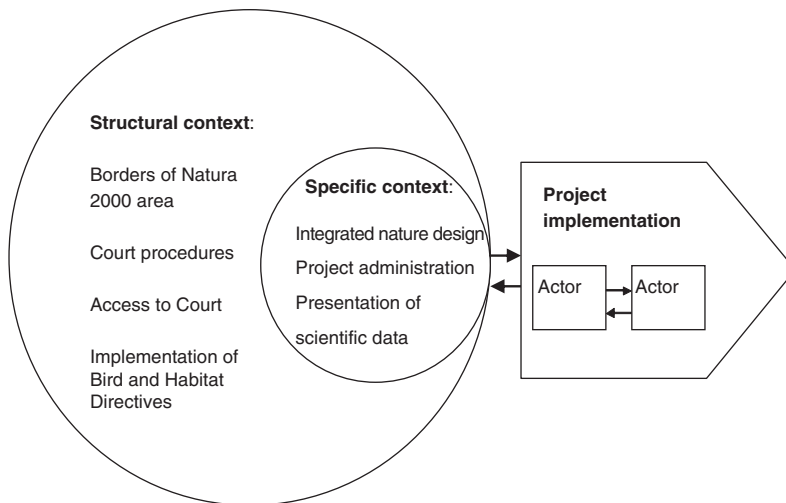


FIGURE 2 Contextual Interaction Theory: Harderwijk and Zeewolde explanatory factors

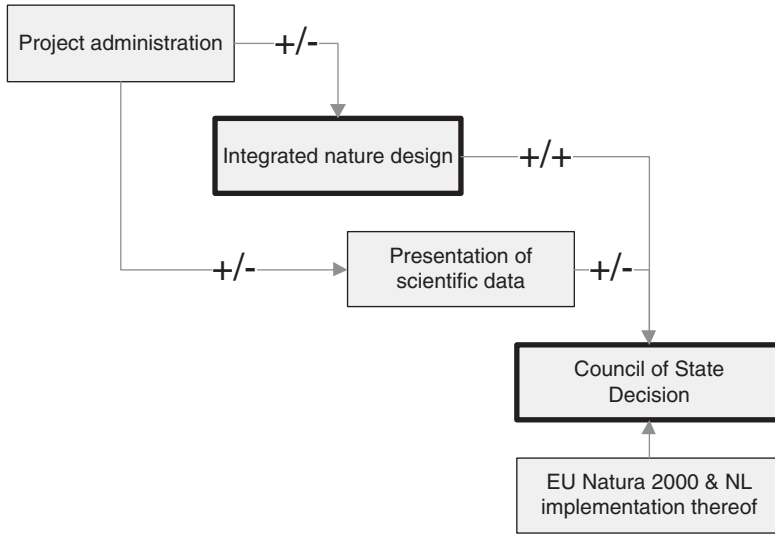


FIGURE 3 Causal factors and their influence on Court decision

the economic goals of the project given the particular site-specific characteristics of a Natura 2000 site, rather than assessing the environmental consequences of a predefined project design. Thereafter, we analyzed a total of seven rival explanations of project outcomes in Zeewolde and Harderwijk. For the main causal factor of interest – integrated nature design – a complete MO was established. Two other rival explanations displayed a complete MO: project administration and the presentation of scientific findings.

The last two factors acted alongside integrated nature design: project administration contributed to rapid and decisive realization of the proposed design in Zeewolde, and slowed it down in Harderwijk. Scientific findings were based on the proposed design and reflected the way actors accounted for its ecological effects, which was more consistent in the case of Zeewolde than Harderwijk. This leads us to believe that neither of the two factors alone had sufficient impact to have caused the outcome and their impact complements the explanatory power of the main causal factor. This allows us to link all three factors in the following causal chain (figure 3).

Integrated nature design strengthens (+/+) the chances of the project being approved in Court. Presentation of the scientific data could either strengthen (+/-) the case in Court, depending on the actors' confidence in their own design and the way they handle the scientific data. Similarly, project administration could either increase or decrease the extent of integration of nature into the design (+/-). The implementation of Natura 2000 legislation sets a number of important conditions that must be taken in account but does not explain the variance in Court decisions.

This estimation of causal effect supports our hypothesis that integrated nature design in Natura 2000 areas can increase the chances of a project's approval by the Dutch Council of State. However, since we were not able to rule out other variables and exclude interaction effects between them, this hypothesis needs refinement. The foregoing analysis of Harderwijk and Zeewolde cases suggest the following refinement: a coastal development project in a given Natura 2000 areas has a greater chance of success if its design integrates nature provided that the administration and scientific findings are favourable. The conclusion

does not necessarily contradict a widespread view in the Netherlands that the EU Bird and Habitat Directives are of poor quality, their requirements are interpreted too strictly, and it is difficult for authorities to comply with them. Rather, we take a more positive stance and argue that, once the legislation is implemented, room can and should be sought within the existing framework, to realize both economic and ecological goals.

Drawing on the analysis of the Harderwijk and Zeewolde cases we were able to see that the outcomes of any two coastal development projects in the same Natura 2000 area in the Netherlands differ if one of them integrates nature into its project design. However, bearing in mind the limitations of a small-n methodology, the above conclusions apply only to a small sample from a larger population of cases. The question then becomes, what is the likelihood that the application of the same method to the larger universe of cases will reproduce the same patterns? This question is particularly relevant now that the European Commission has adopted the integrated nature design, or 'working with nature' approach in the new Guidance Document (European Commission 2011). Hence a broader quantitative comparative research with more cases and countries would be a meaningful undertaking. Such research could take fuller account of the influence of factors that were constant in our analysis (the same in both cases) and therefore address the limitation of quasi-experimental analysis. It could further test our hypothesis for a large-n sample of cases. Ongoing research at the University of Twente will test the refined hypothesis in another small-n qualitative case study.

More practical recommendations with regard to the application of integrated nature design approach are:

- (1) Project design is more successful if it is fine-tuned to Natura 2000 conservation objectives, in particular when it implies any loss of Natura 2000 areas.
- (2) The loss of the Natura 2000 area is possible without an appropriate assessment procedure on condition that scientific data excludes significant effects.
- (3) Administrative decoupling could minimize the preparation time and prevent unintended administrative errors, especially with respect to the evolving legislative framework and case law.
- (4) With respect to scientific certainty of ecological effects, it is advisable not to dwell on the question of 'significance', but to draw on previous experience and to use a consistent vocabulary, both in scientific reports and in a written court defence.
- (5) It is useful to anticipate as early as possible, preferably in the project's preparatory phase, the type of legal requirements that would come into play in case of a legal appeal; and take the latest legislative developments into consideration.

The lessons from the Harderwijk and Zeewolde cases do not contradict the recommendations of the European Commission that 'projects should be "designed" using the "working with nature" concept. This means that the relevant Natura 2000 conservation objectives should be considered together with the technical project objectives from an early stage in project design and development' (European Commission 2011, p. 27).

Besides the practical lessons, broader implications for theory and method emerge from our conclusions. The analysis presented in this paper shows that the combination of the CIT and modus operandi method does allow researchers to draw fairly clear conclusions about causal factors, even given the complexity of Natura 2000 interpretations by the Court. It is therefore possible to understand outcomes of policy implementation in the local context, without explicit reference to broader policy design and policy goals. When

doing this, CIT and modus operandi are helpful in identifying the likely causal path. The conclusions could potentially be generalized to a larger population of cases in Natura 2000 coastal zones. However, to further strengthen and expand upon the derived claims, more cases need to be analyzed, in a geographical as well as temporal scope.

## ACKNOWLEDGEMENTS

The work presented in this paper is carried out as part of the innovation programme, Building with Nature. This programme is funded from several sources, including the Subsidieregeling Innovatieketen Water (SIW, *Staatscourant* nr. 953 and 17009), sponsored by the Dutch Ministry of Transport, Public Works and Water Management and partner contributions of the participants to the Foundation EcoShape. The programme receives co-funding from the European Fund for Regional Development (EFRO) and the Municipality of Dordrecht.

## REFERENCES

- Aarninkhof, S.G.J., J.A. van Dalfsen, J.P.M. Mulder and D. Rijks. 2010. 'Sustainable Development of Nourished Shorelines. Innovations in Project Design and Realisation', paper presented at PIANC MMX Congress, Liverpool, UK.
- Backes, C., M-J. Bogaardt, T. Nijmeijer and J. Vader. 2007. *De Habitattoets Getoetst*. LEI rapport 20407. Den Haag: LEI.
- Balkenende, J.P. 2009. *Dutch Position Paper on Natura 2000* (<http://www.volkskrant.nl/binnenland/article1335678.ece/>; accessed 14 February 2010).
- Bastmeijer, C.J. and J.M. Verschuuren. 2003. *Knelpunten bij de Uitvoering van de Natuurbeschermingswetgeving in Nederland. Eindrapport in opdracht van Ministerie van Financiën*. Centrum voor Wetgevingsvraagstukken, Tilburg: Universiteit van Tilburg.
- Bastmeijer, C.J. and J.M. Verschuuren. 2004. 'Juridische Knelpunten bij de Bescherming van Natuurgebieden', *Milieu en Recht*, 31, 3.
- Beijen, B.A. 2010. *De Kwaliteit van Milieuriichtlijnen. Europese Wetgeving als Oorzaak van Implementatieproblemen*. PhD Dissertation, University of Utrecht. Den Haag: Boom Juridische Uitgevers.
- Bennett, G. 1993. 'The Implementation of EC Environmental Directives: The Gap Between Law and Practice', *The Science of the Total Environment*, 129, 19–28.
- Bovens, M. and K. Yesilkagit. 2010. 'The EU as Lawmaker: The Impact of EU Directives on National Regulation in the Netherlands', *Public Administration*, 88, 1, 57–74.
- Bressers, J.T.A. 2004. 'Implementing Sustainable Development: How to Know What Works, Where, When and How', in W.M. Lafferty (ed.), *Governance for Sustainable Development: The Challenge of Adapting Form to Function*. Cheltenham and Northampton, MA: Edward Elgar, pp. 284–318.
- Bressers, J.T.A. 2009. 'From Public Administration to Policy Networks: Contextual Interaction Analysis', in S. Nahrath and F. Varone (eds), *Rediscovering Public Law and Public Administration in Comparative Policy Analysis: A Tribute to Peter Knoepfle*. Bern: Haupt Verlag, pp. 123–41.
- Case 127/02. Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels vs. Staatssecretaris van Landbouw, Natuurbeheer en Visserij [23.10.2004] OJ C 262 p. 2.
- Case 200706044/1 and 200706194/1. Waterfront-Noord [22.10.2008]. Administrative Jurisdiction Division of the Council of State, Afdeling Bestuursrechtspraak.
- Case 200800948/1. Kustzone Polderwijk Zeewolde [29.04.2009]. Administrative Jurisdiction Division of the Council of State, Afdeling Bestuursrechtspraak.
- Case 57/89. Commission vs. Federal Republic of Germany [28.02.1991] E.C.R. p. I-00883.
- EEC. 1979. Council Directive 79/409/EEC of 25 April 1979 on the Conservation of Wild Birds, OJ L 103 pp. 0001–0018.
- EEC. 1992. Council Directive 92/43/EEC of 22 July 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora, OJ L 206 pp. 0007–0050.
- European Commission. 2011. *Guidelines on the Implementation of the Birds and Habitat Directives in Estuaries and Coastal Zones; with Particular Attention to Port Development and Dredging*. Luxembourg: Office for Official Publications of the European Communities.
- Gemeente Harderwijk. 2006. *Bestemmingsplan Waterfront-Noord*. Harderwijk/Amersfoort: Bügel Hajema adviseurs.
- Gemeente Zeewolde. 2007. *Ontwerp Bestemmingsplan Kustzone Polderwijk. Toelichting*. Amsterdam: Royal Haskoning Nederland BV, Ruimtelijke Ontwikkeling.

- General Administrative Law Act (Algemene Wet Bestuursrecht) 1994. (<http://www.justitie.nl/onderwerpen/wetgeving/awb>; accessed 20 November 2009).
- Gerring, J. 2007. *Case Study Research: Principles and Practices*. New York: Cambridge University Press.
- Gschwend, T. and F. Schimmelfennig. 2007. *Research Design in Political Science. How to Practice what they Preach*. Basingstoke: Palgrave Macmillan.
- Jordan, A. 1993. 'Integrated Pollution Control and the Evolving Style and Structure of Pollution Control in the UK', *Environmental Politics*, 2, 3, 405–27.
- Jordan, A. 1999. 'The Implementation of EU Environmental Policy: A Policy Problem without a Political Solution?' *Environment and Planning, Part C, Government & Policy*, 17, 1, 69–90.
- King, G., R.O. Keohane and S. Verba. 1994. *Designing Social Inquiry. Scientific Inference in Qualitative Research*. Princeton, NJ: Princeton University Press.
- Knill, C. 1998. 'European Policies: The Impact of National Administrative Traditions', *Journal of Public Policy*, 18, 1, 1–28.
- Liebersohn, S. 1991. 'Small N's and Big Conclusions: An Examination of the Reasoning in Comparative Studies Based on a Small Number of Cases', *Social Forces*, 70, 2, 307–20.
- Müller, W.C., M. Bovens, J.G. Christensen, M. Jenny and K. Yesilkagit. 2010. 'Legal Europeanization: Comparative Perspectives', *Public Administration*, 88, 1, 75–87.
- Nature Protection Act (Natuurbeschermingswet) 1998. (<http://wetten.overheid.nl/BWBR0009641>; accessed 20 November 2009).
- O'Toole, L.J., Jr. 2000. 'Research on Policy Implementation: Assessment and Prospects', *Journal of Public Administration Research and Theory*, 10, 2, 263–88.
- O'Toole, L.J., Jr. 2004. 'The Theory-Practice Issue in Policy Implementation Research', *Public Administration*, 82, 2, 309–29.
- PIANC (The World Association for Waterborne Transport Infrastructure). 2008. 'PIANC Position Paper "Working with Nature" (October 2008 version)' (<http://www.pianc.org/workingwithnature.php>; accessed 31 July 2010).
- Rood, J., M. Keulen, S. van Nollen and G. Arts. 2005. *Nederland en de Totstandkoming van EU-milieurichtlijnen. Eindrapport*. Den Haag: Nederlands Instituut voor Internationale Betrekkingen Clingendael.
- Scriven, M. 1976. 'Maximizing the Power of Causal Investigations: The Modus Operandi Method', in G.V. Glass (ed.), *Evaluation Studies Review Annual. Vol. 1*. Beverly Hills/London: Sage Publications, pp. 101–18.
- Smith, A. 2000. 'Fitting in with Brussels: Implementing the Urban Waste Water Treatment Directive in England and Wales', *Journal of Environmental Policy and Planning*, 2, 115–34.
- Steunenberg, B. and W. Voermans. 2006. *The Transposition of EC directives: A Comparative Study of Instruments, Techniques and Processes in Six Member States*. Leiden: Universiteit Leiden.
- van Apeldoorn, R.C. 2011. *Natura 2000 en Recreatie. Voorbeelden van Recreatieactiviteiten in en nabij Natura 2000-gebieden*. Alterra-rapport 2160. Wageningen: Alterra.
- van Hooydonk, E. 2006. *The Impact of EU Environmental Law on Waterways and Ports. Sixth Framework Programme, Maritime Transport Coordination Platform*. Antwerp: Maklu Press.
- VROM Raad. 2008. *Brussels Lof. Handreiking voor Ontwikkeling en Implementatie van Europees Recht en Beleid*. Advies 066. Den Haag: VROM Raad.
- Ward, N., H. Buller and P. Lowe. 1995. *Implementing European Environmental Policy at the Local Level*. CRE Newcastle. Newcastle upon Tyne: University of Newcastle.
- Waterman, R.E. 2008. *Towards an Integrated Coastal Policy via Building with Nature*. Delft: Waterman.
- Waterman, R.E. 2010. 'Integrated Coastal Policy via Building with Nature'. PhD dissertation, University of Delft.
- Zonneveld, W., J.J. Trip and B. Waterhout. 2008. *Impact van EU-regelgeving op de Nederlandse Ruimtelijke Ordeningspraktijk; Vijf Voorbeelden van Gebiedsontwikkeling*. Delft: Onderzoeksinstituut OTB.
- Zubek, R. 2011. 'Core Executives and Coordination of EU Law Transposition: Evidence from New Member States', *Public Administration*, 89, 2, 433–50.

*Date received 7 December 2010. Date accepted 10 February 2011.*