

Experiences of Dutch consultancies with the Birds and Habitats Directives

3 July 2015

Network of Nature Consultancies
Zeisterweg 14
3984 NL Odijk

Summary

1. Introduction
2. Results
3. Suggestions
4. Cases
5. Report preparation and references

Summary

Consultancies advise stakeholders such as initiators, land managers, NGOs and Governments on how to deal with biodiversity in relation to legislation. For the fitness check of the Birds and Habitats Directives (BHD) it is useful to have insight in their experiences of implementing the BHD in the Netherlands. Therefore, the Dutch Ministry of Economic Affairs asked the NGB to make a quick scan of their experiences.

Between the goals of the BHD and the final implementation of the BHD there is a series of steps: the choice of practices to achieve the goals, the legal wording of the BHD, the translation of the BHD in Dutch regulations, the interpretation of regulations by executors of the law and (dynamics in the) interpretation by the courts, Council of State and others Courts. The cause of societal issues concerning the BHD may lie in every link of the chain. This quick scan involved every link, compatible with the approach of the Dutch government to look at "national and international ineffective parts of the implementation of the BHD" (EZ, 2015). To work toward solutions to these issues, it is important to know the causes well.

A major finding is that, as a rule, the BHD and the national regulations based on it, provides a good framework for coordination of different societal interests among which biodiversity. This framework functions best when preparations for projects start on time and the requirements resulting from the BHD are timely incorporated in the design process of the project.

The consultancies estimated, based on recent projects that are known to them, that 80 to 90% of projects involving biodiversity legislation related to article 12 (Protected Species) and an estimated 20 to 30% of projects involving legislation related to article 6 (Appropriate Assessment) are clear cut: these projects are being implemented without much discussion.

In an estimated 15% of projects involving biodiversity legislation related to article 12 (Protected Species) and an estimated 75% of projects involving legislation related to article 6 (Appropriate Assessment) consultants are faced with two types of issues: societal issues and technical issues.

In half of these projects societal issues arise: intensive discussions as a result of complex societal balancing of different interests (debate on desirability of the project because of effects on biodiversity, often conducted through legal procedures). In these debates the BHD - as intended - was found to function as a structure for the gathering of necessary information about effects and about individual and societal interests, leading to solutions.

In the other half of the projects the consultancies experience the following major constraining factors directly linked with the BHD:

- a. lack of anticipation by the initiator on the BHD,
- b. uncertainties about ecological effects and the valuation of effects described,
- c. dynamics in formal interpretation of regulations and
- d. uncertainties accompanying the daily implementation of regulations.

These technical issues may interact with balancing of different societal interests: for instance uncertainties impede the process of decisionmaking and, more important, sometimes facilitate polarisation of societal debate about projects.

Many of the technical issues are gradually being resolved while all parties involved (governments, initiators, interest groups and consultants) gain more experience with the BHD, as has been demonstrated in the past. More societal effort for disseminating and using the lessons learned is essential to the implementation of de BHD.

1. Introduction

A Fitness Check on the EU Birds and Habitats Directives is being held by the Commission. The collection of evidence, data and information constitutes a part of the Fitness Check. The Dutch 'Network of Nature Consultancies' ('Netwerk Groene Bureaus'; www.netwerkgroenebureaus.nl) made available the experience of its members with the (national regulations based on the) BHD. The consultancies primary conduct ecological research and advice, projectmanagement and applications of permits.

By means of a survey under consultancies experiences were collected, gained in projects in which implementation of the HBD is applicable. Based on expert judgment these experiences were supplemented. Other studies (for instance RoyalHaskoningDHV, 2013) analysing thirteen Dutch cases, were found to confirm the findings of this study. Some findings from the survey are elaborated in four detailed case studies by Antea Group, Tauw and Witteveen+Bos. Compiling this report was financially supported by the Dutch Ministry of Economic Affairs.

2. Results

Context

Between the goals of the BHD and the final implementation of the BHD there is a series of steps: the choice of practices to achieve the goals, the legal wording of the BHD, the translation of the BHD in Dutch regulations, the interpretation of regulations by some executors of the law (namely RVO.nl) and (dynamics in the) interpretation by the courts, Council of State and others Courts. The cause of societal issues concerning the BHD may lie in every link of the chain. This quick scan involves every link, compatible with the approach of the Dutch government to look at "national and international ineffective parts of the implementation of the BHD" (EZ, 2015a). To work toward solutions to these issues, it is important to know the causes well.

The outcome of the quick scan is related to the questions in the "Evidence Gathering Questionnaire for the Fitness Check of the Nature Directives" (EZ, 2015b)

2.1 Contribution of the Directives towards Ensuring biodiversity

(Relevant to questionnaire S.2 - What is the contribution of the Directives towards Ensuring biodiversity?)

The BHD provides a robust framework for the coordination and the balancing of the different societal interests, including biodiversity. In clear cut cases (projects that are being implemented without much discussion as a result of good anticipation by the initiator, few uncertainties concerning ecological knowledge and/or implementation of regulations) decisions can be made easily and applying the framework speeds up the process of decision making. Also the process is transparent, enabling the prediction of the outcome.

In cases with uncertainty about the relative importance of the involved societal interests or about effects, investments (time, money) must be made to prepare responsible decisions. In these discussions the BHD framework was found to be even more valuable than in the clear cut cases as the framework structures the gathering or necessary information about effects and about individual and societal interests. The structuring and the legal framework for implementation prevents much debate and delay. The necessary investments in time and money are the consequence of the lack of knowledge and the search for possibilities to balance interests, and not because of the framework as such, being only the tool for decision making.

The experience of consultants shows that - of the projects that are known to them - an estimated 80 to 90% of projects involving biodiversity legislation related to article 12 (Protected Species) and an estimated 20 to 30% of projects involving legislation related to article 6 (Appropriate Assessment) are clear cut. In for instance the case 'Dredging Fairway Boontjes' the research was timely started, the research intensity was appropriate and the right measures to avoid the most important effects were formulated.

The remaining projects face two types of issues: societal issues and technical issues. In about half of the remaining projects consultants are faced with intensive discussions as a result of complex societal balancing of different interests (debate on desirability of the project because of effects on biodiversity, often conducted through legal procedures). In these projects the BHD structures discussions, being the purpose of the BHD. In the remaining projects consultants encounter technical stumbling blocks. In the end almost all projects are realised.

These findings are supported with respect to the Flora and Fauna Act in Veen, MP van et al (2011). In 2010 4,5% of the permits were refused, mainly because of lack of research and 0,5% was refused because of endangering the favourable conservation status of protected species. The permits of the Nature Conservancy Act are granted in 95% of the cases. A part is rejected because insufficient data are provided, and thus a rejection could have been prevented. RoyalHaskoningDHV (2013) shows that the largest share of projects can be realized by project or plan adjustments (more or less plan elements, spatial and temporal optimization of the plan, ecological optimization of the design and increase of mitigation).

2.2 Supporting factors for achieving the Directive's objectives with respect to plans and projects

(Relevant to questionnaire S.3 - Which main factors (eg implementation by Member States, action by stakeholders) have contributed to or stood in the way of Achieving the Directive's objectives?)

a. Anticipate decisionmaking

As a rule the BHD and regulations based on it, provides a good framework for coordination of different societal interests among which biodiversity. This framework functions best when preparations for projects timely start and the requirements resulting from the BHD are incorporated in the design process of the project.

b. 'Agreement of common practice'

The availability of the 'agreement of common practice' (case 'Restoration of small streams in the province of Limburg') supports implementation of the BHD. This 'agreement' aims at protection of species on the population level, and it provides for instance guidelines for the periods in which works can be done without causing damage to protected species or groups. Application of an permit is not necessary when applying the 'common practice', saving time.

2.3 Constraining factors for Achieving the Directive's objectives with respect to plans and projects

(Relevant to questionnaire S.3 - Which main factors (eg implementation by Member States, action by stakeholders) have contributed to or stood in the way of Achieving the Directive's objectives?)

At the project level several constraining factors can be recognized, the most important being the lack of anticipation by the initiator on the BHD, uncertainties about ecological effects and the valuation of effects described, uncertainty caused by the dynamics in formal interpretation of BHD regulations and the uncertainties accompanying daily implementation of regulations including the process of granting permits. These causes all give rise to uncertainties that impede the process of decisionmaking and, more important, sometimes facilitate polarisation of societal debate about projects.

Consultancies experience the following major constraining factors:

a. Anticipation by the initiator on the BHD

The initiator does not always anticipate the requirements of the BHD.

Main causes:

- Delayed start of preparations to take account of biodiversity (already recognized a long time ago, see RLG, 2002).
- Lack of incorporation of the requirements resulting from the BHD in the design process of the project.
- Misinterpretation of the need for preparing an Appropriate Assessment (case business park 'De Kolk' and the eastern ring road).

b. Uncertainties about ecological effects and the valuation of effects described

Ecological research does not always lead to the absoluteness of the statements required by the legal experts involved in the implementation of the BHD. The presence of uncertainties impede the process of decisionmaking and, more important, sometimes facilitate or even cause polarisation of societal debate about projects.

Main causes:

- Lack of knowledge.
- Lack of standards that describe the occurrence of effects when these standards are exceeded. For instance judgments about nitrogen deposition are causing problems for projects (small doses are considered to cause a significant effect (case Business park 'De Kolk' and the eastern ring road; Sweetman-arrest)).
- Lack of biodiversity objectives within an area which are required to evaluate effects (case 'Radio Kootwijk').

c. Dynamics in formal interpretation of BHD regulations

The BHD consists in principle of a simple set of regulations which can allow for different interpretations, offering flexibility in finding practical solutions to solve dilemma's. Interpretations are formalised by jurisdiction of the national and European courts. Also in the process of granting permits interpretation takes place. An example is strict protection of specimens in cases where the protection of populations of species does not implicate strict protection of specimens, which may lead to excessive effort. This effort is not always relevant from an ecological point of view.

Main consequences:

- Interpretations developed while using the BHD are legally enshrined by development of the jurisdiction by which the potential for customization for future projects is constrained.
- Dynamics in the formal interpretation of the BHD-framework during the execution of the project, requiring adjustments during the project (case 'Radio Kootwijk').

d. Uncertainties accompanying the daily implementation of regulations

The presence of uncertainties impede the process of decisionmaking and, more important, sometimes facilitate polarisation of societal debate about projects.

Main causes:

- Differences in interpretation of regulations by different governments (case 'Radio Kootwijk).
- Uncertainty about the requirements authorities will have in their process of granting permits.
- Interpretation of (the difference between) mitigation and compensation. Projects try to call measures mitigation instead of compensation to avoid the discussion about alternatives and imperative reasons of overriding public interest. (case Business park 'De Kolk' and the eastern ring road; see also Sweetman-arrest).
- In international projects governments cannot state which national standards must be used.
- Differences in implementation of assessment frameworks by provinces for the effects of pollution, eutrophication, acidification, light, sound, vibration, etc.
- Terminology in area objectives and regulations is not coherent: 'speciesfocus', 'objectivefocus' and 'cyclical succession' as a conservation purpose in management plans are not clear in regulations, leading to discussions (case 'Radio Kootwijk').
- The licensing process (Appropriate Assessment) does not provide enough room to choose a different work method without proof and consent of the Competent Authority.
- Shortages of capacity and expertise by authorities responsible for granting permits (RVO.nl), causing extensive discussions and thereby uncertainties and delays.

3. Suggestions for dealing with constraining factors

a. Lack of anticipation by the initiator on the BHD:

Increase awareness of the consequences of the BHD and national legislation and options to anticipate.

b. Uncertainties about ecological effects and the valuation of effects described:

Increase research - especially monitoring - on effects, mitigation and compensation, development of standards and good practises.

c. Dynamics in formal interpretation of regulations:

Increase the legal significance of the guidelines. Evaluate the (ecological) relevance of formal juridical interpretations. Increase the ecological underpinning of legal interpretations. Being part of the learning process, dynamics must however be accepted. Disseminating insights gained should be stimulated.

d. Uncertainties accompanying the daily implementation of regulations:

Increase education and feedback on implementation, discuss lessons learned with all parties involved.

4. Cases

I. Case: Dredging Fairway Boontjes

Witteveen+Bos

II. Case: Business park 'De Kolk' and the eastern ring road

Witteveen+Bos,

III. Case: Restoration of small streams in the province of Limburg

Antea Group

IV. Case 'Radio Kootwijk'

Tauw

I. Case: Dredging Fairway Boontjes

Description

The fairway Boontjes in the Dutch Waddenzee needed to be dredged over a length of 2 kilometres, taking 3-6 months, in order to increase the capacity for shipping. The main ecological effect was temporary disturbance of feeding and resting area of birds and seals. Because the fairway is situated in the protected Natura 2000 site Waddenzee, an Appropriate Assessment was prepared in order to obtain the necessary permit from the Dutch Nature protection law. This permit was obtained and the project was realised in 2013.

Effects of application of the Habitat and Birds Directive for this project

The application of the Habitat and Birds Directive led to the following consequences for the project:

- Carrying out of necessary research to study the (ecological) effects;
- Implementation of mitigating measures during the dredging.

In the Appropriate Assessment, the following research was done:

- study of the hydrodynamic and morphological effects using computer modelling;
- study of methods for realisation;
- study of the ecological effects.

This research was started in time to avoid delay of the project. The Authorities determined that the research was sufficient and described all the effects.

As a consequence of the effects, mitigating measures were formulated to reduce the effects during realisation of the project. These measures consisted of:

- period of the year for dredging;
- temporary shutdown of dredging under cold winter circumstances. Under these circumstances the project area is of more importance as a feeding site for water birds due to freezing of neighbouring lakes;
- limited use of lighting on dredging ships.

These measures didn't cause consequences of real importance. Cold winter circumstances didn't occur during realisation. There were no consequences for costs of the realisation.

Bottlenecks

No bottlenecks occurred.

Success factors

The main success factors for this project can be described as follows:

- the research was started in time;
- the research level was appropriate;
- the right measures were formulated to avoid the most important effects.

Further information

This project was executed by Witteveen+Bos, a consulting engineering company in the Netherlands. This case was described by Lennart Turlings (lennart.turlings@witteveenbos.com, +31 6 1208 9368)

II. Case: Business park 'De Kolk' and the eastern ring road

Definition

Town Nunspeet intends to develop a business park at the east side of Nunspeet and also an eastern ring road. Nunspeet wants to improve the road safety in the village of Nunspeet with this development, and increase the accessibility of the business park and a (north of Nunspeet located) housing estate. The eastern ring road cuts through Natura 2000 site Veluwe. The business park is located outside the Natura 2000 site.

Effects of application of the Habitats and Birds Directive for this project

On February 18, 2010 the permit of the Dutch Nature law for the spatial plan 'business park De Kolk' was withdrawn. This decision was a direct result of the decision of the Council of State of December 16, 2009 in which was made clear that an appropriate assessment was necessary.

After this decision, an appropriate assessment was prepared. Alternatives to the eastern ring road were explored and ecological effects were assessed. The design of the ring road was reduced and the location was changed to minimize degradation and disturbance of habitat types and habitats of species. A permit of the Nature protection law was obtained

In 2014, the Council of State annulled this permit because they, among others, disagreed with the method - developed by the composers of the Appropriate Assessment - that was used concerning nitrogen deposition. More specific, the Council of State disagreed with the method of balancing of nitrogen deposition and the method of the quantification of the measures to prevent the effects of nitrogen deposition. The method was rejected because of the assumption that a (small) decline on one part of a certain habitat type could be mitigated by a small improvement on another part of the same habitat type. At this moment, a new appropriate assessment is in preparation.

Destroying the spatial plan and withdrawal of the Natura 2000 permit did have major consequences for the planning and costs of the project. Prove for feasibility of the measures, the financial assurance and implementation of the measures are causing additional cost and time. Anno May 2015 permitting is still in preparation (approximately 6 years after ruling Council of State).

Bottlenecks

- Misinterpretation of the need for preparing an Appropriate Assessment (in 2010);
- Uncertainty about the effectiveness of mitigation measures and the interpretation when it can be concluded that significant effects can be excluded in the context of nitrogen deposition.

Succes factors

The permit is not yet granted.

Suggestions for solutions

- Encourage research to improve the knowledge about dose-effect relationships and the effectiveness of mitigation measures;
- Clearness on acceptable methods for quantifying the effects of nitrogen deposition and the determination of the significance of an effect.

Information about author of this case

This project was since 2010 executed by Witteveen+Bos, a consulting engineering company in the Netherlands. This case was described by mw drs. A.J. (Alice) Esmeijer-Liu (alice.esmeijer@witteveenbos.com; 06 10 32 26 32)

III. Case: Restoration of small streams in the province of Limburg

Name of the project

Restoration of small streams in the province of Limburg (Beekherstelprojecten Limburg)

Description of the project

- Restoration of hydromorphological conditions for WFD goals: changing the course and the profile of the stream, reconnecting old curves, creating shadow by plants, realising connectivity for fish (removal or adjustment of barriers)
- Realization of ecological connections between habitats for protected species: removing nutrient rich top soil layers causing more wet and nutrient poor conditions, realizing sheltered habitats for reproduction of fish and other species, and other specific habitats by adjusted maintenance

Consequences of implementation of the BHD for the project

- Better connection between habitats of strictly protected species (societal value)
- WFD goals of the initiator (the regional water board) are met
- Realization was possible within time and costs

In this case a consequence of the creation of connection between habitats is, that certain other habitats get smaller in the project area.

The implementation of the BHD in the Dutch legislation (FFW) causes a difficulty, because of its focus on protection of individuals and on conservation on the project location only.

Success factor for this project was working conform an in the Netherlands officially accepted 'agreement of common practice' for regional water boards (Gedragscode FFW van de Unie van Waterschappen). This 'agreement' aims at protection of species on the population level, and it provides guidelines for the periods in which works can be done without causing damage to groups of protected species. When waterboards work conform these 'common practises', and are able to explain that they do protect the species on the population level in the area (which can be wider than the project location itself), they do not need a permit.

For other parties than regional water boards, the possibility to work conform an 'agreement of common practise' would help.

Antea Group delivers consultancy and realization services in the fields of infrastructure, water management, environment protection, and planning optimal land use.

Our motto: understanding today, improving tomorrow

For this case, you can contact Jeroen Beuseker,

mail jeroen.beuseker@anteagroup.com, phone 06 22241874

IV. Case 'Radio Kootwijk'

1. Project name: 'Redevelopment Radio Kootwijk'
2. Description: assessment of the effects of 'redevelopment' of Radio Kootwijk. This small village is situated in the middle of the precious nature area 'Veluwe' and consists of several valuable historic characteristic buildings. Formerly these buildings were used for the radio-connections with the former Dutch colony 'Nederlands Indië'. In modern times the buildings lost their function due to new communication techniques. The owner of the buildings would like to 'redevelop' the buildings and save the culture historic values. Meanwhile the natural values of the area are high. Redevelopment might have negative effects on the natural values, being the main reason for the assessment
3. Effects of applying BHD: The Netherlands is a densely populated country. Therefore conflicts between different objectives are -in general- more visible than in other countries. Due to the Birds- and Habitat Directives the description and assessment of effects of plans and projects on the natural values are taken more seriously. Appropriate application of BHD sometimes takes time, but may result in (environmentally) better plans, with less impact on nature
4. Complications during the process were:
 - The Natura 2000-area was not designated definitively. During the designation process some of the objectives were changed or added. *Theme: implementation*
 - One of the objectives is to protect the habitat of specific (bird) species. It wasn't clear whether or not some habitat loss of a species (combined with additional protection elsewhere) may be acceptable when investigations shows that there are actually no territories of that species. The objectives of Natura 2000-areas (as published in the national designations) indicate that both (proven) territories and suitable habitats of qualifying species are protected. This aspect of protection is sometimes interpreted differently, depending on the province responsible. *Theme: translation into Dutch legislation*
 - The redevelopment requires both a change of the zoning plan and the assessment of the effects of a project. The effects of plans and projects have to be assessed using different methods. When the effects of changing a zoning plan are considered one has to compare the 'maximum plan-situation' with the actual, present situation (worst case). When the effects of projects are considered one has to compare the effects with a 'reference', often a historic situation in 2000/ 2004. This is due to legal jurisprudence. *Theme: legal aspects*
 - The process took several years. During this process legislation changed, as a result of which the assessment had to be changed (et cetera)
5. Success factors: patience, the belief that redevelopment might succeed only when both objectives (nature *and* redevelopment) are met
6. Solutions for the considered complications:
 - Most of the Natura 2000-areas in the Netherlands have been designated definitively by now, which means that this complication might not be significant again. It sometimes took very long to assign Natura 2000-areas. In many cases the time between the provisional and the definitive assignment took several years. This enlarges the chance that objectives have to be adapted in between, which enlarges the feeling of arbitrariness.
 - Due to legal jurisdiction permitting organizations have become very careful. The permitting procedures sometimes take long. Clear and unambiguous information might speed up the permitting procedures
 - The effects of plans and projects can be assessed using the same methods. When both changing of the zoning plan and a project assessment are obligatory making only one appropriate assessment could speed up the procedure without losing quality
 - Meanwhile the experience with the assessment of effects of projects and plans has developed very much. This will without any doubt help future assessments
7. Tauw is a large consultancy firm (± 1.000 employees), mainly operating in the Netherlands and specialized in e.g. soil quality, water, spatial planning and ecology. Our clients are both governments and the industrial sector. We have offices in several (other) European countries (Belgium, France, Spain, Germany, Italy). For more information please contact: Niels Jeurink, tel. +31 57 06 99 46 4

5. Report preparation

The report, prepared by the Network of Nature Consultancies is based on a survey among its members, supplemented by expert judgment.

By means of the survey under consultancies experiences were collected, gained in projects in which implementation of the HBD is applicable. Based on expert judgment these experiences were supplemented. Some findings from the survey are elaborated in four detailed case studies by Antea Group, Tauw and Witteveen+Bos. Compiling this report was financially supported by the Dutch Ministry of Economic Affairs.

Network of Nature Consultancies

Zeisterweg 14

3984 NL Odijk

Contact for this report B.H. van Leeuwen PhD, Network of Nature Consultancies

This report can be cited as:

Netwerk Groene Bureaus, 2015 Experiences of Dutch consultancies with the Birds and Habitats Directives. Netwerk Groene Bureaus, www.netwerkgroenebureaus.nl, Odijk

The Dutch 'Network of Nature Consultancies' ('Netwerk Groene Bureaus'; www.netwerkgroenebureaus.nl) is an industry association, founded in 1996, with about seventy members, among which all the large consultancies in the field of work. These members represent an estimated 75% of commercial ecological advisers. Members are:

Adviesbureau Cuppen	Faunaconsult
Adviesbureau E.C.O. logisch	Geofox-Lexmond
Adviesbureau Haver Droeze	GiMaRIS
Aequator Groen & Ruimte	Grontmij Nederland bv
AFO Advisering en Onderzoek	Hofman Aquamarien
Altenburg & Wymenga	IJzerman advies
Antea Group Nederland BV.	Koeman en Bijkerk BV
Aqua-Terra Nova	Koenders & Partners
AquaTerra-KuiperBurger (ATKB)	Landschappartners
ARCADIS Nederland BV	Laneco
b&d Natuuradvies	LievenseCSO infra water en milieu
BRO	Loo Plan
BTL Advies	Myotis flora en fauna
BügelHajema Adviseurs	Movares
Bureau Aandacht Natuur	Natuurbalans - Limes Divergens
Bureau Bleijerveld	Regelink Ecologie & Landschap
Bureau FaunaX	Rho
Bureau Viridis	Royal HaskoningDHV
Bureau Verbeek	RPS advies- en ingenieursbureau bv
Bureau Waardenburg	SAB adviseurs in ruimtelijke ontwikkeling
Buro Bakker	Schoutens advies & begeleiding
CroonenBuro5	Second Opinion
De Groene Ruimte	Stichting Staring Advies
Eco-Niche	Staro Natuur en Buitengebied
EcoGroen Advies	Tabak Advies Ecologie
Ecologica	Taken Adviseurs en Ingenieurs
Ecologisch Adviesbureau Van Tweel	Tauw
Econsultancy	Tonckens Ecologie
ECOquickscan	Van den Bijtel Ecologisch Onderzoek
Eelerwoude	Van der Goes en Groot
Ekoza	VanderHelm Milieubeheer BV
Elodea	Witteveen+Bos Raadgevend Ingenieurs

References

- EZ, 2015a Nederlandse inzet in de Fitness Check Vogel- en Habitatrichtlijn. Letter to the parliament, 18 May 2015, Kamerstuk 33 576, nr. 43
- EZ, 2015b Evidence Gathering Questionnaire for the Fitness Check of the Nature Directives. Letter to the parliament, 9 June 2015, Kamerstuk 33 576, nr. 44
- RoyalHaskoningDHV, 2013 Natura 2000 areas locked? Factors examined in relation to a project or plan realization. Commissioned by Rijkswaterstaat WVL, Lelystad [in Dutch: <https://deltaprogramma.pleio.nl/file/download/24225622>]
- RLG, 2002 Prevention is better. Advice on species protection and economic development, Council for the Rural Area, Amersfoort. [in Dutch, <http://www.rli.nl/sites/default/files/voorkomenisbeter4-2002advies.pdf>]
- Veen, van, et al, 2012 Ecological effectiveness of natural law, PBL Netherlands Environmental Assessment Agency, The Hague [in Dutch: http://www.pbl.nl/sites/default/files/cms/publicaties/PBL_2011_Effectiviteitnatuurwetgeving_555084002.pdf]