



IMPEL Project 2015
Nature protection in permitting and inspection of
industrial installations - implementation of Article 6 (3)
of the Habitats Directive

TAIEX / ECRAN – 60400, Workshop
Bitola, Pelister National Parc

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Nature protection in permitting and inspection of industrial
installations - implementation of Article 6 (3) of the Habitats Directive



Content of this presentation:

1. Legal background of the project
2. Objectives IMPEL project 2015 “Nature protection in permitting and inspection of industrial installations”
3. Evaluation of the COM Guidance Document “Wind energy developments and Natura 2000”
4. Development of a Guidance Document “Pig and Poultry Farms and Natura 2000 – results and current state



Background - European legislation rules on industrial activities



- **Directive on Industrial Emissions (IED):**
 - rules on integrated prevention and control of pollution arising from industrial activities
 - rules for achieving a high level of protection of the environment as a whole
- Article 6 par. 3 **Habitats Directive (HD)** defines further rules concerning industrial activities:
A project likely to have a significant effect on a Natura 2000 site – either individually or in combination with other projects – shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.



3

Background - European legislation rules on industrial activities



- The national authorities shall agree to the project only after having ascertained that it will not affect adversely the integrity of the site concerned
- The requirements refer to IED-projects as well as to smaller projects
- Examples:
 - project for a new LCP → effects of pollutants like NOx, mercury, extraction of cooling water from a protected river or estuary
 - project for a windturbine → noise, mortality of birds, light
 - project of a new farm → ammonia emissions, noise, odour, ...



4

Background - national legislation rules on industrial activities



- Apart from Natura 2000 sites:
Permit writers have to take into consideration protected areas under national law and sites of unique value in nature (e.g. bogs and peat fields that are not necessarily declared as protected objects).
- national requirements,
- possibility of compensation (development of new protected area or compensatory payment into a local ecological fund),
- IMPEL project: concentration on Natura 2000 sites



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Link between Habitats Directive and IED



- Directive on Industrial Emissions (**IED**):
- deals with permitting and inspection of industrial installations (projects)
- Article 6 par. 3 **Habitats Directive** defines rules concerning industrial projects:

a project likely to have a significant effect on a Natura 2000 site – either individually or in combination with other projects – shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.



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The four stages of the procedure

1. **Screening:** Identification of likely impacts upon Natura 2000 site of a project (alone or in combination with other projects or plans). Are the impacts likely to be significant?

2. **Appropriate Assessment (AA):** Impact of the project on the integrity of the Natura 2000 site (alone or in combination with other pp) with respect to the site's structure and conservation objectives. Adverse impacts: → assessment of mitigation measures

3. Assessment of **alternative solutions:** Examination of alternative ways that avoid adverse impacts on the integrity of the Natura 2000 site

4. Assessment where **no alternative solutions** exist and where adverse impacts remain – assessment of compensatory measures where, in the light of an **assessment of IROPI** the project should proceed

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Objectives IMPEL Project 2015

*Nature protection in permitting and inspection of industrial installations
- implementation of Article 6 (3) HD*



*Evaluation of the guidance document
"Wind energy developments and
Natura 2000".
European Commission, October 2010*

1



*Development of a sector specific
guidance document on Article 6(3)
HD in permitting of farm projects
(pigs and poultry) with at least:
- definition of the project and
project boundaries,
- development of a screening list,
- discussion on problem of salami
slicing*

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2015 – IMPEL Project in going
Nature protection in permitting and inspection of industrial installations
- implementation of Article 6 (3) of the Habitats Directive



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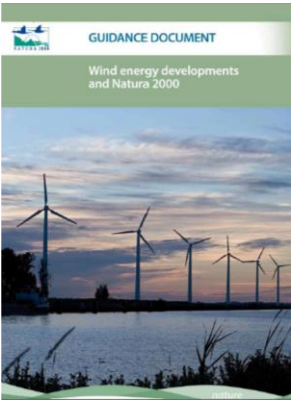
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Nature protection in permitting and inspection of industrial installations
- implementation of Article 6 (3) of the Habitats Directive



Evaluation of the guidance document Wind energy developments and Natura 2000. European Commission, October 2010 – with the focus on:
applicability and usefulness for permit writers and inspectors



Guidance document Wind energy developments and Natura 2000 – introduction



- HD does not, a priori, exclude wind farm developments in or adjacent to Natura 2000 sites. They need to be judged on a case by case basis.
- The guidance focusses on the procedures to follow under Art. 6 HD.
- It provides clarification on certain aspects of the approval process.
- It is designed for use of competent authorities, developers as well as consultants, site managers, practitioners and other interested parties.
- COM asked IMPEL to evaluate the document.



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Guidance document Wind energy developments and Natura 2000 – content



- **Chapter 1:** Wind energy developments in the EU
- **Chapter 2:** The EU's Policy Framework and Legislation for Nature and Biodiversity
- **Chapter 3:** Potential impacts of wind energy developments on nature and wildlife
- **Chapter 4:** The importance of strategic planning and wind farm development
- **Chapter 5:** Step by step procedure for wind farm developments affecting Natura 2000 sites
- **Annex I - VI**



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**Guidance document Wind energy developments and Natura 2000
– general items**



Proposal to update the guidance document due to:

Recent developments on windfarm projects, also offshore and small sized turbines, and their impacts on nature and biodiversity;

New types of turbines available: turbine size of commercial models has been increased to more than 6 MW, with a total height reaching 200 m, microturbines

Repowering

New technology and methods used for mitigation measures: e.g. Blade feathering and increase of cut-in speeds (bats); Radar assisted shutdown on demand (RASOD) (birds).



**Guidance document Wind energy developments and Natura 2000
– general items**



Proposal to complement the guidance with:

Permitting, role of permit conditions, conditions of operation dependent on monitoring results;

(Quality) Monitoring;

Inspection;

construction phase
operation phase
decommissioning phase



Guidance document Wind energy developments and Natura 2000 – general items



Proposal to complement the guidance with:

Detailed examples of criteria applied by MS,

Examples of tools: e.g. Effectenindicator, Netherlands (tool for screening) → table conservation objectives vs impacts + next step



Guidance document Wind energy developments and Natura 2000 – general items



Proposal to complement the guidance, with:

Examples: Portuguese recommendations, on roost inventory and monitoring, habitat survey and mortality of bats based also on Eurobats Guidelines; Experiment on changing cut-in speed and mitigation measures.

Mitigation measures: case study on Birds (Portugal)

Radar assisted shutdown on demand (RASOD)



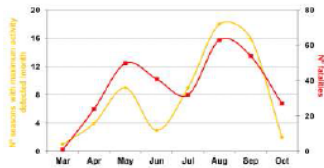
Guidance document Wind energy developments and Natura 2000 – general items



Report on the effect of wind farms on bats in continental Portugal (2010)

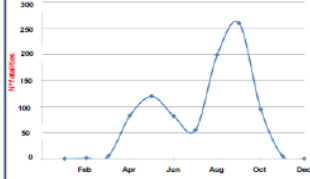
Some results from habitat survey and mortality data analysis:

- significant negative relation between activity and wind speed



- coincidence between higher mortality and higher activity per month

- 905 fatalities; at least 11 species; majority LC and DD



- most fatalities occur in early Autumn and Spring

Update March 2015



Recommendations (planned update 2015)

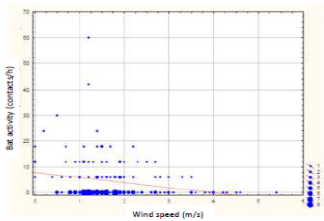


Guidance document Wind energy developments and Natura 2000 – general items

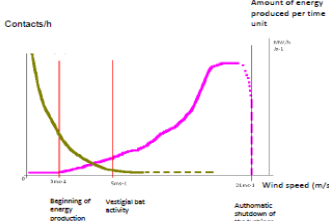


Experiment on changing cut-in speed and mitigation measures

Bats activity and wind speed



Source: Alves P, Silva B, Barreiro S (2012) Parque Eólico de Mosqueros II. Monitorização de Quirópteros. Relatório 3 - Anos de 2010 e 2011 (relatório final). Fase de Exploração. Plecotus, Lda., Pombal, 92 pp.



Source: Jacinto Diamantino (ICNF)

Monitoring results indicate that bats activity decreases with increasing wind speed





**Guidance document Wind energy developments and Natura 2000
– proposals for chapter 1 and 4**

Proposal of items to improve Chapter 1 (*Wind energy developments in the EU*) and Chapter 4 (*The importance of strategic planning in wind farm developments*):

- Wind energy developments and the Natura 2000 network – needs an update. Current situation is different;
- Targets for renewable energies and targets for nature conservation – contradiction?
- Role of Management Plans should be included.



**Guidance document Wind energy developments and Natura 2000
– proposals for chapter 1 and 4**

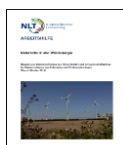
Proposal of items to improve Chapter 1 (Wind energy developments in the EU) and Chapter 4 (The importance of strategic planning in wind farm developments):

Examples:

„Recommendations for distances between wind turbines and bird habitats as well as breeding sites of selected bird species“ (Germany)



Procedures/criteria for a systematic development of wind farm projects on their territory in order to have a planned and transparent approach (Germany)

[illegible]

Guidance document Wind energy developments and Natura 2000 – proposals for chapter 3 and 5



Proposal of items to improve Chapter 3 (*Potential impacts of wind energy developments on nature and wildlife*) **and Chapter 5** (*Step by step procedure for wind farm developments affecting Natura 2000 sites*):

- Alternatives to the plan/project;
- Cumulative effects; examples: HARMONY, CUMULEO and ODEMM projects developing methods for cumulative effects assessment (CEA) in the North-East Atlantic (OSPAR Convention);
- Quality of and baseline information;
- The significance of effects (screening, appropriate assessment);
- Thresholds for mortality of bats/birds; impact on marine mammals, fish and benthos;
- Selection of mitigation measures should be improved / further developed.



Guidance document Wind energy developments and Natura 2000 – general conclusions



General conclusions:

- ❖ Guidance document valuable for those without background knowledge
- ❖ It provides information on the sector, basic knowledge on possible impacts and on the procedures.
- ❖ It describes what has to be done. However, how it can be done and based on which concrete criteria remains unclear.
- ❖ Examples of criteria applied in Member States would be useful.
- ❖ Focus should be more on target groups of permit writers and inspectors as well as colleagues from nature conservation authorities
- ❖ Document needs to be updated.



Draft Guidance on „Pig and Poultry Farms and Natura 2000“

- **IMPEL Project 2015**

Nature protection in permitting and inspection of industrial installations - implementation of Article 6 (3) of the Habitats Directive

- **Impacts of PPF on Natura 2000 sites**



Guidance document “Pig and Poultry Farms and Natura 2000” – scope

Document covers **only pigs and poultry farms** (all sizes).
(upgrade on other types like cows, sheep, etc. can follow)

Project team could not carry out scientific work and develop something totally new, but collect

- approaches used in the IMPEL member states,
- criteria used in the IMPEL member states,
- supporting tools used in the IMPEL member states,
- best practice examples,
- items that have to be further developed.



Content of the draft Guidance

6 Chapters

1. Introduction
2. Legal background
3. Definition of the boundaries and dealing with salami slicing
4. Potential impacts of farms on Natura sites and wildlife
5. Documents and data to be submitted to the authority
6. Screening and screening criteria



1. INTRODUCTION

I

- **PPF - a significant contributor to emissions of pollutants**
- **main pollutants:** ammonia emissions, nutrients from manure, litter and slurry, effluent discharges, dust, odour and noise
- **Europe is the second largest producer of hen eggs with** about 10 % of the world total. (Spain, France and Germany)
- **the total poultry meat production in the EU-27 in 2012 has increased of 14 % compared to 2007** (UK, Poland, Germany, France, Spain, Italy and the Netherlands)
- **the trend of the pig livestock population over the period 2008-2013 confirms a decrease of -4,8 % in the total number of pigs** (Germany, Spain, France, Denmark, Poland and the Netherlands)



1. INTRODUCTION

II

- **farmland makes up around 40% of the total area included in Natura 2000**
- **negative effect of PPF** on conservation status of natural habitats and species of Community interest
- **no guidance document** on impact of PPF on Natura 2000 so far
- **scope of the guidance**
all sizes of PP intensive farms
new installations and already existing farms
PPF in Natura 2000 sites and in the areas nearby



2. LEGAL BACKGROUND

I

- **Directive on industrial emissions (IED):** DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions (integrated pollution prevention and control (IPPC))
lays down rules on integrated prevention and control of pollution arising from industrial activities. It also lays down rules to achieve a high level of protection of the environment as a whole
- **thresholds:** the Annex I/6.6. Intensive rearing of poultry or pigs:
 - (a) with more than 40 000 places for poultry;
 - (b) with more than 2000 places for pigs (over 30 kg),
 - (c) with more than 750 places for sows.



2. LEGAL BACKGROUND

II

- **BREF Document:** The Reference Document on Best Available Techniques for Intensive Rearing of Poultry and Pigs (IRPP_BREF) which was adopted in July 2003, updated in August 2015 – the final draft
- **doesn't propose emission limit values**
- **includes manure spreading**
- **Environmental Impact Assessment (EIA) Directive** has harmonised the principles of environmental impact assessment of projects introducing minimum requirements, with regard to the type of projects subject to assessment, the main obligations of developers, the content of the assessment and the participation of the competent authorities and the public, and it contributes to a high level of protection of the environment and human health
newly amended in 2014: simplifying different environmental assessment procedures



2. LEGAL BACKGROUND

III

- **The Habitats Directive**
- Paragraph 6(3) of the HD contains several general key terms that require clear definitions for the application on the individual case and for carrying out the AA properly.
- **Project:** Related to the IED a project is an industrial installation that belongs to the activities of Annex I to the IED; smaller industrial installations such as wind farms or small animal farms below the thresholds of Annex I are projects as well.
- **European Commission guidance on the provisions of Article 6 of the HD**
- **Sector specific guidance:**
only **Wind energy developments and Natura 2000** deals in a certain way with an industrial sector



2. LEGAL BACKGROUND

V

- **The SEA Directive (2001/42/EC)**

The SEA Directive applies to a wide range of public plans and programmes (e.g. on land use, transport, energy, waste, agriculture, etc). The SEA Directive does not refer to policies.

- **Interlink between Art 6 (3) HD, EIAD and SEAD**

For projects needing an EIA/SEA and AA at the same time AA may be part of the EIA/SEA. **But SEA and EIA cannot substitute the AA.** In all cases the AA must be clearly identifiable, either within the EIA/SEA report or in a separate report, so that its conclusions can be distinguished from those of the overall impact assessment.

For **small projects** a screening / an AA has to be carried out. In some Member States, the national law stipulates that if an AA has to be carried out for a project, it will automatically be covered by the EIA Directive and it shall be at least screened.



3. DEFINITION OF THE BOUNDARIES AND DEALING WITH SALAMI SLICING

I

- Under **Art 6 (3) of HD** it is crucial to determine whether a project, such as pig and poultry farm, can have significant effects on the site's conservation objectives and should be subject to an Appropriate Assessment (AA). Decision whether AA is necessary can be made by Screening.
- A **project** can be a new installation, or a change in an existing installation.
- **Unlike EID and EIAD, HD does not** specify the project categories that should be subject to AA and the changes on installations, such as pig and poultry farms, that should be classified as a project.



3. DEFINITION OF THE BOUNDARIES AND DEALING WITH SALAMI SLICING

II

- **issues to be considered during the assessment**

salami-slicing of projects: meaning the splitting of projects in order to exclude it from the requirements of the HD

cumulative effects: project can cause significant effects, individually, but also considering other existing or new projects, it is necessary to evaluate their overall effect on the site's conservation objectives

boundaries: (temporal; spatial; activities)



3. DEFINITION OF THE BOUNDARIES AND DEALING WITH SALAMI SLICING

III

To prevent salami slicing and also to assure a proper consideration of cumulative effects it is important for MS to assure:

- the definition of a project,
- the definition of changes in an existing installation that can cause significant effects;
- that a proponent of a project cannot divide it into several pieces, presenting each one as a project, and fall under a settled threshold or criteria under which AA is exempted,
- the evaluation of cumulative effects,
- that public entities that are responsible for the evaluation of cumulative effects, have the knowledge of all the projects, plans and existing installations that must be considered.



4. POTENTIAL IMPACTS OF IRPP ON NATURA 2000 SITES AND WILDLIFE

I

Production system & techniques relevant for the environment

- animal housing
- abatement techniques for emissions to air from housing
- feeding strategies and drinking supply
- processing and storage of animal feed
- collection and storage of manure
- on-farm manure processing (including biogas production)
- on-farm manure spreading
- off-farm manure spreading
- on-farm transport
- maintenance and cleaning
- storage of hazardous substances
- production, storage and management of waste
- storage and disposal of carcasses
- treatment and discharge of waste water
- abstraction of water
- heat and power production



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE

II

Emissions to air from IRPP (acc. to BREF 2003)

Air	Production system
Ammonia (NH3)	Animal housing, storage, treatment and land spreading of manure
Odour	Animal housing, storage of manure, land spreading of manure and slurry
Dust	Milling and grinding of feed, feed storage, housing of animals, solid manure storage and application
Methane (CH4)	Animal housing, storage of manure and manure treatment
Nitrous dioxide (N2O)	Animal housing, storage, treatment and land spreading of manure
Carbon dioxide (CO2)	Animal housing, energy used for heating and transport on farm and biogenic CO2 that may be emitted in the field
CO, dust, NOX, SO2, HCl, HF, heavy metals, dioxins and furans	Incineration of residues and by-products



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE III



Main emissions to soil and groundwater from IRPP
(acc. to BREF 2003)

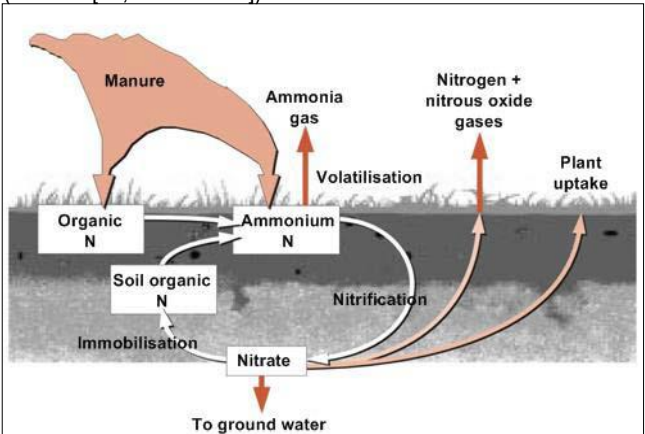
Soil and groundwater	Production system
Nitrogenous compounds	Land spreading and manure storage (indoor/outdoor)
Phosphorus	
K and Na	
(Heavy) metals	
Antibiotics	



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE VI

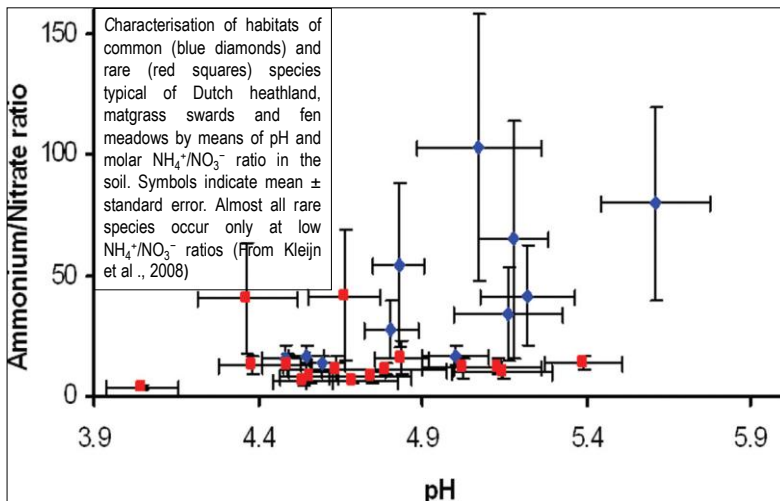


Nitrogen cycle showing the main transformations and losses to the environment
(Source: [31, MAFF 1999])



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE VII

Impacts of nitrogen deposition on plant communities



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE VIII

Court case on N emission and deposition on Natura 2000 sites regarding Ring road in Halle (Germany)

- the west ring road of the city of Halle (Sachsen-Anhalt, Germany) would run along a corridor between two Natura 2000 sites
- approval** the official planning by the authorities after the corresponding procedure was carried out, including the environmental assessment
- appeal** from The Halle section of the Naturschutzbund Deutschland-League for Nature Protection of Germany and local residents based on the lack of documentation and further research in the AA on the two sites and its species on the following impacts: habitat fragmentation, noise, pollutant substances deposition and risk of collision
- the claimants argued that the increase of traffic in the area would lead predictably to an **increase in NO_x emissions** and as a consequence to an increase in the N deposition on the natural habitats of both sites, over the critical loads and that this issued had not been addressed in the AA
- the Federal Administrative Court of Germany** ruled that the decision to approve the official planning was unlawful



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE IV

Other emissions: Noise levels in pig units (acc. to BREF 2003)

Description	Duration	Frequency	Day/Night Activity	Sound pressure levels dB(A)	Equivalent continuous Laeq dB(A)
Normal housing levels	Continuous	Continuous	Day	67	
Feeding animals <ul style="list-style-type: none">• pigs• sows	1 hour	Daily	Day	93 99	87 91
Feed preparation	3 hours	Daily	Day/night	90 (inside) 63 (outside)	85
Stock movement	2 hours	Daily	Day	90 – 110	
Feed delivery	2 hours	Weekly	Day	92	
Cleaning and manure handling	2 hours	Daily	Day	88 (85 – 100)	
Manure spreading	8 hours/day for 2 – 4 days	Seasonal/weekly	Day	95	
Ventilation fans	Continuous	Continuous	Day/night	43	
Fuel delivery	2 hours	Fortnightly	Day	82	



4. POTENTIAL IMPACTS OF FARMS ON NATURA SITES AND WILDLIFE V

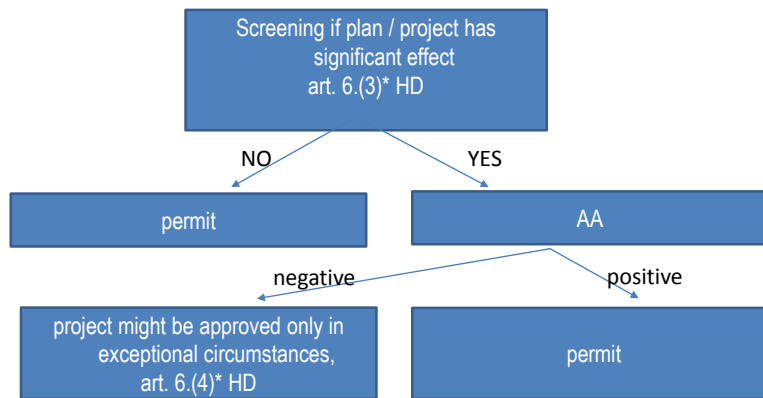
List of activities and potential impacts of IRPP on Natura 2000 sites. (Example NL: IT-tool effect indicator)

Order	Activities
1	Species introduction
2	Maintenance of water bodies
3	Inundation and retention
4	Surface water levels management
5	Surface water abstraction
6	Groundwater abstraction
7	Housing
8	Business Park
9	Industry
10	Railroad
11	Waterway
12	Road
13	Cables and pipes
14	Hunting
15	Land-based agriculture
16	Landless agriculture
17	Coastal and sea professional fishing
18	Freshwater professional fishing
19	Sport fishing
20	Water recreation
21	Country recreation
22	Military activities
23	Coastal and dike improvement
24	dams and reservoirs
25	Land reclamation
26	Sand and gravel extraction
27	Oil and gas extraction
28	Wind turbines

Order	Impact factor
1	Habitat loss
2	Habitat fragmentation
3	Acidification by atmospheric nitrogen
4	Eutrophication by atmospheric nitrogen
5	Desalinization
6	Salinization
7	Pollution
8	Drought
9	Waterlogging
10	Change flow
11	Change the frequency of flooding
12	Change of substrate dynamics
13	Disturbance from noise
14	Impact by light
15	Impact by vibration
16	Optical impact
17	Impact by mechanical effects
18	Change in population dynamics
19	Conscious change of species composition



5. DOCUMENTS AND DATA TO BE SUBMITTED TO THE AUTHORITY



5. DOCUMENTS AND DATA TO BE SUBMITTED TO THE AUTHORITY

Information needed about the project and its effects on the habitats and species depends on:

- **Screening:** rough estimation by using available data, generally accepted information and experiences if significant effects on a site **MIGHT** occur.
- **Appropriate assessment:** detailed investigation if significant effects on a site **CAN** occur (based on mapping of flora and fauna and differentiated statements on the individual case).



5. DOCUMENTS AND DATA TO BE SUBMITTED TO THE AUTHORITY

III

The requirements for the AA (Screening = S)

- general description of the plan / project (S)
 - emissions arising from the plan / project (S)
 - distance to the Natura 2000 sites (S)
 - description of possibly affected Natura 2000 sites (S)
 - status of qualifying species and habitats (S)
 - descriptions of possible effects (direct and indirect) (S)
 - general descriptions of other plans / projects
 - cumulative effects with other plans and projects
 - alternatives to the plan / project
 - mitigation measures
 - plan of follow-up measures
- **no significant differences between the requirements for new and already existing farms**



6. SCREENING AND SCREENING CRITERIA

I

- Screening is carried out by the competent authority (generally the one responsible for licensing the project in cooperation with nature conservation authority).
- Art. 6(3) HD and national provisions on nature conservation are general and generally do not provide defined assessment criteria.
- **assessment of habitat loss**
The German standards of significance for habitat loss (development of thresholds for habitat loss for Habitat Types and for Species)
- **assessment of nitrogen compounds:** several countries - especially those with high background nitrogen deposition - have developed
 - standards (software tools for modeling the nitrogen deposition in place) and
 - thresholds,
 - examples: Germany, The Netherlands, DK and UK

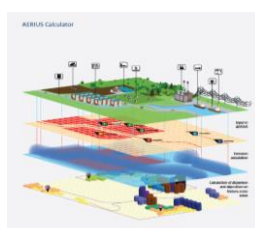
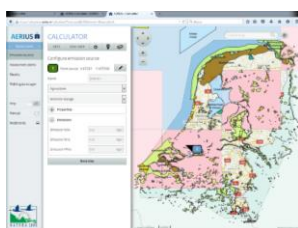


6. SCREENING AND SCREENING CRITERIA

II

The Dutch approach to N deposition and Natura 2000. AERIUS, the calculation tool of the PAS

- For the Netherlands, high nitrogen deposition levels form one of the main barriers to achieving European nature conservation targets.
- To solve the issues around nitrogen and nature, the Netherlands is developing new policy. The Integrated Approach to Nitrogen (PAS) will help to achieve the Natura 2000 objectives



Current state of the project and new plans

- The project team has developed a **draft guidance document**. It is looking for
 - more screening criteria applied in the MS
 - for best practice examples and
 - permit conditions related to Natura 2000 sites (e.g. concerning monitoring of habitats and species)
- During the **second project team meeting (22 – 23 October 2015)** decisions on the document will be made.
- **Draft final version** will be submitted to green expert team and hopefully be adopted by the **General Assembly in December 2015**.
- **Upgrading** of the guidance document planned with
 - collecting data and input on the other animal types
 - new project part in 2017





Blagay's Daphne (*Daphne blagayana*)

THANK YOU FOR YOUR ATTENTION

