

# IS BIODIVERSITY LAW ADAPTED TO CLIMATE CHANGE ADAPTATION?

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Dresden, 25 September 2012



## Overview

- Scientific findings
- Legal issues and challenges
  - General issues and challenges
  - Strengthening of core protected areas
  - Connectivity
  - Restoration

## Scientific findings

- Changing environmental conditions + cumulative effects of climate change will lead to shifts of species and habitats
- In order to adapt to cumulative effects of climate change, there is need for:
  - Strengthening protected areas (resilience of ecosystems)
  - Coherence of ecological networks, including connecting fragmented ecosystems (with corridor areas)
  - Measures outside protected areas
  - Include effects of climate change in impact assessment of human activities

## Legal basis for adapting to climate change

- Link between climate change and biodiversity in international and EU law:
  - No explicit provisions on climate change adaptation in international conventions and EU law
  - Provisions on climate change in (non-binding) decisions or policy documents
- International and EU law contain legal basis for designation and management of protected areas and ecological networks

## Legal basis for adapting to climate change

- Problems with implementation of legislation:
  - Lack of enforcement
  - Implementation so far focused rather on conservation of certain species on certain sites
- Need for 'net gain' (more and bigger areas, more connectivity, more restoration): act pro-actively!

## Dynamics of nature vs. statics of legislation?

- Ecosystems and ecological processes are dynamic + increased and sudden dynamics due to climate change
- Nature conservation legislation has a rather static character: legal process of designation and taking conservation/restoration measures are time-consuming
- Legislation must be updated with new species in need of protection
- Need for transboundary approach

### Flexibility vs. weakening of legal obligations?

- Flexibility = ecosystem approach, qualitative conservation objectives
- Flexibility ≠ weakening legal obligations
- Can you declassify protected areas because of shifted ranges of species?

### Scientific and legal uncertainties

- Conservation and restoration to which reference situation?
- What if the situation has changed due to climate change or land use?
- Is restoration to (historical) reference situations still possible?
- No guarantee on successful adaptation of habitats and species
- What about new concepts such as 'novel ecosystems'?

### Scientific and legal uncertainties

- Connectivity measures are not necessarily beneficial for all species/habitats
- Impact of connectivity on invasive species?
- Uncertainties about reintroduction/relocation/translocation
- Impact of migrating or translocated species on local species?

### Strengthening protected areas in international law

- International conventions (CBD, CMS, Ramsar, World Heritage):
  - Legal basis for designation and management of protected areas
  - No explicit provisions on climate change and protected areas
  - Several decisions by COPs on climate change (but not legally binding)
  - No binding legal targets for additional protected areas
  - Targets (CBD 2010 target) have failed

### Strengthening protected areas in EU law

- Birds Directive and Habitats Directive:
  - Legal basis for designation and management of special protection areas, forming an ecological network (Natura 2000)
    - Legal obligations on increasing resilience of ecosystems by designation and management of protected areas and obtaining favourable conservation status
  - No explicit provisions on climate change and Natura 2000
  - Policy documents on climate change and Natura 2000

### Strengthening protected areas in EU law

- Designation of Natura 2000 sites:
  - Designation must be based on ecological criteria
  - No explicit reference to possible effects of climate change in designation
  - Criteria in Habitats Directive allow for designating sites as potential refuge for species (restoration possibilities)
  - Continuous obligation to designate sites as Natura 2000 site (important for newly arriving species)

## Strengthening protected areas in EU law

- Conservation objectives:
  - Need to focus more on qualitative conservation objectives
- Conservation measures:
  - Legal obligation to take conservation measures and avoid further deterioration and further fragmentation
  - Difficult for monitoring to show causal link between lack of measures and degradation: is degradation a consequence of:
    - Human activities (is not allowed)
    - Climate change (is human induced, but can this be attributed to one state?)
    - Natural causes (is allowed under art. 9 Habitats Directive)

## Strengthening protected areas in EU law

- Impact assessment of human activities:
  - Appropriate assessment:
    - Need to include climate change effects in impact assessment
  - Exception: reasons of overriding public interest
    - Adaptive measures can fall under this definition
    - Need to include elements of naturalness to adaptive measures (no pure economic adaptive measures)
    - EU policy: prevent damage to biodiversity from climate change adaptation measures (Objective 9, Communication on Biodiversity, Commission)

## Connectivity in law

- Focus in law is mostly on core protected areas
- Attention for ecological networks, but often without specific measures for connecting core areas
- Lack of strong legal mechanisms for connectivity

## Connectivity in international law

- Protection of corridors and flyways (e.g. Ramsar Convention...)
- Convention on Biodiversity
  - Convention: obligation for 'system of protected areas'
  - COP decisions on connectivity
    - Programme of work on protected areas (COP 7, 2004)
  - Technical guidance reports
  - Lack of specific legal obligations

## Connectivity in EU law

- Art. 3 & 10, Habitats Directive:
  - Provisions on connectivity measures & restoration (but rather weak)
  - But: in light of obligation of reaching favourable conservation status, connectivity measures can be mandatory!
- Obligation on favourable conservation status is not limited to Natura 2000 sites
- EU policy: Green infrastructure

## Restoration in international law

- Example Biodiversity Convention:
  - Includes provisions on restoration in convention text
  - CBD Aichi targets: restoration of at least 15% of degraded ecosystems by 2020
- Not so much guidance on where, which species and habitats
- Focus on restoration of forests (e.g. REDD+)

### Restoration in EU law

- Legal obligations for ecological restoration in European Union:
  - Definition of conservation in Habitats Directive: maintain or restore natural habitats and species at a favourable status
  - Objective of EU law: reaching a favourable conservation status of habitats and species
  - European biodiversity strategy: target of restoring at least 15 % of degraded ecosystems by 2020

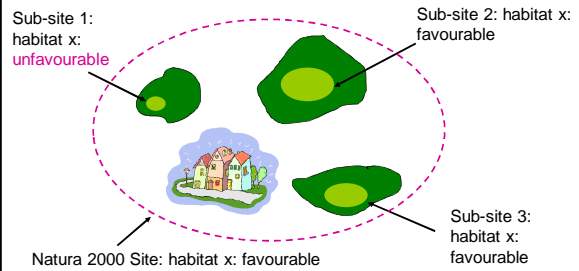
### Restoration in EU law

- Current status of conservation is often unfavourable (cf. EEA):
    - 40-85% of habitats: unfavourable
    - 40-70% of species: unfavourable
- ➡ Ecological restoration is legally obliged!

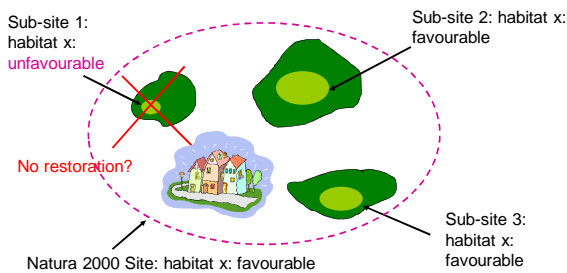
### For which species & ecosystems?

- Conservation/restoration for all Annex I habitat types, all Annex II species, all Annex I birds/regularly migratory birds occurring at the Natura 2000 site (mentioned in standard data form)
- Standard data form must be updated in case of new ecological information

### Restoration within protected sites

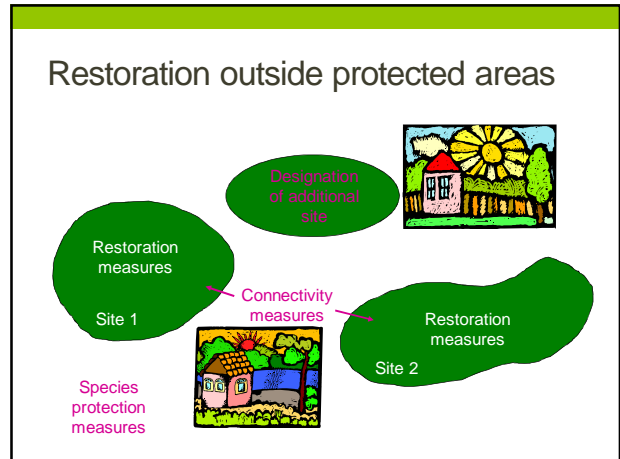
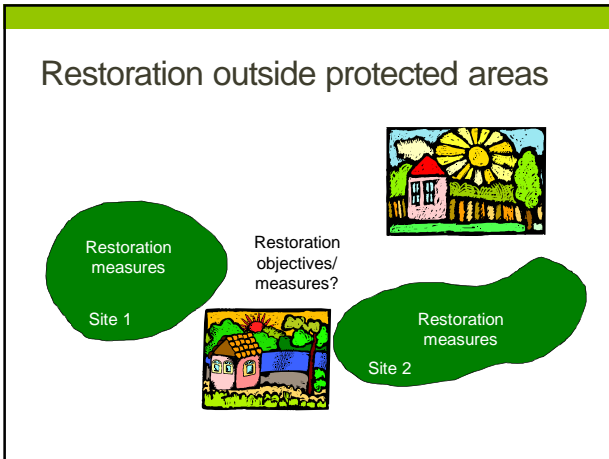


### Restoration within protected sites



### Restoration within protected sites

- No deterioration of a (sub) site is allowed, not even when conservation status is favourable for the whole site
- A lack of restoration measures in a sub-site will most likely lead to a further decrease of population sizes and/or meta-population functioning



- ### Restoration outside protected areas
- Possibilities in Birds and Habitats Directives for restoration objectives/measures outside Natura 2000 sites:
    - Designation of additional protected sites
    - Connectivity measures between protected sites to improve ecological coherence of Natura 2000
    - Species protection (horizontal) for all bird species and certain other species (annex IV Habitats Directive)
  - Obligations for prevention of deterioration outside Natura 2000 sites

- ### Conclusions
- No explicit provisions on climate change in international or EU biodiversity law
  - Provisions in non-binding decisions
  - International and EU law include legal possibilities for designation of protected areas, connectivity and restoration
  - But:
    - Lack of concrete obligations in international law
    - Stronger legal obligations in EU law

- ### Recommendations
- Define conservation objectives for protected areas enabling for shifts in the ranges of species and habitats, without compromising nature conservation objectives (ecosystem approach)
  - Focus more on restoration measures in order to reach a favourable conservation status for habitats and species
  - Designate robust corridor areas as protected areas

- ### Recommendations
- Protect green infrastructure (stepping stones, linear elements), by using legal techniques such as direct biotope protection, imposing obligations on owners/users...
  - Strengthen legal provisions (e.g. at EU level: work out Commission guidelines on implementation of art. 10 Habitats Directive)
  - Flexibility ≠ weakening of obligations!