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Stockholm University paper on the European Commission proposal for an EU regulation on nature restoration

This paper is translated from Swedish: [Yttrande från Stockholms universitet över Förordning om restaurering av natur 221027](#)

Summary and general comments

- Stockholm University welcomes this initiative as it addresses the acute loss of biodiversity within the Union and counterpart the shortcomings of the Habitats Directive, the Birds Directive, the Marine Strategy Framework Directive and the Water Framework Directive.
- The University agrees that the adoption of a regulation, rather than a directive, promotes coherence between Member States, and saves time, since implementation into national legislation is not necessary.
- Stockholm University wants to highlight the importance of coastal areas, which are often biologically very productive, in capturing and storing carbon. This is not only because coastal plant communities take up carbon dioxide from the atmosphere through photosynthesis, but also because they capture organic matter and sediment through their root systems. This carbon sequestration capacity applies to healthy coastal ecosystems. Disturbed coastal areas (e.g. due to exploitation, eutrophication or bottom trawling) are at risk of becoming carbon sources, partly because they emit methane.
- Protecting an ecosystem before it has been damaged is both more economical and more effective than restoring it after the damage has already been done. In the marine environment, more or less strict protection, even for a damaged ecosystem, can create the conditions for ecosystems to recover themselves. Unfortunately, however, large parts of coastal ecosystems are already in such poor condition that active measures are needed to restore them.
- The Regulation should be extended to include also the exclusive economic zones of the Member States as habitat restoration is also needed in this area, and the coast and the outer sea are interlinked in several ways.
- Setting legally binding deadlines reduces the risk of delaying action. However, it is questionable whether the 2050 target is sufficient given the urgent need to halt biodiversity loss. Stockholm University believes that the quantitative target should be raised from 20 % to 30 %, to be consistent with and enable the achievement of the EU Biodiversity Strategy targets.

- The University welcome that requirements for enhancement and restoration also cover connectivity and restoration outside protected areas, given the shortcomings of the existing legislation in this respect. The proposal does however not impose a legal requirement to actually ensure connectivity, nor are there any quantitative targets linked to this. There is also no explicit legal requirement to reintroduce key species. The proposals should be strengthened in this respect.
- Many marine, limnic, diadromous and catadromous species continue to decline and are threatened despite current legislation. Stockholm University would therefore like to see marine restoration measures, not only for the species mentioned in Annex III, but for all species classified as critically endangered and acutely endangered by the International Union for Conservation of Nature (IUCN), thus also making the law adaptive as species disappear or are added to the list.

Background

On 22 June 2022 the European Commission adopted a proposal for an EU regulation on nature restoration. The proposed regulation establishes a framework for Member States to put in place restoration measures covering at least 20% of the EU's land and sea areas by 2030 and all ecosystems in need of restoration by 2050. For habitats covered by the Habitats Directive (Directive 92/43/EC), the proposal sets out a target for Member States to put in place the restoration measures necessary to improve to good condition those areas where the habitats are not in good condition, with measures put in place on at least 30% of such areas by 2030, 60% of such areas by 2040, and 90% of such areas by 2050. The proposed regulation also requires Member States to put in place restoration measures necessary to re-establish habitats in order to reach the 'favorable reference area' of each habitat type. Restoration measures are also to be put in place to re-establish and improve the quality and connectivity of habitats and species protected by the Habitats Directive and the Birds Directive (2009/147/EC). In addition, the regulation sets out a series of targets for ecosystems beyond those covered by the Birds and Habitats Directives including those related to urban, river, agricultural and forest ecosystems and to pollinator populations.

Specific comments on chapters and articles

GENERAL PROVISIONS

Article 1 - Content



The wording "... all ecosystems in need of restoration" (Article 1.2) is unclear. "All" must refer to a specific list of ecosystems (e.g. by referring to annexes). Furthermore, it should be stressed that ecosystems are dynamic, constantly changing in time and space. There is considerable scientific evidence that the "ecosystem types" currently defined are not constant in time and space, particularly in terms of species composition. It is also questionable from a scientific point of view whether ecosystems can be "a functional unit" (Article 3.1) or whether they have "ecological integrity" (Article 3.4). The assessment of when ecosystems are "in need of restoration" (Article 1.2) is thus problematic in practice. Stockholm University agrees with the need for precise definitions and that the Annexes' list of ecosystem types may be operationally necessary, but asks that a dynamic view of ecosystems be highlighted in the background text.

Article 3 - definitions

From a target implementation perspective, it is good that the regulation provides a broad definition of ecosystems, which is also in line with the definition contained in the 1992 Convention on Biological Diversity. It is also important that the proposed regulation covers land, freshwater and coastal waters, given the links between sea and land. However, the regulation is proposed to apply only in the territorial waters of Member States (and not in the exclusive economic zones). As habitat restoration is also needed in this area, and the coast and the outer sea are interlinked in several ways, this limitation may be seen as a shortcoming that risks undermining the achievement of the objective.

Stockholm University believes nomenclature should be harmonized with current legislation to minimize administration and maximize action, using already defined classes such as "good ecological status" and "favorable conservation status". It is also important to consider conservation status of genetically distinct populations. For example, many of the most commercially and ecologically important fish stocks consist of a number of populations but are managed as one single stock. The former population structure of coastal cod in coastal Skagerrak appears to have been more or less lost and has not recovered. The same fate is likely to befall the various herring populations along the Swedish east coast.

CHAPTER II RESTORATION TARGETS AND OBLIGATIONS

Article 4 - Restoration of terrestrial, coastal and freshwater ecosystems

Article 5 Restoration of marine ecosystems



Annex III - marine species

Setting legally binding deadlines reduces the risk of delaying action. However, it is questionable whether the 2050 target is sufficient given the urgent need to halt biodiversity loss. Stockholm University believes that the quantitative target should be raised from 20 % to 30 %, to be consistent with and enable the achievement of the EU Biodiversity Strategy targets. Setting quantitative levels for the EU as a whole, rather than at Member State level, may also risk an uneven distribution between Member States. At the same time, it is good that the regulation does not focus solely on quantitative targets, but also sets out quality requirements.

The approach of listing annexes has advantages and disadvantages, but for this approach to work effectively there needs to be a legal requirement for continuous evaluation and adaptation of the annexes, both in the light of changes in knowledge and changes in nature. We therefore welcome the proposed for the Commission to be authorized to adapt the annexes through delegated acts at five-year intervals. However, there is no legal requirement to do so or to do so on the basis of scientific knowledge, and the authorization can also be revoked at any time. There is thus no guarantee that additional ecosystems in need of restoration will be added in the future under the current proposal.

Stockholm University particularly welcomes that the requirements for enhancement and restoration in articles 4 and 5, for ecosystems listed in annexes I and II, also cover connectivity and restoration outside protected areas, given the shortcomings of the existing legislation in this respect. At the same time, the proposal does not impose any legal requirement to ensure connectivity, nor are there any quantitative targets linked to this. The proposals should be strengthened in this respect. There is also no explicit legal requirement to reintroduce key species

Many marine, limnic, diadromous and catadromous fish species continue to decline and are threatened despite current legislation. In addition, there has been a regional extinction of two species: sturgeon and smooth skate. Stockholm University would therefore like to see marine restoration measures, not only for the species mentioned in Annex III, but for all species classified as critically endangered and acutely endangered by the International Union for Conservation of Nature (IUCN), thus also making the law adaptive as species disappear or are added to the list.

Article 7 - connectivity of rivers and natural functions of the related floodplains

In addition to the legal requirements linked to designated ecosystems (in Annexes I and II), general requirements are proposed for specific habitat types (Articles 6-10).



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The provisions are thus complementary. Stockholm University welcomes the requirements concerning connectivity in rivers (Article 7), but considers the lack of general requirements for marine habitats to be a shortcoming.

Stockholm University confirms the need for increased connectivity and restoration in European rivers and supports the inclusion of their restoration in the proposal. The proposal creates clear and welcome synergies with ongoing Swedish national work on ecosystem-based fish management and climate adaptation. It is also in line with the ongoing and necessary work to provide Swedish hydropower plants with modern environmental conditions in line with the national plan for hydropower reassessment.

Many species have been harmed by the damming, draining, dewatering and other modification of watercourses so that they can no longer maintain their ecological function. This has affected migratory fish such as salmon, sea trout, eels and lamprey, but also many other fish that are considered stationary but migrate to and from spawning and feeding grounds such as pike, perch, whitefish, bream, roach, and salmon. For example, coastal inland waters are often used for reproduction along the coast of northern Sweden, as the low sea temperatures disadvantage many freshwater species such as perch and roach.

The University also supports the inclusion of floodplains in the proposal. Floodplains provide temporary water bodies, such as flooded grasslands in spring, which are important spawning grounds for freshwater fish such as pike, roach and other species in coastal areas of the Baltic Sea. Restoration of such areas has proven to be a successful concept contributing to strengthened coastal populations of pike and perch. In a follow-up study of 100 restored floodplains, researchers showed that the wetlands generated five times more yearlings of pike in the coastal waters closest to the wetlands and that pike populations increased by 60% in the coastal areas outside.

CHAPTER III

Article 11 - Preparation of the national restoration plans

Stockholm University welcomes the relatively concrete proposals for national restoration plans to be developed by Member States. The University also supports the requirements for coordination and consideration of existing legislation when drawing up the plans, the Commission's authority to review and continuously evaluate plans, and the historical approach requiring consideration of losses over the last 70 years - a time perspective that must, however, be seen as somewhat short. In addition, it is important that the proposals linked to climate change are maintained, but also that the



level of ambition is raised, if the EU and its Member States are to meet the climate targets set.

CHAPTER IV

Art 17 and 18 - Monitoring and reporting

Stockholm University supports the proposals for reporting requirements and believes that these can contribute to increased and broader knowledge gathering than existing reporting requirements. The narrow scope for exemptions promotes target achievement, as does the introduction of a ban on deterioration. Consultation with land users, landowners, ditch companies, water councils, heritage conservation, etc. is key to a common overview and local ownership of the restoration work.

Environmental monitoring's long time series of environmental data provides the scientific basis for understanding large-scale changes in the environment. They are also a prerequisite for cost-effective action. Monitoring how species interact in the food web is also central to understanding environmental change. This is becoming increasingly important as we move towards more ecosystem-based management.

Annex VII - Restoration measures in water

In addition to the restoration measures mentioned, Stockholm University recommends that measures that indirectly affect designated species and habitats, such as reduction of eutrophication, treatment of pharmaceutical residues, reduction of light pollution, regulation of fishing and treatment of chemicals, are also mentioned in the regulation. Their inclusion is fundamental to reversing the negative trend in our marine and aquatic environment.

The University is also missing text on exploitation – rural development, jetties, boat traffic, etc., all of which can contribute to destroying and hindering successful restoration in shallow areas. Stockholm University considers the following measures to be important from an ecosystem perspective:

- Removing and limiting invasive alien species and preventing or minimizing new introductions. Imports of live animals from other areas and continents must cease; for example, imports of live American lobsters carry the risk of spreading diseases that could wipe out European lobsters or crayfish.
- Minimize the negative impact of fishing on the marine ecosystem, for example by using gears with less impact on the seabed. Fish fauna must be recognized as an important structuring element of the ecosystem. Fishing has drastically

reduced the abundance of cod, haddock, ling, blue cod, turbot, halibut, ling and catfish. In the Baltic Sea, herring stocks have been depleted in recent times, but also carp and predatory fish species in the coastal zone. Losses of stock components lead to permanent or long-term production losses and reduced abundance of key species until specific spawning areas are recolonized and reoccupied.

- The CFP requires the restoration of depleted stocks. Several of these stocks are referred to as "choke species" and rules are set to minimize by-catch problems for fishermen. Instead, these stocks should be the focus of attention, their protection and recovery should be the priority, and fishing for other species and stocks must be more closely aligned with this than at present.
- Restore important spawning and nursery areas for fish, such as seagrass beds which are important for a number of species.

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