



BRILL

Chapter Title: The Ecosystem Approach for the Marine Environment and the Position of Humans: Lessons from the EU Natura 2000 Regime

Chapter Author(s): Kees Bastmeijer

Book Title: The Ecosystem Approach in Ocean Planning and Governance

Book Subtitle: Perspectives from Europe and Beyond

Book Editor(s): David Langlet and Rosemary Rayfuse

Published by: Brill

Stable URL: <https://www.jstor.org/stable/10.1163/j.ctvrk2v2.14>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



This content is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc/4.0/>.



Brill is collaborating with JSTOR to digitize, preserve and extend access to *The Ecosystem Approach in Ocean Planning and Governance*

JSTOR

The Ecosystem Approach for the Marine Environment and the Position of Humans: Lessons from the EU Natura 2000 Regime

Kees Bastmeijer

1 Introduction: Ecosystem Approach and Sustainability

The ecosystem approach has gained much popularity in legal systems and the literature relating to the management of marine natural resources. It is generally presented as an integrated approach (in contrast to approaches that focus on single species or resources) to protect and restore healthy marine ecosystems and the services that these ecosystems provide.¹ The approach is embedded in international legal systems as well as in legal systems at the regional, domestic or even local level. An example of a regional system that is based on the ecosystem approach is the EU Marine Strategy Framework Directive (MSFD).² This directive requires the EU member states to ‘take the necessary measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest’ (Art. 1(1)). To achieve this objective ‘[a]daptive management on the basis of the ecosystem approach shall be applied’ (Art. 3 (5)).

As this book and many other publications illustrate, the ecosystem approach is a source of rich academic and political debate.³ A substantial part of this debate relates to the question of what the ecosystem approach means in terms of the level of ambition in protecting marine ecosystems. Of particular relevance in this context is the relationship between humans and marine ecosystems. The ecosystem-based approach is ‘generally seen not as a strategy that manages the ecosystems themselves, but rather one that manages the human activities that have an impact on ecosystems, and takes these effects

1 See Ch. 1.

2 Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy (2008) OJ L 164/19, 17 June 2008 (hereinafter: Marine Strategy Framework Directive or MSFD).

3 See, among many other publications, Vito de Lucia, ‘Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law’ (2015) 27 *Journal of Environmental Law* 91.

into account when making management decisions.⁴ However, it is also often emphasised that the ecosystem approach includes human use, as humans are also part of the ecosystem. For example, the guidelines on the ecosystem approach adopted under the Convention of Biological Diversity (CBD)⁵ state that the ecosystem approach ‘recognizes that humans, with their cultural diversity, are an integral component of many ecosystems’.⁶ This notion is also reflected in other definitions of the approach: ‘Ecosystem-based management is an integrated approach to management that considers the entire ecosystem, including humans’.⁷ These perspectives explain why the ecosystem approach is often connected to the concept of sustainability, or more specifically, the sustainable use of natural resources.⁸

Against this backdrop, this chapter aims to contribute to the broader discussion of what the consideration that humans are considered part of the ecosystem should mean for implementing the ecosystem approach. For the purpose of discussing this theme, this chapter focuses on the area protection regime of the EU Birds Directive⁹ and the Habitats Directive¹⁰ – the Natura 2000 regime – and its implementation. Due to this focus, and because most experiences with Natura 2000 relate to the terrestrial environment, the discussion in this chapter

-
- 4 Rachel D Long, Anthony Charles and Robert L Stephenson, ‘Key principles of marine ecosystem-based management’ (2015) 57 *Marine Policy* 53.
 - 5 Convention of Biological Diversity of the United Nations Conference on the Environment and Development, Rio de Janeiro, 5 June 1992, UN Doc DP1/307, reprinted in 31 *ILM* 818.
 - 6 See, among many other documents, Secretariat of the Convention on Biological Diversity, ‘The Ecosystem Approach, CBD Guidelines’ (Montreal: Secretariat of the Convention on Biological Diversity 2004) <<https://www.cbd.int/doc/publications/ea-text-en.pdf>> accessed 15 January 2018, 6.
 - 7 Consensus statement ‘Scientific consensus statement on marine ecosystem-based management’, 21 March 2005, <<http://marineplanning.org/wp-content/uploads/2015/07/Consensusstatement.pdf>> accessed 15 January 2018, 1. See also 2: ‘Humans are an integral part of ecosystems, marine and terrestrial.’
 - 8 For instance, the CBD Guidelines on Ecosystem Approach state that the target of achieving by 2010 a significant reduction of the current rate of biodiversity loss cannot be reached ‘without fully embracing the ecosystem approach in all activities aimed at the conservation and sustainable use of biological diversity.’ See the CBD Guidelines (n 6) 4.
 - 9 Directive 79/409/EEC on the conservation of wild birds, 1979, OJ L 103/1; consolidated version: Directive 2009/147/EC, OJ L 20, 26 January 2010, 7 (hereinafter: Birds Directive).
 - 10 Directive 92/43 on the Conservation of natural habitats and wild fauna and flora, 1992, OJ L 206/7, 22 July 1992 (hereinafter: Habitats Directive).

will pay less attention to the marine environment, compared to other chapters; however, for two reasons the chapter is relevant for implementing the ecosystem approach for the marine environment. First, the Natura 2000 regime also applies to marine ecosystems and, as the European Commission explains, '[t]he Habitats and Birds Directives, along with the Marine Strategy Framework Directive, are the environmental pillar of the wider Integrated Maritime Policy'.¹¹ Second, and more importantly, compared to the MSFD much experience has been gained in implementing the Natura 2000 regime and a very substantial part of the legal debates focuses on the relationship between human ambitions and effective protection of nature in the EU. Thus, the experiences with the Natura 2000 regime may provide important lessons for understanding the concrete meaning of the consideration that humans are considered part of the ecosystem for implementing the ecosystem approach.

First, the relevance of the Natura 2000 regime for the marine environment will briefly be introduced (Section 2 (2.1)). In this section the question of whether the Natura 2000 regime is based on the ecosystem approach also receives attention (Section 2 (2.2)). Next, attention focuses on the question of what the challenges are in applying an ecosystem approach to natural resources at a moment in time where the ecosystem has already been substantially affected (Section 3). Based on this understanding, the Natura 2000 regime is related to the ecosystem approach more specifically, with special attention to the importance of ecological restoration (Section 4). Then it is time to strengthen the focus on the place of humans in the ecosystem by discussing some Natura 2000 implementation practices. Various approaches that have been developed by politicians and other stakeholders in order to weaken the legal protection of Natura 2000 for the benefit of 'space for human activities' will be discussed (Section 5). Attention will focus on the implementation practice in The Netherlands, although much of the discussion is relevant for other member states as well. The final section (Section 6) contains the main conclusions and some lessons learned that may be useful when implementing the ecosystem approach under other legal regimes that are relevant for the marine environment, such as the MSFD.

11 European Commission, 'Natura 2000 in the marine environment', <http://ec.europa.eu/environment/nature/natura2000/marine/index_en.htm> accessed 15 January 2018.

2 The Natura 2000 Regime and the Ecosystem Approach

2.1 *The Natura 2000 Regime and the Marine Environment*¹²

The Natura 2000 regime represents – alongside species protection obligations in both directives – a core legal mechanism for implementing the ‘EU Biodiversity Strategy to 2020’.¹³ It has been established under the EU’s Birds Directive (1979) and Habitats Directive (1992). The Birds Directive prescribes the designation of natural sites for the protection of bird species listed in its Annex I along with the designation of sites designated for ‘regularly occurring migratory species not included in Annex I’.¹⁴ The Habitats Directive requires member states to select and designate ‘sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II’.¹⁵ Together, these categories of protected areas constitute the Natura 2000 network, which is described as a ‘coherent European ecological network of special areas of conservation’.¹⁶ To ensure that the network contributes to the objective of maintaining or restoring natural habitats and species of Community interest at favourable conservation status,¹⁷ Natura 2000 sites enjoy the protection of Article 6 of the Habitats Directive, which regime will be discussed in more detail below.

Both the Birds Directive and the Habitats Directive also apply to the maritime zones where member states have legislative and enforcement jurisdiction.¹⁸ Consequently, in 2007 the European Commission stated in its Guidelines for the establishment of the Natura 2000 network in the marine environment:

-
- 12 This subparagraph builds on Kees Bastmeijer, ‘Natura 2000 and the Protection of Wilderness in Europe’ in Kees Bastmeijer (ed), *Wilderness Protection in Europe: The Role of International, European and National Law* (Cambridge University Press 2016) 177.
- 13 European Commission, *Our life insurance, our natural capital: an EU biodiversity strategy to 2020*, COM(2011) 244 final, (Brussels: European Commission, 2011).
- 14 See Art. 3(2) Habitats Directive.
- 15 Art. 3(1) of the Habitats Directive. For the procedure of selection and designation see Art. 4(1) Habitats Directive.
- 16 Art. 3(1) Habitats Directive. See Art. 4(1) Birds Directive and Art. 3(1), last sentence, Habitats Directive: ‘The Natura 2000 network shall include the special protection areas classified by the Member States pursuant to Directive 79/409/EEC’.
- 17 Art. 2(2) Habitats Directive. See also the preamble and Art. 3(1).
- 18 For a brief discussion on this issue, see European Commission, ‘Guidelines for the establishment of the Natura 2000 network in the marine environment. Application of the Habitats and Birds Directives’ (May 2007) <http://ec.europa.eu/environment/nature/natura2000/marine/docs/marine_guidelines.pdf> accessed 15 January 2018, 18. The Commission refers to Case C-6/04 *Com v United Kingdom* [2005] ECR I-09017.

it is expected that Member States propose in the coming years the necessary sites to complete the marine component of Natura 2000 by application of the Birds and the Habitats Directives in their internal waters, Territorial Sea, as well as in their EEZ or other similar declared zones and in their Continental Shelf area.¹⁹

Today, more than 3000 marine Natura 2000 sites have been designated,²⁰ a number that is much smaller than the number of terrestrial Natura 2000 sites (> 20,000 sites). This smaller number of marine sites may partly be explained by the later start of the implementation process in respect to the marine environment, but may also be the consequence of the relatively limited number of marine habitat types and marine species for which sites must be designated: 9 marine habitat types and 16 species under the Habitats Directive, and 60 bird species under the Birds Directive.²¹ As stated by the European Environment Agency (EEA) in 2015 in respect of the Habitats Directive:

[a]lthough marine ecosystems cover approximately half of the EU's area, there are very few Annex I habitats and a relatively small number of species listed in the annexes of the Habitats Directive. In addition, many of these species are considered 'occasional' or are reported as unknown (up to 83% in the open ocean ecosystem).²²

The implementation of certain provisions of the EU nature directives may require different approaches for the marine environment, compared to the terrestrial environment. For instance, in selecting sites and setting site boundaries, the provision relating to 'animal species ranging over wide areas' will apply more often in respect of the marine environment: for such species 'sites of Community importance shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction'.²³ Approaches in relation to ecological restoration may also be different as active restoration measures may be more feasible for certain terrestrial ecosystems than for marine ecosystems. Nonetheless, in

19 Ibid., 19.

20 European Commission, 'Natura 2000 in the Marine Environment', <http://ec.europa.eu/environment/nature/natura2000/marine/index_en.htm> accessed 15 January 2018.

21 Ibid.

22 European Environment Agency, 'State of nature in the EU. Results from reporting under the nature directives 2007–2012' (Copenhagen 2015) <<https://www.eea.europa.eu/publications/state-of-nature-in-the-eu>> accessed 15 January 2018, 8.

23 Art. 1(k) Habitats Directive.

principle the discussion below applies equally to the terrestrial and the marine environments that fall under the jurisdiction of EU member states.

2.2 *The Natura 2000 Regime: Not Explicitly Based on the Ecosystem Approach*

Although in the literature the implementation of Natura 2000 is sometimes connected to the ecosystem approach,²⁴ the Birds and Habitats Directives, and more specifically the Natura 2000-regime, have not been based on this concept. Indeed, the concept of ecosystem approach is not mentioned in either the Birds or the Habitats directives. In fact, the term 'ecosystem', as such, is not mentioned at all in the Birds Directive and only once in the Habitats Directive (in Annex III, in relation to the criteria for the European Commission's assessment of the Community importance of the sites selected by the member states). In addition, the general Guidance document on Article 6 does not refer to the concept of an ecosystem approach.²⁵

Various policy documents of the European Commission confirm that it was not the explicit intention of the EU legislator to base the Natura 2000 system on the ecosystem approach. For instance, in a document on the relationship between the MSFD and Natura 2000, available on the website of the European Commission, it is emphasised that the ecosystem approach distinguishes the MSFD from the Natura 2000 regime.²⁶ The more recent EU Starter's Guide relating to the main nature conservation and water directives also states that

24 See e.g., Javier Cabello, 'Science-Policy Interfaces and ecosystem services: tools for the implementation of the ecosystem approach in the Natura 2000 sites' (presentation, Prespa: 29–30 May 2015) <http://ec.europa.eu/environment/nature/natura2000/platform/documents/med_grassland_workshop_prespa_158/cabello_prespa_2015_en.pdf> accessed 15 January 2018.

25 European Commission, 'Managing Natura 2000 Sites. The provisions of Article 6 of the 'Habitats', Directive 92/43/CEE' (Luxembourg 2000) <http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf> accessed 15 January 2018.

26 Links between the Marine Strategy Framework Directive (MSFD 2008/56/EC) and the Nature Directives (Birds Directive 2009/147/EEC (BD) and Habitats Directive 92/43/EEC (HD)). Interactions, overlaps and potential areas for closer coordination, 27 July 2012, <http://ec.europa.eu/environment/nature/natura2000/marine/docs/FAQ%20final%202012-07-27.pdf> accessed 15 January 2018, para 16. See also para 41: 'The starting point for the MSFD is a broad ecosystem-based approach to management of human activities with protected areas recognised as one spatial management mechanism. HBD take a two-strand, but complementary, approach with protected areas, supported by wider measures to achieve the conservation of specific habitats and species'.

'[t]he MSFD is the first piece of EU legislation to adopt an ecosystems based approach aiming at the protection of the full range of marine biodiversity'.²⁷

2.3 *The Natura 2000 Regime: Well Equipped for Implementing an Ecosystem Approach*

While the Birds and Habitats Directives are not explicitly based on the ecosystem approach, the European Commission considers the Natura 2000-regime as one of the legal components of the implementation of this approach for the marine environment:

The Commission proposes to implement progressively an ecosystem-based approach for the management of human activities affecting the marine [environment, sic], including goals and targets, to ensure biodiversity conservation and sustainable use of marine resources. This approach takes into account the concepts of favourable conservation status and good ecological status as required by the Habitats and Birds Directives and the Water Framework Directive.²⁸

Applying Natura 2000 as one of the components of the ecosystem approach for the marine environment appears not to be problematic, as the characteristics of the ecosystem approach connect well with the main characteristics and requirements of the Natura 2000-regime. Examples include the importance of scientific knowledge in implementing the Directives. For instance, the selection and designation of Natura 2000 sites may only be based on scientific ecological criteria²⁹ and social and economic interests may not play a role.³⁰ The ECJ has also emphasized that the process of designating sites must take into account the natural boundaries of the ecosystem. In relation to the designation of a site under the Birds Directive, the ECJ has explained in its judgement

27 European Union, 'A Starter's Guide. Overview on the main provisions of the Water Framework Directive, the Marine Strategy Framework Directive, the Birds and Habitats Directives, and the Floods Directive: similarities and differences' (2016) <http://ec.europa.eu/environment/nature/natura2000/management/docs/starter_guide.pdf> accessed 15 January 2018.

28 European Commission, 'Guidelines for the establishment of the Natura 2000 network in the marine environment' (n 18), 11.

29 Art. 4(1) and 4(2) Birds Directive; Case C-44/95 *Regina v United Kingdom* [1996] ECR I-03805, para 26. See also Case C-3/96 *Com v The Netherlands* [1998] ECR I-03031, para 60 and Case C-418/04 *Com v Ireland* [2007] ECR I-10947, para 39.

30 For Special Protection Areas (SPAs) under the Birds Directive sites, see Case C-44/95 (n 29), para 27 and para 39. For Special Areas of Conservation (SACs) under the Habitats Directive sites, see Case C-371/98 *Com v United Kingdom* [2000] ECR I-09235, paras 22–25.

in case C-418/04 (*Commission v Ireland*) ‘that SPA [Special Protection Areas] classification cannot be the result of an isolated study of the ornithological value of each of the areas in question but must be carried out in the light of the natural boundaries of the wetland ecosystem (...).’³¹ On this basis, the ECJ concluded that an area, which was used as a feeding ground by bird species for which a nearby located SPA was designated, should have been part of the SPA: ‘it is an integral part of the entire wetland ecosystem and for that reason ought also to have been classified as an SPA.’³²

The integrated approach, based on explicit attention to cumulative impacts, may also be recognized in the Natura 2000 regime. For instance, Article 6(2) of the Habitats Directive obliges the government to prevent deterioration, including when such deterioration would result from multiple sources. The assessment of plans and projects under Article 6(3) must also take into account possible cumulative effects on the relevant Natura 2000 site.

A contra-argument for the view that the Natura 2000 regime is well fitted for implementing the ecosystem approach might relate to the strong focus of the regime on specific species and habitat types. To a certain extent this is true. For instance, a site must be selected and designated for the specific species and habitat types that appear in the site (above the insignificant threshold) at the moment of selection and designation. The protection of the site must also relate to these specific values. However, as discussed in more detail elsewhere,³³ a closer look at the Natura 2000 regime shows that it leaves considerable space for adaptive management if this is desirable from the perspective of ecological developments. For instance, certain shifts in the abundance of species due to ecological dynamics or conflicting management requirements for different Natura 2000 species may be incorporated and anticipated in the conservation objectives of a site.³⁴ Furthermore, conservation objectives for sites are not

31 Case C-418/04 (n 29) para 142. See RJ Bijlsma and others, *Samenvoeging Natura 2000-gebieden: Juridische, bestuurlijke en ecologische (on)mogelijkheden, kansen en risico's* (Wageningen/Tilburg: Alterra and Tilburg University 2012) <<https://zoek.officielebekendmakingen.nl/blg-210188.pdf>> accessed 15 January 2018; Hendrik Schoukens and Hans Erik Woldendorp, ‘Site selection and designation under the Habitats and Birds Directives: a Sisyphean task?’, in Charles-Hubert Born and others (eds), *The Habitats Directive in its EU Environmental Law Context: European Nature's Best Hope?* (Routledge 2015), 36.

32 Case C-418/04 (n 29) para 145.

33 Mirjam Broekmeyer, Kees Bastmeijer and Dana Kamphorst, ‘Towards an Improved Implementation of the Birds – and Habitats Directives. An inventory of experiences in Austria, England, Flanders and the Netherlands in relation to two dilemma's’, research report (Wageningen: Alterra 2017).

34 Opinion AG Kokott in Case C-241/08 *Com vs France*, 25 June 2009, para 43: ‘If certain conservation objectives conflict with one another in the sense that the conservation

set in stone and may be revised if this is necessary for achieving the favourable conservation status of species and habitat types at the national level. Even the selection and designation of sites may require updates, for instance when new sites qualify as Natura 2000 sites due to successful ecological restoration efforts. Delisting of sites is in theory possible as well but only under strict conditions (e.g., the decrease of the importance of the size may not result from non-compliance with the strict provisions of the directives).

Finally, within certain legal boundaries, the Natura 2000 regime also leaves space for the above discussed view that the ecosystem approach is based on the acknowledgement that humans are part of the ecosystem and may therefore benefit from ecosystem services. For instance, with regard to the position of humans in relation to Natura 2000, the European Commission explains:

Natura 2000 is not a system of strict nature reserves from which all human activities would be excluded. (...) The approach to conservation and sustainable use of the Natura 2000 areas is much wider, largely centered on people working with nature rather than against it. However, Member States must ensure that the sites are managed in a sustainable manner, both ecologically and economically.³⁵

Thus, while from a legal perspective the Natura 2000 regime should be applied on its own merits without an obligation to interpret the relevant provisions in line with the ecosystem approach, the regime may constitute an important component of an ecosystem approach in relation to the marine environment. This constitutes a good basis for studying in more detail the position of humans in the Natura 2000 regime in order to identify possible lessons for the broader implementation of the ecosystem approach for the marine environment.

3 An Unfortunate Start for the Ecosystem Approach

In an ideal situation, the ecosystem approach would commence at a moment in time where ecosystems are complete and healthy and habitat types and species have a favourable conservation status. Figure 7.1 aims to illustrate this

measures required for one objective adversely affect the achievement of another objective, then this conflict must be resolved in the context of defining these objectives.'

35 European Commission, 'Natura 2000' <http://ec.europa.eu/environment/nature/natura2000/index_en.htm> accessed 15 January 2018, 6.

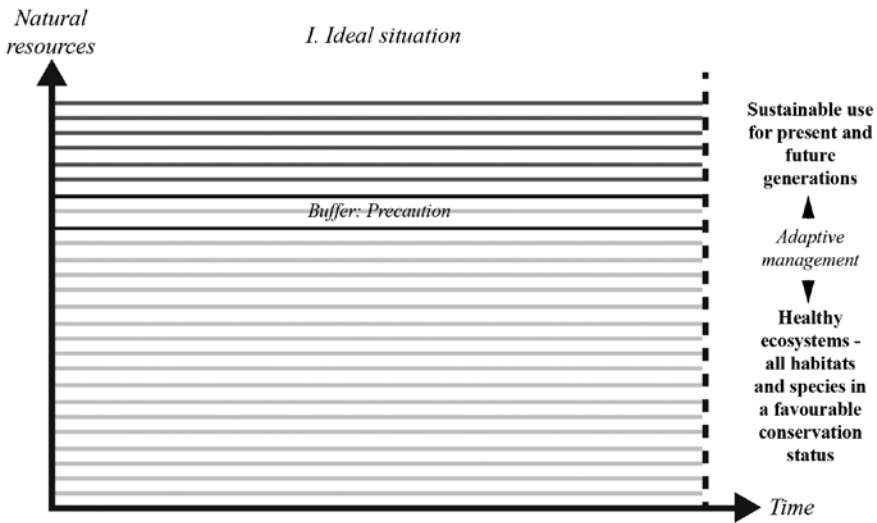


FIGURE 7.1 The ecosystem-based approach in the 'ideal situation'

situation: there is space for human activities with some negative impacts and/or for sustainable use of resources, because these impacts and/or use is limited to a size that ensures the continuing favourable conservation status of the total ecosystem. Sustainable practice and/or the applicable legal regime should then – based on best available scientific knowledge and the precautionary principle – ensure that the negative impacts from human activities or exploitation will not exceed a certain level in order to prevent deterioration of the natural characteristics and to maintain the favourable conservation status of habitat types and species. In this ideal situation, humans may be part of this ecosystem³⁶ subject to the condition of regular monitoring and adaptation to changes and new knowledge when necessary.

Unfortunately, this ideal situation has seldom been the starting point for implementing the ecosystem approach under international legal regimes relating to nature protection or the governance of natural resources. Generally, such regimes are responses to over-exploitation. Even the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention),³⁷ applicable south of the Antarctic convergence and a relatively early example of a convention that is based on the ecosystem approach, was a response to

36 Figure 7.1 is a simplification of reality as in practice the situation is often more complex. For instance, due to ecological dynamics the space for human use will change constantly.

37 Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980 (entered into force on 7 April 1982) <<https://www.ccamlr.org/en/organisation/camlr-convention-text>> accessed 15 January 2018.

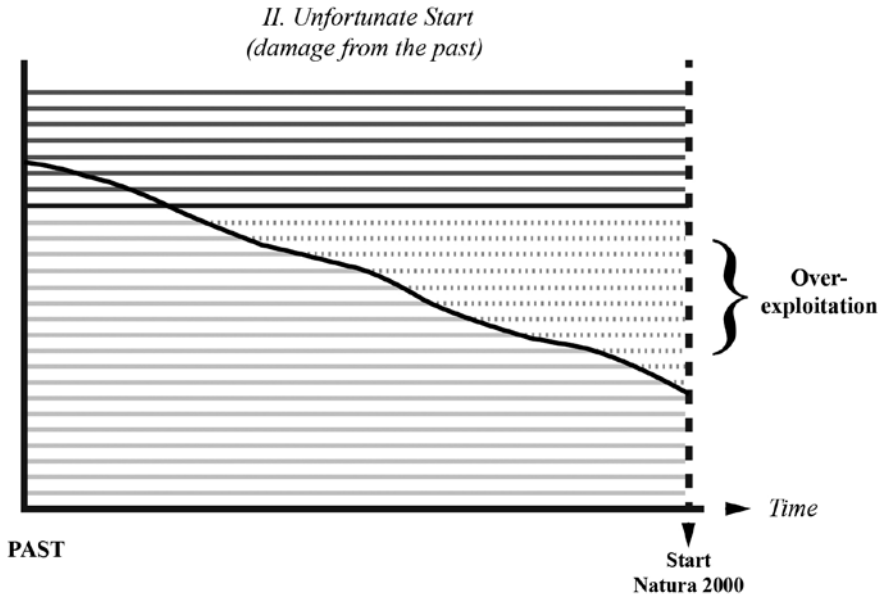


FIGURE 7.2 The ecosystem-based approach with an unfortunate start

over-exploitation of Antarctic cod.³⁸ For instance, in 1976 the science community had observed in relation to fishing (without specifying the species) that ‘large scale harvesting, principally by USSR vessels’ had taken place during the previous decade, with peak catches of 400,000 tonnes in 1970, and that ‘the subsequent decline in catches suggests that the stocks have been affected by the fishery’.³⁹ Possibly one of the very rare examples of a regime that has been developed before over-exploitation takes place is the regime on deep seabed mining, although even the deep sea ecosystems may not be considered pristine.⁴⁰

38 Personal communication with Rosemary Rayfuse, 27 November 2017.

39 SCOR/SCAR Group on the Living Resources of the Southern Ocean (SCOR Working Group 54), ‘Report of the meeting held at Woods Hole’ (USA, 23–24 August 1976, report published in (1977) 55 SCAR bulletin, 175) <http://www.scar.org/scar_media/documents/publications/bulletins/Bulletin55.pdf> accessed 15 January 2018, 179–180. See also the Convention’s website: ‘Extensive harvesting of fish in the sub-Antarctic during the late 1960s and mid-1970s, along with the emergence of interest in the large-scale exploitation of Antarctic krill, raised concerns about the sustainability of such fisheries’ <<https://www.ccamlr.org/en/organisation/history-convention>> accessed 15 January 2018.

40 Personal communication with Rosemary Rayfuse, 27 November 2017. See also R Danovaro and others, ‘An Ecosystem-Based Deep-Ocean Strategy’ (2017) *Science* 452; Y Henocque, ‘The Crafting of Seabed Mining Ecosystem-Based Management’, in R Sharma (ed), *Deep-Sea Mining* (Springer 2017).

In Europe, there is no doubt that the Natura 2000 system did not have the ideal start as illustrated in Figure 7.1. Almost everywhere in the EU, human pressures on nature had already been too intensive before the Birds Directive and Habitats Directive entered into force. This was the reason for adopting more stringent legislation at the EU level with specific attention for those habitat types and species that were considered most threatened (those listed in the Annexes to the directives). As illustrated by Figure 7.2, one could state that, at the moment the directives entered into force, humans had already been part of the ecosystem without respecting the ecosystem boundaries, resulting in over-exploitation of nature.

Consequently, Natura 2000 had to deal with damage from the past, which explains the explicit attention on ecological restoration in the directives. Recent monitoring of the conservation status of habitats and species of community importance has made clear that this situation has not changed. In 2015, based on the reporting under the Birds and Habitats Directives for the period 2007–2012, the European Environment Agency (EEA) concluded that only 21% of the habitat assessments and 23% of the non-bird species assessments are favourable and 52% of the bird species are assessed secure.⁴¹ Possibly even more concerning is that most of the trends are not positive; compared to the previous assessment over the period 2000–2006, the percentages of habitats and species that had improved were very small (4% habitats, 5% non-bird species and under 9% bird species), while a much larger percentage of habitats and species with unfavourable assessments had deteriorated further (30% of the habitats, 22% of the non-bird species).⁴²

4 Prevention of Further Deterioration and Restoration of the Ecosystem

The above discussion shows that an ecosystem approach in relation to Natura 2000 is problematic as long as the ecosystems are in such a damaged shape. For an ecosystem approach, characterized by a good balance between human use and healthy ecosystems as illustrated by Figure 7.1, the implementation of Natura 2000 should first ensure that ecosystems are restored. For this, two conditions are essential: further deterioration of the natural values of the site due to new plans, projects or any other causes must be prevented and – in parallel to this prevention – ecological restoration must be ensured. In theory, Article 6

41 European Environment Agency, 'State of nature in the EU' (n 22) 9.

42 Ibid., 9.

of the Habitats Directive may well address both conditions of preventing further deterioration and ensuring ecosystem restoration.

As indicated by the dotted line in Figure 7.3, further deterioration must be avoided, which is the main subject of Article 6(2) of the Habitats Directive. This provision obliges member states to avoid 'the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this Directive'. Judgments of the ECJ specify that this means that obstacles for reaching the conservation objectives must be addressed, regardless of whether they are caused, for instance, by authorised human activities or natural causes.⁴³ This may not only require the prevention of adverse impacts, but also 'positive measures to preserve or improve the state of the area',⁴⁴ such as, for example, the removal of alien species that constitute a threat to a bird species to which the site pertains.⁴⁵

Furthermore, in terms of the ecosystem approach, the (potential) negative impacts of plans and projects (e.g., in terms of emissions or the extraction of natural resources) must not exceed the requirements of sustainable use, as indicated in Figure 7.3. In theory this is what Article 6(3) of the Habitats Directive aims to achieve with its requirement that: '[a]ny plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives'.⁴⁶ This subsection further mandates that 'the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned (...)'. Relevant case law underlines that the precautionary principle has been imbedded in this provision; a plan or project may not be authorised if there is 'reasonable scientific doubt' regarding the question of whether it 'is likely to undermine the conservation objectives of the site concerned'.⁴⁷ Admittedly, the procedure described in Article 6(4)

43 Case C-6/04 (n 18) para 34: '(...) it is clear that, in implementing Article 6(2) of the Habitats Directive, it may be necessary to adopt both measures intended to avoid external man-caused impairment and disturbance and measures to prevent natural developments that may cause the conservation status of species and habitats in SACs to deteriorate'.

44 Case C-418/04 (n 29) para 154.

45 Ibid., para 87. This case related to Art. 4(4) Birds Directive, but Art. 6(2) Habitats Directive may also require positive measures. See Case C-535/07 *Com v Austria* [2010] ECR I-09483, paras 58–59.

46 Art. 6(3) Habitats Directive.

47 See Case C-127/02 *Waddensea* [2004] ECR I-07405, paras 48 and 59. See also Case C-404/09 *Com v Spain* [2011] ECR I-11853, para 99; Case C-182/10 *Solvay and Others* [2012]

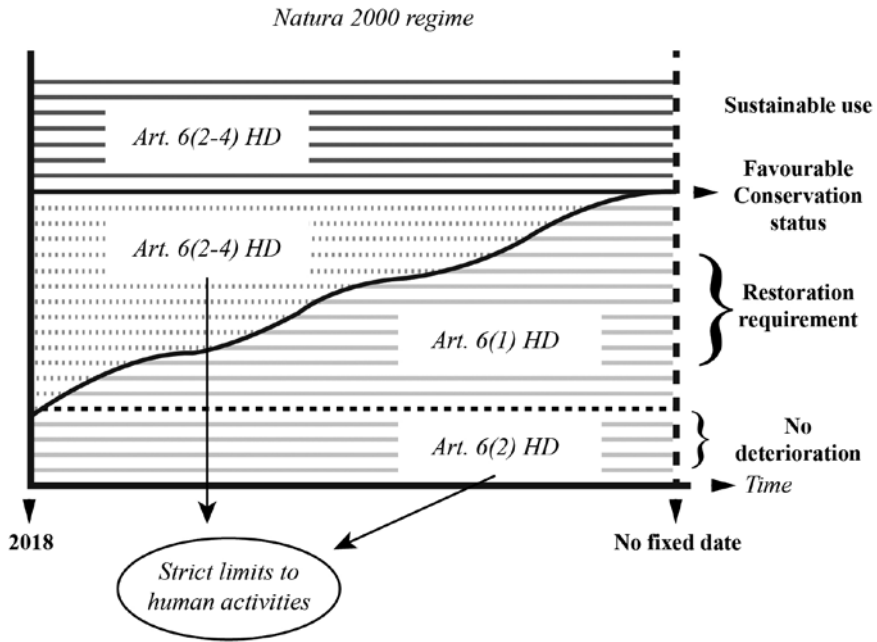


FIGURE 7.3 Natura 2000 regime: achieving the conservation objectives and restoring the ideal situation for implementing the ecosystem approach

of the Habitats Directive provides for an exception to this rule, but only under strict conditions and after taking ‘compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected’.

In parallel with preventing deterioration and significant negative effects by plans and projects, Figure 7.3 also illustrates (through the ascending line towards reaching favourable conservation status of habitat types and species) that ecological restoration must be ensured.⁴⁸ This is the main objective of

ECLI:EU:C:2012:82, para 67, and Case C-258/11 *Sweetman* [2013] ECLI:EU:C:2013:220, para 40.

48 For comprehensive discussions of the concept of ecological restoration in nature conservation law with particular attention for the EU Birds Directive and Habitats Directive, see Anastasia Telesetsky, An Cliquet and Afshin Akhtar-Khavari, *Ecological Restoration in International Environmental Law* (Routledge 2016); Kees Bastmeijer, ‘Ecological Restoration in International Biodiversity Law: A Promising Strategy to Address Our Failure to Prevent?’, in MJS Bowman, P Davies and EJ Goodwin (eds), *Research Handbook on Biodiversity and Law* (Edgar Elgar 2016); and Hendrik Schoukens, ‘Ecological Restoration as New Environmental Paradigm. A Legal Review of Opportunities and Challenges Within the Context of EU Environmental Law, With a Particular Focus on the EU Nature Directives’ (dissertation, Ghent University 2017), 52.

Article 6(1) of the Habitats Directive, which obliges member states to ‘establish the necessary conservation measures’ to achieve the site’s conservation objectives. The objective is to return to the ‘ideal situation’ for implementing the ecosystem approach (Figure 7.1), although this does not necessarily imply a return of nature to an untouched wilderness state. Human activities have influenced ecology for millennia and ecosystems themselves are dynamic as well. The aim of the EU nature directives is to restore and maintain habitat types and species to a favourable status of conservation, which in fact also include species that are typical for semi-natural ecosystems. As noted by Hendrik Schoukens:

Interestingly, using a pre-human reference state as a stringent baseline may at some points even stand at odds with the content of some of the applicable EU environmental directives, for they do not all explicitly require a return to an undisturbed situation in all contexts. For instance, the definition of ‘natural habitat’ in the Habitats Directive includes both ‘entirely natural’ and ‘semi-natural’.⁴⁹

The importance of ecological restoration for the achievement of the objectives of the directives and the EU 2020 biodiversity targets has been broadly acknowledged. As the EEA concludes: ‘[t]he relatively high proportion of ‘deteriorating’ assessments indicate that substantial conservation efforts need to be implemented to revert current trends (...):⁵⁰ More recently, the European Commission has studied the restoration that will be needed for achieving the objectives of the directives.⁵¹ This attention on ecological restoration is not, however, unique to the Natura 2000 regime; the importance of ecological restoration for achieving conservation objectives is emphasized in many international nature protection conventions.⁵²

49 Schoukens, ‘Ecological Restoration as New Environmental Paradigm’ (n 48) 52.

50 European Environment Agency, ‘State of nature in the EU’ (n 22) 9.

51 Constance von Briskorn and others, ‘Restoration efforts required for achieving the objectives of the Birds and Habitats Directives’, prepared for the European Commission (December 2015) <http://ec.europa.eu/environment/nature/knowledge/restoration_and_natura2000_en.htm> accessed 15 January 2018.

52 Kees Bastmeijer, ‘Ecological Restoration in International Biodiversity Law’ (n 48).

5 The Place of Humans in the Ecosystem: Attempts to Weaken Natura 2000

The discussion above shows that the Natura 2000 regime is – in theory – well equipped to prevent further deterioration of the ecosystem and to ensure the recovery of the ecosystem in order to return to a situation where ecosystem approaches may be applied. From an ecosystem perspective, it could be stated that the regime is characterised by a number of legal tools to ensure that humans do not take too dominant a position in the ecosystem. These tools include the strict prohibition of further deterioration, the obligation to refuse authorisations if there is reasonable scientific doubt that a plan or project will cause significant impacts on the Natura 2000 site, strict requirements for allowing exceptions to this rule (e.g. effective compensation) and tools to ensure ecological restoration. However, project developers as well as politicians who want to promote economic activities may feel hindered from achieving their aims because of Natura 2000. Over the last decades, this has resulted in many different attempts to weaken the Natura 2000 regime and to create more space for economic development.

One illustrative example of such attempts is the 2009 letter from the former Dutch Prime Minister Jan Peter Balkenende to Julio Barroso, the former President of the European Commission, in which Balkenende tried to convince Barroso that the Natura 2000 regime should be amended by deleting the precautionary principle from Article 6(3) in order to leave more space for balancing of interests. According to Balkenende:

Natura 2000 fails to strike a balance between ecological value, economic interests and other uses. This is due mainly to the wording of the precautionary principle. The Netherlands believes the Directives that form the basis of Natura 2000 need to be brought up to date in order to strike this balance. The aim should always be sustainable use.⁵³

The response from Barroso emphasised the space for human activities in Natura 2000 sites, in fact emphasising that humans are part of the ecosystem: ‘The EU Natura Directives explicitly acknowledge that human activities are part of the environment and the landscape’.⁵⁴ However, it went on to underline

53 Letter of the Dutch Prime Minister Jan Peter Balkenende to José Manuel Barroso, President of the European Commission, nr 3080107, 13 July 2009.

54 Letter of José Manuel Barroso to Dutch Prime Minister Jan Peter Balkenende, D/2375, 26 October 2009, <<http://www.benegera.nl/images/Overdeschreef/2009BriefBarroso.pdf>> accessed 15 January 2018.

the importance of the legal restrictions designed to ensure that human use does not result in over-exploitation. As Barroso put it:

They [the Directives] establish safeguards to ensure that economic activities take due account of nature conservation objectives and that an acceptable balance between economic interests and nature protection is achieved.⁵⁵

Balkenende's letter has been only one of the many attempts at various governance levels to try to weaken the legal regime for the benefit of economic ambitions. Based on the implementation practice in The Netherlands, Figure 7.4 (below) illustrates a number of such approaches and shows that all these approaches are slowing down or possibly even frustrating the process (as illustrated by Figure 7.3) of returning to a healthy ecosystem.

One set of approaches attempts to enlarge the space for economic interests by avoiding refusals, at the level of concrete plans and projects, of authorisations under Article 6(3). For example, the Dutch government has sought to limit the scope of the terms 'plan and project', and thereby the applicability of Article 6(3), by excluding the injection of lands with livestock manure from the definition of a 'project'. Initiators of projects have also attempted to restrict the application of Article 6(3) by claiming positive ecological restoration measures to neutralise negative impacts of a project as a justification for the conclusion in an appropriate assessment that the project will not have significant effects on the integrity of the relevant site. In itself this approach could be beneficial for reaching the nature conservation objectives while keeping space for economic activities, but in practice the negative impacts on nature often preceded the positive effects.

A second approach has been to attempt to limit the effectiveness of compensation under Article 6(4). While experience regarding compensation under Article 6(4) is limited, as this procedure is seldom followed, experience in the Netherlands with nature compensation requirements more generally is not very positive. Compensation is often not implemented and supervision is limited.⁵⁶ Furthermore, if compensation is carried out, the newly established natural areas do not always receive legally protected status.⁵⁷ These practices slow down the process of ecological restoration of Natura 2000 species and habitat types.

55 Ibid.

56 Algemene Rekenkamer, 'Compensatie van schade aan natuurgebieden' (The Hague, 2014) 16 and 20.

57 Ibid., 15.

A third approach to enlarge the space for economic activities within the Natura 2000 regime relates to the level of ambition as reflected by the conservation objectives and management plans for Natura 2000 sites. In the Netherlands, during the first Natura 2000 management plan period of 6 years,⁵⁸ the national government specifically defined the limited ambition of merely preventing further deterioration, a policy decision which was said to be based on what was considered reasonable and financially affordable.⁵⁹ This policy decision enlarged the space for economic activities during this first plan period: had the ambitions also been related to restoration, there would have been a larger chance that effects of plans and projects are assessed to be above the significance threshold. In terms of Figure 7.4: the ascending line towards restoring favourable conservation status would have been steeper, leaving less space for human impacts.

Finally, other approaches to restricting the efficacy of the Natura 2000 regime have included postponement of the deadline for meeting conservation objectives or – even more fundamentally – lowering the level of ambition of these objectives by adjusting the definitions of ‘favourable conservation status’ for species and habitat types. As illustrated by Figure 7.4, these approaches have also increased the space for economic activities and have slowed down or frustrated the process of returning ecosystems to a healthy status.

Although not all these approaches are obviously in violation of the specific provisions of the directives, they do illustrate the attempts of governments and other stakeholders to ensure maximum space for economic activities within the Natura 2000 regime. This observation is important to a better understanding of the position of humans in the ecosystem; even in a system that – within clearly defined limits – allows for human use of nature and for exonerations of prohibitions, humans aim for a larger portion of the cake than they would receive if the ecosystem approach were implemented in good faith. As the literature makes clear, this is not unique to the implementation of Natura 2000.

58 In principle, management plans relate to a period of 6 years, starting from the date the plan was formally adopted. This moment of adoption is different for each management plan, but generally the first plan period for Dutch Natura 2000 sites falls within the time period of 2008 to 2020.

59 State Secretary of Economic Affairs, Agriculture and Innovation, letter to the Second Chamber of the Parliament, 23 February 2011, Tweede Kamer, vergaderjaar 2010–2011, 32 670, nr 1, 4–5: ‘Ik vind het verantwoord om het ambitieniveau in de eerste beheerplanperiode af te stemmen op wat redelijkerwijs haalbaar en betaalbaar is. De ondergrens vanuit de richtlijnen is, zonder de uiteindelijke doelen uit het oog te verliezen, het zoveel als redelijkerwijs mogelijk is behouden van de huidige kwaliteit.’

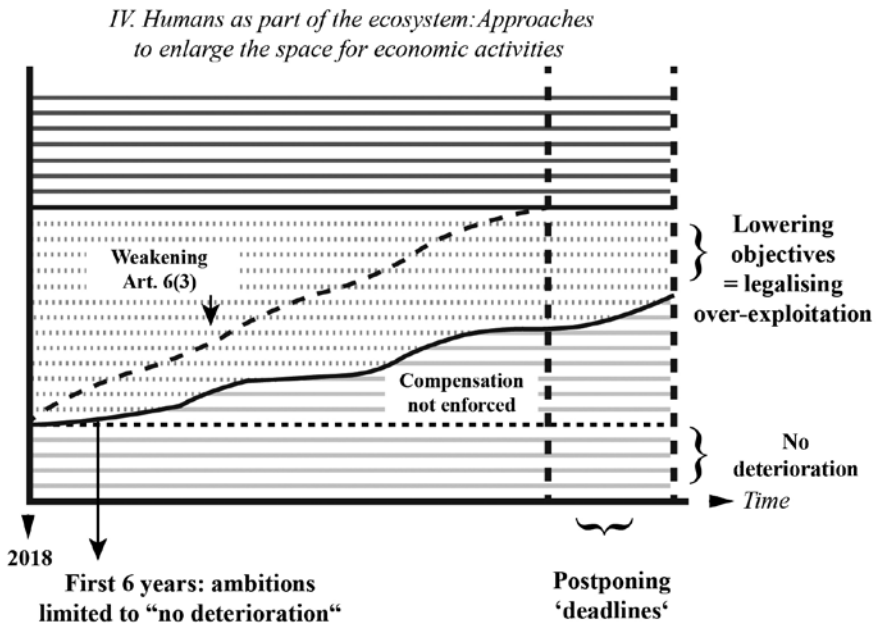


FIGURE 7.4 Humans as part of the ecosystem

Similar practices have been implemented to circumvent the species protection provisions of the Birds and Habitats Directives,⁶⁰ as well as other nature conservation legislation. Chapron and others discuss ‘the staggering number and diversity of tactics used to weaken biodiversity legislation across the globe’⁶¹ and conclude that ‘[w]hereas the predicament of the planet’s wild fauna and flora would have been even worse without the legal protection they have received so far, the onslaught against biodiversity laws has prevented these from fully performing their assigned function’.⁶²

Nevertheless, although this conclusion certainly applies to the Natura 2000 regime, the good news for nature protection in the EU is that the Natura 2000 regime is fairly robust. In particular, thanks to its strict legal requirements and obligations, the active watchdog-role of the European Commission, and the role of the ECJ, the regime has proven to be quite able to respond to many

60 See Hendrik Schoukens and Kees Bastmeijer, ‘Species Protection in the European Union: How Strict is Strict?’ in Charles-Hubert Born and others (eds), *The Habitats Directive in its EU Environmental Law Context* (n 31) 121–146, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2390383> accessed 15 January 2018.

61 Guillaume Chapron and others, ‘Bolster legal boundaries to stay within planetary boundaries’ (2017) 1(3) *Nature Ecology & Evolution* 86.

62 Ibid.

of these challenges fairly effectively. For example, the obligation to achieve favourable conservation status of species and habitat types is an obligation of result. Through monitoring and reporting, complaint procedures, and – if necessary – infringement procedures in the ECJ, the European Commission requires the member states to achieve this objective. Moreover, the ECJ has interpreted the provisions of the directives strictly, often explicitly based on the stated objectives of the directives.⁶³ For example, the ECJ has rejected practice of project developers and governments taking positive ecological restoration measures to neutralise negative impacts of a project as a basis for justifying the conclusion that the project will not have significant effects on the integrity of the site in the meaning of Article 6(3). In the *Briels* and *Orleans* judgments,⁶⁴ the Court explained that this practice is not in line with the precautionary principle on which Article 6(3) is based and would also result in a circumvention of the requirements of Article 6(4). Many other such examples may be provided which, when taken together, indicate that the regime design is strong enough to ensure a solid basis for long-term ecological restoration and biodiversity protection in Europe. It is clear that the European Commission is positive about this role of the Birds and Habitats Directives, as evidenced by its recent conclusion, on the basis of a comprehensive ‘fitness check’, that the Birds – and Habitats Directives are ‘fit for purpose’.⁶⁵

6 Conclusions: Natura 2000 Lessons for Implementing the Ecosystem Approach for the Marine Environment

The Natura 2000 regime is not explicitly based on the ecosystem approach. Consequently, from a legal perspective the implementation of the regime does not necessarily have to be based on the requirements and typical characteristics of the ecosystem approach. However, as discussed in this chapter, the Natura 2000 regime leaves considerable space for this approach and the characteristics of the ecosystem approach connect well with the requirements of

63 See e.g., Schoukens and Bastmeijer, ‘Species Protection in the European Union: How Strict is Strict?’ (n 60) and Broekmeyer and others, ‘Towards an Improved Implementation of the Birds – and Habitats Directives’ (n 33).

64 Case C-521/12 *Briels* [2014] ECLI:EU:C:2014:330 and Case C-387/15 *Orleans* [2016] ECLI:EU:C:2016:583.

65 European Commission, ‘Fitness Check of the EU Natura Legislation (Birds and Habitats Directives)’ SWD(2016) 472 final <http://ec.europa.eu/environment/nature/legislation/fitness_check/docs/nature_fitness_check.pdf> accessed 15 January 2018.

the Natura 2000 regime. Moreover, since the Natura 2000 regime also applies to ecologically important sites in the marine environment, the regime may play an important role in implementing ecosystem management in the marine environment. In view of the many years of experiences with the implementation of the Natura 2000 regime, this chapter focused on the question of what we can learn from the Natura 2000 regime for our understanding of the consideration that humans are 'part of the ecosystem', when implementing the ecosystem approach. Such lessons learned may be of great value when implementing the ecosystem approach for the marine environment.

When taking a closer look at the implementation of Natura 2000 from the perspective of the ecosystem approach, a first observation is that it had quite an 'unfortunate start'. When the Birds and Habitats directives entered into force, a very large part of Europe's biodiversity had already been severely degraded. The causes of this degradation – such as habitat loss, invasive alien species and over-exploitation (e.g., hunting and fishing) – make clear that humans have taken a too dominant position in the ecosystem. This has resulted in a situation in which the implementation of Natura 2000 has also required – and still requires – substantial ecological restoration efforts to ensure the recovery of many species and habitat types. This requirement to restore damage from the past has resulted in a stricter functioning of the Natura 2000 regime than otherwise would have been necessary (e.g. stricter interpretation of prohibitions, lower 'significance' threshold when assessing plans and projects under Article 6(3), etc.). Consequently, **the first obvious lesson** from the Natura 2000 regime and its implementation is that an ecosystem approach should start when the ecosystem is still robust, intact and healthy. Unfortunately, for many parts of the marine environment and its resources this lesson comes too late, however, it may be of relevance for the deep seabed and for parts of the Polar Regions, particular for areas that are currently ice-covered but which are expected to become ice-free due to climate change.⁶⁶ Furthermore, the lesson may also still be relevant for relatively intact sites within larger impacted natural areas.

In light of this 'unfortunate start', the good news is that Article 6 of the Habitats Directive provides strict legal requirements for fulfilling important conditions to return the ecosystem to a situation in which the ecosystem approach can genuinely be implemented. These include the requirements to ensure ecological restoration through conservation measures (art. 6(1) Habitats Directive), prevent further deterioration by human activities and

66 Personal communication with Rosemary Rayfuse, 27 November 2017.

other causes (art. 6(2) Habitats Directive), prevent significant effects from plans and projects (art. 6(3) Habitats Directive), and – in case of necessary exonerations – to require effective compensation (6(4) Habitats Directive). However, practice shows that full implementation of these requirements has met much resistance, not only among project developers but also among politicians. The implementation practice in The Netherlands reveals many different approaches taken by companies and governments, aimed at weakening the system or circumventing limitations deriving from the system for economic purposes. These approaches appear not to be based on misunderstandings regarding the aims or requirements of the system, but rather to stem from the deliberate prioritization of social and economic interests over environmental ones. Therefore, **the second lesson** is that, if the aim is to ensure inclusion of humans as part of an ecosystem in a manner that ensures the ecosystem is either in or will be restored to intact and healthy conditions, then strict legal requirements to prevent over-use are essential. This also implies that, in order to avoid the risk of prioritising short-term (often economic) interests in decision-making, only limited discretion can be afforded to the balancing of interests by governments.

This second lesson appears particularly relevant for implementing the ecosystem approach in relation to Europe's marine environment. As distinct from the Natura 2000 regime, the EU legislation relating to the protection of the marine environment appears to place more explicit emphasis on the balancing of interests. For example, Article 13(3) of the MSFD states: '[w]hen drawing up the programme of measures pursuant to paragraph 2, Member States shall give due consideration to sustainable development and, in particular, to the social and economic impacts of the measures envisaged'. Reasonable as this may appear, it runs the risk of giving 'humans', through governments, too dominant a position in the ecosystem, thereby severely limiting the potential effectiveness of the ecosystem approach. Paragraph 8 of the preamble of the MSFD recognises this risk⁶⁷ and prioritises the objective of achieving or maintaining good environmental status in the Community's marine environment, stating:

67 For a recognition of weak aspects of the ecosystem approach due to market forces, see <<https://www.cbd.int/doc/external/iucn/iucn-ecosystem-approach-en.pdf>> accessed 15 January 2018.

By applying an ecosystem-based approach to the management of human activities while enabling a sustainable use of marine goods and services, priority should be given to achieving or maintaining good environmental status in the Community's marine environment, to continuing its protection and preservation, and to preventing subsequent deterioration.⁶⁸

However, the experiences with the Natura 2000 regime show that, if this priority setting will result in tensions with ambitions relating to economic activities, such as fisheries, mining activities or energy production, it may be expected that economic stakeholders and politicians will apply approaches to weaken the legal system. Some such approaches may be similar to those applied regarding the Natura 2000 regime. For instance, social and economic interests might compromise a science-based definition of a 'good environmental status'. The question of whether such approaches are already being applied falls outside the scope of this chapter, but further research on this topic appears important. Such approaches would indicate that the notion that – in implementing an ecosystem approach – humans should be considered to be part of the ecosystem, is nothing more than an excuse for its over-exploitation.

Table of Authorities

Conventions and European Union Legislation

- Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980 (entered into force on 7 April 1982) 1329 UNTS 47.
- Convention of Biological Diversity of the United Nations Conference on the Environment and Development, Rio de Janeiro, 5 June 1992, UN Doc DPI/307, reprinted in 31 ILM 818.
- Directive 79/409/EEC on the conservation of wild birds, 1979, OJ L 103/1; consolidated version: Directive 2009/147/EC, OJ L 20, 26 January 2010.
- Directive 92/43 on the Conservation of natural habitats and wild fauna and flora, 1992, OJ L 206/7, 22 July 1992.
- Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy (2008) OJ L 164/19, 17 June 2008.

68 MSFD, preamble, para 8.

Cases of the Court of Justice of the EU

- Case C-44/95 *Regina v United Kingdom* [1996] *ECR I-03805*
 Case C-3/96 *Com v The Netherlands* [1998] *ECR I-03031*
 Case C-371/98 *Com v United Kingdom* [2000] *ECR I-09235*
 Case C-127/02 *Waddensea* [2004] *ECR I-07405*
 Case C-6/04 *Com v United Kingdom* [2005] *ECR I-09017*
 Case C-418/04 *Com v Ireland* [2007] *ECR I-10947*
 Case C-535/07 *Com v Austria* [2010] *ECR I-09483*
 Case C-404/09 *Com v Spain* [2011] *ECR I-11853*
 Case C-182/10 *Solvay and Others* [2012] *ECLI:EU:C:2012:82*
 Case C-258/11 *Sweetman* [2013] *ECLI:EU:C:2013:220*
 Case C-521/12 *Briels* [2014] *ECLI:EU:C:2014:330*
 Case C-387/15 *Orleans* [2016] *ECLI:EU:C:2016:583*

Bibliography

Books

- Born Ch-H, Cliquet A, Schoukens H, Misonne D and Van Hoorick G, *The Habitats Directive in its EU Environmental Law Context: European Nature's Best Hope?* (Routledge 2015).
- Schoukens H, *Ecological Restoration as New Environmental Paradigm. A Legal Review of Opportunities and Challenges Within the Context of EU Environmental Law, With a Particular Focus on the EU Nature Directives*, dissertation (Ghent University 2017).
- Telesetsky A, Cliquet A and Akhtar-Khavari A, *Ecological Restoration in International Environmental Law* (Routledge 2016).

Reports and Policy Documents

- Algemene Rekenkamer, 'Compensatie van schade aan natuurgebieden' (The Hague, 2014).
- European Commission, 'Managing Natura 2000 Sites. The provisions of Article 6 of the Habitats Directive 92/43/CEE' (Luxembourg 2000) <http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf>.
- European Commission, 'Guidelines for the establishment of the Natura 2000 network in the marine environment. Application of the Habitats and Birds Directives' (May 2007) <http://ec.europa.eu/environment/nature/natura2000/marine/docs/marine_guidelines.pdf>.
- European Commission, 'Links between the Marine Strategy Framework Directive (MSFD 2008/56/EC) and the Nature Directives (Birds Directive 2009/147/EEC (BD)

- and Habitats Directive 92/43/EEC (HD)). Interactions, overlaps and potential areas for closer coordination' (27 July 2012, <<http://ec.europa.eu/environment/nature/natura2000/marine/docs/FAQ%20final%202012-07-27.pdf>>).
- European Commission, 'Our life insurance, our natural capital: an EU biodiversity strategy to 2020' COM (2011) 244 final.
- European Commission, 'Fitness Check of the EU Natura Legislation (Birds and Habitats Directives)' SWD (2016) 472 final <http://ec.europa.eu/environment/nature/legislation/fitness_check/docs/nature_fitness_check.pdf>.
- European Commission, 'A Starter's Guide. Overview on the main provisions of the Water Framework Directive, the Marine Strategy Framework Directive, the Birds and Habitats Directives, and the Floods Directive: similarities and differences' (Technical Report 2016-103) <http://ec.europa.eu/environment/nature/natura2000/management/docs/starter_guide.pdf>.
- European Environment Agency, 'State of nature in the EU. Results from reporting under the nature directives 2007–2012' (Copenhagen 2015) <<https://www.eea.europa.eu/publications/state-of-nature-in-the-eu>>.
- SCOR/SCAR Group on the Living Resources of the Southern Ocean (SCOR Working Group 54), 'Report of the meeting held at Woods Hole' (USA, 23–24 August 1976, report published in (1977) 55 *SCAR bulletin*, 175) <http://www.scar.org/scar_media/documents/publications/bulletins/Bulletin55.pdf>.
- Scientists and policy experts (no authors mentioned) Consensus statement 'Scientific consensus statement on marine ecosystem-based management' (21 March 2005) <<http://marineplanning.org/wp-content/uploads/2015/07/Consensusstatement.pdf>>.
- Secretariat of the Convention on Biological Diversity, 'The Ecosystem Approach, CBD Guidelines' (Montreal 2004) <<https://www.cbd.int/doc/publications/ea-text-en.pdf>>.

Book Chapters

- Bastmeijer K, 'Ecological Restoration in International Biodiversity Law: A Promising Strategy to Address Our Failure to Prevent?', in Bowman MJS, Davies P and Goodwin EJ, *Research Handbook on Biodiversity and Law* (Edgar Elgar 2016).
- Bastmeijer K, 'Natura 2000 and the Protection of Wilderness in Europe', in Bastmeijer K (ed), *Wilderness Protection in Europe: The Role of International, European and National Law* (Cambridge University Press 2016) 177–198.
- Henocque Y, 'The Crafting of Seabed Mining Ecosystem-Based Management', in R Sharma (ed), *Deep-Sea Mining* (Springer 2017).
- Schoukens H and Bastmeijer K, 'Species Protection in the European Union: How Strict is Strict?', in Born and others (eds), *The Habitats Directive in its EU Environmental Law Context: European Nature's Best Hope?* (Routledge 2015) 121–146.
- Schoukens H and Woldendorp HE, 'Site selection and designation under the Habitats and Birds Directives: a Sisyphean task?', in Born and others, *The Habitats Directive*

in its EU Environmental Law Context: European Nature's Best Hope? (Routledge 2015) 31–55.

Journal Articles

- Chapron G, Epstein Y, Trouwborst A and López-Bao JV, 'Bolster legal boundaries to stay within planetary boundaries', (2017) 1(3) *Nature Ecology & Evolution* 86.
- Danovaro R, Aguzzi J, Fanelli E, Billett D, Gjerde K, Jamieson A, Ramirez-Llodra E, Smith CR, Snelgrove PVR, Thomsen L, Van Dover CL, 'An Ecosystem-Based Deep-Ocean Strategy' (2017) *Science* 452.
- De Lucia V, 'Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law' (2015) 27 *Journal of Environmental Law* 91.
- Long RD, Charles A and Stephenson RL, 'Key principles of marine ecosystem-based management' (2015) 57 *Marine Policy* 53.

Other Print Sources and Documents (Letters)

- Balkenende, Letter of the Dutch Prime Minister Jan Peter Balkenende José Manuel Barroso, President of the European Commission, nr 3080107, 13 July 2009.
- Barroso 2011, Letter of José Manuel Barroso to Dutch Prime Minister Jan Peter Balkenende, D/2375, 26 October 2009, available at <<http://www.benegora.nl/images/Overdeschreef/2009BriefBarroso.pdf>>.
- Bijlsma RJ, Bastmeijer K, Broekmeyer MEA, Butger RJF, Fleurke FM, Huiskes HPJ, Janssen JAM, *Samenvoeging Natura 2000-gebieden: Juridische, bestuurlijke en ecologische (on)mogelijkheden, kansen en risico's* (Alterra and Tilburg University 2012), <<https://zoek.officielebekendmakingen.nl/blg-210188.pdf>>.
- Broekmeyer M, Bastmeijer K and Kamphorst D, 'Towards an Improved Implementation of the Birds – and Habitats Directives. An inventory of experiences in Austria, England, Flanders and the Netherlands in relation to two dilemmas' (Alterra 2017).
- Cabello J, 'Science-Policy Interfaces and ecosystem services: tools for the implementation of the ecosystem approach in the Natura 2000 sites' [presentation, Prespa, 29–30 May 2015] <http://ec.europa.eu/environment/nature/natura2000/platform/documents/med_grassland_workshop_prespa_158/cabello_prespa_2015_en.pdf>.
- State Secretary of Economic Affairs, Agriculture and Innovation, Letter to the Second Chamber of the Parliament, 23 February 2011, Tweede Kamer, vergaderjaar 2010–2011, 32 670, nr 1.
- Von Briskorn C and others, 'Restoration efforts required for achieving the objectives of the Birds and Habitats Directives', prepared for the European Commission (December 2015) <http://ec.europa.eu/environment/nature/knowledge/restoration_and_natura2000_en.htm>.