Bridging the gap between policy and knowledge on Biodiversity in Europe

Call for Knowledge and Call for Interest in joining the Expert Working Group on TOPIC:

Blueprint for site-specific conservation objectives for marine Natura 2000 sites in European sea basins

Reference: Eklipse - CfK 01/2025

April 2025

Responses by May 07th, 2025

1. Invitation to share knowledge and expertise for informed decision-making

Eklipse invites you to contribute to this open call with your knowledge and expertise on ecological requirements of marine habitat types and species for which Natura 2000 sites must be designated under the EU Birds and Habitats Directives. This will support Member States in establishing clear and measurable conservation objectives for marine habitats and species, facilitating the implementation of effective conservation measures and the achievement of substantial conservation outcomes.

Background:

The aim of the request is to **support Member States in setting scientifically sound site-specific conservation objectives** for marine habitats and species protected under the **Birds and Habitats Directives** (BHD) **within Natura 2000 sites**, contributing to the protection and recovery of marine biodiversity across Europe.

Member States must establish site-specific conservation objectives for species and habitats protected in the sites (marine habitats and species listed in Annexes I and II of the Habitats Directive and seabirds listed in Annex I of the Birds

Directive and regularly occurring migratory species), as well as establish and implement the necessary conservation measures to reach those objectives. For a list of species and habitats see Annex 1.

Site-specific conservation objectives for a Natura 2000 site are a set of specified objectives to be met at site-level to ensure that each site is in good ecological condition and meaningfully contributes to the achievement of favourable conservation status of species and habitats at the national and EU biogeographical levels. In other words, the overarching objective of the Directive is translated into site-level conservation objectives. These conservation objectives must be defined **using attributes and targets that are based on parameters set out in the Habitats Directive for defining favourable conservation status**.

Conservation objectives should be defined for the ecological requirements of **a habitat type or species** which are necessary for the maintenance or restoration of that feature at favourable conservation status. The ecological requirements of the habitat types and species refer to the specific conditions necessary for survival, growth, and reproduction within particular environments. **Ecological requirements include all the ecological needs, both abiotic and biotic factors,** which are deemed necessary to ensure the conservation of the habitat types and species, including their interactions with the physical environment.

For habitat types, these parameters typically cover the area and range of the habitat type in the site, as well as its structure, functions, and environmental conditions, including the typical species and their composition or relevant food webs, abiotic factors such as water quality, etc. For species, these parameters typically relate to the population of the species within the site, along with the quality and quantity of the habitat of the species in the site (e.g. extent of foraging habitat, amount of prey, etc.). **For examples of site-specific conservation objectives from different Member States, see annex 2.**

The request recognizes that, despite existing guidance from the European Commission, many Natura 2000 sites—especially marine ones—still lack **a clear blueprint to guide the definition of conservation objectives**. This is due to challenges in defining the ecological requirements of species, their current status, and identifying potential threats, which pose compliance issues and hinder progress to achieve both EU and global conservation targets.

To address this, the request aims to gather and synthesise knowledge on the ecological needs of marine species and habitats. Based on this knowledge, a **blueprint for drafting site-specific conservation objectives** will be developed for each **habitat type and species at the sea-basin level**, potentially breaking them

down into sub-types or species groups with similar ecological needs, and ensuring these objectives contribute to halting and reversing biodiversity loss in EU marine environments. **The blueprint should include a list of essential attributes for the objectives for each habitat and species, along with best practices for setting measurable target values for those attributes and how they should be monitored.** Key aspects to consider include the definition of **"good ecological condition"** for each habitat and species-what definitions currently exist and which should be prioritised. Experts are invited to identify any additional aspects they consider relevant for inclusion in the blueprint (e.g. forms of knowledge needed; governance processes, existence/absence of threats, etc).

While this request is focused on marine Natura 2000 sites, we are also interested in approaches and methodologies that could support this task, even if they have been used in other marine protected areas. As long as they are relevant to defining specific conservation objectives, such insights would be valuable.

Invitation to contribute

Eklipse invites scientists, policy makers, practitioners and other societal actors to share their knowledge and expertise on the following topics.

The main aim of a **Call for Knowledge** is to ensure a comprehensive and collaborative approach to addressing the request. The CfK supports the initial scoping phase by gathering relevant knowledge **to avoid duplication of ongoing efforts** and to **ensure that the outputs are jointly and timely developed**.

This Call for Knowledge includes a **Call for Interest to join the future Expert Working Group (EWG)** who will be selected to provide an in-depth analysis and synthesis of knowledge to answer the policy relevant need. The EWG is expected to be diverse in terms of relevant **disciplinary backgrounds**, **types of stakeholders**, **gender**, and **geographical representation**. The group should include experts from various fields, including policy, academia, and practice, as well as individuals from different countries, with equal representation of all genders.

Please have a look at the following questions:

1. Do you know of any **major – or overlooked – projects, papers, reports, grey literature that could support the development of methodologies to define site-specific conservation objectives for marine habitats and species** under the Birds and Habitats Directives (BHD) within Natura 2000 sites? Please also share any methodologies that, while not specific to Natura 2000 sites, could be applied or adapted for this purpose.

2. Could you **share your experiences** of on-the-ground actions related to defining and implementing conservation objectives and measures for marine species and habitats?
3. What **types and forms of knowledge** (e.g. scientific, social sciences, experiential) is needed to better integrate ecological needs, species status, and threats into conservation planning within Marine Natura 2000 sites?
4. Are you aware of any **knowledge gap analysis** concerning any of the following topics:
    a. scientific methods to define and assess the good ecological condition of
    marine species and habitats within Natura 2000 sites.
    b. documentation on the differences between these methodologies, for example to which extent do they include an evaluation of threats? Which aspects are included/left out in different approaches?
    c. best practices for setting clear site-specific conservation objectives that align with the requirements of the EU nature legislation.
    d. challenges and solutions (e.g. effective strategies) for ensuring compliance with the Birds and Habitats Directives, particularly in marine environments.

2. How to contribute?

Please contribute your comments and knowledge/initiatives/references through the Eklipse Survey or through social media using the hashtag: #Eklipseeurope. Feel free to send us an email directly if you prefer or request a meeting with us, using emb@eklipse.eu.

We invite you to add any information that you think is relevant for this request and justify its inclusion (e.g. additional information from countries, scales, or disciplinary perspectives not covered sufficiently). **We also warmly encourage you to help us disseminate broadly this call for knowledge.**

Relevant information should be grouped under the following: (1) Methodological frameworks, (2) Initiatives/projects (indicating if completed, ongoing or planned), (3) Literature reviews, (4) Empirical studies/practical experiences, (5) Modelling studies that show predictions or simulations, and (6) Conceptual papers which present ideas, theories, or frameworks.

Contributions may include: (a) Links to websites or contact details, (b) Open access papers, (c) Links to published and unpublished grey literature or case studies, (d) Descriptions of ongoing research projects or knowledge

compilations expected to deliver results within the next year, or (e) On-the-ground experiences in this field.

3. Objective of the call and request to be addressed by this call

This request relates to many existing policies, including the **EU Biodiversity strategy for 2030, Nature Restoration Regulation, and the EU Marine Strategy Framework Directive**. The issue is also relevant for discussions about the implementation of the Birds and Habitats Directives within Commission's expert (sub)-groups such as the Nature Directives Expert Group (NADEG) and the Marine Expert Group (MEG). The final framing of the request seeks to contribute to the Natura 2000 sites under the Birds and Habitats Directives.

The objective of this call for knowledge is to nurture the scoping process on the request and is meant to identify available assessments, existing studies and other resources. For further details on Eklipse background see link, its functions see link and the process followed to address the requests from policy and society see link.

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Annex 1 List of habitats and species

Habitats listed in Annex I

Open sea and tidal areas natural habitats types of community interest whose conservation requires the designation of special areas of conservation (SAC's)

1110 Sandbanks which are slightly covered by sea water all the time

1120 * Posidonia beds (Posidonion oceanicae)

1130 Estuaries

1140 Mudflats and sandflats not covered by seawater at low tide

1150 * Coastal lagoons

1160 Large shallow inlets and bays

1170 Reefs

1180 Submarine structures made by leaking gases

8330 Submerged or partially submerged sea caves

Species of community interest listed in Annex II (18 marine species, including fish, reptile, cetacean, and seal species) whose conservation requires the designation of Special Areas of Conservation (SACs)

1349 Tursiops truncatus

1351 Phocoena phocoena

1364 Halichoerus grypus

1365 Phoca vitulina

1366 Monachus monachus

1938 Phoca hispida bottnica

1224 Caretta caretta

1095 Petromyzon marinus

1099 Lampetra fluviatilis

1100 Acipenser naccarii

1101 Acipenser sturio

1102 Alosa alosa

1103 Alosa fallax

1151 Aphanius iberus

1152 Aphanius fasciatus

1153 Valencia hispanica

1154 Pomatoschistus canestrini

1992 Valencia letourneuxi

Seabirds and waterbird species for which Special Protection Areas (SPAs) should be considered.

Gavia stellata

Gavia arctica

Gavia immer

Podiceps cristatus

Podiceps grisegena

Podiceps auritus

Podiceps nigricollis

Fulmarus glacialis

Pterodroma feae

Pterodroma madeira

Bulweria bulwerii

Calonectris diomedea

Puffinus griseus

Puffinus assimilis

Puffinus puffinus

Puffinus mauretanicus

Puffinus yelkouan

Hydrobates pelagicus

Oceanodroma leucorhoa

Oceanodroma castro

Pelagodroma marina

Morus bassanus

Phalacrocorax carbo

Phalacrocorax aristotelis

Phalacrocorax a. desmarestii

Phalaropus lobatus

Phalaropus fulicarius

Aythya marila

Somateria mollissima

Polysticta stelleri

Melanitta nigra

Melanitta fusca

Clangula hyemalis

Bucephala clangula

Mergus serrator

Mergus merganser

Stercorarius skua

Stercorarius pomarinus

Stercorarius parasiticus

Stercorarius longicaudus

Larus genei

Larus ridibundus

Larus canus

Larus melanocephalus

Larus audouini

Larus marinus

Larus fuscus

Larus argentatus

Larus michahellis

Larus hyperboreus

Larus glaucoides

Larus minutus

Rissa tridactyla

Sterna caspia

Sterna albifrons

Sterna nilotica

Sterna sandvicensis

Sterna paradiseae

Sterna hirundo

Sterna dougallii

Cepphus grylle

Fratercula arctica

Alle alle

Alca torda

Uria aalge

Uria aalge ibericus

Annex 2 Examples of site-specific conservation objectives

i) Ireland

A list of attributes on habitat area, habitat distribution and community distribution, with associated targets, was drawn up in order to maintain the favourable conservation condition of Sandbanks which are slightly covered by sea water all the time (Habitat 1110) in the Natura 2000 site Blackwater Bank SAC (IE0002953) in Ireland[1].

Conservation objectives for: Blackwater Bank SAC [002953]			
1110 Sandbanks which are slightly covered by sea water all the time			
To maintain the favourable conservation condition of Sandbanks which are slightly covered by sea water all the time in Blackwater Bank SAC, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 3	Habitat area was estimated as 7310 ha using the Carnsore Point to Wicklow Head Admiralty Chart (no. 1787-0)
Habitat distribution	Occurrence	The distribution of sandbanks is stable or increasing, subject to natural processes. See map 3	Distribution established using the Carnsore Point to Wicklow Head Admiralty Chart (no. 1787-0)
Community distribution	Hectares	Conserve the following community type in a natural condition: Sand with *Nephtys cirrosa* and *Bathyporeia elegans* community complex. See map 4	The likely area of the community was derived from benthic surveys undertaken in 2005 (Roche et al., 2007) and in 2012 (Aquafact, 2012). See marine supporting document for further details

A list of attributes on distribution, habitat area and community structure, with associated targets, was drawn up in order to maintain the favourable conservation condition of Reefs (Habitats 1170) in the site Slyne Head Islands SAC (IE0000328) in Ireland[2].

Conservation objectives for: Slyne Head Islands SAC [000328]			
1170 Reefs			
To maintain the favourable conservation condition of Reefs in Slyne Head Islands SAC, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes

[1] Source: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002953.pdf

[2] Source: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000328.pdf

Distribution	Occurrence	The distribution of reefs is stable or increasing, subject to natural processes. See map 3	Distribution was established from 2010 subtidal reef survey (Aquafact, 2011) and 2012 field observations
Habitat area	Hectares	The permanent area is stable, subject to natural processes. See map 3	Habitat area was estimated as 1418 ha from 2010 subtidal reef survey (Aquafact, 2011) and 2012 field observations
Community structure	Biological composition	Conserve the following community types in a natural condition: Exposed intertidal reef community complex; *Laminaria*-dominated community; and Exposed subtidal reef with echinoderms and encrusting algae community. See map 4	Based on 2010 subtidal reef survey (Aquafact, 2011) and 2012 field observations

The following list of attributes and targets was drawn up in order o maintain the favourable conservation condition of Grey Seal in Slyne Head Islands SAC (IE000328) in Ireland,[3].

Conservation objectives for: Slyne Head Islands SAC [000328]			
1364 Grey Seal *Halichoerus grypus*			
To maintain the favourable conservation condition of Grey Seal in Slyne Head Islands SAC, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use. See map 5	See marine supporting document for further details
Breeding behaviour	Breeding sites	Conserve the breeding sites in a natural condition. See map 5	Attribute and target based on background knowledge of Irish breeding populations, review of data from Summers (1983), Lyons (2004), Ó Cadhla et al. (2005), a comprehensive breeding survey in 2005 (Ó Cadhla et al., 2008) and

[3] Source: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000328.pdf

			unpublished National Parks and Wildlife Service records. See marine supporting document for further details
Moulting behaviour	Moult haul-out sites	Conserve the moult haul-out sites in a natural condition. See map 5	Attribute and target based on background knowledge of Irish populations, review of data from Ó Cadhla et al. (2006), a national moult survey (Ó Cadhla and Strong, 2007) and unpublished National Parks and Wildlife Service records. See marine supporting document for further details
Resting behaviour	Resting haul-out sites	Conserve the resting haul-out sites in a natural condition. See map 5	Attribute and target based on review of data from Lyons (2004), Cronin et al. (2004), Ó Cadhla et al. (2005) and unpublished National Parks and Wildlife Service records. See marine supporting document for further details
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the grey seal population at the site	See marine supporting document for further details

ii) Belgium

Conservation objectives adopted in 2022 for the Vlaamse Banken Natura 2000 site in Belgium[4].

Targets
1 The spatial extent of habitat type 1110 does not change significantly
1.1 The spatial range and distribution of Level 2 EUNIS physical habitats (sandy mud to mud, muddy sand to sand and gravel containing sediment) fluctuates - in relation to the reference status as described in the 'Initial Assessment' (KRMS) - within a margin limited to the accuracy of the current distribution folders
1.2 The spatial range and distribution of the *A. alba* community is maintained
2 Function of shallow sandbanks as spawning and nursery areas is maintained or enhanced

[4] Belgische Staat. 2022. Instandhoudingsdoelstellingen voor het Belgische deel van de Noordzee - Habitat- en Vogelrichtlijn – Herziening 2022. Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu, DG Leefmilieu, Brussel, België: 27 pp.

2.1 Occurrence and densities of juvenile flatfish such as plaice (Pleuronectes platessa) and sole (*Solea solea*) in the coastal zone is maintained or increasing.
3 Non-indigenous species introduced by human activities occur at levels that do not alter the ecosystem.
3.1 Introduction of new human-introduced non-native species of macrofauna and macroflora (>1mm) that alter an ecosystem is avoided.
4 The frequency of occurrence of vulnerable species increases
4.1 The ratio of benthic R-strategists to K-strategists (at species level) is decreasing
4.2 The number of K-strategists (at species level) is increasing
4.3 There is a positive trend in the mean density of adult specimens (or frequency of occurrence) of a selection of long-lived and/or slow reproducing species and the major structuring benthic species groups in mud to muddy sands and pure fine to gravelly sands
5 The benthic ecosystem provides sufficient food for higher trophic levels
6 The ecological quality of the benthic habitat of the Abra alba biotope is preserved
6.1 The Benthic Ecosystem Quality Indicator as determined by BEQI tool is a minimum value of 0.60 for each occurring community
6.2 The bioturbation potential (BPc), an indicator for evaluating the functioning of the benthic ecosystem, has a minimum value of 0.60 (as determined via the BEQI procedure) for the *A. alba* community in the second half of the year.
7 The autonomous development of *L. conchilega* aggregations is not prevented
7.1 The 3D structures formed by *L. conchilega* are preserved
7.2 The densities of the *L. conchilega* reef-associated species (e.g. *Eumida sanguinea, Pariambus typicus, Microprotopus maculatus* and *Phyllodoce* spp.) do not show a downward trend
8 There is at least a conservation of the surface area of naturally occurring hard substrates
8.1 For gravel beds, the ratio of hard substrate surfaces (specifically, surfaces colonized by hard substrate epifauna) to soft sediment surfaces (specifically, surfaces on top of the hard substrate and preventing the development of substrate fauna) should not show a negative trend in predefined test zones
9 There is a recovery of more natural benthic communities in the gravel beds
9.1 There has been an increase in species richness within taxa typically associated with hard substrates (specifically Porifera, Cnidaria, Bryozoa, Polychaeta, Malacostraca, Maxillopoda, Gastropoda, Bivalvia, Echinodermata and Ascidiacea)
9.2 There is an increase in the frequency of occurrence or median density of adult or mature colonies of at least half of the most important and long-lived species within gravel beds: native Flat oyster (*Ostrea edulis*), Mussel (*Mytilus edulis*), Common Whelk (*Buccinum undatum*), Dead man's fingers (*Alcyonium digitatum*), erected sponges (such as Mermaid's glove sponge (*Haliclona oculata*)) and erected Bryozoa (such as Sea chervil (*Alcyonidium* spp.) and Leafy hornwrack (*Flustra foliacea*))
9.3 There is an increase in the median body size of the larger benthic species: Common Whelk (*Buccinum undatum*) and Spider Crabs (Majidae spp.)
9.4 There is an increase in the number and size of sand tubeworm Ross worm (*Sabellaria spinulosa*) reefs and the number of clusters of triangular tubeworms (*Pomatoceros* (*Spirobranchus*) *triqueter*). - Type 1
9.5 There is recovery of gravel beds as spawning areas for Herring (*Clupea harengus*) and as sites for egg deposition by rays and sharks

iii) Greece

Conservation objectives for the habitat type *Posidonia* meadows (*Posidonion oceanicae*) (1120) in the NISOS GYAROS KAI THALASSIA ZONI SCI-SPA (GR4220033)[5]			
Parameter	Measurement unit	Target	Specific Target
Surface	Hectares	199.4	Maintenance
Rhizome growth strategy (at 15 m depth)	% of plagiotropic rhizomes	<10%	Maintenance
Depth of lower distribution limit	Metres	≥35	Maintenance
Meadow coverage (at 15 m depth)	% total habitat surface	>80%	Maintenance
Dynamics (stability, range, shrinking) of meadow at the lower distribution range	Typology of lower limit of meadow distribution	Advancing	Maintenance
Conservation index (at 15 m depth)	Index (Conservation Index - CI)	> 0,9	Maintenance
Meadow density (at 15 m depth)	Shoots per m^2	>500	Maintenance

iv) Bulgaria

Parameters for setting the specific conservation objectives for the species *Puffinus yelkouan* in the site BG0002077 Bakerlata[6].

Parameter	Unit	Target value	Additional information	Site-specific conservation objectives
Population: Size of the migratory population	Number of individuals	At least 20 individuals	The target value is set on the basis of data from the SDF and data from eBird. The quantity of individuals passing during migration is highly dependent on weather conditions. The species' presence in the area is irregular during migration.	Maintaining the number of migrating individuals in the area to at least 20 through maintenance of foraging habitats

[5] Government Gazette: Series II, No 1807/22.03.2023

[6] For more information see: https://natura2000.egov.bg/EsriBg.Natura.Public.Web.App/Home/Natura2000ProtectedSites

Habitat of the species: Area of suitable foraging habitats of the species	Ha	At least 21110	The species feeds in the Bay of Burgas. Determined on the basis of the % contribution of habitat N01-Marine sites and bays. The area in the site is 21110 ha.	Preservation and maintenance of the habitat types in the site to at least 21110 ha.
Habitat of the species: Ecological status of water bodies with habitats of the species by using biological quality element 'Fish' under the WFD	5 step scale for ecological status	1– High/ 2 – Good	Fish are covered by studies under the Water Framework Directive, using a biological quality element 'Fish'. The ecological status of water bodies according to the biological quality element Fish is assessed on a 5-level scale: Ecological status 1– High 2– Good 3– Moderate 4– Poor 5– Bad The monitoring of internal and coastal waters is carried out by the Basin Directorate 'Black Sea area' annually on defined monitoring points.	Maintaining and/or improving the ecological status of water bodies with appropriate habitats for the species, at values 2– Good or 1– High.