



BLUEPRINT FOR SITE-SPECIFIC CONSERVATION OBJECTIVES FOR  
MARINE NATURA 2000 SITES IN THE EUROPEAN SEA BASINS

## DOCUMENT OF WORK (DOW)

BLUEPRINT FOR SITE-SPECIFIC CONSERVATION OBJECTIVES FOR MARINE  
NATURA 2000 SITES IN THE EUROPEAN SEA BASINS

Requested by

European Commission's Directorate-General Environment (EC – DG ENV)

Funded by

EU Horizon Europe project “ Connecting biodiversity knowledge and  
decision-making – BioAgora

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when it comes to biodiversity in Europe. [www.eclipse.eu](http://www.eclipse.eu)





## Site-Specific Conservation Objectives

Developed by Expert Working Group on Site-Specific Conservation Objectives

Jan 2026

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### 1) PREAMBLE

This request was put to Eklipse by the European Commission's Directorate General for Environment (EC–DG ENV) through the EU Horizon Europe project “Connecting biodiversity knowledge and decision-making”–BioAgora.

This document of work describes the results of the scoping activities as well as the background of the request and is the basis for the call for experts.

**Requesters:** European Commission's Directorate-General for Environment (EC – DG ENV)

**Funder:** EU Horizon Europe project “Connecting biodiversity knowledge and decision-making” – BioAgora

Date request received by the EC Knowledge Centre for Biodiversity (KCBD): 15th of July 2024

Intake meeting by BioAgora with the requesters: 25th of September 2024

Kickoff meeting by Eklipse: 18th of November 2024

Request reformulation meeting with the requesters, Eklipse Scoping Group: 5th of March 2025

Final Report submission: September 2026

In order to refine the request, the following scoping activities have been carried out:

- a. Preliminary literature screening was carried out.
- b. Call for knowledge in order to identify already existing work on the request, and
- c. Discussion with initiatives/projects working on the topic of the request.

This Document of Work (DoW) describes the results of the scoping activities as well as the background of the request. The information in this document is also the basis for the next step: Call for Experts (CfE) to select the members of an Eklipse Expert Working Group (EWG) that will work on answering the request. It explores the existing knowledge in this area, who the main knowledge holders are, how the request relates to existing policy processes at the EU level, and identifies plausible and relevant programmes of work and methodology for answering this request.

### 2) BACKGROUND AND CONTEXT OF THE CALL

#### ORIGINAL REQUEST

*The aim of the request is to gather knowledge on the main ecological requirements, current status, and potential threats to marine habitats and species protected under the Birds and Habitats Directive, and to define a blueprint for drafting site-specific conservation objectives at the sea-basin level. This knowledge will ultimately support Member States in setting appropriate site-specific conservation objectives for their marine habitats and species and facilitate the establishment and implementation of necessary conservation measures.*



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### 2.1 BACKGROUND

The Birds and Habitats Directives (BHD) require the designation and effective management of Natura 2000 sites (Special Protection Areas [SPAs] under the Birds Directive and Special Areas of Conservation [SACs] under the Habitats Directive) as the main contribution to reaching and maintaining the favourable conservation status of protected habitats and species. Member States must establish site-specific conservation objectives (SSCOs) for species and habitats protected in the sites, as well as implementing the necessary conservation measures to reach those objectives.

SSCOs should be based on scientific assessments that analyse the ecological needs of species and habitats, their current status, and associated threats. Clear, measurable targets are essential for guiding effective conservation actions. Despite existing European Commission guidance, there is currently no standardised methodology for defining measurable conservation targets. Consequently, Member States have developed their own approaches to formulating objectives, which has resulted in uneven application and significant gaps, particularly for marine habitats and species. These gaps have led to implementation challenges, including compliance issues, and have limited the ability of Natura 2000 sites to halt and reverse biodiversity loss and to contribute effectively to EU and global biodiversity targets. Addressing these gaps is therefore critical to improve the effectiveness of marine conservation efforts.

### 2.2 POLICY RELEVANCE AND GEOGRAPHICAL SCOPE OF THE REQUEST

This request is highly relevant to ongoing EU biodiversity policy and governance efforts. It directly supports the objectives of the EU Biodiversity Strategy for 2030, particularly the commitment to legally protect and effectively manage 30% of EU marine areas. It also contributes to the implementation of the Birds and Habitats Directives, by helping Member States define robust, site-specific conservation objectives, which is an essential step toward achieving and maintaining favourable conservation status. The request also aligns with the goals of the Nature Restoration Regulation, which aims to restore degraded ecosystems across the EU. The topic is closely connected to discussions within key European Commission expert groups, including the Nature Directives Expert Group (NADEG) and the Marine Expert Group (MEG), where challenges around operationalising site-level conservation targets are actively being addressed. Furthermore, effective management and conservation of 30% of EU marine areas will help contribute to Target 3 of the Convention on Biological Diversity's Global Biodiversity Framework, which also aims to conserve 30% of marine and coastal areas by 2030.

The geographical scope of the request is marine Natura 2000 sites designated under the EU Birds and Habitats Directives across all European sea basins, including the Baltic Sea, North-East Atlantic Ocean, Mediterranean Sea, and the Black Sea. The scope is EU-wide, with a focus on supporting Member States in defining and implementing site-specific conservation objectives relevant to their national marine territories within these regional seas.



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### 2.3 RELEVANCE FOR BIODIVERSITY

The request would contribute to effectively protecting marine habitats and species by defining their conservation objectives and thereby facilitating the setting of the right conservation measures in the sites belonging to the Natura 2000 network, which should lead to the improvement of marine biodiversity.

### 2.4 ADDED VALUE OF EKLIPSE

The Eklipse process enables decision-makers to address complex environmental policy questions by synthesising the best available knowledge from both scientific and other relevant knowledge holders, including peer-reviewed and grey literature. The process, in place since 2016, provides a transparent, objective, and robust framework for evidence-based decision-making, with transparency and scientific quality embedded throughout the process. Peer review is applied at key stages, including the development of the methods protocol and the review of final deliverables, ensuring credibility, rigour, and traceability of results.

For this specific request, Eklipse adds particular value by **linking existing initiatives, projects, and expert networks** across Europe to gather and synthesise knowledge on the ecological requirements, pressures, and monitoring of marine habitats and species within the Natura 2000 network. This integrative approach supports the development of a scientifically sound and coherent blueprint for SSCOs, while ensuring consistency across sea basins and facilitating the transfer of robust scientific evidence into practical, policy-relevant guidance for Member States.

## 3) REFINED REQUEST QUESTION

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 favourable conservation status and meaningfully contributes to the achievement of favourable conservation status of species and habitats at both national and EU biogeographical levels. To strengthen the request's clarity, relevance, and policy alignment—particularly with the objectives of EU Birds and Habitats Directive and the Nature Restoration Regulation—the request was refined by the scoping group and approved by the requester on 5th of May 2025. The revised reformulation is: "Blueprint for site-specific conservation objectives for Marine Natura 2000 sites in the European sea basins."

### 3.1 OBJECTIVES:

The main goal of this request, put forward by the Directorate General for Environment (DG ENV), is to support Member States on setting scientifically sound, realistic, and measurable SSCOs for marine habitats and species. This will be achieved by:



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- 1) Gathering knowledge on the main ecological requirements, current status, and potential threats for marine habitats and species protected under Annex I of the Birds Directive and Annexes I and II of the Habitats Directive (full list in the Annex).
- 2) Developing a blueprint for drafting SSCOs at the sea-basin level, tailored to habitat types and species, with options for sub-types or species groupings where ecological needs overlap.
- 3) Supporting the establishment and implementation of appropriate conservation measures that follow from these SSCOs.
- 4) Conducting horizon scanning to identify novel methods and technologies for monitoring key ecological features and indicators, ensuring that SSCOs are underpinned by the most effective and innovative monitoring approaches.

Ultimately, the knowledge gathered through this work will help Member States set legally compliant, site-specific conservation objectives for marine habitats and species, thereby contributing to the effective protection and recovery of marine biodiversity in the Natura 2000 network and helping achieve EU and global conservation targets.

### 4) SUGGESTED PROGRAMME OF WORK AND METHODS

During the scoping phase, the members of the Eclipse Methods Expert Group (MEG) discussed a range of knowledge synthesis methods suitable for addressing this request (for an overview of available approaches, see Dicks et al. 2018 and the [Eclipse website under “Methods”](#)).

Given the scope, complexity, and time constraints of the request, it was recognised that no single method could address all methodological challenges, and that a **combination of complementary approaches** would be required. There are two suggested methods from the MEG:

#### Approach 1: Rapid Evidence Assessment (REA)

This preferred option is a two-staged methods process designed to comprehensively collate, critically appraise and synthesise existing research evidence including traditional academic and grey literature. This method could be applied to systematically and efficiently gather and appraise existing literature on the ecological requirements, status, and threats to marine habitats and species within Natura 2000 sites, allowing for timely, focused, and transparent evidence synthesis. For more information visit [Eclipse Rapid Evidence Assessment](#).

#### Approach 2: Structured decision making/Multi-Criteria Decision Analysis

In parallel, Structured Decision Making (SDM) such as Multi-Criteria Decision Analysis (MCDA), joint-fact finding or multi-expert consultation + Delphi approaches may be considered to support the evaluation and prioritisation of ecological objectives based on the diverse criteria such as ecological significance, feasibility, and policy relevance through participatory expert input. Such methods can be also used for the application of the blueprint in particular case-studies suggested by a number of member states. For more information visit [Multi-Criteria Decision Analysis](#), [Joint Fact Finding](#), [multi-expert consultation + delphi approach](#)



### 4.1 METHODOLOGIES SELECTED BY EWG

Following dialogue between the Expert Working Group (EWG) and the MEG, the EWG selected a **Rapid Evidence Assessment (REA)** combined with a **Participatory Online Consultation** as the most appropriate methodological approach. Given the wide range of habitats and species covered, the involvement of multiple European sea basins, and the timeframe associated with the request, a REA was considered the most suitable approach. Conducting a full systematic review would not have been proportionate to the scope and objectives of the request, nor compatible with the need to address several interconnected ecological and management questions within the available time. The REA approach enables a structured and transparent synthesis of both scientific and grey literature, and is complemented by participatory consultation and expert input to support the relevance and practical use of the outcomes. The REA provides a structured, transparent, and time-efficient method to systematically gather, critically appraise, and synthesise existing scientific and grey literature on the ecological requirements, conservation status, pressures, and monitoring of marine habitats and species within the Natura 2000 network.

The participatory online consultation, comprising an online survey and structured expert discussions, complements the REA by integrating Member State and expert knowledge to validate findings, address evidence gaps, and ensure that the proposed SSCOs, conservation measures, and monitoring approaches are realistic, applicable across sea basins, and aligned with policy and management needs.

The detailed description and justification of these selected methods are provided in the Method Protocol, which constitutes the first mandatory deliverable of the EWG.

### 4.2 FUTURE TIMELINE

Following the agreement of the Document of Work by the requester, a Call for Expert was launched and the Expert Working Group (EWG) has been established. The EWG, in consultation with the Eklipse Methods Expert Group (MEG), has confirmed the methodological approach and **agreed on the timeline for delivering the request**, taking into account the needs of the requesters, the complexity of the request, and available resources. The following table presents the timeline as agreed by the EWG for the subsequent steps of the Eklipse process.

Key process	Key activities	Suggested timeline
Method Protocol	Methods selected by EWG in consultation with MEG	4 months
Method Protocol peer-reviewed finished (3 weeks)	Call for open consultation and peer review of methodological protocol	February 2026
Rapid Evidence Assessment (REA)	Systematic identification, screening, and synthesis of scientific and grey literature relevant to marine habitats and species.	June month



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<b>Participatory Workshop: Online Survey</b>	Collection of Member State and expert input to validate evidence and identify gaps.	<b>July 2026</b>
<b>Participatory Workshop: Expert Consultation</b>	Facilitated expert discussions to validate findings and refine SSCOs and monitoring approaches.	<b>July 2026</b>
<b>Report Writing</b>	Call for open consultation and peer review of methodological protocol	<b>September 2026</b>

### 5) LOGBOOK

The logbook describes the agenda of exchanges with the Requester and the scoping group, which is constituted by members of the Knowledge Coordination Body (KCB), Methods Expert Group (MEG), and Eklipse Management Body (EMB), as well as the contents discussed during the meetings.

Date	Participants	Topic	Platform
18.11.2024	Scoping group meeting first meeting Eklipse KCB: Ute Jacob, Nils Bunnefeld, Olga Ameixa, Maud Borie, Jan-Claas Dajka Eklipse MEG: Josie Antonucci di Carvalho, Spyridoula Ntemiri EMB: Marie Vandewalle, Hari Meenakshi Sundaram	Topic of the request	Online
05.03.2025	Scoping group meeting with the requester  Requester: Vedran Nikolić (DG Environment-Nature Conservation Unit)	To discuss the request, and clarify aspects with the requester	Online
17.04.2025	Call for Knowledge and Call for Interest	Call for Knowledge and Call for Interest in joining an Eklipse Expert Working Group launched	Online via Social media channels, networks and emails



### 6) ANNEXES

#### ANNEX I: LIST OF MARINE 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*



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*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*



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*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 II: EXAMPLES OF CONSERVATION OBJECTIVES FOR MARINE SITES

#### 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<sup>1</sup>.

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)

<sup>1</sup> Source: [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO002953.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002953.pdf)



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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 <i>Nephtys cirrosa</i> and <i>Bathyporeia elegans</i> 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<sup>2</sup>.

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
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

<sup>2</sup> Source: [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO000328.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000328.pdf)



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Community structure	Biological composition	Conserve the following community types in a natural condition: Exposed intertidal reef community complex; <i>Laminaria</i> -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
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The following list of attributes and targets was drawn up in order to maintain the favourable conservation condition of Grey Seal in Slyne Head Islands SAC (IE000328) in Ireland<sup>3</sup>.

Conservation objectives for: Slyne Head Islands SAC [000328]			
1364 Grey Seal <i>Halichoerus grypus</i>			
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 unpublished National Parks and Wildlife Service records. See marine

<sup>3</sup> Source: [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO000328.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000328.pdf)



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			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



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Conservation objectives adopted in 2022 for the Vlaamse Banken Natura 2000 site in Belgium<sup>4</sup>.

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 <i>A. alba</i> community is maintained
2 Function of shallow sandbanks as spawning and nursery areas is maintained or enhanced
2.1 Occurrence and densities of juvenile flatfish such as plaice ( <i>Pleuronectes platessa</i> ) and sole ( <i>Solea solea</i> ) 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 <i>Abra alba</i> 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 <i>A. alba</i> community in the second half of the year.
7 The autonomous development of <i>L. conchilega</i> aggregations is not prevented
7.1 The 3D structures formed by <i>L. conchilega</i> are preserved
7.2 The densities of the <i>L. conchilega</i> reef-associated species (e.g. <i>Eumida sanguinea</i> , <i>Pariambus typicus</i> , <i>Microprotopus maculatus</i> and <i>Phyllodoce</i> spp.) do not show a downward trend
8 There is at least a conservation of the surface area of naturally occurring hard substrates

<sup>4</sup> 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.



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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 ( <i>Ostrea edulis</i> ), Mussel ( <i>Mytilus edulis</i> ), Common Whelk ( <i>Buccinum undatum</i> ), Dead man's fingers ( <i>Alcyonium digitatum</i> ), erected sponges (such as Mermaid's glove sponge ( <i>Haliclona oculata</i> )) and erected Bryozoa (such as Sea chervil ( <i>Alcyonidium</i> spp.) and Leafy hornwrack ( <i>Flustra foliacea</i> ))
9.3 There is an increase in the median body size of the larger benthic species: Common Whelk ( <i>Buccinum undatum</i> ) and Spider Crabs (Majidae spp.)
9.4 There is an increase in the number and size of sand tubeworm Ross worm ( <i>Sabellaria spinulosa</i> ) reefs and the number of clusters of triangular tubeworms ( <i>Pomatoceros (Spirobranchus) triqueter</i> ). - Type 1
9.5 There is recovery of gravel beds as spawning areas for Herring ( <i>Clupea harengus</i> ) and as sites for egg deposition by rays and sharks

### iii) Greece

Conservation objectives for the habitat type *Posidonia* meadows (*Posidonium oceanicae*) (1120) in the NISOS GYAROS KAI THALASSIA ZONI SCI-SPA (GR4220033)<sup>5</sup>

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

<sup>5</sup> Government Gazette: Series II, No 1807/22.03.2023



## Site-Specific Conservation Objectives

Meadow density (at 15 m depth)	Shoots per m <sup>2</sup>	>500	Maintenance
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iv) Bulgaria

Parameters for setting the specific conservation objectives for the species *Puffinus yelkouan* in the site BG0002077 Bakerlata<sup>6</sup>.

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
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 NO1-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.

<sup>6</sup> For more information see: <https://natura2000.egov.bg/EsriBg.Natura.Public.Web.App/Home/Natura2000ProtectedSites>



## Site-Specific Conservation Objectives

<p>Habitat of the species: Ecological status of water bodies with habitats of the species by using biological quality element 'Fish' under the WFD</p>	<p>5 step scale for ecological status</p>	<p>1- High/ 2 - Good</p>	<p>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.</p>	<p>Maintaining and/or improving the ecological status of water bodies with appropriate habitats for the species, at values 2- Good or 1- High.</p>
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### ANNEX III: RESULTS - CALL FOR KNOWLEDGE

#### Summary

The European Commission's Directorate-General for Environment ([EC - DG ENV](#)) requests help from the Eclipse organisation 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. This request is funded by the EU Horizon Europe project "Connecting biodiversity knowledge and decision-making" - [BioAgora](#), which is developing the architecture and functionality of the new European "Science Service for Biodiversity".



## Site-Specific Conservation Objectives

The scoping phase of this project consisted of 12 meetings with and without the requester, to clarify the questions, followed by a Call for Knowledge. The call resulted in documented responses from 14 different experts. The respondents shared a wide range of studies, projects, tools, and grey literature relevant to the request.

### Call for Knowledge

Responses received through the Call for Knowledge launched by Eclipse to support the development of a blueprint for site-specific conservation objectives (SSCOs) under the EU Birds and Habitats Directives is synthesised.

### Key Peer Reviewed Literature

Several studies and journal articles were highlighted for their relevance informing conservation objectives in marine environments:

- Marine Protected Areas Effectiveness and Governance
  - Schéré et al. (2020, 2021, 2023) – Multiple papers on the impact of multiple conservation designations, equitable governance, and the role of stakeholders in the Irish Sea and Brittany.
  - Bogaert et al. (2008) – Policy processes in Belgian MPAs.

Schéré, C.M., Dawson, T.P., and Schreckenberg, K. (2023) Un-muddying the waters: Using benthic and shorebird population data to assess intertidal mudflat conditions and inform management strategies in two Irish Sea marine protected areas, *Ecological Indicators*, 154, pp.1-14. DOI: 10.1016/j.ecolind.2023.110632

Schéré, C.M., Dawson, T.P., and Schreckenberg, K. (2020) Multiple conservation designations: what impact on the effectiveness of marine protected areas in the Irish Sea? *International Journal of Sustainable Development & World Ecology*, 27(7), pp. 596-610. DOI: 10.1080/13504509.2019.1706058

Schéré, C.M., Schreckenberg, K., Dawson, T.P., Duval, C., Alban, F., Le Gentil, F., and Provost, P. (2023) 'Examining stakeholder involvement in the context of top-down marine protected area governance: The case of the Sept-Îles National Nature Reserve (Brittany, France),' *Regional Studies in Marine Science*, 67, pp. 1-13. DOI: 10.1016/j.rsma.2023.103196

Schéré, C.M., Schreckenberg, K., Dawson, T.P., and Jones, N. (2021) It's just conservation: to what extent are marine protected areas in the Irish Sea equitably governed and managed? *Frontiers in Marine Science*, 8, pp. 1-17. DOI: 10.3389/fmars.2021.668919

Bailey J.J., et al. (2022). Protected Areas and Nature Recovery. Achieving the goal to protect 30% of UK land and seas for nature by 2030. London, UK. Available at: [www.britishecologicalsociety.org/protectedareas](http://www.britishecologicalsociety.org/protectedareas)

Bogaert, D, Cliquet, A, De Waen, D, Maes, F, The designation of Marine Protected Areas in Belgium. An Analysis of the Decision Making Process. In: Bogaert, D, Maes, F (eds.), *Who Rules the Coast. Policy Processes in Belgian MPAs and Beach Spatial Planning*. Antwerpen: Maklu, 2008. p. 57-105 (ISBN 978 90 466 01747

- Methodological Frameworks:
  - Soland et al. (2020) – Advocates a shift from feature-based to whole-site management in marine conservation.
  - Ecosystem-based marine spatial planning: A review of tools and critical issues ([ResearchGate link](#)).



## Site-Specific Conservation Objectives

Soland, J., Mullier, T., Elliott, S., Sheehan, E., 2020. Managing marine protected areas in Europe: moving from 'feature-based' to 'whole-site' management of sites. *Marine Protected Areas*. DOI: 10.1016/B978-0-08-102698-4.00009-5

- Biodiversity Metrics:
  - Several references on [SMART](#) criteria (Specific, Measurable, Achievable, Relevant, Time-bound), genetic diversity, and conservation index estimation.
  - Recent high-impact papers (e.g., *Biological Conservation*, *Trends in Ecology & Evolution*) on SSCO setting and ecological indicators.

### Reports, Assessments & Guidelines

- Regional Guidelines and Technical Documents
  - [HELCOM MPA designation guidelines](#) (2022).
  - [ASCOBANS](#) workshop on small cetacean management.
  - [CCB paper](#) on habitats and species managements in MPAs (2002).
  - [National technical guide on fishing activity risks for Natura 2000 sites](#) (France)
- Knowledge gap and Strategic Assessments:
  - MSP4BIO deliverables [D3.1](#) and [D3.2](#): Criteria portfolio and review of multilevel ecological processes for biodiversity protection.
  - Interreg ECOSSE framework for ecosystem-based MPA planning.
- Action Plans and Frameworks
  - Angel Shark Project (Canary Islands) - Habitat use studies, threat identification, and conservation planning.
  - OSPAR background documents for endangered marine species.

### Initiatives & Working Groups

- National and Regional Programs:
  - PROTECT BALTIC: Evaluation of conservation measures across Baltic Sea Natura 2000 sites.
  - CT88 method in France: Standardised national approach for setting COs in both terrestrial and marine contexts.
- Citizen and Local Knowledge Initiatives:
  - Shark Logbook Project (Greece), Coastal Wildlife Monitoring (Pelion), and community surveillance using drones and underwater cameras.
  - Visual habitat/species cards developed for awareness and monitoring.
- International Collaborations:
  - Transboundary Dogger Bank Management (UK-NL-DE).
  - Regional Activity Centre for Specially Protected Areas (UNEP/MAP RAC/SPA).

### Methodologies for Adaptation and Application

- General Conservation Planning Tools:
  - One Health Integrated Surveillance Models (OHISM).
  - Stakeholder-informed target setting (including participatory interviews).
  - Visual card systems for habitat condition and threat communication.
- Ecological Monitoring Techniques:
  - Integration of eDNA and videography for biodiversity assessment.



## Site-Specific Conservation Objectives

- Use of open platforms (iNaturalist, GBIF, OBIS) for data mapping.
- Incorporation of genetic diversity, phylogenetic data in SSCOs.
- Framework for Objective Setting (Suggested Steps):
  - Data collation (published and grey literature.
  - Identification of key ecological features
  - Threat and pressure assessments
  - Setting measurable and FCS-aligned objectives
  - Stakeholder consultation
  - Legal alignment (BHD, MSFD, etc.)

### Stakeholder Involvement & Business Involvement

- Participatory Governance:
  - Positive experiences reported with citizen science, community trust-building, and NGO–stakeholder collaboration.
  - Challenges in translating local data into policy without formal institutional integration.
- Business Relevance:
  - Sustainable ecotourism development noted in Pacific MPAs.
  - Concerns expressed about political prioritization of economic development over ecological integrity in marine governance.

### Data Sources & Needs

- Technology-Driven Tools:
  - Use of waterproof cameras, trail cams, GPS-logging on boats, and acoustic sensors.
  - Online portals and mobile apps for species observation and spatial data collection.
- Identified Needs:
  - Tailored indicators for benthic communities and mobile species (e.g., cetaceans, sharks).
  - Improved integration of monitoring frameworks (MSFD, WFD, EOVs, EBVs).

### Knowledge Gaps & Barriers

- Gaps in Assessment Methods:
  - Inconsistent implementation across regions, especially Mediterranean.
  - Limited threat evaluation in existing monitoring programs.
- Operational Challenges:
  - Lack of best practice repositories, standardized templates, and sustained funding.
  - Disconnect between national strategies and site-level implementation.
- Suggested Solutions:
  - Development of modular and regionally adaptable SSCO templates.
  - Citizen-led monitoring networks with low-cost technology.
  - Strengthened transboundary collaboration in shared marine basins.

### Key Institutions to Engage

- EU & International Bodies:
  - DG ENV, European Environment Agency (EEA), European Marine Board, European Marine Biological Research Centre (EMBRC).



## Site-Specific Conservation Objectives

- HELCOM, OSPAR, MedPAN, RAC/SPA, UNEP/MAP
- IPBES (for systems-based biodiversity integration)
- Research Institutions & NGOs:
  - IUCN (including Shark Specialist Group), BirdLife Europe, WWF, Oceana
  - Marine institutes: PML (UK), Sharklab Malta, Scripps, Woods Hole
- Specialist Networks:
  - Ocean Biodiversity Information System (OBIS), Global Biodiversity Information Facility (GBIF), COST Action GENOA, Coalition for Conservation Genetics (CCB)

ANNEX IV: CALL FOR KNOWLEDGE AND CALL FOR INTEREST IN JOINING THE EXPERT WORKING GROUP