Third Natura 2000 biogeographical seminar for the Baltic marine region

8-10 November 2023, Riga

Wellton Riverside SPA Hotel, Riga, Latvia

Background Document

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Introduction to the Natura 2000 biogeographical process and the Natura 2000 seminars

The Natura 2000 biogeographical process was launched in 2011 by the European Commission. The objective of the process is to promote knowledge exchange, networking, and cooperation on Natura 2000 related issues at a biogeographical region level. At the heart of the process lie the Natura 2000 seminars, as well as a networking programme consisting of the organisation of workshops, events, or meetings relevant to the objective of the process and various communication actions.

Since Member States in each region are likely to face similar challenges in the management of Natura 2000 sites and protected habitats and species, the Natura 2000 seminars are intended to stimulate transnational exchanges and promote a coherent management of Natura 2000 at biogeographical region level. This approach is particularly relevant for the marine environment, where the management of Natura 2000 sites often involves addressing transboundary or even basin-scale pressures and activities which also often affect highly mobile species not restricted to the marine area of one Member State.

As the responsibility for implementing Natura 2000 lies with the Member States, the seminars create an opportunity for these key actors to exchange information at biogeographical level. In addition, they also stimulate engagement with and involvement of other key stakeholders and expert networks, including civil society and economic operators.

1.1. EU Biodiversity Strategy for 2030

The strategic orientation of the process has evolved over time. In 2020, the European Commission adopted the EU Biodiversity Strategy for 2030 "Bringing nature back into our lives"[1], which was supported by Member States[2]. The strategy sets out a comprehensive, ambitious, long-term plan for protecting nature and reversing the degradation of ecosystems and ecosystem services. Specific targets are to be achieved by 2030, among them two that are particularly relevant for the Natura 2000 biogeographical process:

- **Protected areas**: legally protect at least 30% of the land, including inland waters, and 30% of the sea in the EU, of which at least one third (10% of land and 10% of sea) to be under strict protection. Effectively manage all protected areas, defining clear conservation objectives and measures, and monitor them appropriately.

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[1] EU Biodiversity Strategy for 2030 Bringing nature back into our lives https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380

[2] https://data.consilium.europa.eu/doc/document/ST-11829-2020-INIT/en/pdf

- **Conservation status**: ensure that at least 30% of species and habitats covered by the Birds[3] and Habitats[4] Directives not currently in favourable status are in that category or show a strong positive trend, as well as ensure no deterioration in conservation trends and status of all protected habitats and species.

These targets are not legally binding and do not replace the legal obligations that Member States have under the Birds and Habitats Directives. Rather, they represent a political agreement for action to drive their delivery and help stop and reverse biodiversity loss. Commission's guidance documents have been produced that provide further clarifications for each of the targets[5,6]. These targets have also added a new and over-arching context for the Natura 2000 biogeographical process.

1.2. Pledge and review process

As part of the initiative to meet the objectives set out within the Biodiversity Strategy 2030, the European Commission has requested that Member States make pledges to show how they will meet the protected area and conservation status targets. These should follow the format[7] and contents agreed between the Member States, the Commission, and the European Environment Agency (EEA), using the Excel file template developed by the EEA and the European Topic Centre for Biodiversity (ETC-BD) for pledge submission to the EEA's Reportnet platform. Pledges will be peer reviewed by the Commission, the EEA, and Member States. The expanded Natura 2000 biogeographical process and seminars will be central to this review process.

1.3. Biogeographical process and Natura 2000 seminars

To provide additional support to Member States and the pledge and review process, the scope of the Natura 2000 biogeographical process has been expanded. In addition to helping Member States to implement their legal obligations under the EU Birds and Habitats Directives, the process will also help them to contribute to the full implementation of targets under the EU Biodiversity Strategy for 2030.

Sharing information, experience, and knowledge on best practices, and ensuring cooperation and common understanding at transnational level are key to making progress towards achieving a coherent

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[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0147

[4] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01992L0043-20130701

[5] Commission guidance on the protected areas targets: https://ec.europa.eu/environment/publications/criteria-and-guidance-protected-areas-designations-staff-working-document_en

[6] Commission guidance on the status improvement targets: https://circabc.europa.eu/ui/group/6f30d1d2-d6f2-4c6e-a4dc-1feb66201929/library/bd8a2cd4-f774-4574-bd88-0b1fa012b725/details

[7] Format for the protected areas target: https://circabc.europa.eu/ui/group/6f30d1d2-d6f2-4c6e-a4dc-1feb66201929/library/55ebe353-e369-49ab-92b1-4ddab67424b0/details

Format for the status improvement target: https://circabc.europa.eu/ui/group/6f30d1d2-d6f2-4c6e-a4dc-1feb66201929/library/395c7cde-e2c4-40b0-9afc-638a214d6b39/details

EU-wide network of protected areas, improving the effectiveness of its management, and ultimately ensuring progress towards reaching favourable conservation status at biogeographical level by 2030. Natura 2000 seminars will therefore support key players in:

- achieving a common understanding of the objectives and processes in relation to relevant targets under the Biodiversity strategy,
- presenting national pledges related to the targets for a peer review in the seminars,
- achieving a common understanding on relevant topics, especially in relation to Natura 2000, to address challenges in implementation and management, financing, and monitoring and reporting, to ensure coherence and effectiveness of implementation at regional/biogeographical level,
- sharing good practices in regulation, supervision, conservation, and restoration with a view to promoting and upscaling them, and
- facilitating the setup of joint projects to support delivery of these objectives, including on management/restoration.

1.4. Biogeographical process in the marine regions

The EU Biodiversity strategy applies equally to the marine as to the terrestrial environment. The protected area (PA) targets are to be met at the level of each marine biogeographical region by designating new, or expanding existing, Natura 2000 sites (special areas of conservation under the Habitats Directive or special protection areas under the Birds Directive) or MPAs designated under national legislation or through international agreements such as regional sea conventions.

Strictly protected areas are defined as follows[8]: "*Strictly protected areas are fully and legally protected areas designated to conserve and/or restore the integrity of biodiversity-rich natural areas with their underlying ecological structure and supporting natural environmental processes. Natural processes are therefore left essentially undisturbed from human pressures and threats to the area's overall ecological structure and functioning, independently of whether those pressures and threats are located inside or outside the strictly protected area*".

In addition, other effective area-based conservation measures (OECMs) can be counted towards the targets if they meet relevant criteria stipulated by the Convention on Biological Diversity. What constitutes an OECM in the marine context is currently being elucidated[9], with fisheries management areas being one topic of focus.

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[8] Commission guidance on the protected areas targets:
https://ec.europa.eu/environment/publications/criteria-and-guidance-protected-areas-designations-staff-working-document_en
[9]https://ec.europa.eu/environment/nature/natura2000/platform/events/pdf/2.%20Ellen%20Kenchington_WTOPS_Marine%20OECMs.pdf

The situation with conservation status (CS) targets is distinctly different. The CS improvement target does not distinguish between habitats and species in marine and terrestrial regions. While this target could be met in theory by addressing only terrestrial habitats and species, there is a strong presumption that for coastal states efforts should be made across both environments. In any case, the part of the target concerning no deterioration in conservation trends and status will still have to be met for marine habitats and species where relevant. A second objective of the target is to ensure that, by 2030, the quality of national monitoring has become sufficiently comprehensive in each of the Member States to allow for complete and up-to-date reporting that provides a reliable assessment of status and trend for all relevant species and habitats. This is particularly important for marine habitats and species given that a large proportion of conservation status assessments are classed as unknown. Finally, this target is conceived as a national-level target to be achieved by each Member State individually without any further regional or biogeographical breakdown.

A new contract has been put in place under the Natura 2000 biogeographical process to provide better and more focused support to Member States working in marine regions[10]. The terrestrial and marine biogeographical processes are complementary and there is a strong level of coordination between them, including a joint communications platform and a shared wiki[11]. The Baltic seminar is the second of a series of three marine regional events that will support the delivery of the biodiversity pledge and review process in the EU seas.

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[10] Support for the Natura 2000 Biogeographical Process in the Marine Regions ENV/2022/OP/0006
[11] https://biogeoprocess.net/

2. The Baltic marine biogeographical region

Figure 1 shows the marine biogeographical regions that are relevant in the context of the EU Biodiversity strategy 2030. It is important to note that these are purely biogeographical areas, and do not reflect national jurisdictions.

Reference data: ©ESRI
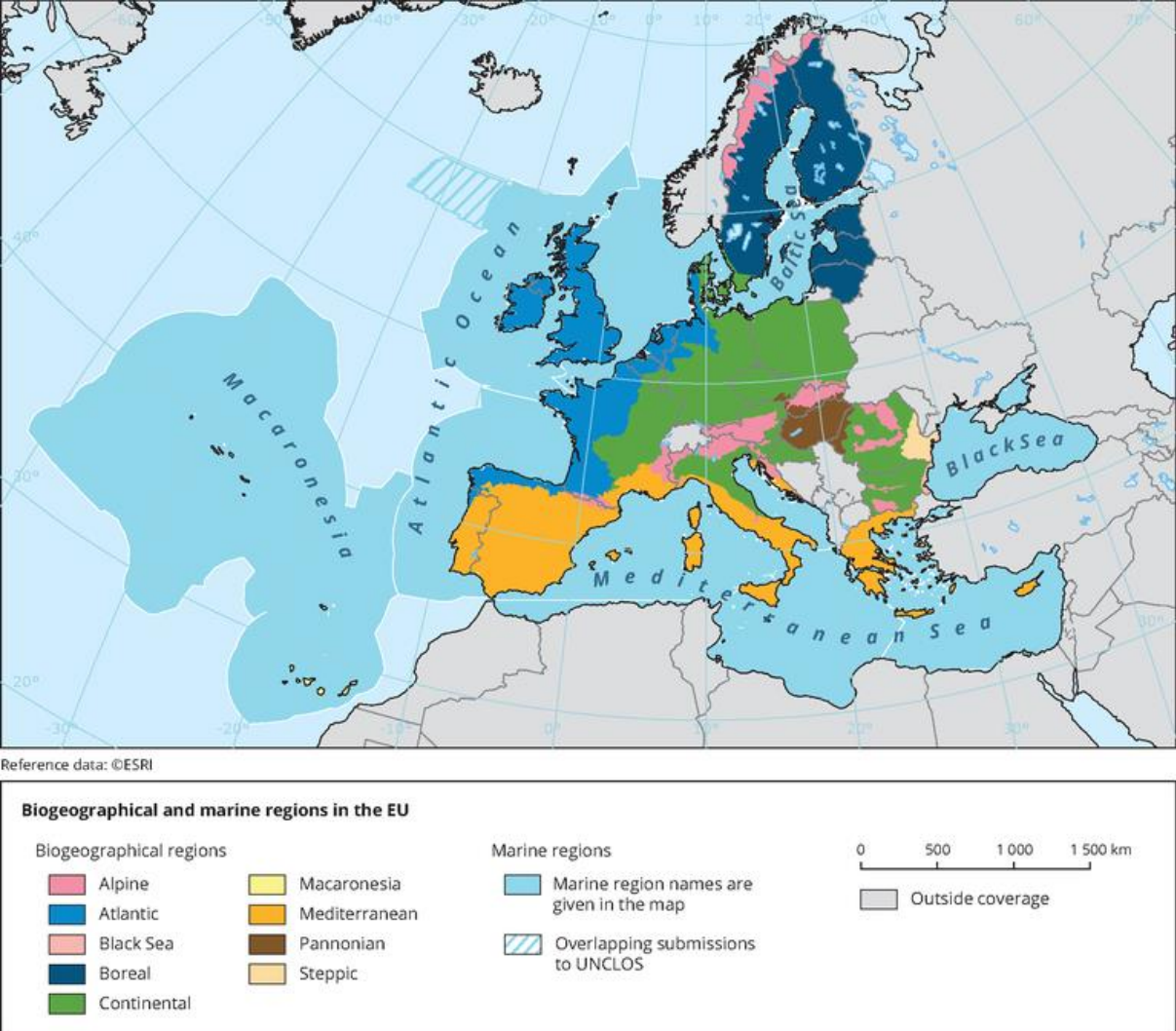
Figure 1: Biogeographical regions in Europe (source: EEA[12], last modified October 2020)

Relevant coastal Member States are Sweden, **Finland**, **Estonia**, **Latvia**, **Lithuania**, **Poland**, Germany, and Denmark (coastal states in bold are solely in the Baltic region, while the others have coasts in more than one marine biogeographical region – see Table 1).

Member State	Baltic	Atlantic
Sweden	X	X
Finland	X	
Estonia	X	

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[12] https://www.eea.europa.eu/data-and-maps/figures/biogeographical-and-marine-regions-in

Member State	Baltic	Atlantic
Latvia	X	
Lithuania	X	
Poland	X	
Germany	X	X
Denmark	X	X

Table 1 – Member States and relevant marine biogeographical regions

2.1. The biogeographical process for the Baltic marine region

The first marine biogeographical seminar was held in St Malo, France in 2015[13]. It covered all EU marine regions and, appropriately for a first event, was broad in scope addressing three themes.

- **Theme 1**:   Setting conservation objectives for Natura 2000 sites
- **Theme 2**:   Reconciling Natura 2000 objectives and marine activities/ conservation management planning
- **Theme 3**:   Regional integration of Natura 2000 issues

The second marine biogeographical seminar was held in Palma, Spain, in 2018[14]. The themes addressed in this event were:

- **Theme 1:** Setting conservation objectives at site, national and regional levels
- **Theme 2:** Setting favourable reference values (FRVs)
- **Theme 3:** Developing conservation measures to achieve the conservation objectives

Discussions were based on biogeographical groupings of Member States: Baltic, Atlantic and Macaronesian, and Mediterranean and Black Sea.

2.2. Current protected area coverage

The most recent analysis of marine protected area coverage at marine biogeographical regions level was conducted by European Environment Agency based on the data reported by the end of 2021 for Natura 2000 sites and for nationally designated areas (Figure 2). It combines data for Natura 2000 sites with those for nationally designated areas reported by Member States and therefore provides an overview of the total area that is designated as protected, accounting for overlaps between different designations. The overview at regional level also includes sites designated under Regional Sea Conventions (accounting for the overlap between them and Natura 2000 and nationally designated

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[13] All documentation for the first marine seminar can be foud here:
https://ec.europa.eu/environment/nature/natura2000/platform/knowledge_exchange/28_document_library_en.htm

[14] All documentation for the second marine seminar can be foud here:
https://ec.europa.eu/environment/nature/natura2000/platform/knowledge_exchange/28_document_library_en.htm

sites). The data about the areas under strict protection are currently not reported but this will become available once all pledges are submitted.
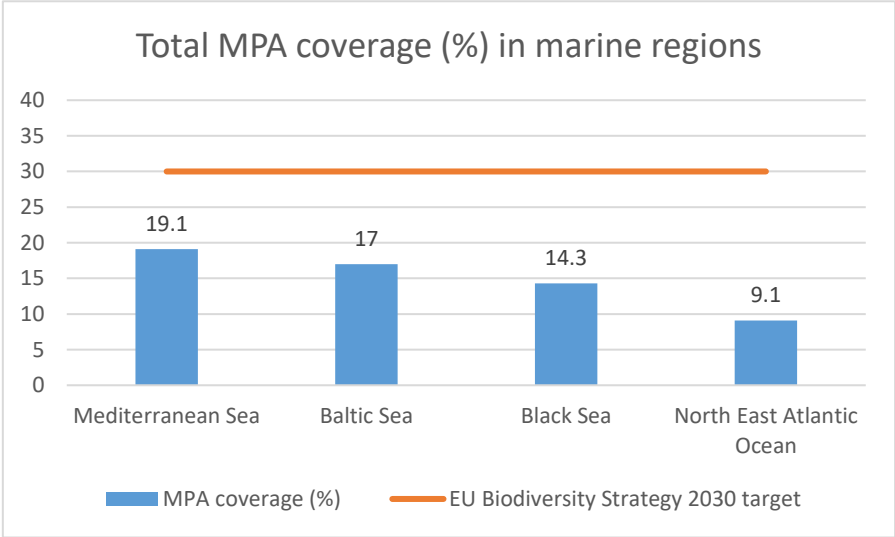
Figure 2 - Total MPA coverage in each marine biogeographical region, as % of the total EU marine area of the region

For the Baltic specifically, it is also possible to break down the figures at the level of Member States that have marine waters within these regions (Figure 3). It should be noted that the 30% target is to be achieved at the level of the biogeographical region, however all Member States are expected to contribute towards reaching the strategy protected areas targets to an extent that is proportionate to the natural values they host and to the potential they have for nature restoration.
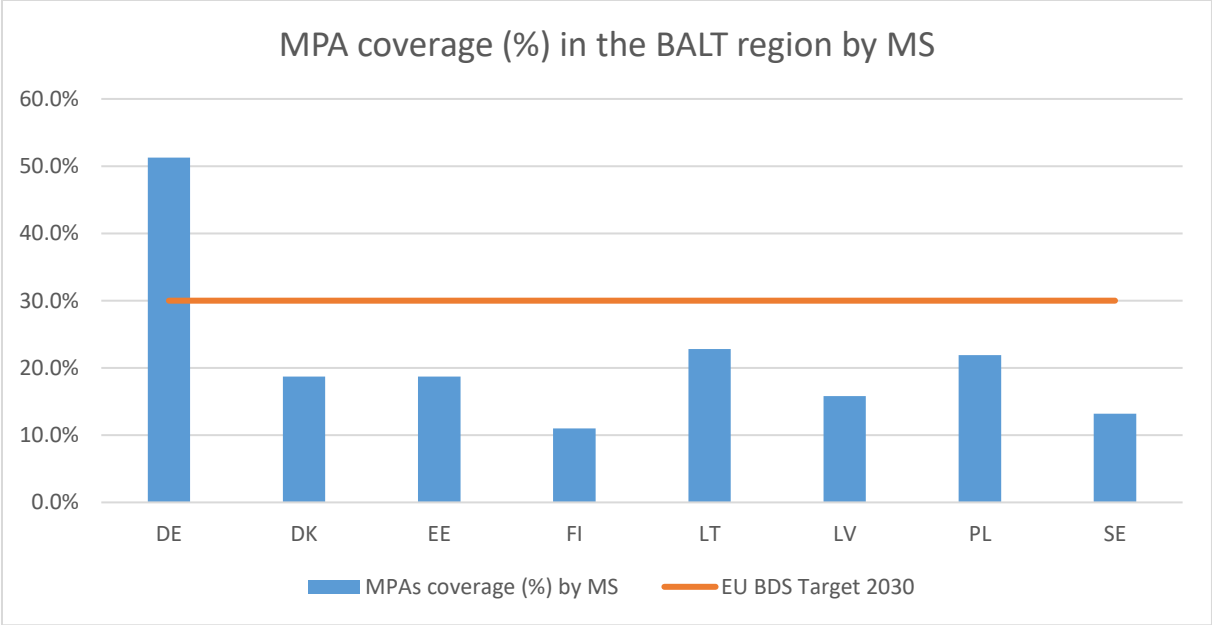
Figure 3 - Percentage of the marine area of each MS covered by Natura 2000 sites or nationally designated areas (with overlaps accounted for) in the Baltic marine biogeographical region

2.3. Current conservation status

Information on the conservation status of habitats and species in the Baltic marine biogeographical region is available through the most recent reports under Article 12 of the Birds Directive and Article 17 of the Habitats Directive, for the period 2013-18[15]. This provides a baseline against which progress towards the conservation status targets can be assessed.

2.3.1. Habitats

Member States report on the conservation status of habitats under Article 17 of the Habitats Directive. The chart below (Figure 4) combines the results of conservation status assessment for habitat types as reported by Member States for the Baltic marine biogeographical region for the period 2013-18[16]. Each habitat is assessed as favourable (FV), unfavourable-inadequate (U1), unfavourable-bad (U2) or unknown (XX). In addition, a trend value is reported for each assessment value, declining (D), increasing (I), stable (S), or unknown (Unk).

The chart shows that none of the habitats are in favourable condition, with all either U1 (unfavourable – inadequate) or U2 (unfavourable – bad), though one habitat (1160 Large shallow inlets and bays) has an increasing assessment value .
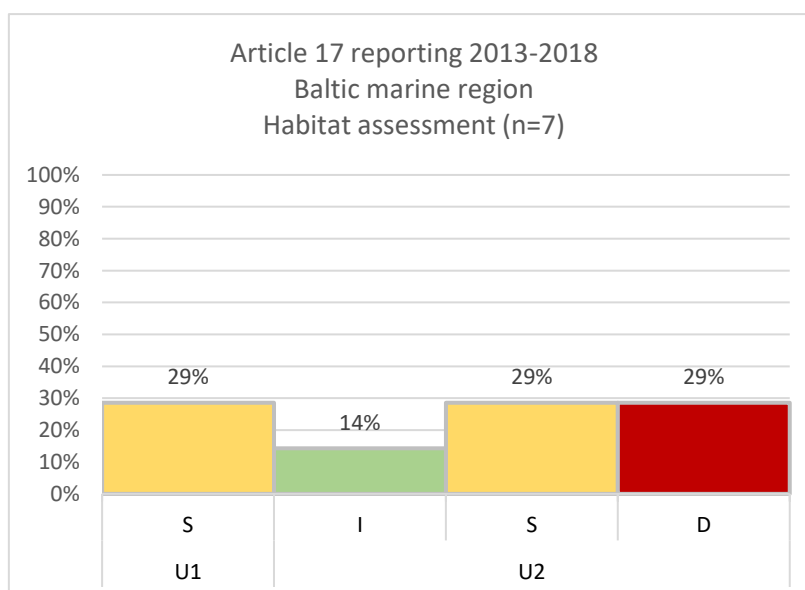
Figure 4 - Habitat assessments under Article 17 reporting 2013-2018 for Baltic marine biogeographical region

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[15] Note that the reporting for this period includes data from the United Kingdom

[16] Article17_2020_habitatsEUassessment https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-2/article-17-2020-dataset/article-17-2020-data-csv-format/at_download/file (accessed October 2023)

2.3.2. Species

Member States report on the conservation status of non-bird species under Article 17 of the Habitats Directive. The chart below (Figure 5) combines the results of conservation status assessments for marine species as reported by Member States for the Baltic marine biogeographical region for the period 2013-18[17]. Each species is assessed as favourable (FV), unfavourable-inadequate (U1), unfavourable-bad (U2) or unknown (XX). In addition, a trend value is reported for each assessment value, declining (D), increasing (I), stable (S), or unknown (Unk). Note that in some cases no data are reported, in which case these are identified as 'blank'.

The main issue is the lack of knowledge regarding the conservation status and trends of marine species, with around 80% of marine species reported as unknown. Only 6% of marine species in the Baltic marine biogeographical region are assessed as having favourable status.
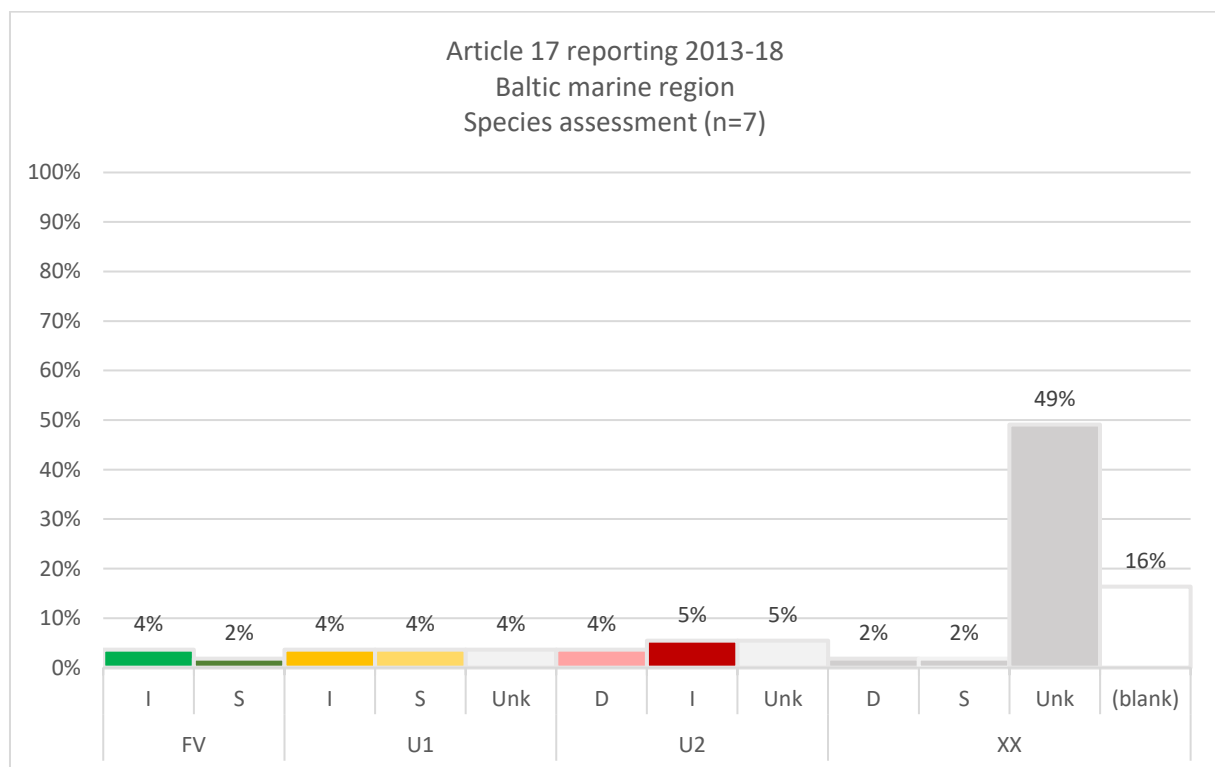
Figure 5 - Baltic marine region – species conservation status and trends assessment

2.3.3. Birds

Data regarding current conservation status and trend in relation to bird species are reported by Member States under Article 12 of the Birds Directive. These are not reported by biogeographical region, but at either EU or Member State level, and there is no distinction made in the data between

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[17] Article17_2020_speciesEUassessment https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-2/article-17-2020-dataset/article-17-2020-data-csv-format/at_download/file (accessed October 2023)

marine and terrestrial species. However, a list of marine bird species[18] can be used to separate out relevant data and information on the conservation status at an EU level provides some context for Member State pledges.

Figure 6 summarises the results of the most recent (2013-2018) status assessment for marine bird species[19]. This shows that 35% of EU marine bird populations are either threatened or near threatened, with only 39% secure. A complete list of species and assessments is provided in Annex 1.
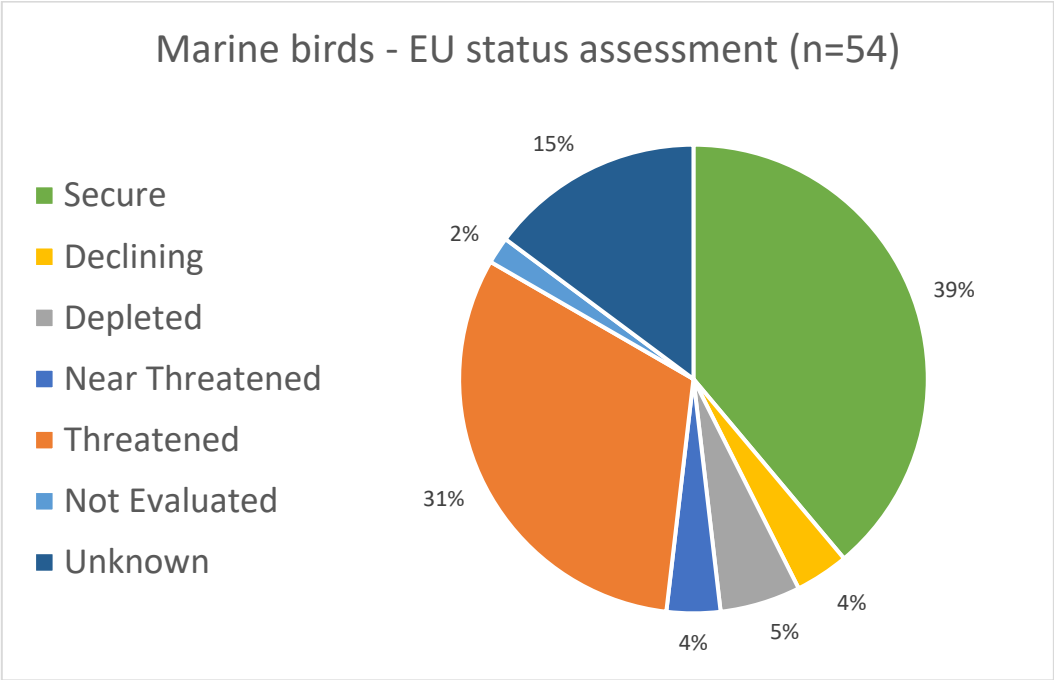
Figure 6 - Summary of marine bird species status assessment under Article 12 reporting at EU level

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[18] Marine bird species subset determined from
http://ec.europa.eu/environment/nature/natura2000/marine/docs/appendix_2_listing_species_habitats.pdf

[19] Current status from EEA bird data (Article12_2020_birdsEUpopulation) https://www.eea.europa.eu/data-and-maps/data/article-12-database-birds-directive-2009-147-ec-1

3. Pledge and review – analysis

3.1. Introduction to analysis methodology

This section describes the methodology for analysis and assessment of the Member State pledges for action towards the Protected Area and Conservation Status targets. In addition, it sets out an overview of the information presented to provide context for those Member States who will be submitting pledges soon.

It should be noted that a draft methodology[20] for analysis and assessment of pledges was suggested and discussed in the meeting of the Marine Expert Group (sub-group on marine issues under the Commission's Biodiversity Platform). This methodology cannot be currently applied because not all Member States have submitted their pledges yet. However, guiding principles of that draft methodology have been used in the analysis presented here.

3.1.1. Protected Area pledges – analysis methodology

The pledges for protected areas targets could only be analysed partially, as only pledges from some Member States have been received. With only some pledges available it is not yet possible to have a full picture at the regional level.

Nonetheless, analysis could be undertaken for each Member State. The analysis for progress on the protected area targets is straight forward and mainly involves checking the relevant biogeographic marine areas and percentage calculations for actual and expected coverage of protected areas and strictly protected areas provided by Member States in their data forms.

A preliminary analysis has also been undertaken to look at the question of the current baseline through reviewing the responses of the countries regarding nationally designated areas which should be counted towards the 30% target.

3.1.2. Conservation Status pledges – analysis methodology

The methodology used for analysis of pledges for improving the conservation status of habitats and species protected under the Habitats Directive is different from that used for the analysis of pledges for improving the conservation status of birds. This is because of the different way in which these data are reported (i.e. the lack of assessment at the biogeographical region level for birds).

Habitat and species conservation status assessments under Article 17 of the Habitat Directive are reported at the level of each biogeographical region within each Member State. This allows for the extraction of information relating to habitats and species in the Baltic marine biogeographical region.

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[20] https://circabc.europa.eu/ui/group/00564ca7-9d16-4b81-bac5-b35fcb84aa33/library/0adb9c80-658e-4e94-b22f-0b0b2c527826/details

In contrast, the assessments of the status of bird species under Article 12 of the Birds Directive are reported by Member State and aggregated at a whole-EU level, with no gathering of information by biogeographical region. Also, especially relevant to the current study, there is no distinction made between bird species that are largely marine, and those that are wholly terrestrial. As a result, additional analysis is needed before assessing pledges, to extract data for bird species that are predominantly marine.

However, in both cases, pledges made in relation to conservation status, whether aiming at status improvement, prevention of detrimental trends or gathering additional information to address 'unknowns', are assessed in relation to the reported status of habitats and species, or birds.

Habitats and species - analysis

The following steps are taken in assessing the Member State pledges to improve the Conservation Status of marine habitats and species under the Habitats Directive:

- Determine the marine habitats and species that are relevant for the Member State, in the appropriate marine biogeographical region – data provided by the EEA for both habitats[21] and species[22] - as well as identifying priority habitats and species.
- Determine the current conservation status in the appropriate database for all relevant marine habitats[23] and species[24]. For the purposes here, the Current Status, under the Overall Assessment is used. This provides an overall assessment of: FV – favourable, XX – unknown, U1 – unfavourable, inadequate, or U2 – unfavourable, bad.
- For each relevant marine habitat and species, note which of the Conservation Status pledges apply, based on the Member State input[25]. These are categorised as: 30% – status improvement target; non-det – non-deterioration target; UNKN – target to address unknowns; Unlikely – non-detriment target unlikely to be achieved; or N – no target specified.

Tables setting out the analysis results for each Member State that has submitted Conservation Status pledges are presented in Annex 2, while summary charts can be found in the following section.

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[21] Article 17_2020_habitats_check_list in https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-2
[22] Article 17_2020_species_check_list in https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-2
[23] Article 17 web tool https://nature-art17.eionet.europa.eu/article17/habitat/report/
[24] Article 17_2020_data_species_regions in https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eec-2
[25] Individual Member State Conservation Status pledges in https://reportnet.europa.eu/public/dataflow/705

Birds – analysis

Similar steps are taken in assessing the Member State pledges to improve the Conservation Status of bird species under the Birds Directive, though as previously mentioned some additional work is required to identify those species that are largely marine:

- Determine the bird species that are relevant for the Member State – data provided by the EEA[26] and determine which of these are considered largely marine.[27] It should be noted that where a Member State has coasts in more than one marine biogeographical region, it will not be possible to identify if any region is relevant for each species. However, as Conservation Status pledges for birds do not specify a biogeographical region, this is not considered a significant issue.

- Assess the current Conservation Status using the appropriate database for all relevant marine bird species[28]. For the purposes of the current assessment, the Population Trend is used[29]. This provides an overall assessment of D – Decreasing; I – Increasing; S – Stable; U – Uncertain; Unk – Unknown; or F – Fluctuating. It is important to note that there may be more than one assessment for any particular bird species, for example if there are different breeding and wintering populations. Each assessment is counted as a separate datapoint.

- For each relevant bird species, note which of the Conservation Status pledges apply, based on the Member State input[30]. These are categorised as: 30% – status improvement target; non-det – non-detriment target; UNKN – target to address unknowns; Unlikely – non-detriment target unlikely to be achieved; or N – no target specified.

Tables setting out the results of analysis for each Member State that has submitted Conservation Status pledges are presented in Annex 2, while summary charts can be found in the following section.

Sankey diagrams – presenting results

Where a Member State has provided relevant pledges, a summary of assessment results is presented through a Sankey diagram. Figure 7 shows such a diagram, based on the assessment of Denmark's Conservation Status pledges for marine birds. This illustrates the relationship between population trends, on the left-hand side, and the corresponding pledge category on the right. For example, of the eleven species with increasing populations, seven have no corresponding pledges – as indicated by the broad blue line between 'Increasing' at the top left and 'no pledge' on the bottom right. Actions to

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[26] Article 12_2020_bird_check_list in https://www.eea.europa.eu/data-and-maps/data/article-12-database-birds-directive-2009-147-ec-1

[27] Marine bird species subset determined from http://ec.europa.eu/environment/nature/natura2000/marine/docs/appendix_2_listing_species_habitats.pdf

[28] Article 12_2020_data_birds in https://www.eea.europa.eu/data-and-maps/data/article-12-database-birds-directive-2009-147-ec-1

[29] Note that only population or distribution trends are reported by Member State. Broad conservation assessments are only reported at a whole-EU level.

[30] Individual Member State Conservation Status pledges in https://reportnet.europa.eu/public/dataflow/705

address 'unknowns' are pledged for five of the six marine bird species where population trends are unknown – as indicated by the broad light blue line between 'Unknown' at the bottom left, and the pledge to address unknowns, middle right.

The summary diagrams for habitats and species follow the same approach, though the left-hand side categories represent conservation status assessments rather than population trends.

The diagram does not specify which marine bird species is in each category, it simply deals with total numbers. So, for example, one of the six species with an unknown population trend is not linked to any pledge. From the diagram alone, it is not possible to say which feature this is. It is, however, possible to look at the detailed chart for this assessment, to be found in the relevant Annex, to identify that this refers to breeding populations of A001 *Gavia stellata*.

The summary diagrams for Article 17 reporting combine conservation status and pledges for habitats and species into a single chart, as Member State reporting also combines the two. However, the detailed results in Annex 2 present separate tables for habitats and species.
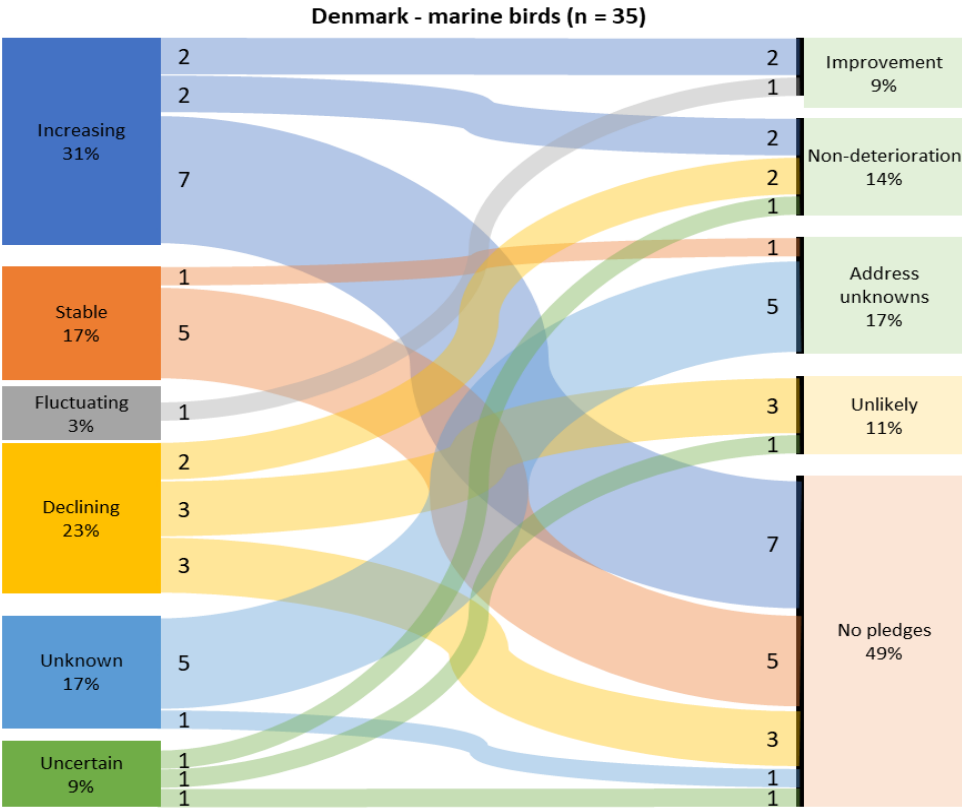
Figure 7 - Example Sankey diagram (see text for explanation)

A final point to remember is that the assessments presented in this report only address pledges made for marine habitats and species, so that pledges for terrestrial habitats and species must also be considered when measuring progress towards the 30% improvement target.

Assessing measures – appropriate action?

A main aim of the 'pledge and review' process is to bring about change, to drive action to improve the conservation status of habitats and species. In addition to simply meeting numerical targets, it is important that effective measures are put in place to support pledges. Member States have reported on measures that will be introduced as part of the process and these will be reviewed. At this stage, such a review will only be qualitative, with a brief commentary on the types and scope of measures that are proposed. In due course, as more pledge data are received from Member States, a methodology for a more detailed analysis of measures can be developed.

In the current absence of pledges

At this early stage in the 'pledge and review' process, there are still some Member States in the Baltic marine biogeographical region that are still to provide pledge data. To provide a more complete picture of the current background against which pledges are expected, some basic information on the current conservation status of habitats and species, and marine birds will be provided for these Member States. These will take the form of simple pie chart. Figure 8 provides an example of the type of summary that will be presented.
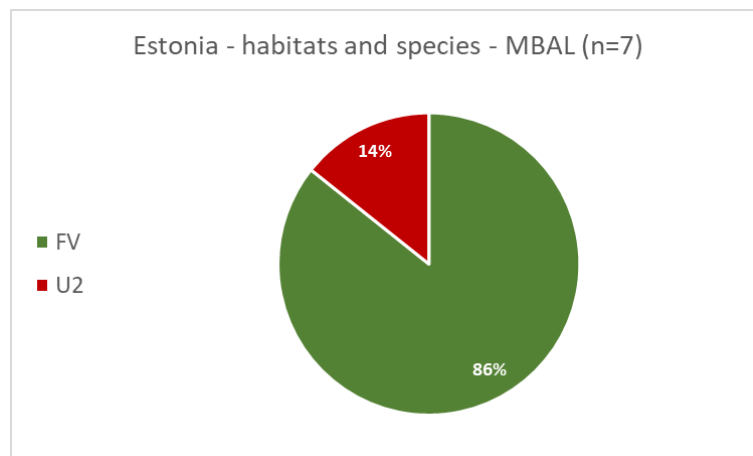
Figure 8 - Example pie chart summarising current habitat (n=5) and species (n=2) conservation status

As with the Member States where pledge data have been received, detailed tables, setting out the current status for each marine habitat and species, and for all marine bird species, will be provided in Annex 3.

4. Pledge and review – analysis of Member State inputs

This section summarises the results of the analysis of Member State pledges on Protected Area and Conservation Status targets. **It should be noted that this is only a preliminary analysis based on the information submitted by Member States which is expected to be further updated. It is a working example to feed the discussions in the seminar and not intended to be a final assessment.**

4.1. Overview of Member States' response

In response to the EU Biodiversity Strategy for 2030 "Bringing nature back into our lives", the following Member States have provided pledges for either the Protected Areas targets, the Conservation Status targets, or both[31]:

- Cyprus
- Denmark
- Germany
- Luxembourg
- Spain
- Sweden

with responses from Denmark, Germany and Sweden being relevant to the current marine seminar, addressing the Baltic marine biogeographical region. Tables summarising these pledges are included in Annex 4.

Only Denmark and Sweden have made pledges to increase protected areas in their waters in the Baltic marine biogeographical region, with Germany reporting that current protection areas already exceed the 30% targets (see Figure 10). All three Member States have provided pledge data for Conservation Status targets (though not necessarily for all features or for all relevant marine biogeographical regions).

4.2. Protected Area pledges – results by Member State

This analysis is based on the information submitted by three Member States in their protected areas reporting and pledges – Denmark, Germany, and Sweden. As mentioned above, Germany has made no new pledges as it reports protected areas in excess of the 30% target.

It should be further noted that some Member States who have submitted initial pledges, continue compiling information, therefore the results provided below should not be considered as final.

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[31] As of mid-September 2023.

The information provided by the Member States in the pledges gives an overview of the expected increase in the total marine protected areas coverage in the Baltic region and is summarised below in Figure 9.
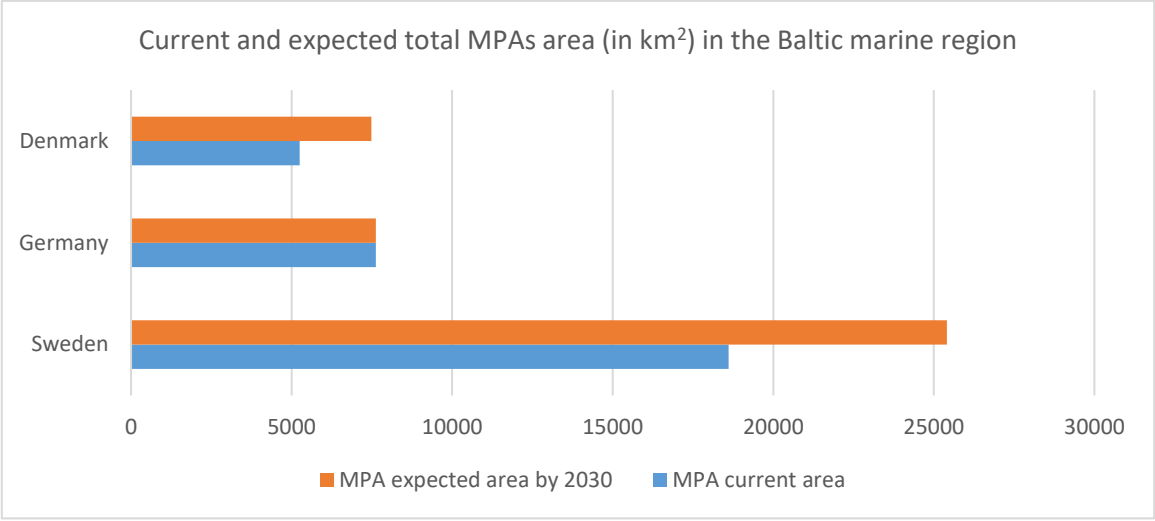
Figure 9 - Current and expected total MPAs area (in km²) in the Baltic marine region

With this information it is also possible to have an overview of the percentage of the marine waters of each Member State covered by protected areas currently and expected by 2030 compared to the 30% target (Figure 10). However, as pledges from all Member States in this region have not been submitted yet, it is too early at this stage to assess the progress towards the 30% target at the level of biogeographical regions, rather than individual Member States.
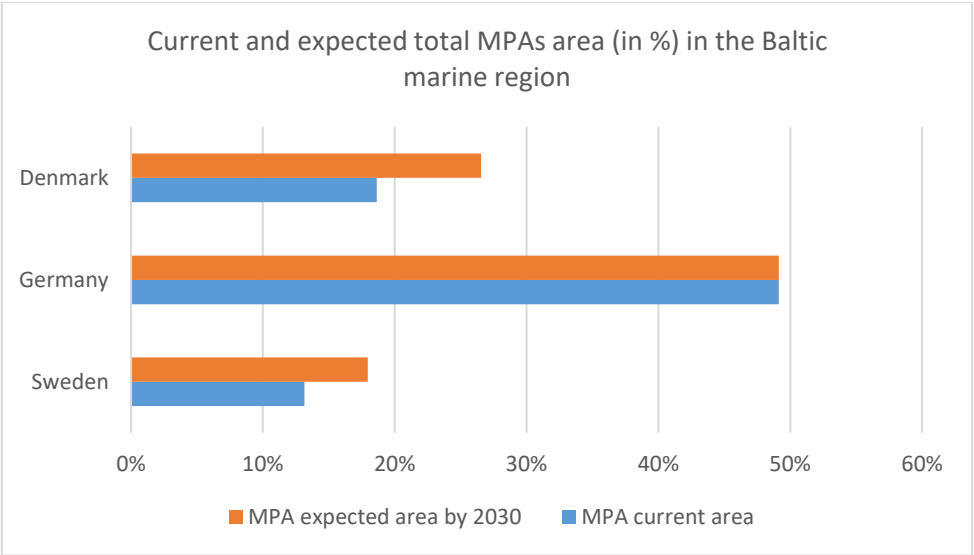
Figure 10 - Current and expected total MPAs area (as a percentage) in the Baltic marine region

A similar overview can be made for the total area under strict protection (Table 2). As of now, most Member States report that there are no areas that could currently be considered as being under strict protection. However, it is understood that this is based on preliminary consideration and that further

work is ongoing to identify areas that correspond to the criteria of strict protection. In addition, there seems to have been some issue with the submission of Sweden's strict protection figures and these will be re-submitted shortly. As for the 2030 projections, only Denmark currently provides an estimate of marine areas that would be under strict protection in the Baltic biogeographical region by this time. This area would correspond to around 1.9% of the marine waters of Denmark within the Baltic marine biogeographical region.

Member State	Strict protection current (km2)	Strict protection by 2030 (km2)
Germany	not reported	not reported
Denmark	0	526
Sweden	to be resubmitted	

Table 2 - Areas under strict protection (km2) reported and predicted in the Baltic marine biogeographical region

More detailed analysis will be possible later with, for example, a full set of Member State pledges allowing an assessment of network coherence at the level of marine biogeographical region. However, while analysis at the regional level might be limited, it is possible to carry out an additional assessment at the Member State level, looking at what has been reported in terms of site management.

Denmark proposes 24 new designations, either additional protection for existing sites, extension of current sites or new protected areas. Of these, ten are in the Baltic marine biogeographical region. Four are new Natura 2000 sites, while the remaining six are designated under national legislation. It is reported that the Natura 2000 sites will have management plans, with a timeline of introducing measures by 2027. While all sites have a responsible management body identified, only the Natura 2000 sites are regarded as being sufficiently resourced.

While Sweden has pledged to increase the extent of marine protected areas, it does not report any information at a site-based level at this stage.

4.3. Conservation Status pledges – results by Member State

This section provides a summary of the results of the analysis of Conservation Status pledges for marine habitats and species and for bird species that are largely marine, for Member States in the Baltic marine biogeographical region that have submitted pledges, namely: Denmark, Sweden, and Germany. These will be analysed as described above and the following information presented:

- Sankey diagrams setting out the relationship between conservation status and pledges for marine habitats and species and between population trends and pledges for marine bird species

- Brief commentary on key points[32]
- Qualitative overview of proposed measures to deliver the pledges

Where no pledges have been received, a chart summarising current conservation status will be provided.

4.3.1. *Denmark*

Habitats and species

In the absence of marine habitats and species in Denmark's pledge, Figure 11 provides a summary of the current conservation status of marine habitats (n=6) and species (n=3) in Denmark's waters within
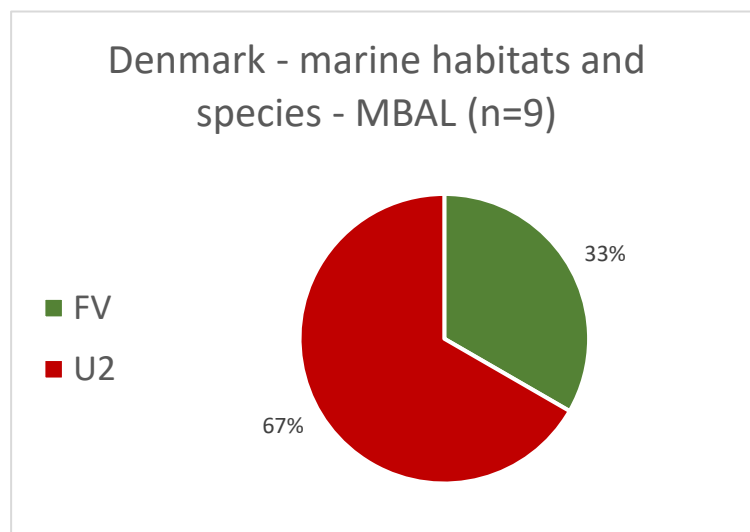
Figure 11 - Summary of current conservation status of marine habitats and species

the Baltic marine biogeographical region. Of the 9 features, 33% are in favourable condition and 67% are unfavourable – bad.

Birds

Figure 12 summarises the relationship between the pledge data received for Denmark's marine birds and the population trend data. This shows that most species for which no pledges have been specified are either increasing or stable. Similarly, most of the species where population trends are unknown are linked to a pledge addressing 'unknowns'. However, of the eight species that are listed as declining,

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[32] Note that as described above a detailed analysis of progress and distance to 30% improvement target is not possible as this depends on combining results of the analysis for both marine and terrestrial pledges and the methodology for such a process has yet to be developed. At this stage, only a brief overview of the extent of conservation status pledges is provided.

three have no pledges for any improvement and for another three it is reported that any non-deterioration is considered unlikely.

Measures

Denmark reports management measures for the three marine bird species subject to a pledge to improve conservation status. These involve the continuation of existing initiatives relating to the protection of breeding sites, and the development of infrastructure to reduce the accidental killing or disturbance of birds (the erection of electric sheep fencing around breeding colonies), with two of the measures applying to populations that are already increasing.
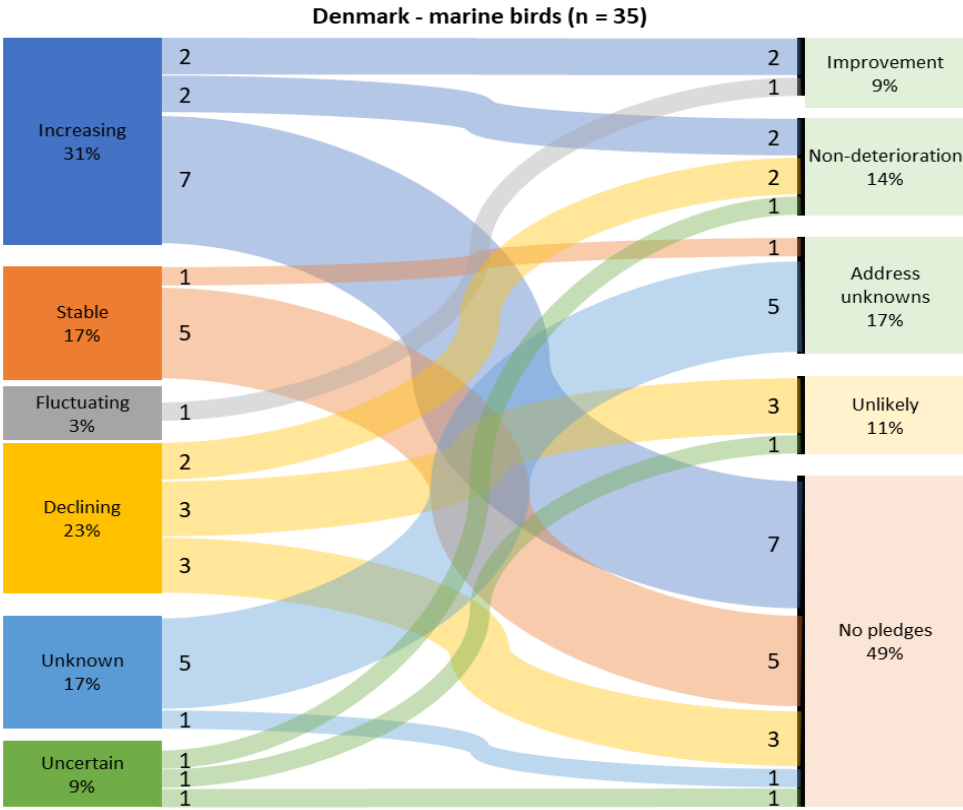
Figure 12 – Sankey diagram summarising analysis of Denmark's pledges for marine birds

Management measures are also reported for the seven species for which non-deterioration pledges have been made. Three of these are reported as a continuation of current management practices, while others include establishing artificial islands to encourage breeding and expanding SPAs.

Measures for improving the data available for the assessment of the conservation status of bird species are also reported, including the development of a new methodological approach to the use of data and a reduction in the level of expert opinion used in assessments.

No pledge data are reported for any marine habitats and species under the Habitats Directive, so no management measures are set out[33].

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[33] The format of the reporting form is such that no measures can be reported in the absence of pledges. As Denmark has made no pledges for habitats and species reported under the Habits Directive, no relevant measures, such as addressing 'unknowns', are reported.

4.3.2. Sweden

Habitats and species

Figure 13 summarises the relationship between the pledge data received for Sweden's habitats (n=7) and species (n=7) within the Baltic marine biogeographical region. This shows that only two of the features assessed as Unfavourable–bad have associated pledges. 1109 *Thymallus thymallus* has a target of non-deterioration, while for the other, 1351 *Phocoena phocoena,* the lack of information on conservation status must be addressed. There is only one feature in Favourable status, 1364 *Halichoerus grypus*. No pledges have been made for any other features.
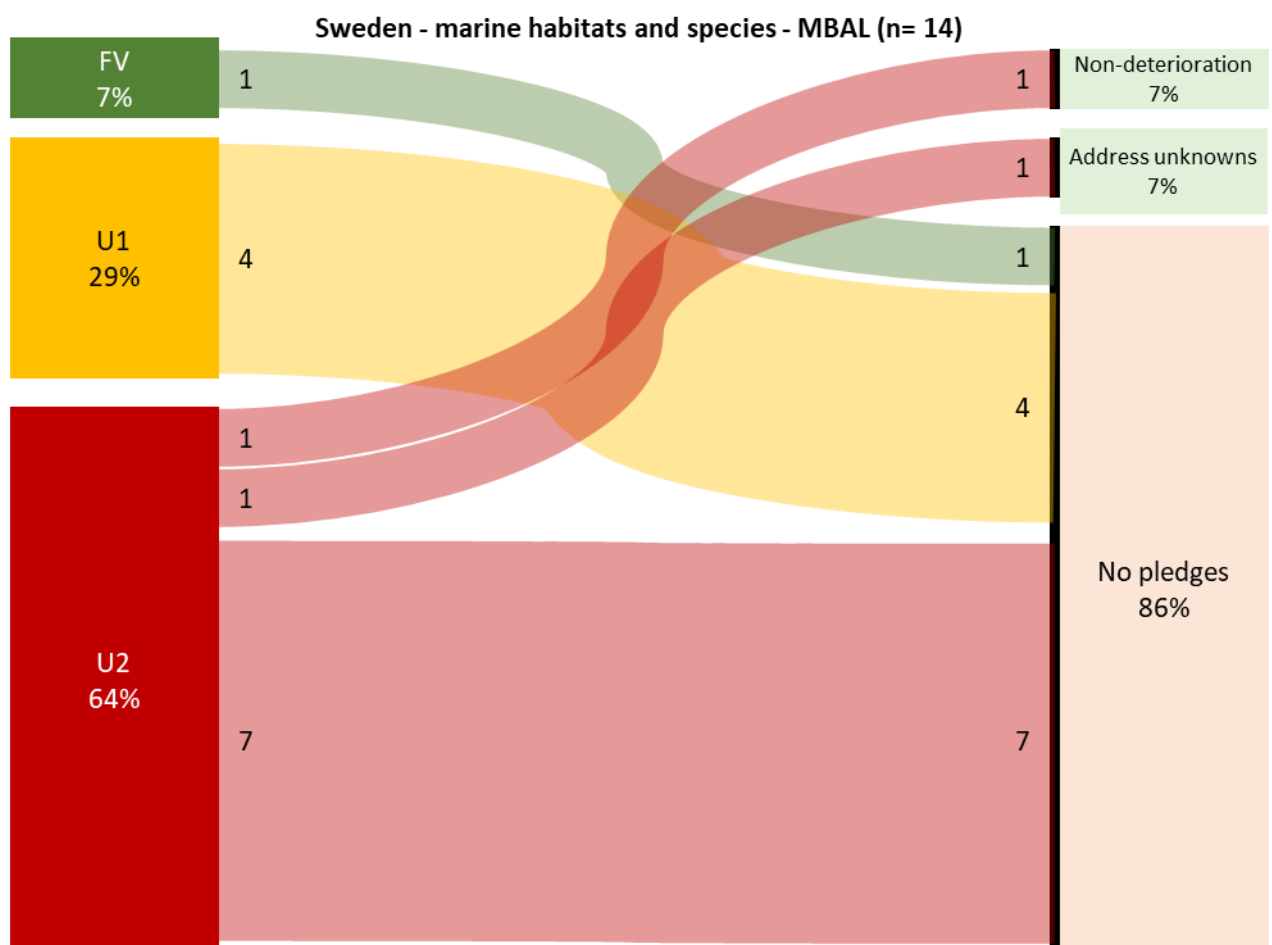
Figure 13 - Sankey diagram summarising analysis of Sweden's pledges for marine habitats and species

Birds

Figure 14 summarises the relationship between the pledge data received for Sweden's marine birds and the population trend data. This shows that for 90% of the species, no pledges are reported. While 15 species are listed as increasing, and another 15 as stable, there are still seven listed as fluctuating, nine declining, and six uncertain, where no action is proposed.

Sweden - marine birds (n = 58)
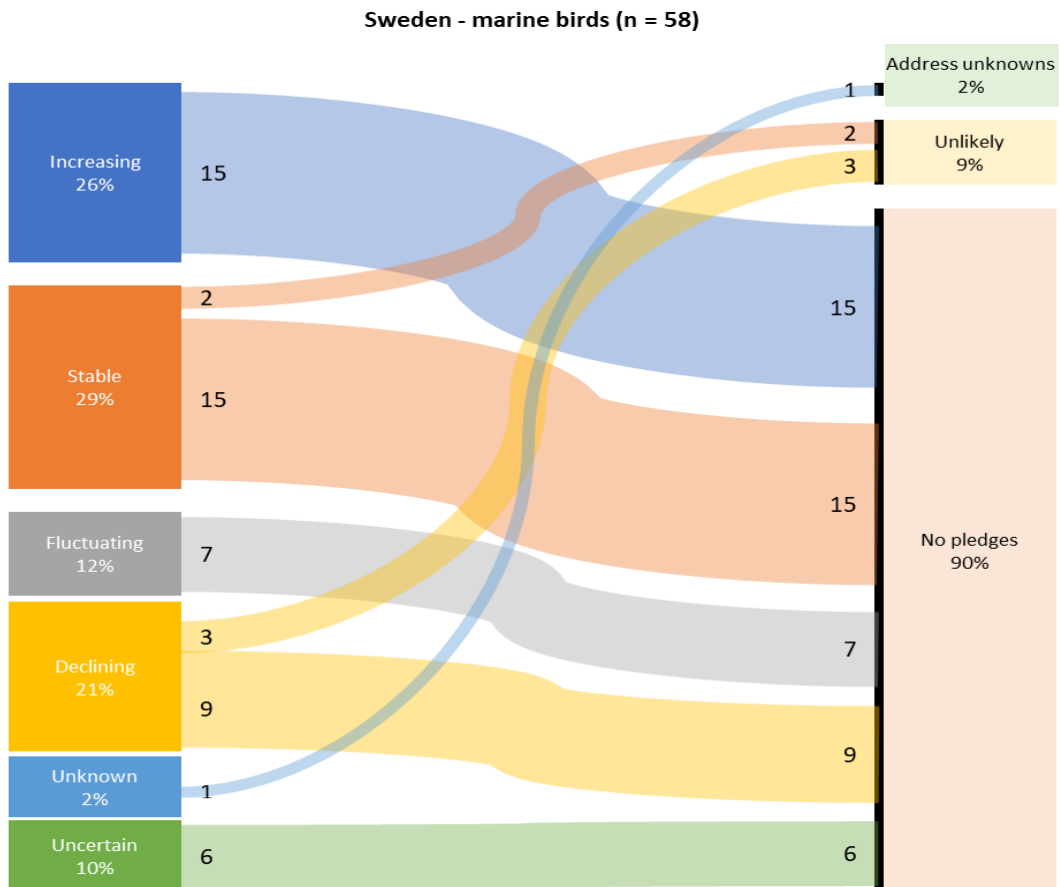
Figure 14 - Sankey diagram summarising analysis of Sweden's pledges for marine birds

Measures

Sweden reports management measures for the single marine species for which a non-deterioration pledge has been made (1109 *Thymallus thymallus*). One of these is a continuation of existing management, while others relate to the improvement and protection of fish spawning grounds.

No improvement pledges have been made for marine habitats and species, or for marine bird species, and no non-deterioration pledges made for any marine bird species.

Measures for improving the data availability for the assessment of the conservation status of habitat and species, and marine bird species are also reported. However, these do not appear to introduce any new approaches.

4.3.3. Germany

Habitats and species

Figure 15 summarises the relationship between the pledge data received for Germany's habitats (n=5) and species (n=3) within the Baltic marine biogeographical region. All features are considered unfavourable (U1 or U2). Three of these, 1110 Sandbanks which are slightly covered by sea water all the time, 1170 Reefs and 1352 *Phocoena phocoena* are associated with improvement pledges. No pledges are currently listed for other features.

Germany - marine habitats and species - MBAL (n=8)
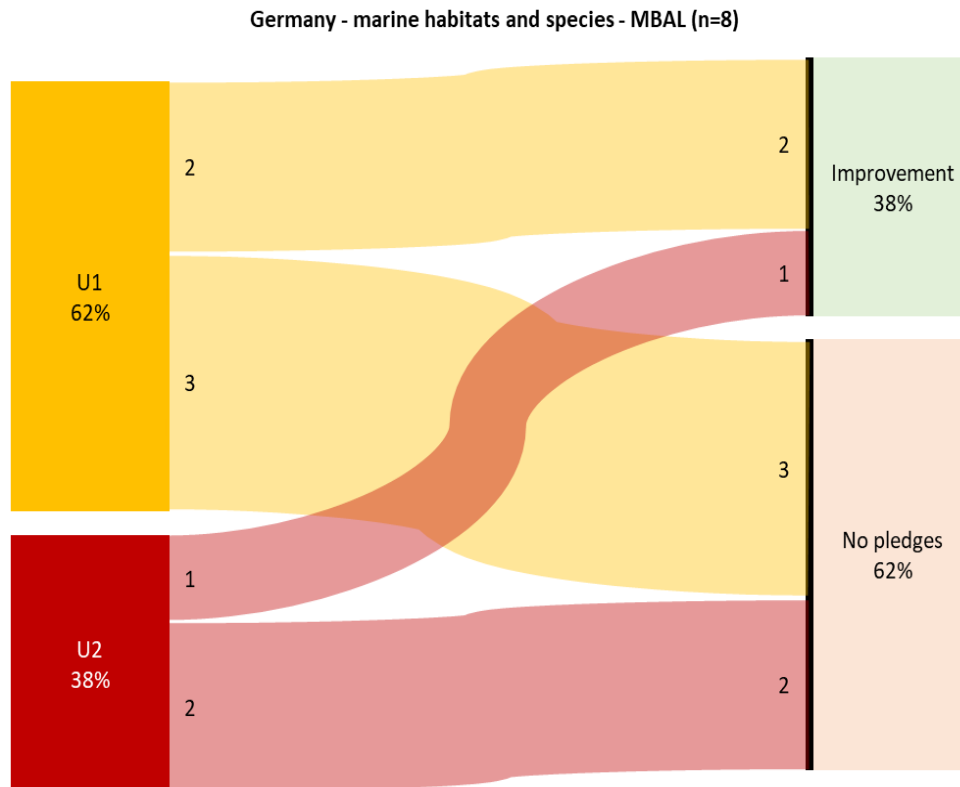
Figure 15 - Sankey diagram summarising analysis of Germany's pledges for marine habitats and species

Birds

Figure 16 summarises the relationship between the pledge data received for Germany's marine birds and the population trend data. As with the habitats and species, most of the species for which there are no pledges have populations that are either increasing or stable. All the species for which trends are unknown are linked to action to address this uncertainty, or which should result in improvements. There is only one species, *Fulmarus glacialis,* where breeding populations are declining with no associated pledges.
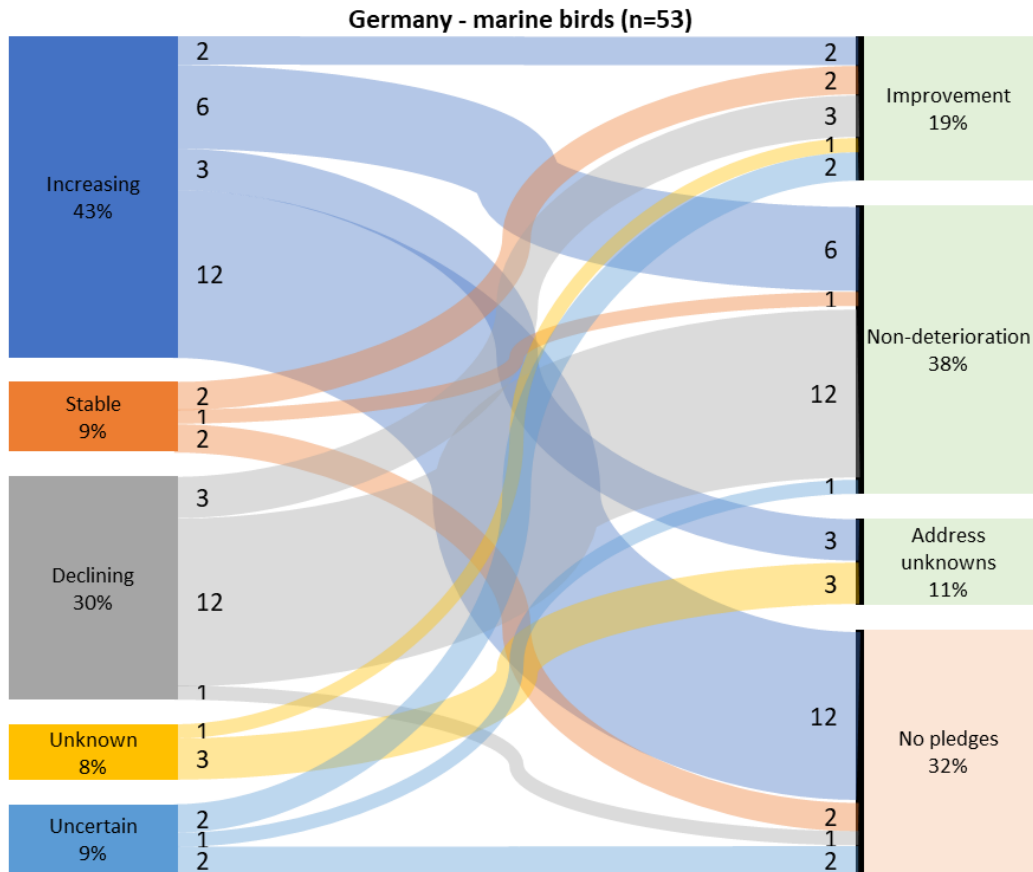
Figure 16 - Sankey diagram summarising analysis of Germany's pledges for marine birds

Measures

Germany has indicated that it is taking an iterative approach to the pledge making process. In its current round of pledge reporting[34], it has identified that relevant management measures will be introduced for marine habitats and species, and bird species, where improvement, non-deterioration and addressing 'unknowns' pledges have been made. However details are not currently available.

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[34] As of October 2023.

4.4. Conservation Status – summary by Member State

This section provides a summary of the Conservation Status for marine habitats and species and for bird species that are largely marine, for the Member States in the Baltic marine biogeographical region which have yet to submit pledge data – Finland, Estonia, Latvia, Lithuania, and Poland. Tables providing full details of current status are presented in Annex 3.

4.4.1. Finland

Habitats and species

Figure 17 summarises the conservation status of marine habitats (n=5) and species (n=6) in the Finnish part of the Baltic marine biogeographical region. This shows that 18% of features are in favourable condition, with 73% in unfavourable condition.
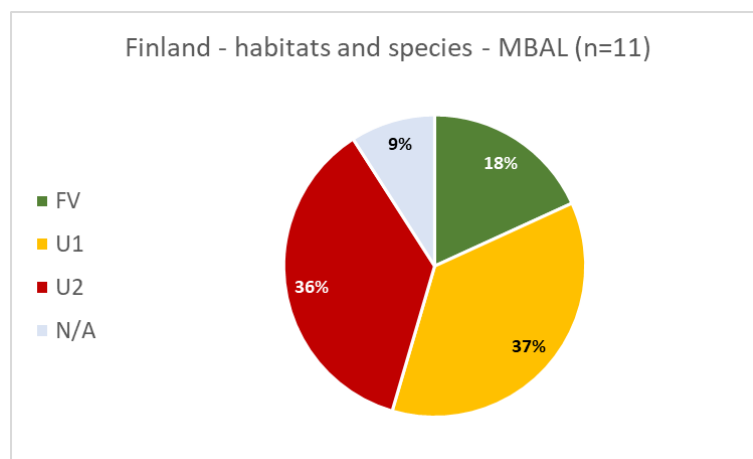
Figure 17 - Summary of current conservation status of marine habitats and species

Birds

Figure 18 summarises the population trends in Finland for bird species that are largely marine. This shows that over half (51%) of species have populations that are either stable or increasing. 28% are declining, while 17%have populations that are either unknown or uncertain.
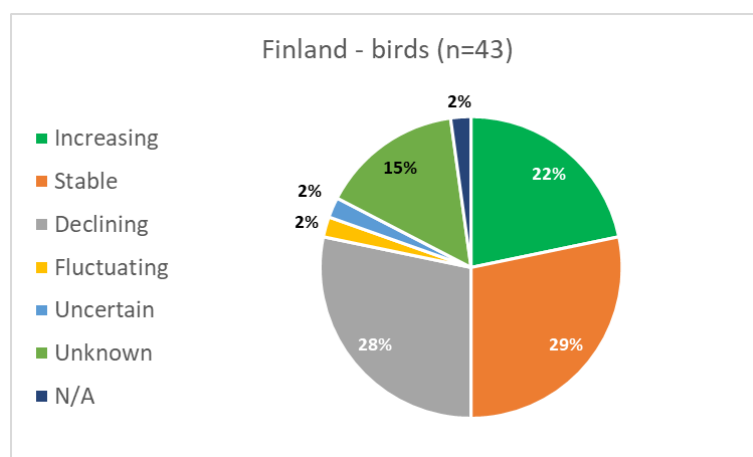
Figure 18 - Summary of population trends for bird species that are largely marine

4.4.2. Estonia

Habitats and species

Figure 19 summarises the conservation status of marine habitats (n=5) and species (n=2) in the Estonian part of the Baltic marine biogeographical region. This shows that 86% of features are in favourable condition, while 14% are unfavourable - bad.
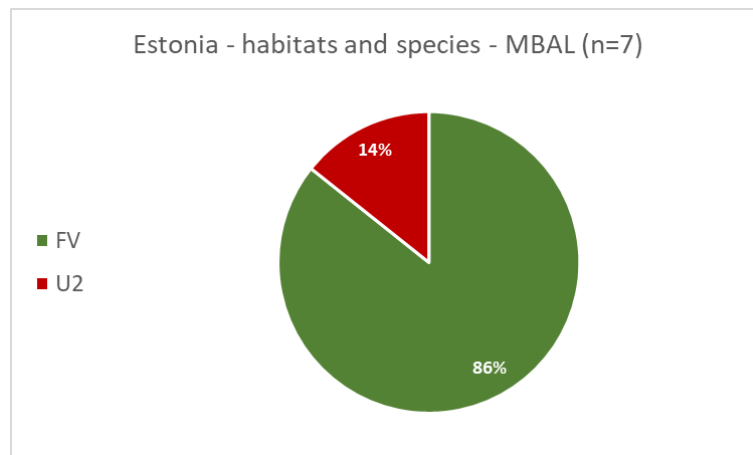
Figure 19 - Summary of current conservation status of marine habitats and species

Birds

Figure 20 summarises the population trends in Estonia for bird species that are largely marine. This shows that over half (65%) of species have populations where trends are stable or increasing. However, there are still 33% of species which have declining populations.
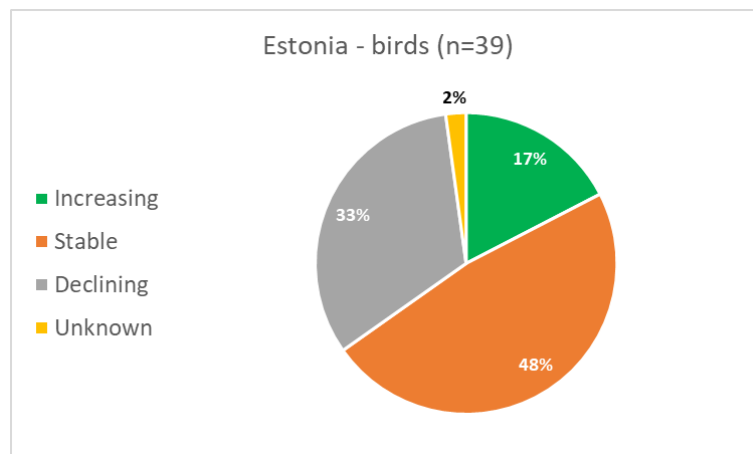
Figure 20 - Summary of population trends for bird species that are largely marine

4.4.3. Latvia

Habitats and species

Figure 21 summarises the conservation status of marine habitats (n=2) and species (n=3) in the Latvian part of the Baltic marine biogeographical region. This shows that only 20% of features are in favourable

condition, with 40% are unfavourable - bad. Other features are either unknown (20%) or have no data available (20%).
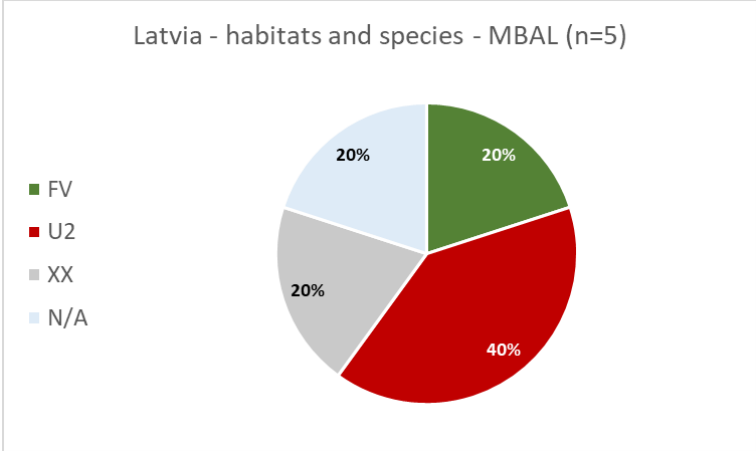
Figure 21 - Summary of current conservation status of marine habitats and species

Birds

Figure 22 summarises the population trends in Latvia for bird species that are largely marine. Only 20% of species have populations that are either stable or increasing, with 22% declining. 50% of species have populations that are unknown, uncertain, or for which data are not available.
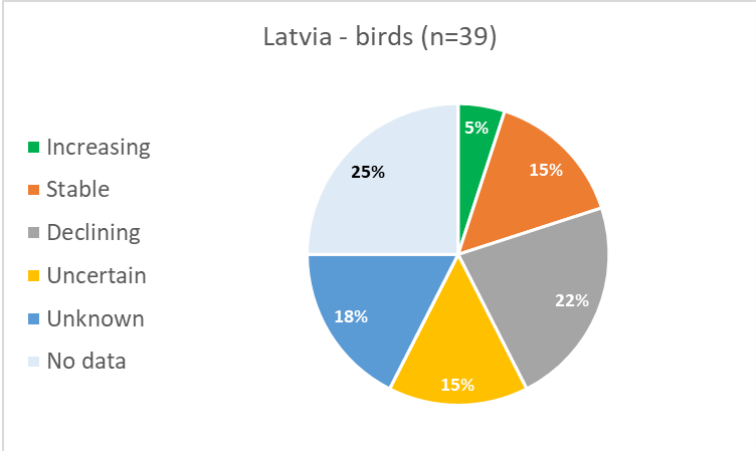
Figure 22 - Summary of population trends for bird species that are largely marine

4.4.4. Lithuania

Habitats and species

Figure 23 summarises the conservation status of marine habitats (n=2) and species (n=1) in the Lithuanian part of the Baltic marine biogeographical region. This shows that around two-thirds of features (67%) have a favourable conservation status, with 33% unknown. However the total number of features (n=3) is very low.
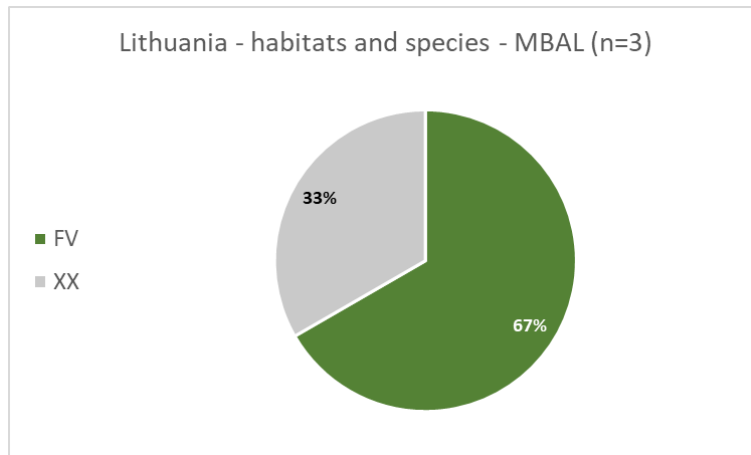
Figure 23 - Summary of current conservation status of marine habitats and species

Birds

Figure 24 summarises the population trends in Lithuania for bird species that are largely marine. This shows that over half the species (52%) have populations that are either stable or increasing, while 28% are fluctuating or declining. 27% have population trends that are uncertain or unknown.
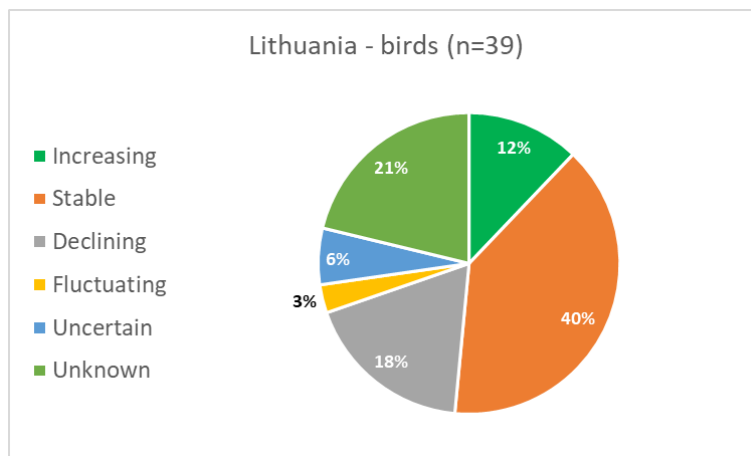
Figure 24 - Summary of population trends for bird species that are largely marine

4.4.5. Poland

Habitats and species

Figure 25 summarises the conservation status of marine habitats (n=4) and species (n=4) in the Polish part of the Baltic marine biogeographical region. This shows that only a quarter (25%) of the features have favourable status, while 62% are assessed as unfavourable. The condition of 13% of features are unknown.
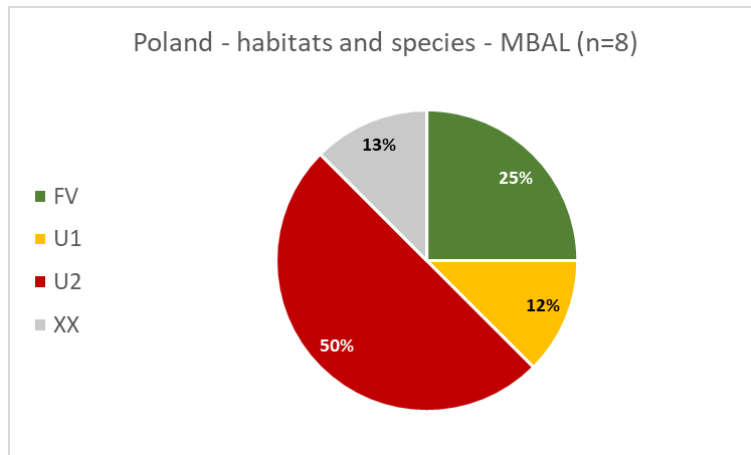
Figure 25 - Summary of current conservation status of marine habitats and species

Birds

Figure 26 summarises the population trends in Poland for bird species that are largely marine. This shows that around half of the species (51%) have population trends that are uncertain or unknown. Only 21% of the populations are wither stable or increasing, while 31% are either fluctuating or declining.
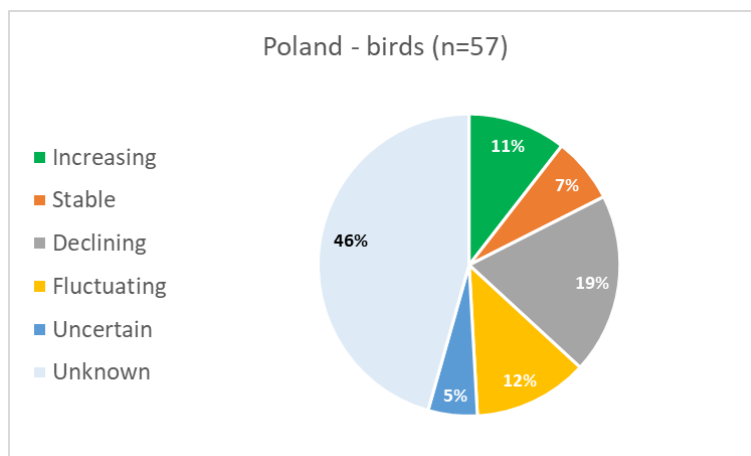
Figure 26 - Summary of population trends for bird species that are largely marine

5. Background information in relation to the three selected discussion themes

In addition to discussion of the progress with the pledge and review process, the third Baltic marine seminar will consider three topics that are of common concern across Member States for the implementation of Biodiversity strategy targets and for the management of the Natura 2000 network.

- Theme 1: Role of Natura 2000 sites and other MPAs in marine restoration
- Theme 2: Strict protection in the Baltic marine region
- Theme 3: Renewable energy and marine conservation

The following sections provide a short context and proposed questions for seminar discussions on each theme, along with introductions to relevant case studies.

5.1. Theme 1: Role of Natura 2000 sites and other MPAs in marine restoration

An important part of the EU Biodiversity strategy is the EU Nature Restoration Plan. The Strategy underlines that marine restoration will, along with effective protected areas, bring substantial health, social and economic benefits to coastal communities and the EU as a whole. Among other things, it aims to reconcile the use of bottom-contacting fishing gears with biodiversity goals and to reduce the by-catch of protected species so as not to threaten their conservation status. In addition, fisheries-management measures must be established in all marine protected areas according to clearly defined conservation objectives and on the basis of the best available scientific advice. To accelerate the necessary actions, the Commission published an EU Action Plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries[35].

The Commission also proposed a Regulation on nature restoration[36] which combines an overarching restoration objective for the long-term recovery of nature in the EU's land and sea areas with binding restoration targets for specific habitats and species, including those in the marine environment. The proposal is currently being discussed between the co-legislators.

Against this background, if the restored marine areas comply (or are expected to comply once restoration produces its full effect) with the criteria for protected areas, these restored areas should also contribute towards the EU targets on protected areas.

Equally, protected areas can also provide an important contribution to the restoration targets in the strategy, by creating the conditions for restoration efforts to be successful. It is therefore important

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[35] https://oceans-and-fisheries.ec.europa.eu/policy/common-fisheries-policy-cfp/action-plan-protecting-and-restoring-marine-ecosystems-sustainable-and-resilient-fisheries_en

[36] https://environment.ec.europa.eu/topics/nature-and-biodiversity/nature-restoration-law_en

for there to be exchanges on the relevant experiences in view of increased efforts and investments in marine restoration and protection in the future.

5.1.1. LIFE Case Study – Better BirdLIFE (Improvement of natural habitats for coastal birds)

Coordinating Beneficiary: Middelfart Kommune (Denmark)

The conservation status of a number of habitat types and bird species is assessed as unfavourable-bad or unfavourable-insufficient in Denmark and Germany. This is the case for 14 bird species, 10 of which are listed in the Annex I of Birds Directive, and 10 habitat types listed in the Annex I of Habitats Directive. There are a number of issues and barriers preventing improvement of these species' and habitats' conservation status in both the terrestrial and marine zones. Better BirdLIFE is taking measures to address these issues and improve the conservation status of two marine habitats, namely coastal lagoons (1150) and reefs (1170), partly through restoration actions. As an additional benefit, it will also help improve the conservation status of two marine mammals, the harbour porpoise (*Phocoena phocoena*) and the harbour seal (*Phoca vitulina*). The project is also contributing to implementing Natura 2000 plans in accordance with Danish and German legislation (The Environmental Targets Act).

One important part of the project has been the restoration of 30 ha of stone reefs in three Natura sites in clusters of 10 ha each in depths of up to 6 m. This restoration has been fully accomplished. The objective is to provide feeding ground for Common Eider ducks, as the new reefs will recolonise with blue mussels, a preferred food item for this species. However, this type of restoration can clearly benefit a wide range of other species and the blue mussels will provide added benefits in terms of a natural filtration mechanism to remove coastal pollutants. Denmark leads the field in this kind of restoration following the pioneering LIFE BlueREEF project completed in 2013 which clearly demonstrated extensive ecosystem recovery after 4 years with an increase in macroalgal vegetation and bottom fauna of approximately 6 and 3 ton ash free biomass respectively; and estimates surplus of nearly 700 million fauna; increase in cod on average of 3-6 fold in the reef area and an instant, positive effect on harbour porpoises in the area. Stone reef design and placement continues to evolve in the Better BirdLIFE project, monitoring is underway to fully catalogue the impact. More projects of this type are expected in the coming years by the associated beneficiaries.

 A second element of the project is the restoration of 1.6 ha of eelgrass in at least two of the designated sites in water depths of between 1 to 3m. The restoration process involves the transplantation of single shoots and rhizomes from a designated donor site to the recipient site. The target of seagrass restoration has been achieved and the beneficiaries are now monitoring the effectiveness of the measures. The project is examining possibilities of transplanting eelgrass into suitable recipient sites but in deeper water.

Credit: Better BirdLIFE

5.2. Theme 2: Strict protection in the Baltic marine region

The Biodiversity strategy sets a target of at least one third of all protected areas in the EU, representing 10% of EU land and 10% of EU sea, to be under strict protection by 2030. In the context of the 10% target in the Biodiversity Strategy, strictly protected areas are defined as follows: "*Strictly protected areas are fully and legally protected areas designated to conserve and/or restore the integrity of biodiversity-rich natural areas with their underlying ecological structure and supporting natural environmental processes. Natural processes are therefore left essentially undisturbed from human pressures and threats to the area's overall ecological structure and functioning, independently of whether those pressures and threats are located inside or outside the strictly protected area*".

The condition that natural processes should be left essentially undisturbed by human pressures and threats means that many strictly protected areas will be non-intervention areas, where only limited and well-controlled activities that either do not interfere with natural processes or enhance them, will be allowed. In addition, strictly protected areas may also be areas in which active management sustains or enhances natural processes. Activities authorised in strictly protected areas should also include those that are necessary for the restoration of the natural values of the areas in question.

The Strategy also stated that significant areas of carbon-rich ecosystems, such as seagrass meadows should be strictly protected and that achieving good environmental status of marine ecosystems, including through strictly protected areas, must involve the restoration of carbon-rich ecosystems as well as important fish spawning and nursery areas.

To make progress with the implementation of this target, it is important to identify habitats and areas which are suitable for such protection regime. It is also important to exchange experience in ensuring that these areas deliver benefits to society and economic activities, in particular fisheries. Finally, strictly protected areas also need to be effectively managed which requires proper control and enforcement.

5.2.1. *LIFE Case Study – Biodiversea (Enhancing the marine and coastal biodiversity of the Baltic Sea in Finland and promoting the sustainable use of marine resources)*

Coordinating Beneficiary: Metsähallitus Parks & Wildlife Finland (MHPWF)

During the last round of Article 17 reporting in 2018, Finland reported that the conservation status of the Natura 2000 marine habitats was assessed as either U1 – unfavourable, inadequate or U2 unfavourable, bad for the Baltic region. Launched in September 2021, the LIFE BIODIVERSEA project covers all Finnish marine and coastal areas including the province of Åland. It covers the whole marine protected area network including Natura 2000 sites and other private and state-owned nature reserves. The Marine Natura 2000 sites in Finland overlap with several national parks and internationally designated areas under HELCOM and Ramsar and one UNESCO World Heritage Site. Together with private protected areas, they form the MPA network in Finland covering about 11% of the sea area in Finnish territorial waters, of which less than 1% is strictly protected.

Finland was one of the first countries to join the Global Ocean Alliance supporting the protection of at least 30% of the global oceans by 2030. Finland is also supporting the EU biodiversity strategy to protect 30% of European seas and strictly protect at least one third of protected areas by 2030. Consequently, one of the main objectives of BIODIVERSEA is to establish an efficient marine protected area network and effective conservation and restoration of habitats and species needed to supplement the current protected area network, and to find out solutions for active management and restoration of coastal and especially subsurface habitats and species.

As a starting point, results from a zonation analysis undertaken prior to the project in 2019 identified 87 ecologically significant marine underwater areas (EMMAs) in Finland. The EMMAs were described by using similar methods and criteria that have been globally used by the Convention on Biological Diversity (CBD) to describe Ecologically or Biologically Significant Marine Areas. Even though the level of knowledge on the underwater environment has increased significantly in recent years in Finland, there is still a need to improve the ecological effectiveness of MPAs through the continued development of the MPA network for expansion to 30% and for the identification of strictly controlled areas. Within the project there are a series of actions to fill in gaps in the inventories, map underwater species and habitats and the further development of the MPA network. The aim is to make an ambitious roadmap, where all means of protection will be taken into account. The aim is to have an effectively and equitably managed, ecologically representative, and well-connected network of protected areas. OECMs as well as strictly protected areas are of particular importance for sustaining biodiversity and ecosystem services.

The concept of strictly protected marine areas is not well developed in any of the Baltic States and the BIODIVERSEA project is making progress towards strict protection in Åland. Therefore, one of the most important project objectives is to increase the marine protected area coverage in the Åland waters from current ca. 3% to at least 10%. To achieve strict protection, the Government of Åland intends to purchase land and/or make one-off compensations to private landowners to ensure only controlled

activities will take place in these areas. The identified and selected areas will be permanently strictly protected and designated as new Natura 2000 areas. The first of these purchases has already taken place and the project will be working on implementation of the strictly controlled areas as the project progresses. The acquired lands will be established as permanent nature conservation areas according to Åland's Nature Conservation Act and this is clearly stipulated in the sales agreement. Moreover, the agreement includes specific stipulations related to the use of the area. In case of one-off compensations, the areas are established as permanent nature conservation areas, but the ownership will remain private. The necessary area specific restrictions and conditions to improve the conservation status of the target species or habitats will be negotiated and clearly stated in all the agreements of compensations for permanent protection or sales agreements between the Government of Åland and private landowners.

Furcellaria lumbricalis, *Cladophora rupestris*, *Fucus vesiculosus*, *Hildenbrandia rubra* - Linn Engström, Åbo Akademi University

Filamentous red algae, *Mytilus trossulus*, *Aurelia aurita* - Petra Arola, Åbo Akademi University

5.3. Theme 3: Renewable energy and marine conservation

More sustainably sourced renewable energy will be essential to fight climate change and biodiversity loss, which are interlinked. The development of offshore renewable energy however provides both opportunities and threats to biodiversity conservation. The Biodiversity strategy states that the EU will prioritise solutions such as ocean energy, offshore wind, which also allows for fish stock regeneration. It is therefore essential to explore such technologies and ways of implementing renewable energy projects in the marine environment that can be compatible with or even foster marine conservation and restoration.

The EU Strategy for offshore renewable energy[37] states that the development of offshore renewable energy must comply with the EU environmental legislation and the integrated maritime policy and that designated sea spaces for offshore energy exploitation should be compatible with biodiversity protection, consider socio-economic consequences for sectors relying on good health of marine ecosystems and integrate as much as possible other uses of the sea.

In this context, maritime spatial planning is an essential and well-established tool to anticipate change, prevent and mitigate conflicts between policy priorities while also creating synergies between

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[37] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2020:741:FIN&qid=1605792629666

economic sectors. Offshore renewable energy can and should coexist with many other activities, especially in crowded areas. To this end, national maritime spatial planning should adopt a holistic, multi-use/multipurpose approach.

5.3.1. LIFE Case Study – NOVIOCEAN – Upscaling and demonstration of NoviOcean, a breakthrough wave energy converter

Coordinating Beneficiary: Novige AB, Sweden

Novige is a Swedish based private company established in 2016 by entrepreneur Jan Skjoldhammer, now the CEO, with the ambition to develop a highly accountable and cost-effective renewable energy technology. Following successful collaboration with three Swedish Universities to perfect designs, complete the physical tests, construct, and test a 1:5 scale prototype, by 2019, the prototype wave energy converter had been manufactured and deployed offshore of Stockholm and tested for 6 weeks together with the control system and necessary software. This led to them producing energy from waves for the first time. Under the Horizon 2020 MaRINET2 programme, Novige had the opportunity to test the first prototype more thoroughly and make design changes to improve performance. They hold the EC's highly accredited Seal of Excellence for their work. In 2021 the team received the LIFE funding for upscaling and demonstrating the first full scale NoviOcean unit with a rated capacity of 600 kW.

The EU Offshore Renewable Energy Strategy (2020) plans for a 25-fold increase in offshore wind by 2050, together with significant deployment of wave, tidal, thermal and other marine renewable energy. While offshore renewable energy will help mitigate climate change, the biodiversity concerns it raises need to be addressed. Unlike solar or wind power, tides and ocean currents are almost 100% predictable, with endless flows that guarantee continuous energy availability. Such technologies tend to be energy rich – moving water is much denser than moving air – thereby creating excellent conditions for efficient energy conversion. While wave power energy generation is in its infancy by comparison to wind power, it is clear that if ambitions to deliver the EU Offshore Renewable Energy Strategy are to be met then wave power will need to form an important part of the mix. In fact, even under optimum conditions, using wind and solar power still leaves 40% of the hours in any month where neither can generate energy. This led to the hybrid design for the NoviOcean converter which has both wave and solar capacity.

Credit: Combined wave and solar converter, NoviOcean website

During the course of five years, numerous ideas were drawn and analyzed, and some were even tested in sea conditions (e.g. devices that used chains, hydraulic motors, etc.), but ultimately only the design under demonstration in the LIFE project meet the stringent criteria: being simple, light, strong, cost-effective, and using few and well-proven components.

NoviOcean is a non-resonant buoyant wave energy converter that extracts energy from the vertical motion (heave) of the waves. The patented elongated rectangular float is designed in a way that resembles the shape of a wave. Such design makes it possible for the float to automatically align its elongated face towards the wavefront. This ensures a much larger "active" wetted area of four to ten times more than a typical round buoy. Due to the simplicity of the power take off subsystem, the NoviOcean wave energy converter utilizes enormous lifting forces on every wave. The converter rides in sync with the waves, with slower speeds and simple controls to achieve extreme power output, as opposed to the more common and much more complex resonant approach. Wave generation is quite stable and this reduces the need for energy storage. The target is to produce 0.1 GW by 2030.
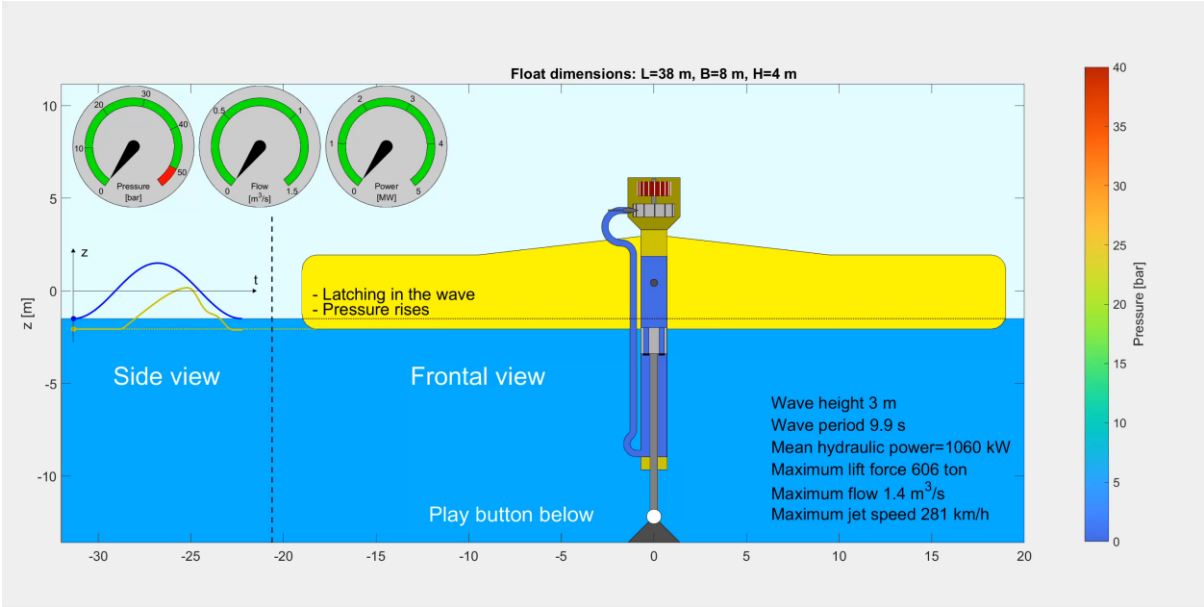
Credit: The NoviOcean converter, NoviOcean website

Clearly the sea has considerable potential for renewable energy production but there are legitimate concerns over the impact of large-scale infrastructure developments on biodiversity and human activities, including fisheries. However, some of the impacts associated with offshore wind generation are less significant in the wave generation system. There are no moving turbines, so bird populations are less affected, in fact the platforms are likely to attract seabirds as resting sites. There is no sound generation and the footprint of a single platform on the seabed is much reduced. However, issues with shipping and navigation and fisheries will still need to be resolved.

ANNEXES

- **Annex 1 – Conservation status of marine birds – EU combined assessment**
- **Annex 2 – Conservation status pledge tables – analysis by Member State**
- **Annex 3 – Conservation status tables – analysis by Member State**
- **Annex 4 – Pledge tables – by Member State**
- **Annex 5 – List of relevant LIFE projects**

Annex 1 – Conservation status marine birds – EU combined assessment

Species code	Species name	Season assessed	Red list category	CS conclusion
A200	*Alca torda*	B	LC	Secure
A203	*Alle alle*	W	NE	Not Evaluated
A062	*Aythya marila*	B	EN A2bcde+3bcde+4bcde; C1	Threatened
A067	*Bucephala clangula*	B	LC	Secure
A387	*Bulweria bulwerii*	B	LC	Unknown
A202	*Cepphus grylle*	B	LC	Depleted
A064	*Clangula hyemalis*	W	LC	Depleted
A204	*Fratercula arctica*	B	LC	Secure
A009	*Fulmarus glacialis*	B	EN A4abcde	Threatened
A002	*Gavia arctica*	B	LC	Secure
A003	*Gavia immer*	W	LC	Secure
A001	*Gavia stellata*	B	LC	Secure
A014	*Hydrobates pelagicus*	B	LC	Unknown
A862	*Hydrocoloeus minutus*	B	LC	Secure
A184	*Larus argentatus*	B	VU A2bcde+3bcde+4bcde	Threatened
A181	*Larus audouinii*	B	VU A3bce+4abce	Threatened
A182	*Larus canus*	B	LC	Declining
A183	*Larus fuscus*	B	LC	Secure
A180	*Larus genei*	B	LC	Unknown
A185	*Larus glaucoides*	W	LC°°	Unknown
A186	*Larus hyperboreus*	W	LC°°	Unknown
A187	*Larus marinus*	B	NT A2bcde+3bcde+4bcde	Near Threatened
A176	*Larus melanocephalus*	B	LC	Secure
A604	*Larus michahellis*	B	LC	Unknown
A179	*Larus ridibundus*	B	VU A2bcde	Threatened
A066	*Melanitta fusca*	B	VU A2abcde	Threatened
A070	*Mergus merganser*	B	LC	Secure
A069	*Mergus serrator*	B	NT A2bcde+3bcde+4bcde	Near Threatened
A016	*Morus bassanus*	B	LC	Secure
A389	*Pelagodroma marina*	B	EN B2ab(iii,v)	Threatened

A392	*Phalacrocorax a. desmarestii*	B	LC	Unknown
A018	*Phalacrocorax aristotelis*	B	LC	Depleted
A017	*Phalacrocorax carbo*	B	LC	Secure
A170	*Phalaropus lobatus*	B	LC	Declining
A007	*Podiceps auritus*	B	VU C1	Threatened
A005	*Podiceps cristatus*	B	LC	Secure
A006	*Podiceps grisegena*	B	VU A2bcde+3bcde+4bcde	Threatened
A008	*Podiceps nigricollis*	B	LC	Secure
A506	*Polysticta stelleri*	W	EN A2bcd+3bcd+4bcd; C1	Threatened
A385	*Pterodroma madeira*	B	EN D	Threatened
A693	*Puffinus mauretanicus*	B	CR A4abcde	Threatened
A013	*Puffinus puffinus*	B	LC	Unknown
A464	*Puffinus yelkouan*	B	VU A2abcde	Threatened
A188	*Rissa tridactyla*	B	EN A2abcd+3bcd+4abcd	Threatened
A063	*Somateria mollissima*	B	VU A2abcde+A3abcde+A4abcde	Threatened
A174	*Stercorarius longicaudus*	B	LC	Secure
A173	*Stercorarius parasiticus*	B	EN A2bcd+3bce+4bce	Threatened
A192	*Sterna dougallii*	B	LC	Secure
A193	*Sterna hirundo*	B	LC	Secure
A194	*Sterna paradiseae*	B	LC	Secure
A885	*Sternula albifrons*	B	LC	Secure
A862	*Thalasseus sandvicensis*	B	LC	Secure
A419	*Uria aalge ibericus*	B	CR (PE) D	Threatened
A199	*Uria aalge*	B	LC	Secure

The following marine bird species were not listed in the Art.12 reporting and so have had to be excluded from the assessment:

Oceanodroma leucorhoa
Phalaropus fulicarius
Pterodroma feae
Puffinus griseus
Stercorarius pomarinus
Stercorarius skua
Sterna nilotica

Annex 2 – Conservation Status pledge tables

Sweden

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status	Pledge
1110	Sandbanks which are slightly covered by sea water all the time	U2	N
1130	Estuaries	U2	N
1140	Mudflats and sandflats not covered by seawater at low tide	U1	N
1160	Large shallow inlets and bays	U1	N
1170	Reefs	U2	**N**
1650	Boreal Baltic narrow inlets	U2	**N**
8330	Submerged or partially submerged sea caves	U1	**N**

Marine species – Habitats Directive

MBAL

Species code	Species	Status	Pledge
1109	*Thymallus thymallus*	U2	Non-det
1351	*Phocoena phocoena*	U2	UNKN
1364	*Halichoerus grypus*	FV	N
1365	*Phoca vitulina*	U2	N
2492	*Coregonus albula*	U1	N
6307	*Pusa hispida botnica*	U2	N
6353	*Coregonus lavaretus Complex*	U2	N

Marine bird species – Birds Directive

Species code	Season	Species	Trend	Pledge[38]
A200	B	*Alca torda*	I	N
A203	W	*Alle alle*	F	N
A062	B	*Aythya marila*	I	N
A062	W	*Aythya marila*	D	

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[38] 30% - 30% targets for improving trends, Non-det – non-deterioration target, ND unlikely – non-deterioration unlikely to be achieved; UNKN – reducing unknowns; N – no pledge

A067	B	*Bucephala clangula*	D	N
A067	W	*Bucephala clangula*	S	N
A202	B	*Cepphus grylle*	I	N
A064	B	*Clangula hyemalis*	D	ND unlikely
A064	W	*Clangula hyemalis*	D	ND unlikely
A002	B	*Gavia arctica*	S	N
A003	W	*Gavia immer*	F	N
A001	B	*Gavia stellata*	S	N
A001	P	*Gavia stellata*	S	N
A001	W	*Gavia stellata*	U	N
A890	B	*Larus argentatus argentatus*	S	N
A459	W	*Larus cachinnans*	S	N
A182	B	*Larus canus*	S	N
A489	B	*Larus fuscus all others*	S	N
A640	B	*Larus fuscus fuscus*	D	N
A185	W	*Larus glaucoides*	F	N
A186	W	*Larus hyperboreus*	F	N
A187	B	*Larus marinus*	D	N
A176	B	*Larus melanocephalus*	F	N
A604	W	*Larus michahellis*	Unk	UNKN
A179	B	*Larus ridibundus*	S	N
A066	B	*Melanitta fusca*	D	N
A066	W	*Melanitta fusca*	I	N
A900	B	*Melanitta nigra s. str.*	U	N
A900	W	*Melanitta nigra s. str.*	I	N
A767	B	*Mergellus albellus*	D	N
A767	P	*Mergellus albellus*	I	N
A767	W	*Mergellus albellus*	I	N
A070	B	*Mergus merganser*	S	N
A070	P	*Mergus merganser*	I	N
A070	W	*Mergus merganser*	U	N
A069	B	*Mergus serrator*	S	ND unlikely
A069	P	*Mergus serrator*	S	ND unlikely
A069	W	*Mergus serrator*	D	ND unlikely
A684	B	*Phalacrocorax aristotelis aristotelis*	I	N
A684	W	*Phalacrocorax aristotelis aristotelis*	I	N
A391	B	*Phalacrocorax carbo sinensis*	S	N
A391	W	*Phalacrocorax carbo sinensis*	I	N
A170	B	*Phalaropus lobatus*	U	N
A007	B	*Podiceps auritus*	U	N
A005	B	*Podiceps cristatus*	U	N
A005	P	*Podiceps cristatus*	D	N
A006	B	*Podiceps grisegena*	S	N
A008	B	*Podiceps nigricollis*	D	N
A506	W	*Polysticta stelleri*	F	N
A188	B	*Rissa tridactyla*	S	N
A063	B	*Somateria mollissima*	D	N
A063	W	*Somateria mollissima*	I	N
A174	B	*Stercorarius longicaudus*	F	N
A173	B	*Stercorarius parasiticus*	S	N

A193	B	*Sterna hirundo*	S	N
A194	B	*Sterna paradisaea*	I	N
A885	B	*Sternula albifrons*	I	N
A887	B	*Uria aalge all others*	I	N

Denmark

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status	Pledge
1110	Sandbanks which are slightly covered by sea water all the time	U2	N
1130	Estuaries	FV	N
1140	Mudflats and sandflats not covered by seawater at low tide	U2	N
1160	Large shallow inlets and bays	U2	N
1170	Reefs	U2	**N**
8330	Submerged or partially submerged sea caves	FV	N

Marine species – Habitats Directive

MBAL

Species code	Species	Status	Pledge
1351	*Phocoena phocoena*	U2	N
1364	*Halichoerus grypus*	U2	N
1365	*Phoca vitulina*	FV	N

Marine bird species – Birds Directive

Species code	Season	Species	Trend	Pledge
A200	B	*Alca torda*	I	30%
A203	B	*Alle alle*	Unk	UNKN
A062	B	*Aythya marila*	D	Unlikely
A067	B	*Bucephala clangula*	S	N
A067	W	*Bucephala clangula*	I	
A202	B	*Cepphus grylle*	I	N
A064	B	*Clangula hyemalis*	U	Unlikely
A002	B	*Gavia arctica*	Unk	UNKN
A001	B	*Gavia stellata*	Unk	N
A890	B	*Larus argentatus argentatus*	I	N
A182	B	*Larus canus*	D	N
A489	B	*Larus fuscus all others*	I	N
A185	B	*Larus glaucoides*	Unk	UNKN
A186	B	*Larus hyperboreus*	Unk	UNKN
A187	B	*Larus marinus*	I	N
A176	B	*Larus melanocephalus*	I	N
A179	B	*Larus ridibundus*	D	Non-det
A066	B	*Melanitta fusca*	U	N
A900	B	*Melanitta nigra s. str.*	U	Non-det

A070	B	*Mergus merganser*	S	N
A070	W	Mergus merganser	I	
A069	B	*Mergus serrator*	D	N
A391	B	*Phalacrocorax carbo sinensis*	I	Non-det
A391	W	*Phalacrocorax carbo sinensis*	I	
A007	B	*Podiceps auritus*	Unk	UNKN
A005	B	*Podiceps cristatus*	D	N
A006	B	*Podiceps grisegena*	S	N
A008	B	*Podiceps nigricollis*	S	UNKN
A188	B	*Rissa tridactyla*	S	N
A063	B	*Somateria mollissima*	D	Unlikely
A063	W	*Somateria mollissima*	D	
A193	B	*Sterna hirundo*	F	N
A194	B	*Sterna paradisaea*	D	Non-det
A885	B	*Sternula albifrons*	F	30%
A887	B	*Uria aalge all others*	I	30%

Germany

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status	Pledge[39]
1110	Sandbanks which are slightly covered by sea water all the time	U1	30%
1130	Estuaries	U2	N
1140	Mudflats and sandflats not covered by seawater at low tide	U1	N
1160	Large shallow inlets and bays	U2	N
1170	Reefs	U1	30%

Marine species – Habitats Directive

MBAL

Species code	Species	Status	Pledge
1351	*Phocoena phocoena*	U2	30%
1364	*Halichoerus grypus*	U1	N
1365	*Phoca vitulina*	U1	N

Marine bird species – Birds Directive

Species code	Season	Species	Trend	Pledge
A200	W	*Alca torda*	U	N
A200	B	*Alca torda*	I	N
A062	W	*Aythya marila*	I	UNKN
A062	B	*Aythya marila*	Unk	UNKN
A067	W	*Bucephala clangula*	D	Non-det
A067	B	*Bucephala clangula*	I	Non-det
A202	W	*Cepphus grylle*	D	30%
A064	W	*Clangula hyemalis*	I	N
A009	B	*Fulmarus glacialis*	D	N
A009	W	*Fulmarus glacialis*	U	N
A002	P	*Gavia arctica*	U	30%
A002	W	*Gavia arctica*	U	30%
A001	P	*Gavia stellata*	I	30%
A001	W	*Gavia stellata*	I	30%
A890	B	*Larus argentatus argentatus*	D	Non-det

[39] 30% - 30% targets for improving trends, Non-det – non-deterioration target, ND unlikely – non-deterioration unlikely to be achieved; UNKN – reducing unknowns; N – no pledge

A182	W	*Larus canus*	D	Non-det
A182	B	*Larus canus*	D	
A489	B	*Larus fuscus all others*	I	N
A187	W	*Larus marinus*	D	Non-det
A187	B	*Larus marinus*	I	
A176	B	*Larus melanocephalus*	S	N
A604	W	*Larus michahellis*	I	N
A604	B	*Larus michahellis*	I	N
A179	B	*Larus ridibundus*	S	30%
A066	W	*Melanitta fusca*	I	N
A900	W	*Melanitta nigra s. str.*	I	N
A070	W	*Mergus merganser*	D	Non-det
A070	B	*Mergus merganser*	I	
A069	B	*Mergus serrator*	S	N
A069	W	*Mergus serrator*	I	
A016	W	*Morus bassanus*	I	N
A016	B	*Morus bassanus*	I	
A683	W	*Phalacrocorax carbo carbo*	Unk	UNKN
A391	W	*Phalacrocorax carbo sinensis*	D	Non-det
A391	B	*Phalacrocorax carbo sinensis*	S	
A007	W	*Podiceps auritus*	I	UNKN
A007	B	*Podiceps auritus*	Unk	
A007	P	*Podiceps auritus*	I	
A005	B	*Podiceps cristatus*	D	Non-det
A005	W	*Podiceps cristatus*	I	
A006	B	*Podiceps grisegena*	D	Non-det
A008	B	*Podiceps nigricollis*	D	Non-det
A008	W	*Podiceps nigricollis*	I	
A188	W	*Rissa tridactyla*	U	Non-det
A188	B	*Rissa tridactyla*	D	
A063	B	*Somateria mollissima*	I	N
A063	W	*Somateria mollissima*	I	
A193	B	*Sterna hirundo*	S	30%
A194	B	*Sterna paradisaea*	D	30%
A885	P	*Sternula albifrons*	Unk	30%
A885	B	*Sternula albifrons*	D	
A887	B	*Uria aalge all others*	I	Non-det
A887	W	*Uria aalge all others*	D	

Annex 3 - Conservation status tables – by Member State

Finland

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status
1110	Sandbanks which are slightly covered by sea water all the time	U1
1130	Estuaries	U2
1160	Large shallow inlets and bays	U2
1170	Reefs	U1
1650	Boreal Baltic narrow inlets	U2

Marine species – Habitats Directive

MBAL

Species code	Species	Status
1109	*Thymallus thymallus*	U2
1364	*Halichoerus grypus*	FV
1351	*Phocoena phocoena*	N/A
2492	*Coregonus albula*	FV
6307	*Pusa hispida botnica*	U1
6353	*Coregonus lavaretus Complex*	U1

Marine bird species – Birds Directive

Species code	Species	Season	Trend
A200	*Alca torda*	B	I
A062	*Aythya marila*	B	D
A062	*Aythya marila*	W	S
A062	*Aythya marila*	P	Unk
A067	*Bucephala clangula*	B	D
A067	*Bucephala clangula*	W	I
A202	*Cepphus grylle*	B	S
A064	*Clangula hyemalis*	B	Unk
A064	*Clangula hyemalis*	W	I
A002	*Gavia arctica*	B	I
A001	*Gavia stellata*	B	S
A862	*Hydrocoloeus minutus*	B	S
A862	*Hydrocoloeus minutus*	P	Unk
A894	*Hydroprogne caspia*	B	S

A894	*Hydroprogne caspia*	P	Unk
A890	*Larus argentatus argentatus*	B	D
A182	*Larus canus*	B	S
A640	*Larus fuscus fuscus*	B	D
A186	*Larus hyperboreus*	W	S
A187	*Larus marinus*	B	D
A179	*Larus ridibundus*	B	U
A066	*Melanitta fusca*	B	S
A066	*Melanitta fusca*	P	Unk
A066	*Melanitta fusca*	W	S
A900	*Melanitta nigra s. str.*	B	Unk
A900	*Melanitta nigra s. str.*	P	Unk
A900	*Melanitta nigra s. str.*	W	I
A070	*Mergus merganser*	B	I
A070	*Mergus merganser*	W	S
A069	*Mergus serrator*	B	D
A069	*Mergus serrator*	W	I
A391	*Phalacrocorax carbo sinensis*	B	I
A170	*Phalaropus lobatus*	B	D
A007	*Podiceps auritus*	B	D
A005	*Podiceps cristatus*	B	D
A006	*Podiceps grisegena*	B	D
A506	*Polysticta stelleri*	P	N/A
A506	*Polysticta stelleri*	W	D
A063	*Somateria mollissima*	B	D
A063	*Somateria mollissima*	W	S
A174	*Stercorarius longicaudus*	B	F
A173	*Stercorarius parasiticus*	B	S
A193	*Sterna hirundo*	B	D
A194	*Sterna paradisaea*	B	I
A885	*Sternula albifrons*	B	S
A887	*Uria aalge all others*	B	I

Estonia

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status
1110	Sandbanks which are slightly covered by sea water all the time	FV
1130	Estuaries	FV
1140	Mudflats and sandflats not covered by sea water at low tide	FV
1160	Large shallow inlets and bays	FV
1170	Reefs	FV

Marine species – Habitats Directive

MBAL

Species code	Species	Status
1364	*Halichoerus grypus*	FV
6307	*Pusa hispida botnica*	U2

Marine bird species – Birds Directive

Species code	Species	Season	Trend
A200	*Alca torda*	B	D
A062	*Aythya marila*	P	S
A062	*Aythya marila*	B	S
A062	*Aythya marila*	W	I
A067	*Bucephala clangula*	B	S
A067	*Bucephala clangula*	P	S
A067	*Bucephala clangula*	W	I
A202	*Cepphus grylle*	B	S
A064	*Clangula hyemalis*	P	S
A064	*Clangula hyemalis*	W	S
A002	*Gavia arctica*	B	S
A001	*Gavia stellata*	P	D
A862	*Hydrocoloeus minutus*	B	D
A894	*Hydroprogne caspia*	B	S
A890	*Larus argentatus argentatus*	B	D
A182	*Larus canus*	B	S
A640	*Larus fuscus fuscus*	B	D
A186	*Larus hyperboreus*	W	S
A187	*Larus marinus*	B	D
A179	*Larus ridibundus*	B	I

A066	*Melanitta fusca*	B	D
A066	*Melanitta fusca*	P	S
A066	*Melanitta fusca*	W	D
A900	*Melanitta nigra s. str.*	P	S
A900	*Melanitta nigra s. str.*	W	S
A070	*Mergus merganser*	B	D
A070	*Mergus merganser*	P	S
A070	*Mergus merganser*	W	S
A069	*Mergus serrator*	B	S
A069	*Mergus serrator*	W	S
A391	*Phalacrocorax carbo sinensis*	B	I
A391	*Phalacrocorax carbo sinensis*	P	IS
A391	*Phalacrocorax carbo sinensis*	W	I
A170	*Phalaropus lobatus*	P	Unk
A007	*Podiceps auritus*	B	D
A005	*Podiceps cristatus*	B	I
A005	*Podiceps cristatus*	P	S
A006	*Podiceps grisegena*	B	D
A506	*Polysticta stelleri*	P	D
A506	*Polysticta stelleri*	W	D
A063	*Somateria mollissima*	B	D
A063	*Somateria mollissima*	W	D
A193	*Sterna hirundo*	B	I
A194	*Sterna paradisaea*	B	I
A885	*Sternula albifrons*	B	S
A863	*Thalasseus sandvicensis*	B	S

Latvia

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status
1110	Sandbanks which are slightly covered by sea water all the time	XX
1170	Reefs	U2

Marine species – Habitats Directive

MBAL

Species code	Species	Status
1364	*Halichoerus grypus*	FV
1351	*Phocoena phocoena*	N/A
6307	*Pusa hispida botnica*	U2

Marine bird species – Birds Directive

Species code	Species	Season	Trend
A200	*Alca torda*	B	Unk
A200	*Alca torda*	W	I
A062	*Aythya marila*	P	-
A067	*Bucephala clangula*	B	S
A067	*Bucephala clangula*	P	-
A067	*Bucephala clangula*	W	U
A202	*Cepphus grylle*	W	Unk
A064	*Clangula hyemalis*	P	-
A064	*Clangula hyemalis*	W	D
A002	*Gavia arctica*	B	S
A002	*Gavia arctica*	W	U
A001	*Gavia stellata*	P	-
A001	*Gavia stellata*	W	Unk
A890	*Larus argentatus argentatus*	B	I
A182	*Larus canus*	B	D
A186	*Larus hyperboreus*	W	Ink
A179	*Larus ridibundus*	B	D
A066	*Melanitta fusca*	P	-
A066	*Melanitta fusca*	W	U
A900	*Melanitta nigra s. str.*	P	-
A900	*Melanitta nigra s. str.*	W	D
A070	*Mergus merganser*	B	S

A070	*Mergus merganser*	W	U
A069	*Mergus serrator*	B	S
A069	*Mergus serrator*	W	U
A391	*Phalacrocorax carbo sinensis*	B	S
A391	*Phalacrocorax carbo sinensis*	P	-
A170	*Phalaropus lobatus*	P	-
A005	*Podiceps cristatus*	W	U
A005	*Podiceps cristatus*	B	Unk
A005	*Podiceps cristatus*	P	-
A006	*Podiceps grisegena*	B	D
A006	*Podiceps grisegena*	W	S
A008	*Podiceps nigricollis*	B	D
A506	*Polysticta stelleri*	W	Unk
A193	*Sterna hirundo*	B	D
A194	*Sterna paradisaea*	B	D
A885	*Sternula albifrons*	B	D
A863	*Thalasseus sandvicensis*	P	-
A887	*Uria aalge all others*	W	Unk

Lithuania

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status
1130	Estuaries	FV
1170	Reefs	FV

Marine species – Habitats Directive

MBAL

Species code	Species	Status
1364	*Halichoerus grypus*	XX

Marine bird species – Birds Directive

Species code	Species	Season	Trend
A200	*Alca torda*	W	S
A062	*Aythya marila*	W	Unk
A067	*Bucephala clangula*	B	I
A067	*Bucephala clangula*	P	Unk
A067	*Bucephala clangula*	W	S
A202	*Cepphus grylle*	W	S
A064	*Clangula hyemalis*	W	D
A002	*Gavia arctica*	B	S
A001	*Gavia stellata*	W	S
A862	*Hydrocoloeus minutus*	B	Unk
A862	*Hydrocoloeus minutus*	P	D
A459	*Larus cachinnans*	B	I
A182	*Larus canus*	B	S
A186	*Larus hyperboreus*	W	S
A176	*Larus melanocephalus*	B	I
A179	*Larus ridibundus*	B	S
A066	*Melanitta fusca*	W	U
A900	*Melanitta nigra s. str.*	W	U
A070	*Mergus merganser*	B	Unk
A070	*Mergus merganser*	P	I
A070	*Mergus merganser*	W	S
A069	*Mergus serrator*	B	S
A391	*Phalacrocorax carbo sinensis*	B	S

A170	*Phalaropus lobatus*	P	Unk
A007	*Podiceps auritus*	B	F
A005	*Podiceps cristatus*	B	S
A005	*Podiceps cristatus*	P	Unk
A006	*Podiceps grisegena*	B	S
A008	*Podiceps nigricollis*	B	D
A506	*Polysticta stelleri*	W	D
A193	*Sterna hirundo*	P	Unk
A193	*Sterna hirundo*	B	D
A885	*Sternula albifrons*	B	D

Poland

Marine habitats – Habitats Directive

MBAL

Habitat code	Habitat	Status
1110	Sandbanks which are slightly covered by sea water all the time	FV
1130	Estuaries	U1
1160	Large shallow inlets and bays	U2
1170	Reefs	FV

Marine species – Habitats Directive

MBAL

Species code	Species	Status
1364	*Halichoerus grypus*	U2
1365	*Phoca vitulina*	U2
1351	*Phocoena phocoena*	U2
6307	*Pusa hispida botnica*	XX

Marine bird species – Birds Directive

Species code	Species	Season	Trend
A200	*Alca torda*	P	Unk
A200	*Alca torda*	W	D
A062	*Aythya marila*	P	S
A062	*Aythya marila*	W	Unk
A067	*Bucephala clangula*	B	Unk
A067	*Bucephala clangula*	P	Unk
A067	*Bucephala clangula*	W	I
A202	*Cepphus grylle*	W	D
A064	*Clangula hyemalis*	P	Unk
A064	*Clangula hyemalis*	W	U
A002	*Gavia arctica*	W	D
A001	*Gavia stellata*	W	F
A862	*Hydrocoloeus minutus*	B	Unk
A862	*Hydrocoloeus minutus*	P	Unk
A894	*Hydroprogne caspia*	P	Unk
A890	*Larus argentatus argentatus*	B	Unk
A890	*Larus argentatus argentatus*	P	Unk
A890	*Larus argentatus argentatus*	W	D
A459	*Larus cachinnans*	B	I

A182	*Larus canus*	B	D
A182	*Larus canus*	P	Unk
A182	*Larus canus*	W	D
A640	*Larus fuscus fuscus*	B	F
A176	*Larus melanocephalus*	B	D
A604	*Larus michahellis*	B	F
A179	*Larus ridibundus*	B	D
A179	*Larus ridibundus*	P	Unk
A179	*Larus ridibundus*	W	I
A066	*Melanitta fusca*	P	Unk
A066	*Melanitta fusca*	W	S
A900	*Melanitta nigra s. str.*	P	Unk
A900	*Melanitta nigra s. str.*	W	D
A070	*Mergus merganser*	B	Unk
A070	*Mergus merganser*	P	Unk
A070	*Mergus merganser*	W	S
A069	*Mergus serrator*	B	Unk
A069	*Mergus serrator*	P	Unk
A069	*Mergus serrator*	W	U
A391	*Phalacrocorax carbo sinensis*	B	I
A391	*Phalacrocorax carbo sinensis*	P	Unk
A391	*Phalacrocorax carbo sinensis*	W	I
A170	*Phalaropus lobatus*	P	Unk
A007	*Podiceps auritus*	W	F
A007	*Podiceps auritus*	P	Unk
A005	*Podiceps cristatus*	B	S
A005	*Podiceps cristatus*	P	Unk
A005	*Podiceps cristatus*	W	I
A006	*Podiceps grisegena*	B	F
A006	*Podiceps grisegena*	W	D
A008	*Podiceps nigricollis*	B	U
A008	*Podiceps nigricollis*	P	Unk
A063	*Somateria mollissima*	B	F
A063	*Somateria mollissima*	W	F
A194	*Sterna paradisaea*	P	Unk
A885	*Sternula albifrons*	B	Unk
A863	*Thalasseus sandvicensis*	B	D
A863	*Thalasseus sandvicensis*	P	Unk

Annex 4 – Pledge tables – by Member State

Protected area pledges

Member State	Region code	Area of marine waters	MPA Area Current	MPA Area Expected	Gain	MPA % current	MPA % new	Strict Protection Current	Strict Protection Expected	Gain	Strict protection % current	Strict protection % new
					MPA Target (figures in ha)							
Denmark	MBAL	4,625,400	525,201	748,401	223,200	11%	16%	0	52,574	52,574	0%	1%
Sweden	MBAL	14,142,200	1,860,434	2,540,434	680,000	13%	18%	0	0	0	0%	0%
Germany	MBAL	1,550,100	762,346	762,347	1[40]	49%	49%	0	0	0	0%	0%

Conservation status pledges

Member State	Biodiversity Target			
	30% target for improving trends	Non-deterioration target	Non-deterioration unlikely to be achievable	Reducing unknowns
Denmark	*MBAL*			
	Birds			
	Sternula albifrons-A885 *Alca torda-A200* *Uria aalge all others-A887*	*Larus ridibundus-A179* *Melanitta nigra s. str.-sensu stricto [excluding americana]-A900* *Phalacrocorax carbo sinensis-A391* *Somateria mollissima-A063* *Sterna paradisaea-A194*	*Aythya marila-A062* *Clangula hyemalis-A064* *Fulmarus glacialis-A009* *Somateria mollissima-A063*	*Alle alle-A203* *Gavia arctica-A002* *Larus glaucoides-A185* *Larus hyperboreus-A186* *Podiceps auritus-A007* *Podiceps nigricollis-A008*
Sweden	MBAL			
		Thymallus thymallus-1109		*Phocoena phocoena-1351*
	Birds			
			Clangula hyemalis-A064 *Mergus serrator-A069*	*Larus michahellis-A604*

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[40] It is assumed that these figures have been added to the reporting spreadsheet for technical reasons as data for Germany reports an increas of 1 for all protected areas.

Member State	Biodiversity Target			
	30% target for improving trends	Non-deterioration target	Non-deterioration unlikely to be achievable	Reducing unknowns
Germany	*MBAL*			
	1110-Sandbanks which are slightly covered by sea water all the time 1170-Reefs Phocoena phocoena-1351			
	Birds			
	Cepphus grylle-A202 *Gavia arctica-A002* *Gavia stellata-A001* *Larus ridibundus-A179* *Sterna hirundo-A193* *Sterna paradisaea-A194* *Sternula albifrons-A885*	*Bucephala clangula-A067* *Larus argentatus argentatus-A890* *Larus canus-A182* *Larus marinus-A187* *Mergus merganser-A070* *Phalacrocorax carbo sinensis-A391* *Podiceps cristatus-A005* *Podiceps grisegena-A006* *Podiceps nigricollis-A008* *Rissa tridactyla-A188* *Uria aalge all others-A887*		*Aythya marila-A062* *Phalacrocorax carbo carbo-A683* *Podiceps auritus-A007* *Sternula albifrons-A885*

Annex 5 – List of relevant LIFE projects

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE05 NAT/LV/000100	Baltic MPAs	Marine protected areas in the Eastern Baltic Sea	https://webgate.ec.europa.eu/life/publicWebsite/project/details/2583	1110 - Sandbanks which are slightly covered by sea water all the time 1140 - Mudflats and sandflats not covered by seawater at low tide 1150 - Coastal lagoons 1160 - Large shallow inlets and bays 1170 - Reefs	Sterna sandvicensis; Sterna hirundo; Sterna caspia; Sterna caspia; Sterna albifrons; Podiceps auritus; Mergus albellus; Larus minutus; Gavia stellata; Gavia arctica; Cygnus cygnus; Cygnus columbianus bewickii; Branta leucopsis; Polysticta stelleri; Chlidonias niger; Phoca hispida botnica; Halichoerus grypus; Phocoena phocoena	Inventories compiled of benthic and pelagic organisms - food web implications - creation of MPAs a strength of this project - again deals with conflict resolution with fishermen
LIFE06 NAT/DK/000159	BLUEREEF	Rebuidling of Marine Cavernous Boulder Reefs in Kattegat	https://webgate.ec.europa.eu/life/publicWebsite/project/details/2685	1170 - Reefs		Restoration resulted in 6 tonnes of macroalgae and 3 tonnes of bottom fauna, plus 700 million individual fauna. Changes in the fish community structure were also evident. Cod increased by three to six fold in the restored reef area. Potential implications for MSFD.
LIFE06 ENV/FIN/000195	STABLE	Controlled tratment of TBT-Contaminated Dredged Sediments for the beneficial use in infrastruction applications case: Aurajoki-Turku	https://webgate.ec.europa.eu/life/publicWebsite/project/details/2678			Following treatment of contaminants like TBT, dredged materials were to be reused as raw materials for infrastructure works, such as example harbour extensions.

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE07 NAT/FIN/000 151	FINMARINET	Inventories and planning marine Natura 2000 network in Finland	https://webgate.ec.europa.eu/life/publicWebsite/project/details/2855	1110 - Sandbanks which are slightly covered by sea water all the time 1150 - Coastal lagoons 1160 - Large shallow inlets and bays 1170 - Reefs 1180 - Submarine structures made by leaking gases 1610 - "Baltic esker islands with sandy, rocky and shingle beach vegetation and sublittoral vegetation 1620 - Boreal Baltic islets and small islands 1650 - Boreal Baltic narrow inlets		Production of inventories and maps for underwater habitat types and their flora and fauna in key marine Natura 2000 sites, and then use the field-collected data in GIS distribution modelling for habitats and species. Extention of the Natura 2000 network proposed.
LIFE07 ENV/EE/0001 22	BaltActHaz	Baltic actions for reduction of pollution of the Baltic Sea from priority hazardous substances	https://webgate.ec.europa.eu/life/publicWebsite/project/details/2811			Reduction of pollution of the Baltic Sea by priority hazardous substances - prepared an inventory of substances - optimised environmental permits - tools to reduce level of pollutants
LIFE08 NAT/S/00026 1	SAMBAH	Static acoustic monitoring of the Baltic Sea Harbour porpoise	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3069		Phocoena phocoena	Use of static acoustic monitoring to determine distribution patterns and hotspots for harbour porpoise in Baltc to lead to improved management
LIFE08 ENV/S/00027 1	WEBAP	Wave Energized Baltic Aeration Pump	https://webgate.ec.europa.eu/life/publicWebsite/project/details/2975			Demonstrating the technical feasibility of using a wave-powered device - WEBAP - for the aeration of coastal zones and open seas suffering oxygen depletion without harming marine organisms
LIFE09 NAT/LV/0002 38	MARMONI	Innovative approached for marine biodiversity monitoring and assessment of conservation status of nature values in the Baltic Sea	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3260	1110 - Sandbanks which are slightly covered by sea water all the time 1130 - Estuaries 1140 - Mudflats and sandflats not covered by seawater at low tide 1170 - Reefs		Production of inventories and maps for underwater habitat types and their flora and fauna outside Natura 2000 network in the Baltic - development of new ecosystem-based monitoring and assessment approaches (using marine biodiversity indicators)

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE09 NAT/LT/000234	DENOFLIT	Inventory of marine species and habitats for development of Natura 2000 network in the offshore waters of Lithuania	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3227	1170 - Reefs		Compiling inventories of marine habitats and species in offshore waters and designate new Natura 2000 sites
LIFE09 ENV/SE/000351	Mare Purum	Mare Purum - Prevention of marine fouling on commercial shipping and leisure boats with a non-toxic method	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3162			Prevention of Marine Fouling on Commercial Shipping and Leisure Boats with a Non Toxic Method
LIFE09 ENV/FI/000569	GISBLOOM	Participatory monitoring , forecasting, control and socio-economic impacts of eutrophication and algal blooms in river basin districts	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3170			Reduction in eutrophication at river basin scale (using 8 river basins) but also - critically - in coastal areas and estuaries - cites MSFD as policy traget area
LIFE10 INF/EE/000108;	BaltInfoHaz	Baltic Campaign on Hazardous substances	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3425			Baltic Info Campaign on Hazardous Substances through reduced demand for such substances by the public. Also targeted Regulations 528/2012; 1272/2008 and 850/2004
LIFE11 ENV/SE/000839	BUCEFALOS	BlUe ConcEpt For A Low nutrient/carbOn System – regional aqua resource management	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3497			To demonstrate a holistic approach for the regional coordination of sustainable resource management of aquatic biomass
LIFE11 ENV/SE/000841	BIAS	Baltic Sea Information on the Acoustic Soundscape	https://webgate.ec.europa.eu/life/publicWebsite/project/details/3498			To ensure that the introduction of underwater noise is at levels that do not adversely affect the marine environment of the Baltic Sea.
LIFE15 ENV/SE/000279	LIFE SURE	LIFE SURE - Sediment Uptake and Remediation on Ecological basis	https://webgate.ec.europa.eu/life/publicWebsite/project/details/4509			Demonstrating a cost-effective and ecologically sustainable process for retrieving and recycling sediments in shallow eutrophic waters

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE15 NAT/LV/0009 00	LIFE CoHaBit	Coastal Habitat Conservation in Nature Park 'Piejura'	https://webgate.ec.europa.eu/life/publicWebsite/project/details/4568	1150 - Coastal lagoons 1630 - Boreal Baltic coastal meadows 2110 - Embryonic shifting dunes 2120 - Shifting dunes along the shoreline with Ammophila arenaria ("white dunes") 2130 - Fixed coastal dunes with herbaceous vegetation ("grey dunes")		Mitigating heavy anthropogenic pressures and restoring vulnerable coastal habitats of Piejūra Nature Park
LIFE17 NAT/DK/0004 98	Better BirdLIFE	Improvement of natural habitats for coastal birds in the West Baltic Sea	https://webgate.ec.europa.eu/life/publicWebsite/project/details/4853		Arctic tern (Sterna paradisaea), Common eider (Somateria mollissimaporpoise), Common tern (Sterna hirundo), Corn crake (Crex crex), Dunlin (Calidris alpina), European golden plover (Pluvialis apricaria), Greater scaup (Aythya marila), Little tern (Sterna albifrons), Pied avocet (Recurvirostra avocetta), Red-breasted merganser (Mergus serrator), Ruff (Philomachus pugnax), Sandwich tern (Sterna sandvicensis), Short-eared owl (Asio flammeus), Spotted crake (Porzana porzana)	Improving the conservation status of the 14 bird species and 10 habitat types targeted within the project area - component of marine habitat restoration to improve food areas for birds (offshore) - recreation of 30 ha of stone reefs
LIFE17 CCA/SE/000 048	LIFE CoastAdapt	Coastal adaptation to climate change by multiple ecosystem-based measures	https://webgate.ec.europa.eu/life/publicWebsite/project/details/4980			The project has one element to recreate natural reef structures for macroalgae this is a new technique and is done primarily for coastal protection as a by-product it will create valuable habitat for invertebrates and fish

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE17 NGO/SE/100 040	CCB	Coalition Clean Baltic	https://webgate.ec.europa.eu/life/publicWebsite/project/details/4783			Coalition Clean Baltic (CCB) is a regional network of environmental NGOs committed to protecting and improving the environment of the Baltic Sea catchment area, which includes members from the EU along with Belarus, Russia and Ukraine.Specific objectives of the work plan include the incorporation of climate change adaptation into the full range of EU policies, from the management of migratory fish to the provision of drinking water. CCB also aims to engage other NGOs and civil society in consultation initiatives that promote the Baltic Sea, through expert contributions and public participation in decision-making.
LIFE17 NAT/FI/0005 44	CoastNet LIFE	Restoring the Baltic coastal habitat networks	https://webgate.ec.europa.eu/life/publicWebsite/project/details/4954	1230 - Vegetated sea cliffs of the Atlantic and Baltic Coasts 1610 - "Baltic esker islands with sandy, rocky and shingle beach vegetation and sublittoral vegetation" 1620 - Boreal Baltic islets and small islands 1630 - Boreal Baltic coastal meadows	Common redshank (Tringa totanus)	Improving the conservation status of Natura 2000 sites along the Baltic coastal zone by carrying out restoration work on four types of habitat: boreal Baltic islets and small, open habitats; mosaics of herb-rich, broad-leaved forests and semi-natural habitats; sun-lit habitats; as well as large coastal meadows and new forests on previously uncolonised land
LIFE19 NAT/LV/0009 73	LIFE REEF	Research of marine protected habitats in EEZ and determination of the necessary conservation status in Latvia	https://webgate.ec.europa.eu/life/publicWebsite/project/details/5358	1110 - Sandbanks which are slightly covered by sea water all the time 1170 - Reefs	invasive fish species round goby (Neogobius melanostomus)	Main aim is to improve the conservation status of the protected habitats and contribute to a comprehensive management system of marine protected areas in Latvia.
LIFE19 NAT/FI/0008 32	Saima seal LIFE	Working together to save the Saimaa Ringed Seal in changing environment	https://webgate.ec.europa.eu/life/publicWebsite/project/details/5365		*Pusa hispida botnica* *Pusa hispida saimensis*	Saimaa Seal LIFE project will enhance the implementation of the Saimaa ringed seal conservation strategy and action plan, with the aim of achieving a 5% annual population growth to reach a population size of 500 550 individuals at the end of the project. Nature conservation areas will also be established in the essential breeding grounds of the Baltic ringed seal to improve breeding conditions.

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE20 IPE/FI/000020	BIODIVERSEA	Enhancing the marine and coastal biodiversity of the Baltic Sea in Finland and promoting the sustainable use of marine resources	https://www.metsa.fi/en/project/biodiversea-eng/	1110 - Sandbanks which are slightly covered by sea water all the time 1170 - Reefs	Bladder Wrack (*Fucus vesiculosus*) and Charophytes (*Charophyta*), examine ways to boost the populations of the critically endangered Grayling (*Thymallus thymallus*) in the northern Gulf of Bothnia	Biodiversea LIFE IP is the largest collaborative project carried out in Finland to safeguard the biodiversity of the Baltic Sea. The main aim of the project is to enhance the protection of marine nature and promote the sustainable use of natural resources in the marine and coastal areas of Finland.Particularly extensive mappings of areas with protection potential will be carried out in the marine areas around Åland Islands, of which only three per cent are currently protected. The MPA-network on Åland will be expanded by at least 850 km2, reaching the minimum target of 10 % protection for the marine areas in Åland.To promote the restoration of habitats of marine species, the project will include a restoration plan covering the entire Finnish coastline.
LIFE20 CCM/SE/001589	NOVIOCEAN	Upscaling and demonstration of NoviOcean, a breakthrough wave energy converter : The Hydro Power Plant at Sea	https://webgate.ec.europa.eu/life/publicWebsite/project/details/5542			The overall objective of the LIFE NOVIOCEAN project is to demonstrate a new, highly innovative concept for wave energy much more cost efficient than existing wave energy converters. It will construct a pilot unit to validate the wave energy converters (WEC) components and systems on an industrially-relevant scale.
LIFE21-NAT-EE-LIFE	Baltic Sturgeon	Bringing back the extinct sturgeon into the North-Eastern Baltic Sea	https://webgate.ec.europa.eu/life/publicWebsite/project/details/101074368		Baltic Strugen (*Acipenser oxyrinchus*)	In case of the extinct species, the re-introduction together with the elimination of the adverse factors, is the only way for the re-establishment of the viable population of A. oxyrinchus in Baltic Sea region. This project will initiate the recovery of the sturgeon population in the North-Eastern area of the Baltic Sea. The introduction of juvenile sturgeons into the River Narva and River Pärnu, the most important historical sturgeon spawning rivers in the region, will be launched.

Reference	Project acronym	Project title	Website	Habitats	Species	Summary
LIFE22-NAT-NL-LIFE-CIBBRiNA/10 111430	LIFE CIBBRiNA	Coordinated Development and Implementation of Best Practice in Bycatch Reduction in the North Atlantic, Baltic and Mediterranean Regions	https://webgate.ec.europa.eu/life/publicWebsite/project/details/101114301			Incidental bycatch has been identified as one of the major threats to marine species worldwide. The LIFE CIBBRiNA project aims to address this issue by setting up a European flagship initiative in which fishers, scientists, fisheries and environment ministries and NGOs from 13 European countries will work jointly to minimize incidental bycatch in fisheries which have a high risk of bycatch of priority marine mammals, birds, turtles, sharks and rays and to work towards transparent and environmentally and socioeconomically sustainable fisheries in the Northeast Atlantic, Baltic and Mediterranean regions.