JNCC Report 794

Technical document for an Official Statistic in Development for the 25 Year Environment Plan Outcome Indicator C6: Diverse seas: status of threatened and declining features

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April 2025

ISSN 0963 8091

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This document should be cited as:
Kenworthy J., and Woodcock K. 2025. Technical document for an Official Statistic in Development for the 25 Year Environment Plan Outcome Indicator C6: Diverse seas: status of threatened and declining features. *JNCC Report 794*. JNCC, Peterborough, ISSN 0963-8091. https://hub.jncc.gov.uk/assets/4624a05d-4f40-429d-8504-1085155b6d59.

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Summary

The status of threatened and declining marine features in the UK are reported under various national legislation or international agreements. The C6 indicator: “Diverse Seas: status of threatened and declining features” is being developed as part of the 25 Year Environment Plan Outcome Indicator Framework. This indicator is designed to quantify the status of vulnerable features flagged for protection by producing summary statistics based on published status assessments.

Initial C6 assessments have been undertaken using UK-relevant information published by OSPAR and Article 17 Habitats Directive assessments (this reporting requirement has since been translated into the Habitats Regulations). OSPAR assessments relevant to the UK were derived from status assessments published by OSPAR’s Intersessional Correspondence Group on the Protection of Species and Habitats (ICG-POSH) between 2019 and 2023, and the OSPAR Quality Status Report (2023). These were analysed alongside assessments of marine and coastal features, relevant to the UK, published under the Article 17 UK Habitats Directive Reporting process, in 2007, 2013 and 2019.

The C6 indicator provides a high-level summary of the status of marine and coastal features relevant to the UK listed under these two assessment sources (OSPAR and Article 17). To achieve this, the indicator results summarise the status assessments of listed features under different categories: habitats, marine mammals, marine birds, fish and reptiles.

In OSPAR Regions II and III (which are most relevant to the UK), the majority of assessed features listed as threatened and/or declining in the OSPAR QSR (2023) are in Poor status (23 out of 28 features in Region II, and 23 out of 27 features in Region III). Only three features were in Good status in Region II and only one feature was in Good status in Region III. The status of the remaining assessed features were Unknown.

In the fourth UK Article 17 reporting round (in 2019), 17 out of 31 assessed features were in Unfavourable status which included the majority of habitat features. The trend assessment for the majority of habitat features was either Stable or Unknown. The status for the majority of marine mammal features and the single reptile species were Unknown. The only species in Favourable status was the grey seal. An assessment of change between reporting periods was also conducted; however, due to methodological differences between assessment periods, any changes in status should be interpreted with caution.

These statistics will be used to inform biodiversity reporting and commitments under the 25 Year Environment Plan. JNCC aims to develop and improve the statistic in ways that will support this work and inform non-governmental stakeholders and the wider public.

Contents

1. Introduction

This report provides the technical and methodological background for the "Diverse Seas: status of threatened and declining features" indicator, which is in development for the Outcome Indicator Framework (OIF). The initial concept was published in 2024 (Kenworthy *et al*. 2024) and subsequently included as part of the OIF as Indicator C6. The indicator is being developed as an Official Statistic in Development. Official Statistics in Development represent a subset of official statistics that are still undergoing the process of further development and evaluation in line with the Code of Practice for Statistics. Further information can be found on the Office for Statistics Regulation website.

1.1. Policy context

The indicator "Diverse Seas: status of threatened and declining features" has been developed for the OIF, which is a suite of indicators describing environmental change relating to the ten goals of the 25 Year Environment Plan (Defra 2018). The 25 Year Environment Plan and its subsequent update, the Environmental Improvement Plan (Defra 2023a), set out government action to help the environment "regain and retain good health." The 25 Year Environment Plan Outcome Indicators are voluntarily compliant with the UK's Code of Practice for Statistics, which advocates that users' interests should be at the core of indicator development.

The indicator, hereafter referred to as C6 in reference to its OIF designation, has been developed to quantify the vulnerable features flagged for protection, either listed in national legislation or international agreements. These include the features of conservation interest protected in Marine Protected Areas, Natural Environment and Rural Communities Act Section 41 habitats and species of principle importance for conservation, and under the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), amongst others. The indicator is derived from the status of the individual features and presents a marine-specific UK summary of published assessments and, therefore, supports harmonised reporting of evidence amongst national and international commitments.

1.2. Development of the C6 indicator

C6 is designed to quantify the status of vulnerable marine features flagged for protection by summarising published status assessment results. It provides a high-level summary for listed features, utilising assessments from: the OSPAR List of Threatened and/or Declining Species and Habitats (T&D list); and Article 17 reporting of Annex I habitats and Annex II, IV and V species under the Habitats Directive. The methodology outlined in this document builds on the initial concept for C6 (Kenworthy et al. 2024) and now includes an assessment of trends, where available.

This indicator incorporates assessments derived from UK-relevant information published by OSPAR's Intersessional Correspondence Group on the Protection of Species and Habitats (ICG-POSH). Additionally, the latest OSPAR Quality Status Report (QSR) was published in 2023 (OSPAR, 2023a), and provides an assessment and numerical summary of the status of features on the OSPAR T&D list. For this indicator, the aim is to use existing OSPAR publications, with updates to the indicator when new status assessments become available.

Further assessments are derived from Article 17 UK Habitats Directive feature reports which consider the conservation status of Annex I habitats and Annex II, IV and V species. These are habitats and species for which the UK had European level conservation responsibilities.

The conservation status of only coastal and marine features will be used to develop the C6 indicator.

The fourth UK Article 17 report was submitted to the EU in 2019 (JNCC, 2019) and provided the third assessment of the conservation status of features. Previous reports can be found on The National Archives website. The results of these assessments are summarised in the UK Biodiversity Indicators (UKBI): Status of UK habitats of European importance; and Status of UK species of European importance (Defra, 2024). However, these UK Biodiversity Indicators do not provide a marine narrative.

As the UK has now left the EU, provision for Article 17 reporting has been included in the Statutory Instruments amending the Habitats Regulations in England and Wales, Scotland and Northern Ireland. The Habitats Regulations stipulates that reporting must be completed within six years of EU Exit Day and every six years thereafter. Country level reporting must be followed by a UK composite report within two years of the last country level report. Therefore, the aim will be to continue drawing on this dataset when new status assessments become available.

While there is some crossover between features listed under OSPAR and Article 17, the dates of assessment, and, in some cases, the methodologies used for status assessment may be different. Furthermore, Article 17 features are much broader than OSPAR T&D features, therefore no integration will be made, and the assessments should be interpreted separately to formulate a combined C6 assessment. The C6 indicator will be flexible, with intended scope for integration with wider datasets, where relevant data are publicly available.

1.3. Methodology

The datasets used for the C6 indicator are derived from published sources: Article 17 reporting and OSPAR status assessments. The C6 indicator utilises these published sources to create a summary of the status of threatened and declining marine species and habitats in the UK. The methodologies used to determine overall status within these source assessments are not described here, but are detailed within the source publications (JNCC, 2019; OSPAR, 2023a). This report provides an overview of the process implemented to summarise results from these respective assessments sources for the C6 indicator.

When interpreting the results of the C6 indicator, it should be noted that the temporal data analysed in Article 17 reporting and OSPAR status assessments did not align. Article 17 assessments were conducted in 2007, 2013, and 2019. For each assessment year, and where sufficient data was available, assessments of status utilised data collected during the preceding six years, and assessments of trends utilised data over the preceding 12 years. Additionally, within each assessment year, all habitats and species were assessed simultaneously. In contrast, OSPAR status assessments included in this report were assessed on an individual basis within a five-year period, between 2019 and 2023. Furthermore, OSPAR status assessments do not have a prescribed temporal range of analysis; however, assessments should have covered the period from the previous published status assessment for the feature and / or when the feature was included on the OSPAR List. For details on how the C6 indicator will aim to address these gaps in temporal alignment during future updates, please see Section 1.4.

1.3.1. OSPAR Threatened and/or Declining Species and Habitats

The OSPAR component of the C6 indicator is predominantly based on OSPAR ICG-POSH status assessments published between 2019 and 2023. OSPAR ICG-POSH assessments completed between 2019 and 2023 were summarised in the latest OSPAR QSR (OSPAR, 2023a). These assessments related to features on the OSPAR List of Threatened and/or Declining (T&D) Species and Habitats, which incorporates multiple habitats, fish, birds, marine mammals and reptiles (OSPAR, 2019).

OSPAR ICG-POSH status assessments were only included in the C6 indicator where they were geographically relevant to UK waters. Assessments of feature status in published OSPAR assessments are completed for each OSPAR Region. The boundaries of these Regions do not align with the national boundaries of OSPAR Contracting Parties' waters. However, OSPAR Regions II and III have the largest overlap with UK waters. In contrast, only small sections of Regions I, IV and V cross into UK waters. Therefore, for the purpose of the C6 indicator, only OSPAR status assessments for features in Region II (Greater North Sea) and Region III (Celtic Seas) were considered.

It is important to note that the incorporation of OSPAR assessments, based on Regions that extend beyond UK waters, encapsulated datasets from outside the UK. It was not possible to disaggregate UK only datasets for the purpose of this indicator, which is based on published assessments. The status reported as part of the C6 indicator is, therefore, representative of each OSPAR Region, and not specific to the part of the Region that is within UK waters. However, the C6 indicator only included T&D features which are known to occur in UK waters.

Where published OSPAR ICG-POSH status assessments had not been conducted for features relevant to the UK at the time of reporting, alternative published OSPAR assessments were consulted. Harbour porpoise and roseate tern were two features relevant to the UK that did not have OSPAR ICG-POSH status assessments at the time of reporting. However, relevant assessments were made through other methods published as part of the OSPAR QSR 2023. The harbour porpoise was assessed by applying the OSPAR Common Indicators for abundance and distribution (M4) and by-catch (M6) (OSPAR 2023b). Roseate tern was assessed as part of the OSPAR integrated assessment of marine birds (OSPAR 2023c). Therefore, harbour porpoise and roseate tern were included under the C6 indicator OSPAR analysis, based on the aforementioned OSPAR assessment results. Any remaining features with no published OSPAR status assessment were included in this report but were classified as 'Not Assessed'.

To summarise the final results based on OSPAR assessments for the C6 indicator, the total number of features in each status category, within each feature category (habitats, fish, marine mammals, birds and reptiles), and within each OSPAR Region were calculated. Under OSPAR reporting, assessments conclude whether a feature is in a Good, Poor or Unknown status within each OSPAR Region. The number of features in each respective status category were summarised in both graphical and tabular formats, to facilitate communication of results. Tables were also created based on those presented under the OSPAR QSR 2023 (OSPAR, 2023a) thematic assessments for benthic habitats, fish, marine mammals and birds, representing a summary of published assessments. However, there was insufficient data to facilitate an assessment of trends in status based on published OSPAR assessments.

1.3.2. Article 17 features

The C6 indicator component examining Article 17 features is based on the published results from the previous Article 17 reports published in 2007, 2013 and 2019. The C6 indicator uses a similar approach to assessing Article 17 results and combining status and trend as defined by the UKBI Status of threatened habitats and Status of threatened species indicators (Defra, 2024). However, in contrast to the UKBI indicators, the C6 indicator focuses only on marine and coastal features.

The UK Article 17 Habitats Directive Reporting assesses the conservation status of eight coastal habitats, eight marine habitats and 16 marine species. A further 26 marine species are considered vagrant species under Article 17; however, no status assessments were made on these 26 species. Therefore, vagrant species were excluded from the C6 indicator. Additionally, within each Article 17 reporting year (2007, 2013, and 2019), the same marine features were assessed, which enabled a comparison of conservation status over time.

The 16 species assessed under Article 17 reporting included two species of maerl, which are calcareous habitat-forming species. There are at least four species of maerl in the UK, which are difficult to distinguish without genetic identification. Due to difficulties in distinguishing between species, in 2019 the same report was submitted for the two species assessed under Article 17 reporting. Therefore, for the purposes of the C6 indicator, maerl was considered as a single marine habitat feature. As a result of this adaptation, the C6 indicator summarised the conservation status of nine marine habitats, eight coastal habitats, and 14 marine species.

Under Article 17 reporting, assessments must determine a feature's conservation status and, where appropriate, the trend in conservation status. The following conservation status groups are used in Article 17 assessments: Favourable, Unfavourable-Inadequate, Unfavourable-Bad or Unknown. For features in Unfavourable-Inadequate or Unfavourable-Bad status, a trend assessment is conducted to determine if the habitat is Improving, Declining, Stable or Unknown. No trend assessments are assigned to habitats or species in Favourable Status under Article 17 reporting.

To report status and trends together for the C6 indicator, assessments of status and trends were combined. For example, a feature with Unfavourable Bad status, and a Declining trend was labelled as Unfavourable-Bad Declining. To facilitate high-level summaries of results, in some instances, the different Unfavourable status categories were combined. For example, Unfavourable-Inadequate Declining, and Unfavourable-Bad Declining were summed to form the category Unfavourable Declining.

The final C6 indicator results based on Article 17 reports aimed to summarise the total number of features in each status and trend category, within each feature category (coastal habitats, marine habitats, marine mammals and reptiles) for each assessment year (2007, 2013, and 2019). Summary results for marine species were separated into marine mammals and marine reptiles to facilitate coherence with OSPAR assessments. For the same reason, the results text describes overall summary results for both marine and coastal habitats, collectively, as one marine habitat group. Nevertheless, separate assessments were conducted for marine and coastal habitats to retain the detail provided in Article 17 reporting, and the collective summaries were based on the respective assessments for marine and coastal habitats presented via graphs and tables

As Article 17 reports are only published every six years, there were limited data points to inform an accurate trend. Furthermore, there were methodological differences in assessment for both habitats and species in 2019 which resulted in changed status for multiple habitats and species (see JNCC, 2019 and The National Archives website for more information). In

2019, for marine mammals, the approach implemented to handle limited data and interpret guidance for setting Favourable Reference Values was revised. For habitats, the method used to determine both status and trends was altered. Therefore, the latest (2019) datapoint, represents the most accurate narrative of status and trend and caution is advised when comparing assessments to previous years.

1.4. Development plan and update frequency

This statistic is being published as an Official Statistic in Development in order to facilitate user involvement in its development. JNCC will continue to seek feedback on and develop the C6 indicator. Opinions and feedback will be sought to ascertain the accuracy and applicability of this indicator, and to ensure it is of sufficient quality. Stakeholders include: marine habitats and species specialists; 25 Year Environment Plan / OIF and policy experts; technical experts and country agencies involved in Article 17 / Habitats Regulations reporting; and OSPAR groups (e.g. ICG-POSH). The statistic will be deemed sufficient quality once it fully meets the needs of the OIF C6 indicator. As outlined above, this statistic is required to provide an indicator on threatened and declining marine features in the UK, which will be used to track progress against the goals outlined in the 25 Year Environment Plan.

The frequency of updates to this indicator will be decided as part of the ongoing evaluation of this indicator. Future updates are dependent on the frequency of publication of the underlying datasets and assessment cycles. Continued development and user feedback would be expected throughout 2025/2026, with a finalised version expected in line with the future publication cycle of the underlying datasets. Habitats Regulations assessments for the UK will be expected by 2028, which is likely to be the next major milestone for updating this statistic. Additional OSPAR status assessments will also continue to be produced throughout this period and can be incorporated during the next update. Therefore, the next update of this indicator will be based on more recent conservation status assessments from both key sources, and there will be an increased overlap in the temporal range assessed within both sources. Future updates of the C6 indicator are, therefore, expected to provide a more temporally coherent and current summary of the conservation status of threatened and declining marine features in UK waters.

2. Status of threatened and declining features: Results

2.1. OSPAR Threatened and/or Declining Species and Habitats

The majority of threatened and / or declining features were in Poor status in both OSPAR Regions (Table 1 and Figure 1). In Region II, 23 out of 28 assessed features (82%) were in Poor status. In Region III, 23 out of 27 assessed features (85%) were in Poor status. Conversely, only a small number of features were in Good status in both Regions (Table 1; Figure 1). In Region II, three features were in Good status, and in Region III one feature was in Good status (Table 1, Figure 1, Table 2 and Table 3). The remaining threatened and / or declining features in Regions II and III were either Not Assessed, or an assessment was conducted but their status remained Unknown.

Table 1: Total number of UK relevant OSPAR Threatened and / or Declining species and habitats in OSPAR Regions II and III in the following status classifications: Good, Poor, Unknown and Not Assessed. Assessments of Good, Poor and Unknown status were based on published OSPAR assessments; Unkown status refers to features that were assessed but insufficient information was available to determine status. Not Assessed refers to features with no available OSPAR assessment at the time of this analysis.

Status	Number of Features in Region II	Number of Features in Region III
Good	3	1
Poor	23	23
Unknown	2	3
Not Assessed	12	12

The majority of threatened and / or declining features were in Poor status within each individual category of birds, fish, habitats, marine mammals, and reptiles (Figure 1, Table 2 and Table 3). At time of analysis, there had been no assessment of any invertebrate species. Fish represented the largest individual threatened and / or declining category; 10 out of 13 assessed species (77%) were in Poor status in Region II, and 12 out of 15 assessed species (80%) were in Poor status in Region III. Habitats were the second largest category; eight out of nine assessed habitats (89%) were in Poor status in Region II and six out of seven assessed habitats (86%) were in Poor status in Region III. Birds, marine mammals and reptiles were notably small categories, with three or less UK relevant features in each category. Nevertheless, Poor status remained prevalent and roseate tern was the only feature across these categories not in Poor status.

Full details on assessment results for birds, fish, habitats, marine mammals and reptiles, broken down by feature, are provided in Table 2 and Table 3, for Region II and Region III respectively.

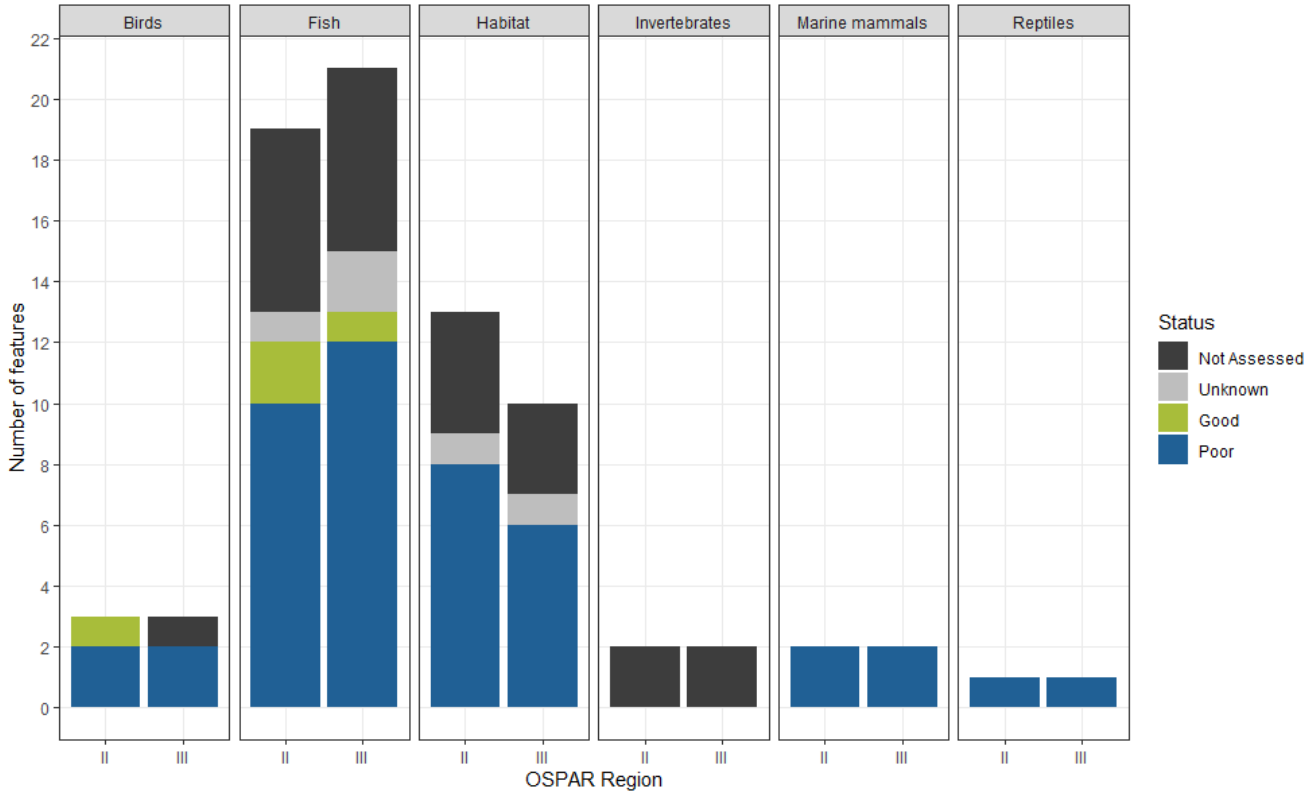

Figure 1: Status of UK relevant OSPAR Threatened and/or Declining Species and Habitats across OSPAR Regions II and III within each feature group (birds, fish, habitats, invertebrates, marine mammals, and reptiles). Assessments of Good, Poor and Unknown status were based on published OSPAR assessments; Unknown status refers to features that were assessed but insufficent information was available to determine status. Not Assessed refers to features with no published OSPAR assessment at the time of this analysis.

Table 2: Greater North Sea (Region II) assessment summary of OSPAR Threatened and/or Declining Species and Habitats. Data are derived from OSPAR QSR (2023). A distinction has been made between features that are in Unknown status (have a published OSPAR assessment but it was not possible to determine status in Region II due to insufficient information), and those that are listed under OSPAR Threatened and/or Declining features (OSPAR, 2019), but do not yet have a published status assessment.

Category	Threatened and / or Declining Species and Habitats overview	Habitats/species in Poor status	Habitats/species in Good status	Unknown	Not Assessed
Habitats	Eight out of nine OSPAR listed habitats assessed are in poor status	Coral gardens Deep-sea sponge aggregations Intertidal mud flats Intertidal *Mytilus edulis* beds on mixed and sandy sediments *Lophelia pertusa* reefs Maerl beds Sea-pen and burrowing megafauna communities *Zostera* beds	None	European flat oyster (*Ostrea edulis*) beds	Kelp forest Littoral chalk communities *Modiolus modiolus* beds *Sabellaria spinulosa* reefs
Fish	Ten out of Thirteen OSPAR listed fish species assessed are in poor status	Allis shad Angel shark Basking shark Common skate Eel Salmon Sea lamprey Spurdog Sturgeon White skate	Spotted ray Thornback skate/ray	Porbeagle shark	Bluefin tuna Cod Houting Long-snouted seahorse Orange roughy Short-snouted seahorse

Category	Threatened and / or Declining Species and Habitats overview	Habitats/species in Poor status	Habitats/species in Good status	Unknown	Not Assessed
Birds	Two out of three OSPAR listed bird species assessed are in poor status	Balearic shearwater Black-legged kittiwake	Roseate tern [see note 2]	None	None
Mammals	Two out of two OSPAR listed marine mammal species assessed are in poor status	Harbour porpoise [see note 1] Northern right whale	None	None	None
Reptiles	One out of one OSPAR listed marine reptile species assessed are in poor status	Leatherback turtle	None	None	None
Invertebrates	Listed marine invertebrate species were not assessed	None	None	None	Dogwhelk Ocean Quahog

Note 1: The harbour porpoise was assessed by applying the common indicators for abundance and distribution (M4) and by-catch (M6)

Note 2: Roseate tern did not have a published status assessment at the time of this analysis. However, the species has been assessed as part of the OSPAR integrated assessment of marine birds.

Table 3: Celtic Seas (Region III) assessment summary of OSPAR Threatened and/or Declining Species and Habitats. Data are derived from OSPAR QSR (2023). A distinction has been made between features that are in Unknown status (have a published OSPAR assessment but it was not possible to determine status in Region II due to insufficient information), and those that are listed under OSPAR Threatened and/or Declining features (OSPAR, 2019), but do not yet have a published status assessment.

Category	Threatened and / or Declining Species and Habitats overview	Habitats/species in Poor status	Habitats/species in Good status	Unknown	Not Assessed
Habitats	Six out of seven OSPAR Listed habitats assessed are in poor status	European flat oyster (*Ostrea edulis*) beds Intertidal mud flats *Lophelia pertusa* reefs Maerl beds Sea-pen and burrowing megafauna communities *Zostera* beds	None	Intertidal *Mytilus edulis* beds on mixed and sandy sediments	Kelp forest *Modiolus modiolus* beds *Sabellaria spinulosa* reefs
Fish	Twelve out of Fifteen OSPAR Listed habitats assessed are in poor status	Allis shad Angel shark Basking shark Common skate Eel Leafscale gulper shark Portuguese dogfish Salmon Sea lamprey Spurdog Sturgeon White skate	Thornback skate/ray	Porbeagle shark Spotted ray	Bluefin tuna Cod Houting Long-snouted seahorse Orange roughy Short-snouted seahorse

Category	Threatened and / or Declining Species and Habitats overview	Habitats/species in Poor status	Habitats/species in Good status	Unknown	Not Assessed
Birds	Two out of two OSPAR listed bird species assessed are in poor status	Balearic shearwater Black-legged kittiwake	None	None	Roseate tern [see note 2]
Mammals	Two out of two OSPAR listed marine mammal species assessed are in poor status	Harbour porpoise [see note 1] Northern right whale	None	None	None
Reptiles	One out of one OSPAR listed marine reptile species assessed are in poor status	Leatherback turtle	None	None	None
Invertebrates	Listed marine invertebrate species were not assessed	None	None	None	Dogwhelk Ocean Quahog

Note 1: The harbour porpoise was assessed by applying the common indicators for abundance and distribution (M4) and by-catch (M6).

Note 2: Roseate tern did not have a published status assessment at the time of this analysis. However, the species has been assessed as part of the OSPAR integrated assessment of marine birds.

2.2. Article 17 features

2.2.1. Conservation status of UK marine habitats and species 2007 to 2019

The conservation status of species and habitats assessed under Article 17 reporting in the UK has changed over time (Figure 2). However, due to differences in methodologies between years, and the limited number of datapoints, inferences of changes in conservation status over time should be made with caution. Trend assessments were made for each feature within each year of assessment (Table 4), which represent a more accurate assessment of trends in condition for each feature. The latest 2019 assessment provides the most accurate representation of trend for each feature and is discussed in Section 2.2.2.

Across both marine and coastal habitats, the majority of habitat features were classified as Unfavourable across all three reporting periods (Figure 2). In both 2007 and 2013, 14 habitats (or 82%) were Unfavourable, and in 2019, 16 habitats (or 94%) were Unfavourable. The remaining habitats were in Unknown status, meaning no habitat features were in Favourable status. Results from trend assessments within year changed over time. Comparing the first and latest trend assessments, in 2007, ten out of 17 assessed habitats (59%) were classed as Declining, whereas in 2019, three habitats (18%) were classed as Declining (Table 4). It should be noted that in 2019, the method used to determine trend changed, therefore, this should not be seen as an improvement. In addition, there was an increase in the number of features where trend was assessed as Unknown.

Regarding the species assessments, conservation status varied over time for marine mammals but remained the same for marine reptiles. For marine mammals, a change in assessment methodology created a reduction in the number of features in Favourable status (Figure 2). There were six in Favourable status in 2007, eight in 2013, and one in 2019. As a result of these methodological changes, most marine mammals were assessed as Unknown in 2019. Only one marine mammal (common seal) was classed as Unfavourable in each assessment year; however, the trend for this species varied over time. For reptiles, only one species was assessed under Article 17 and this was classed as Unknown in all three time points (Figure 2).

Summaries of assessment results for habitats (coastal and marine), mammals and reptiles are provided in Table 4.

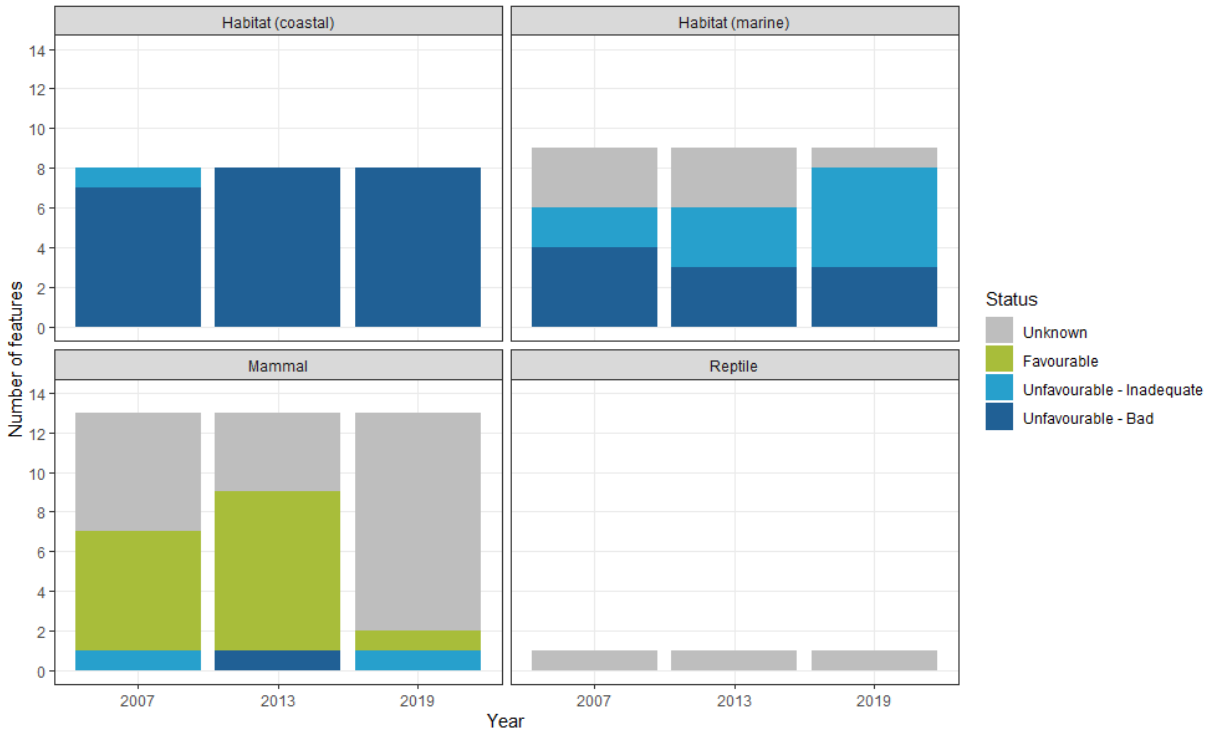

Figure 2: Status of Article 17 listed coastal and marine features in the UK in 2007, 2013, and 2019. This figure provides a breakdown of the number of habitats and species in Favourable, Unfavourable - Inadequeate, Unfavourable - Bad, and Unknown status.

Table 4: Summary of the combined conservation status and trend assessment by year for each category of Article 17 listed coastal and marine features in the UK. Table indicates the number of features within each conservation status | Trend group.

Date	Category	Favourable	Unfavourable - Bad | Declining	Unfavourable - Bad | Improving	Unfavourable - Bad | Stable	Unfavourable - Bad | Unknown	Unfavourable - Inadequate | Declining	Unfavourable - Inadequate | Stable	Unfavourable - Inadequate | Unknown	Unknown
2007	Habitat (coastal)	0	4	3	0	0	1	0	0	0
2013	Habitat (coastal)	0	0	3	5	0	0	0	0	0
2019	Habitat (coastal)	0	3	0	3	2	0	0	0	0
2007	Habitat (marine)	0	4	0	0	0	1	1	0	3
2013	Habitat (marine)	0	1	1	1	0	1	2	0	3
2019	Habitat (marine)	0	0	0	0	3	0	3	2	1
2007	Mammals	6	0	0	0	0	0	1	0	6
2013	Mammals	8	1	0	0	0	0	0	0	4
2019	Mammals	1	0	0	0	0	0	0	1	11
2007	Reptiles	0	0	0	0	0	0	0	0	1
2013	Reptiles	0	0	0	0	0	0	0	0	1
2019	Reptiles	0	0	0	0	0	0	0	0	1

2.2.2. Conservation status of UK marine habitats and species in 2019

In 2019, more than 50% of features assessed under Article 17 reporting were in Unfavourable status (Figure 3 and Table 5). Of the 31 features assessed across coastal and marine habitats, mammals and reptiles, 17 (or 55%) were in Unfavourable status. Variable trends were observed for features in Unfavourable status (Stable, Declining and Unknown), no features were considered to be Improving. Only one feature was in Favourable status: the grey seal. However, there were also considerable gaps in our understanding of feature status, and over a third of assessed features (13 features equating to 42%) had Unknown status.

Across marine and coastal habitats, 16 of the 17 features (or 94%) were in Unfavourable status (Figure 3 and Table 6). Unfavourable-Bad status alone was observed in 11 habitat features (65%), and five features (29%) were in Unfavourable-Inadequate status. The trends in status for Unfavourable habitats varied: seven were Unknown, six were Stable and three were Declining. The only habitat feature not in an Unfavourable status was Submarine structures made by leaking gases, which had an Unknown status.

In contrast to marine and coastal habitats, Unknown status was the most prevalent status category among marine species assessed in 2019 (Figure 3 and Table 6). Within marine mammals, 11 out of 13 species (or 85%) had Unknown status. Regarding the remaining two species, the grey seal was in Favourable status, and the common seal was in Unfavourable-Inadequate status with an Unknown trend. Only one species of marine reptile (the leatherback turtle) was assessed under Article 17 reporting, and its status was also considered Unknown.

For detailed information on assessment results for habitats (coastal and marine), mammals and reptiles, broken down by feature, are provided in Table 5.

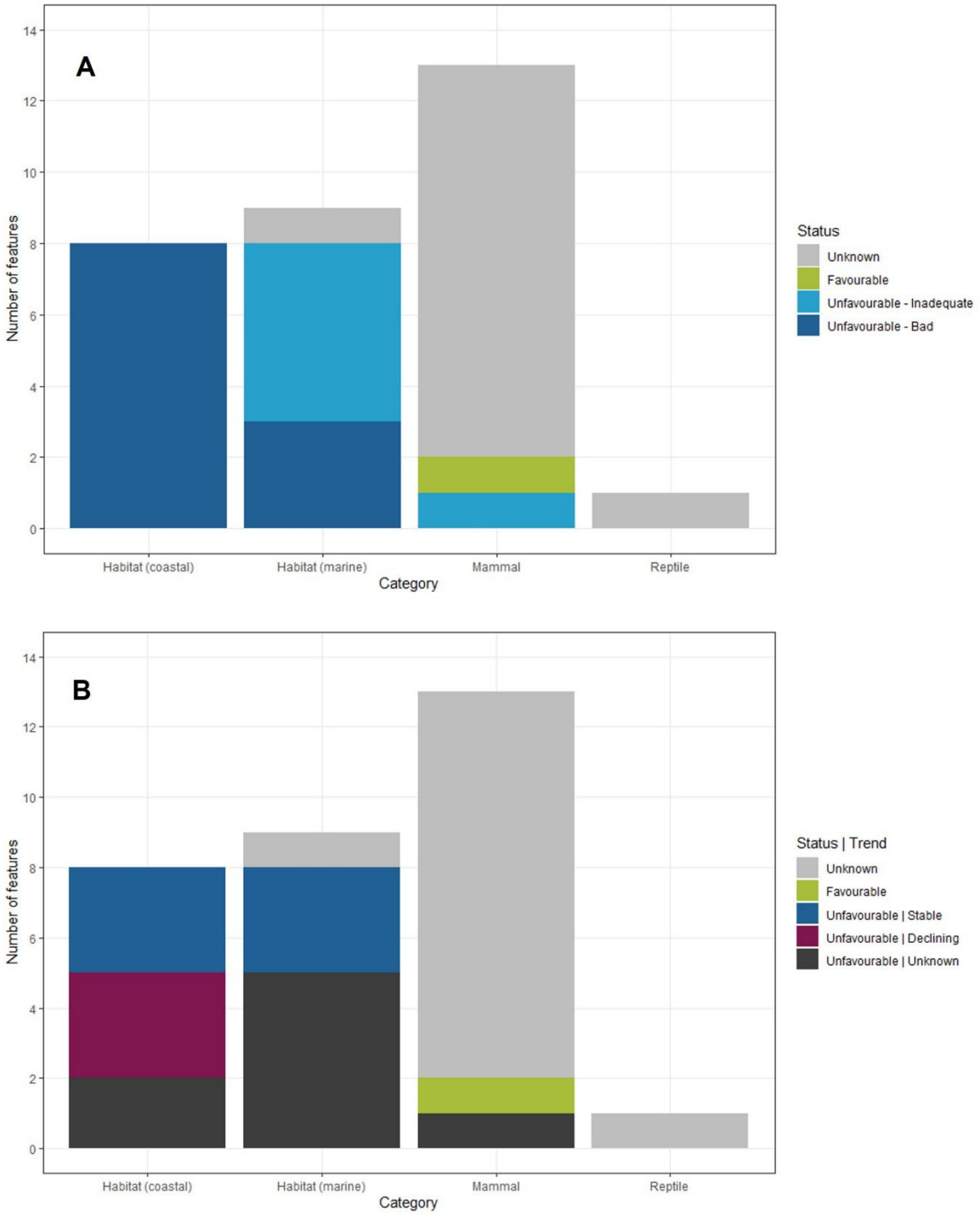

Figure 3 (A and B): Status of coastal and marine features assessed under Article 17 in the UK in 2019: A – the number of habitat and species features in Favourable, Unfavourable - Inadequate, Unfavourable - Bad, and Unknown status; B – the conservation status and status trend of habitat and species features, where subcategories of Unfavourable - Inadequate and Unfavourable - Bad have been combined into “Unfavourable” for simplification.

Table 5: Status summary of coastal and marine features assessed under Article 17 in the UK in 2019. The feature assessment overview column summarises the the total number of features in Unfavourable status (Unfavourable - Bad and Unfavourable - Indaequate combined).

Category	Feature assessment overview	Favourable	Unfavourable - Bad	Unfavourable - Inadequate	Unknown
Habitat (coastal)	**Eight out of eight coastal habitats assessed are in Unfavourable status**	None	Annual vegetation of drift lines Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) Inland salt meadows Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) Perennial vegetation of stony banks *Salicornia* and other annuals colonizing mud and sand Spartina swards (*Spartinion maritimae*) Vegetated sea cliffs of the Atlantic and Baltic Coasts	None	None
Habitat (marine)	**Eight out of nine marine habitats assessed are in Unfavourable status [see note 1]**	None	Estuaries Mudflats and sandflats not covered by seawater at low tide Sandbanks which are slightly covered by sea water all the time	Coastal lagoons Large shallow inlets and bays *Lithothamnium coralloides* / *Phymatholithon calcareum* (maerl) Reefs Submerged or partially submerged sea caves	Submarine structures made by leaking gases

Category	Feature assessment overview	Favourable	Unfavourable - Bad	Unfavourable - Inadequate	Unknown
Mammal	**One out of thirteen marine mammals assessed are in Unfavourable status, the status is Unknown for eleven species**	Grey seal	None	Common seal	Atlantic white-sided dolphin Bottlenose dolphin Common dolphin Fin whale Harbour porpoise Killer whale Long-finned pilot whale Minke whale Risso's dolphin Sperm Whale White-beaked dolphin
Reptile	**Status is Unknown for the only marine reptile assessed**	None	None	None	Leatherback turtle

Note 1: Under Article 17 maerl was assessed as two separate species in 2019, however due to the difficulties in differentiating between species, the assessment was combined and the same report was submitted for both species. They are classed as a single habitat under the C6 indicator

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2.3. Comparison of features assessed under OSPAR QSR (2023) and Article 17 (2019) assessments

Overall, the majority of features assessed under the C6 indicator are in Poor, or Unfavourable status (terminology is dataset dependant). Some features were assessed under both Article 17 (2019) and OSPAR QSR (2023) (Table 6). The Marine Habitat Correlation Tables (JNCC, 2018) were used to identify potential crossovers between Article 17 and OSPAR T&D habitat features. Annex I habitats are habitat complexes made up of a mosaic of subtidal and intertidal habitats, therefore multiple T&D habitats potentially form part of a single Annex I listed feature.

While there was general agreement between the two assessments, there were some minor differences. It should be noted that that the classifications between both OSPAR and Article 17 will not always be aligned due to differences: in feature descriptions; underlying data; and the dependence upon expert judgement. In a comparison of the latest reporting, these differences related to some features being classified as either Poor / Unfavourable status in one, and Unknown in another dataset. The status of correlating features did not change from Favourable/Good to Unfavourable/Poor, or vice versa. It should be noted that the Article 17 assessments were made earlier than the OSPAR assessments, rely on differing underlying datasets collected at different time points, and use slightly different methodologies. The geographical scope is also different for the two assessments.

Table 6: Comparison of common features assessed under Article 17 and OSPAR assessments. Results presented for Article 17 were derived from assessments conducted in 2019. Results presented for OSPAR were derived from status assessments conducted between 2019 and 2023. Under the Article 17 assessment, both Bad and Inadequate are considered Unfavourable status. Note that geographic scope, year of assessment, data availability, feature name, and overall assessment methodology may slightly differ depending on assessment type (i.e., Article 17 or OSPAR). Marine Habitat Correlation Tables (JNCC 2018) were used to identify potential crossovers between Article 17 and OSPAR T&D habitat features.

Feature (Article 17 listed feature name)	**Article 17 assessment status and trend (2019)**	**Feature (OSPAR listed name)**	**OSPAR assessment status (2019-2023)**	
			Region II	**Region III**
Mudflats and sandflats not covered by seawater at low tide	Bad Unknown	Intertidal mudflats	Poor	Poor
Mudflats and sandflats not covered by seawater at low tide	Bad Unknown	Zostera beds	Poor	Poor
Reefs	Inadequate Unknown	Carbonate Mounds	Not Applicable	Not Applicable
Reefs	Inadequate Unknown	Coral gardens	Poor	Not Applicable
Reefs	Inadequate Unknown	Deep-sea sponge aggregations	Poor	Not Applicable
Reefs	Inadequate Unknown	Intertidal *Mytilus edulis* beds on mixed and sandy sediments	Poor	Unknown
Reefs	Inadequate Unknown	Littoral chalk communities	Not Assessed	Not Applicable
Reefs	Inadequate Unknown	*Lophelia pertusa* reefs	Poor	Poor
Reefs	Inadequate Unknown	*Modiolus modiolus* beds	Not Assessed	Not Assessed
Reefs	Inadequate Unknown	*Sabellaria spinulosa* reefs	Not Assessed	Not Assessed
Submerged or partially submerged sea caves	Inadequate Stable	Littoral chalk communities	Not Assessed	Not Applicable
Sandbanks which are slightly covered by sea water all the time	Bad Unknown	Maerl beds	Poor	Poor
Sandbanks which are slightly covered by sea water all the time	Bad Unknown	*Ostrea edulis* beds	Unknown	Poor

Feature (Article 17 listed feature name)	Article 17 assessment status and trend (2019)	Feature (OSPAR listed name)	OSPAR assessment status (2019-2023)	
			Region II	Region III
Sandbanks which are slightly covered by sea water all the time	Bad Unknown	Sea-pen and burrowing megafauna communities	Poor	Poor
Sandbanks which are slightly covered by sea water all the time	Bad Unknown	Zostera beds	Poor	Poor
Submarine structures made by leaking gases	Unknown	Carbonate Mounds	Not Applicable	Not Applicable
Submarine structures made by leaking gases	Unknown	Coral gardens	Poor	Not Applicable
Common sturgeon	Not assessed [see note 1]†	European/common sturgeon	Poor	Poor
Leatherback turtle	Unknown	Leatherback sea turtle	Poor	Poor
Northern right whale	Not assessed [see note 1]	Right whale	Poor	Poor
Harbour porpoise	Unknown	Harbour porpoise [see note 2]	Poor	Poor
Lithothamnium coralloides / *Phymatholithon calcareum* (maerl)	Inadequate Unknown	Maerl beds [see note 3]	Poor	Poor

Note 1: Common sturgeon and norther right whale were considered vagrant species under Article 17 (2019) and were therefore not assessed.

Note 2: The harbour porpoise was assessed by applying the common indicators for abundance and distribution (M4) and by-catch (M6).

Note 3: Under Article 17 maerl was assessed as two separate species in 2019, however due to the difficulties in differentiating between species, the assessment was combined and the same report was submitted for both species.

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