European Community Directive
on the Conservation of Natural Habitats
and of Wild Fauna and Flora
(92/43/EEC)

Fourth Report by the United Kingdom
under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the species:

S1376 - Maerl (Lithothamnium corallioides)

UNITED KINGDOM
IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this species, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.

- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.

- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.

- The reporting fields and options used are aligned to those set out in the European Commission guidance.

- Maps showing the distribution and range of the species are included (where available).

- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.

- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species).

- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

### NATIONAL LEVEL

#### 1. General information

<table>
<thead>
<tr>
<th>1.1 Member State</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Species code</td>
<td>1376</td>
</tr>
<tr>
<td>1.3 Species scientific name</td>
<td>Lithothamnium coralloides</td>
</tr>
<tr>
<td>1.4 Alternative species scientific name</td>
<td></td>
</tr>
<tr>
<td>1.5 Common name (in national language)</td>
<td></td>
</tr>
</tbody>
</table>

#### 2. Maps

<table>
<thead>
<tr>
<th>2.1 Sensitive species</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2 Year or period</td>
<td>1995-2017</td>
</tr>
<tr>
<td>2.3 Distribution map</td>
<td>Yes</td>
</tr>
<tr>
<td>2.4 Distribution map Method used</td>
<td>Based mainly on extrapolation from a limited amount of data</td>
</tr>
<tr>
<td>2.5 Additional maps</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 3. Information related to Annex V Species (Art. 14)

<table>
<thead>
<tr>
<th>3.1 Is the species taken in the wild/exploited?</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Which of the measures in Art. 14 have been taken?</td>
<td></td>
</tr>
<tr>
<td>a) regulations regarding access to property</td>
<td>No</td>
</tr>
<tr>
<td>b) temporary or local prohibition of the taking of specimens in the wild and exploitation</td>
<td>No</td>
</tr>
<tr>
<td>c) regulation of the periods and/or methods of taking specimens</td>
<td>No</td>
</tr>
<tr>
<td>d) application of hunting and fishing rules which take account of the conservation of such populations</td>
<td>No</td>
</tr>
<tr>
<td>e) establishment of a system of licences for taking specimens or of quotas</td>
<td>No</td>
</tr>
<tr>
<td>f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens</td>
<td>No</td>
</tr>
<tr>
<td>g) breeding in captivity of animal species as well as artificial propagation of plant species</td>
<td>No</td>
</tr>
<tr>
<td>h) other measures</td>
<td>No</td>
</tr>
</tbody>
</table>
Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

### a) Unit

### b) Statistics/quantity taken

<table>
<thead>
<tr>
<th>Season/year</th>
<th>Min. (raw, ie. not rounded)</th>
<th>Max. (raw, ie. not rounded)</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season/year 1</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Season/year 2</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Season/year 3</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Season/year 4</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Season/year 5</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Season/year 6</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

For further details refer to JNCC website for 2019 UK Approach Document and country-level reporting information.

**BIOGEOGRAPHICAL LEVEL**

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

**Marine Atlantic (MATL)**

England


Scotland


Wales


Milford Haven Port Authority Dredging Strategy Document (Revision 2), June 2016, Anthony D. Bates Partnership LLP

5. Range

5.1 Surface area (km²)  17600
6. Population

6.1 Year or period

2005-2017

6.2 Population size (in reporting unit)

a) Unit

number of map 1x1 km grid cells (grids1x1)

b) Minimum

c) Maximum

d) Best single value 604

6.3 Type of estimate

Best estimate

5.11 Change and reason for change in surface area of range

Improved knowledge/more accurate data

Use of different method

The change is mainly due to: Improved knowledge/more accurate data

5.12 Additional information

5.1-It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to create the distribution map and range map. The number of 10 x 10 grid squares containing maerl records were used to calculate the range. 5.3-Data is limited and it is not possible to directly compare with previous years due to difficulties with species identification. Therefore the short-term trend is uncertain. 5.11-It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to create the range map for both maerl reports (S1376 and S1377). A different method was used for the 2013 reports as a combination of Lithothamnium corallioides and mixed maerl bed records were used to calculate range for S1376 and a combination of Phymatolithon calcareum species records and mixed maerl bed records were used to calculate range for S1377. For further details see JNCC website for 2019 UK Approach Document.
6.4 Additional population size (using population unit other than reporting unit)

6.5 Type of estimate

6.6 Population size Method used
Based mainly on extrapolation from a limited amount of data

6.7 Short-term trend Period
2005-2018

6.8 Short-term trend Direction
Uncertain (u)

6.9 Short-term trend Magnitude

6.10 Short-term trend Method used
Based mainly on expert opinion with very limited data

6.11 Long-term trend Period

6.12 Long-term trend Direction

6.13 Long-term trend Magnitude

6.14 Long-term trend Method used

6.15 Favourable reference population (using the unit in 6.2 or 6.4)
Based on our current understanding it is not possible to indicate favourable reference population.

6.16 Change and reason for change in population size
Genuine change
Improved knowledge/more accurate data
The change is mainly due to: Improved knowledge/more accurate data

6.17 Additional information

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat

7.2 Sufficiency of area and quality of occupied habitat Method used
Based mainly on expert opinion with very limited data

7.3 Short-term trend Period
2005-2018

7.4 Short-term trend Direction
Decreasing (-)

7.5 Short-term trend Method used
Based mainly on expert opinion with very limited data

7.6 Long-term trend Period
7.7 Long-term trend Direction

7.8 Long-term trend Method used

7.9 Additional information

7.4-The short-term trend was assessed by the four countries and the results were aggregated (see 2019 UK Approach Document). The short-term trend is identified as decreasing. In 2013, the trend was unknown, however, improved mapping methods and data availability have enabled a trend to be identified in 2019.

For methods see JNCC website for 2019 UK Approach Document and country-level reporting information.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

<table>
<thead>
<tr>
<th>Pressure</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural activities generating marine pollution (A28)</td>
<td>M</td>
</tr>
<tr>
<td>Shipping lanes and ferry lanes transport operations (E02)</td>
<td>M</td>
</tr>
<tr>
<td>Shipping lanes, ferry lanes and anchorage infrastructure (e.g. canalisation, dredging) (E03)</td>
<td>H</td>
</tr>
<tr>
<td>Industrial or commercial activities and structures generating marine pollution (excluding marine macro- and micro-particular pollution) (F21)</td>
<td>M</td>
</tr>
<tr>
<td>Marine fish and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species (G01)</td>
<td>H</td>
</tr>
<tr>
<td>Marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats (G03)</td>
<td>H</td>
</tr>
<tr>
<td>Marine plant harvesting (G04)</td>
<td>M</td>
</tr>
<tr>
<td>Marine aquaculture generating marine pollution (G16)</td>
<td>M</td>
</tr>
<tr>
<td>Other invasive alien species (other than species of Union concern) (I02)</td>
<td>M</td>
</tr>
<tr>
<td>Mixed source marine water pollution (marine and coastal) (J02)</td>
<td>M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threat</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping lanes, ferry lanes and anchorage infrastructure (e.g. canalisation, dredging) (E03)</td>
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</tr>
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<tr>
<td>Marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats (G03)</td>
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</tr>
<tr>
<td>Marine plant harvesting (G04)</td>
<td>M</td>
</tr>
<tr>
<td>Marine aquaculture generating marine pollution (G16)</td>
<td>M</td>
</tr>
<tr>
<td>Other invasive alien species (other than species of Union concern) (I02)</td>
<td>H</td>
</tr>
</tbody>
</table>
8.2 Sources of information

8.3 Additional information

There were often more than ten pressures or threats (of high or medium importance) identified, and an aggregation method was used to identify the top ten of each. As a result the top ten lists for the feature may not correspond with each other. For example, a pressure may be in the reported top ten list, but may not appear in the top ten list of threats. This does not necessarily mean that the threat was not listed but instead it is in the extended list of threats that did not make the top ten but are detailed in the additional information section.

The following pressures were also identified, however, a maximum of 10 could be listed: D05- Development and operation of energy production plants (including bioenergy plants, fossil and nuclear energy plants), E07- Land, water and air transport activities generating marine pollution, F07- Sports, tourism and leisure activities, F20- Residential or recreational activities and structures generating marine pollution (excl. marine macro- and micro-particular pollution)

The following threats were also identified, however, a maximum of 10 could be listed: D05- Development and operation of energy production plants (including bioenergy plants, fossil and nuclear energy plants), E07- Land, water and air transport activities generating marine pollution, F07- Sports, tourism and leisure activities, F20- Residential or recreational activities and structures generating marine pollution (excl. marine macro- and micro-particular pollution), F21- Industrial or commercial activities and structures generating marine pollution (excluding marine macro- and micro-particular pollution), A28- Agricultural activities generating marine pollution, C01- Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell), C07- Dumping/depositing of dredged materials from marine extraction, D01- Wind, wave and tidal power, including infrastructure, E02- Shipping lanes and ferry lanes transport operations, J02- Mixed source marine water pollution (marine and coastal)

For methods see JNCC website for 2019 UK Approach Document and country-level reporting information.

9. Conservation measures

9.1 Status of measures

a) Are measures needed? Yes
b) Indicate the status of measures Measures identified and taken

9.2 Main purpose of the measures taken

Maintain the current range, population and/or habitat for the species

9.3 Location of the measures taken

Both inside and outside Natura 2000

9.4 Response to the measures

Medium-term results (within the next two reporting periods, 2019-2030)
10. Future prospects

10.1 Future prospects of parameters

- a) Range: Poor
- b) Population: Poor
- c) Habitat of the species: Unknown

10.2 Additional information

Future trends for each parameter were selected by the four countries and then aggregated to give a future trend for the UK (see 2019 UK Approach Document). Table 25 in the EU Guidelines was used to bring the future trend and conservation status of each parameter together to conclude on future prospects.

10.1a) The future prospects are poor because the future trend of range is thought to be negative and the conclusion for range is unknown. The future prospects were unknown in 2013, however, improved knowledge has enabled this field to be completed in 2019.

10.1b) The future prospects are poor because the future trend of population is thought to be negative and the conclusion for population is unknown. The future prospects were unknown in 2013, however, improved knowledge has enabled this field to be completed in 2019.

10.1c) The future prospects are unknown because the future trend for habitat for the species is thought to be stable and the conclusion for habitat for the species is unknown. The future prospects were also unknown in 2013.

For further details on approaches taken in this section see JNCC website for the 2019 UK Approach Document and relevant country-level reporting information.
Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

11. Conclusions

11.1. Range
Unknown (XX)

11.2. Population
Unknown (XX)

11.3. Habitat for the species
Unknown (XX)

11.4. Future prospects
Unfavourable - Inadequate (U1)

11.5 Overall assessment of Conservation Status
Unfavourable - Inadequate (U1)

11.6 Overall trend in Conservation Status
Unknown (x)

11.7 Change and reasons for change in conservation status and conservation status trend

a) Overall assessment of conservation status
Improved knowledge/more accurate data
Use of different method

The change is mainly due to: Improved knowledge/more accurate data

b) Overall trend in conservation status
No change

The change is mainly due to:

11.8 Additional information

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)

12.2 Type of estimate

12.3 Population size inside the network Method used

12.4 Short-term trend of population size within the network Direction

12.5 Short-term trend of population size within the network Method used

12.6 Additional information

13. Complementary information

13.1 Justification of % thresholds for trends

13.2 Trans-boundary assessment

13.3 Other relevant Information
It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may
Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

not be reliable. Therefore, information and knowledge of all maerl species in UK waters were used to complete reports S1376 and S1377. Therefore, the reports are identical. Section 9 is not a requirement for Annex V species, however, conservation measures are in place and so have been reported on in this section for extra information.
Figure 1: UK distribution map for S1376 - Maerl (Lithothamnium corallioides).

The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.
It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to create the distribution map and range map. The number of 10x10km grid squares containing maerl records were used to calculate the range.
**Species name:** Lithothamnium coralloides (1376) **Region code:** MATL

<table>
<thead>
<tr>
<th>Field label</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Surface area</td>
<td>It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to create the distribution map and range map. The number of 10 x 10 grid squares containing maerl records were used to calculate the range.</td>
</tr>
<tr>
<td>5.3 Short term trend; Direction</td>
<td>Data is limited and it is not possible to directly compare with previous years due to difficulties with species identification. Therefore the short-term trend is uncertain.</td>
</tr>
<tr>
<td>5.11 Change and reason for change in surface area of range</td>
<td>It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to create the range map for both maerl reports (S1376 and S1377). A different method was used for the 2013 reports as a combination of Lithothamnium corallioides and mixed maerl bed records were used to calculate range for S1376 and a combination of Phymatolithon calcareum species records and mixed maerl bed records were used to calculate range for S1377.</td>
</tr>
<tr>
<td>6.2 Population size</td>
<td>It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to map population size for both maerl reports (S1376 and S1377).</td>
</tr>
<tr>
<td>6.8 Short term trend; Direction</td>
<td>The short-term trend of the population size was assessed by the four countries and the results were aggregated (see 2019 UK Approach Document). The short-term trend was identified as uncertain.</td>
</tr>
<tr>
<td>6.16 Change and reason for change in population size</td>
<td>It is recognised that it is extremely difficult to distinguish maerl species without genetic testing and previous identification of UK maerl species in surveys may not be reliable. Therefore, all records of maerl species in UK waters were used to create the population map for both maerl reports (S1376 and S1377). A different method was used for the 2013 reports as a combination of Lithothamnium corallioides and mixed maerl bed records were used to calculate population for report number S1376 and a combination of Phymatolithon calcareum species records and mixed maerl bed records were used to calculate population for report number S1377. The change in population size is, therefore, a result of a different reporting method.</td>
</tr>
<tr>
<td>7.4 Short term trend; Direction</td>
<td>The short-term trend was assessed by the four countries and the results were aggregated (see 2019 UK Approach Document). The short-term trend is identified as decreasing. In 2013, the trend was unknown, however, improved mapping methods and data availability have enabled a trend to be identified in 2019.</td>
</tr>
<tr>
<td>10.1 Future prospects of parameters</td>
<td>Future trends for each parameter were selected by the four countries and then aggregated to give a future trend for the UK (see 2019 UK Approach Document). Table 25 in the EU Guidelines was used to bring the future trend and conservation status of each parameter together to conclude on future prospects.</td>
</tr>
<tr>
<td>10.1a Future prospects of parameters - Range</td>
<td>The future prospects are poor because the future trend of range is thought to be negative and the conclusion for range is unknown. The future prospects were unknown in 2013, however, improved knowledge has enabled this field to be completed in 2019.</td>
</tr>
<tr>
<td>10.1b Future prospects of parameters - Population</td>
<td>The future prospects are poor because the future trend of population is thought to be negative and the conclusion for population is unknown. The future prospects were unknown in 2013, however, improved knowledge has enabled this field to be completed in 2019.</td>
</tr>
</tbody>
</table>
The future prospects are unknown because the future trend for habitat for the species is thought to be stable and the conclusion for habitat for the species is unknown. The future prospects were also unknown in 2013.

11.1 Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is uncertain; and (ii) the Favourable Reference Range is unknown. 11.2 Conclusion on Population reached because: (i) the short-term trend direction in Population size is uncertain; and (ii) the Favourable Reference Population is unknown. 11.3 Conclusion on Habitat for the species reached because: (i) the area of occupied and unoccupied habitat is unknown and (ii) the habitat quality is unknown for the long-term survival of the species; and (iii) the short-term trend in area of habitat is decreasing. 11.4 Conclusion on Future prospects reached because: (i) the Future prospects for Range are poor; (ii) the Future prospects for Population are poor; and (iii) the Future prospects for Habitat for the species are unknown. The future prospects were unknown in 2013, however, improved knowledge allowed a conclusion to be drawn in 2019. 11.5 Overall assessment of Conservation Status is Unfavourable-inadequate because one or more of the conclusions are Unfavourable-inadequate. 11.6 Overall trend in Conservation Status is based on the combination of the short-term trends for Range - uncertain, Population - uncertain, and Habitat for the species - decreasing. 11.7 The overall assessment of Conservation Status has changed between 2013 and 2019 because the conclusion for future prospects has changed from unknown to unfavourable-inadequate. The changes have occurred as a result of improved knowledge and mapping methods. For methods see JNCC website for 2019 UK Approach Document and country-level reporting information.