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

Supporting documentation for the
conservation status assessment for the habitat:

H8330 - Submerged or partially submerged sea caves

ENGLAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this habitat is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- 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 only relevant at UK-level (sections 10 Future prospects and 11 Conclusions).
- For technical reasons, the country-level future trends for Range, Area covered by habitat and Structure and functions are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-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.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK (England information only)**
1.2 Habitat code	**8330 - Submerged or partially submerged sea caves**

2. Maps

2.1 Year or period	
2.3 Distribution map	Yes
2.3 Distribution map Method used	
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Marine Atlantic (MATL)**
3.2 Sources of information	Brazier, D. P., Davies, J., Holt, R. H. F. and Murray, E. 1998. Marine Nature Conservation Review Sector 5. South-east Scotland and north-east England: area summaries: Joint Nature Conservation Committee (Coasts and Sea of the United Kingdom MNCR Series). British Museum of Natural History (BMNH). 1985. Kent & Sussex littoral chalk-cliff algal survey: BMNH. Bunker, F., Mercer, T. and Howson, C. 2005. South Wight European Marine Site Sublittoral Monitoring 2003-2004: Aquatic Survey & Monitoring Ltd. http://www.emodnet-seabedhabitats.eu/pdf/09-04-02 NE IOWReportNov2005b_Mesh.pdf Cork, M., McNulty, S. and Gaches, P. 2008. Site Selection Report for the Inshore Marine SACs Project: Natural England. Crabbe, R. and Whiteman, J. 2010. The Solent Diffuse Water Pollution Plan: Environment Agency; Natural England. English Nature (EN). 2000. English Nature's advice for the Flamborough Head European marine site given under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994.: English Nature.http://publications.naturalengland.org.uk/file/3295646 Environment Agency (EA). 2014. WFD - Surface Water Classification Status and Objectives [Online]. Environment Agency. [Accessed 20/03/15]. http://www.geostore.com/environment-agency/WebStore?xml=environment-agency/xml/ogcDataDownload.xml Environment Agency (EA). 2015-2018. EA Catchment Data Explorer [Online]. https://environment.data.gov.uk/catchment-planning/ Environment Agency (EA). 2016. Winter DIN Assessment (Nov 2010 - Feb 2016 data) - SACs and SCIs, version 1: Environment Agency (EA). European Commission (EC). 2017. ENERGY Projects of common interest - Interactive map [Online]. http://ec.europa.eu/energy/infrastructure/transparency_platform/map-viewer/main.html Fowler, S. L. and Tittley, I. 1993. The Marine Nature Conservation of British Coastal Chalk Cliff Habitats: English Nature Fugro EMU Ltd. 2013. Pilot Study to Develop Monitoring Methodologies and Establish a Baseline Survey for the Submerged or Partially Submerged Sea Caves

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Jenkins G., Murphy J., Sexton D., Lowe J. 2009, UK Climate Projections: Briefing Report. Met Office Hadley Centre, Exeter. Available at http://ukclimateprojections.metoffice.gov.uk/22536
Joint Nature Conservation Committee (JNCC). 2004. Common Standards Monitoring Guidance for Sea Caves. Peterborough: Joint Nature Conservation Committee (JNCC).
Joyce, C., Teasdale, P. and Waller, C. 2009. A biological survey of the Intertidal sediments of Lee-on-the-Solent to Itchen Estuaries, Medina Estuaries, North Solent, Thanet Coast and Thorness Bay Sites of SSSI for the purpose of SSSI condition assessment: The Biogeography and Ecology Research Group at the University of Brighton.
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Natural England, 2017, Natural England Conservation Advice for Marine Protected Areas, South Wight Maritime UK0030061, https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030061&SiteName=solent&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
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Weir, J., and Bessell, A., 2012, Sea caves in the Lyme Bay and Torbay cSAC Interim Report, EMU Ltd Report to Natural England

4. Range

4.1 Surface area (in km²)		
4.2 Short-term trend Period		
4.3 Short-term trend Direction		
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum
4.5 Short-term trend Method used		
4.6 Long-term trend Period		
4.7 Long-term trend Direction		
4.8 Long-term trend Magnitude	a) Minimum	b) Maximum
4.9 Long-term trend Method used		
4.10 Favourable reference range	a) Area (km²) b) Operator c) Unknown: No d) Method	
4.11 Change and reason for change in surface area of range	No change The change is mainly due to:	
4.12 Additional information		

5. Area covered by habitat

5.1 Year or period			
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

5.3 Type of estimate			
5.4 Surface area Method used			
5.5 Short-term trend Period			
5.6 Short-term trend Direction			
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used			
5.9 Long-term trend Period			
5.10 Long-term trend Direction			
5.11 Long-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used			
5.13 Favourable reference area	a) Area (km²) b) Operator c) Unknown No d) Method		
5.14 Change and reason for change in surface area of range	No change The change is mainly due to:		
5.15 Additional information			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum	Maximum
	b) Area in not-good condition (km²)	Minimum	Maximum
	c) Area where condition is not known (km²)	Minimum	Maximum
6.2 Condition of habitat Method used	Based mainly on extrapolation from a limited amount of data		
6.3 Short-term trend of habitat area in good condition Period	2013-2018		
6.4 Short-term trend of habitat area in good condition Direction	Stable (0)		
6.5 Short-term trend of habitat area in good condition Method used	Based mainly on expert opinion with very limited data		
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period? No		
6.7 Typical species Method used			
6.8 Additional information	Evidence on the condition of this feature is available for a limited amount of submerged and partially submerged sea caves in English waters. Monitoring data and thus detailed full condition assessments are available for this feature from within 5 SACs, which contain 38% of the sea cave biotope points mapped in English waters. These assessment results indicate that the feature is assumed to be in good condition within these 5 sites. The condition is not known for the remaining 62% of sea caves in English waters due to lack of evidence. The proportions are derived from the numberof point locations where sea cave biotopes were recorded. Area values for sea caves are not available, due to the small size of most sea caves and the resultant mapping approaches that were chosen: sea caves are predominantly mapped as point data lacking extent information. Therefore, it is not possible to report on the area covered by this		

habitat (section 5) and also not possible to supply area values of the feature in 'good/ not good condition' (section 6.1). There is however a high degree of confidence in the proportion of the number locations with sea cave biotopes that were recorded in good condtion. Short term trend of the number of seacave point locations in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been broadly stable over this period.

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Sea-level and wave exposure changes due to climate change (N04)	M
Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defences or coastal protection works and infrastructures) (F08)	H
Sports, tourism and leisure activities (F07)	M
Mixed source marine water pollution (marine and coastal) (J02)	M
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	M
Residential or recreational activities and structures generating marine macro- and micro- particulate pollution (e.g. plastic bags, Styrofoam) (F22)	H
Industrial or commercial activities and structures generating marine macro- and micro- particulate pollution (e.g. plastic bags, Styrofoam) (F23)	H
Change of species distribution (natural newcomers) due to climate change (N08)	M

Threat	Ranking
Sea-level and wave exposure changes due to climate change (N04)	M
Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defences or coastal protection works and infrastructures) (F08)	H
Sports, tourism and leisure activities (F07)	M
Mixed source marine water pollution (marine and coastal) (J02)	M
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	M
Wind, wave and tidal power, including infrastructure (D01)	M
Other invasive alien species (other then species of Union concern) (I02)	M

Residential or recreational activities and structures generating marine macro- and micro- particulate pollution (e.g. plastic bags, Styrofoam) (F22)	H
Industrial or commercial activities and structures generating marine macro- and micro- particulate pollution (e.g. plastic bags, Styrofoam) (F23)	H
Change of species distribution (natural newcomers) due to climate change (N08)	M

7.2 Sources of information	This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature. This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature.
7.3 Additional information	N04: Sea caves are exposed to a range of pressures resulting from climate change, in particular a change in exposure regimes and hydrodynamic conditons that may cause complete cave loss and/or decline in their extent due to increasing erosion. Also, rising sea-levels may lead to a decline in intertidal sea caves. This is likely going to continue in the future. F08: Coastal squeeze can impact sea caves, causing changes in emergence regimes and causing the decline and/ or loss in the extent of partially submerged (intertidal) sea caves. This is likely going to continue in the future. F07: Human activities causing trampling and possibly impacting the condition of the feature are a pressure, in particular for partially submerged sea caves. This is likely going to continue in the future. J02: Sea caves can be exposed to a whole range of pollution sources. Sea caves can act as sinks for drift litter (macro and microplastic, drift wood, ghost nets) that may get trapped in sea caves. This is likely going to continue in the

future.
N01: Sea caves are exposed to a range of pressures resulting from climate change, for example changes in temperature regimes that may be leading to changes in species composition. This is likely going to continue in the future.
D01: Wind, wave and tidal power and their infrastrucutres are a possible threat in the future, as they are likely to increase in future. If in proximity to sea caves, especially wave power generation could reduce wave height, changing community composition as a result of reduced submergence.
I02: There are currently very few records of invasive species from sea caves, but this is likely going to change in the future, due to likely increases in species introductions and their spread.
F22: Marine macro- and micro- particulate pollution caused by recreational or residential activities and structures can have very negative impacts on sea cave conditon. Sea caves can act as sinks for drift litter (macro and microplastic, drift wood, household litter) that may be trapped in sea caves. This likely to continue in the future.
F23: Marine macro- and micro- particulate pollution caused by industrial or commercial activities and structures can have very negative impacts on sea cave conditon. Sea caves can act as sinks for drift litter (macro and microplastic, drift wood, ghost nets) that may be trapped in sea caves. This likely to continue in the future.
N08: Sea caves are exposed to a range of pressures resulting from climate change, for example changes in species composition due to changes in temperature regimes. This is likely going to continue in the future.

8. Conservation measures

8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken		Maintain the current range, population and/or habitat for the species
8.3 Location of the measures taken		Both inside and outside Natura 2000
8.4 Response to the measures		Medium-term results (within the next two reporting periods, 2019-2030)
8.5 List of main conservation measures		

Reduce/eliminate marine pollution from agricultural activities (CA13)

Manage/reduce/eliminate marine pollution from transport (CE04)

Reduce/eliminate marine pollution from industrial, commercial, residential and recreational areas and activities (CF07)

Reduce/eliminate marine contamination with litter (CF08)

Manage changes in hydrological and coastal systems and regimes for construction and development (CF10)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters	a) Range	
	b) Area	
	c) Structure and functions	
9.2 Additional information		This judgement is based on expert judgement due to the limited occurrence of

	pressures impacting on the feature currently and in the next 2 reporting cycles, and the resilient nature of the feature. There are a number of uncertainties affecting this judgement of future prospects; these include the application and interpretation of EU Caselaw to small scale developments within European Sites.

10. Conclusions

10.1. Range	
10.2. Area	
10.3. Specific structure and functions (incl. typical species)	
10.4. Future prospects	
10.5 Overall assessment of Conservation Status	
10.6 Overall trend in Conservation Status	
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status No change The change is mainly due to:
10.8 Additional information	

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value
11.2 Type of estimate	
11.3 Surface area of the habitat type inside the network Method used	
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)
11.5 Short-term trend of habitat area in good condition within network Method used	Based mainly on expert opinion with very limited data
11.6 Additional information	Area values for sea caves are not available and therefore could not be provided. As explained in section 6.8, instead the proportion of number of point locations where sea cave biotopes were recorded (by number, not area) in good condition has been reported for this feature. We suggest that the proportion of point locations with sea cave biotopes inside the N2K network is also used by the JNCC to populate sections 11.1-11.3 as discussed on marine habitat expert group calls.

12. Complementary information

12.1 Justification of % thresholds for trends	

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12.2 Other relevant information

Distribution Map

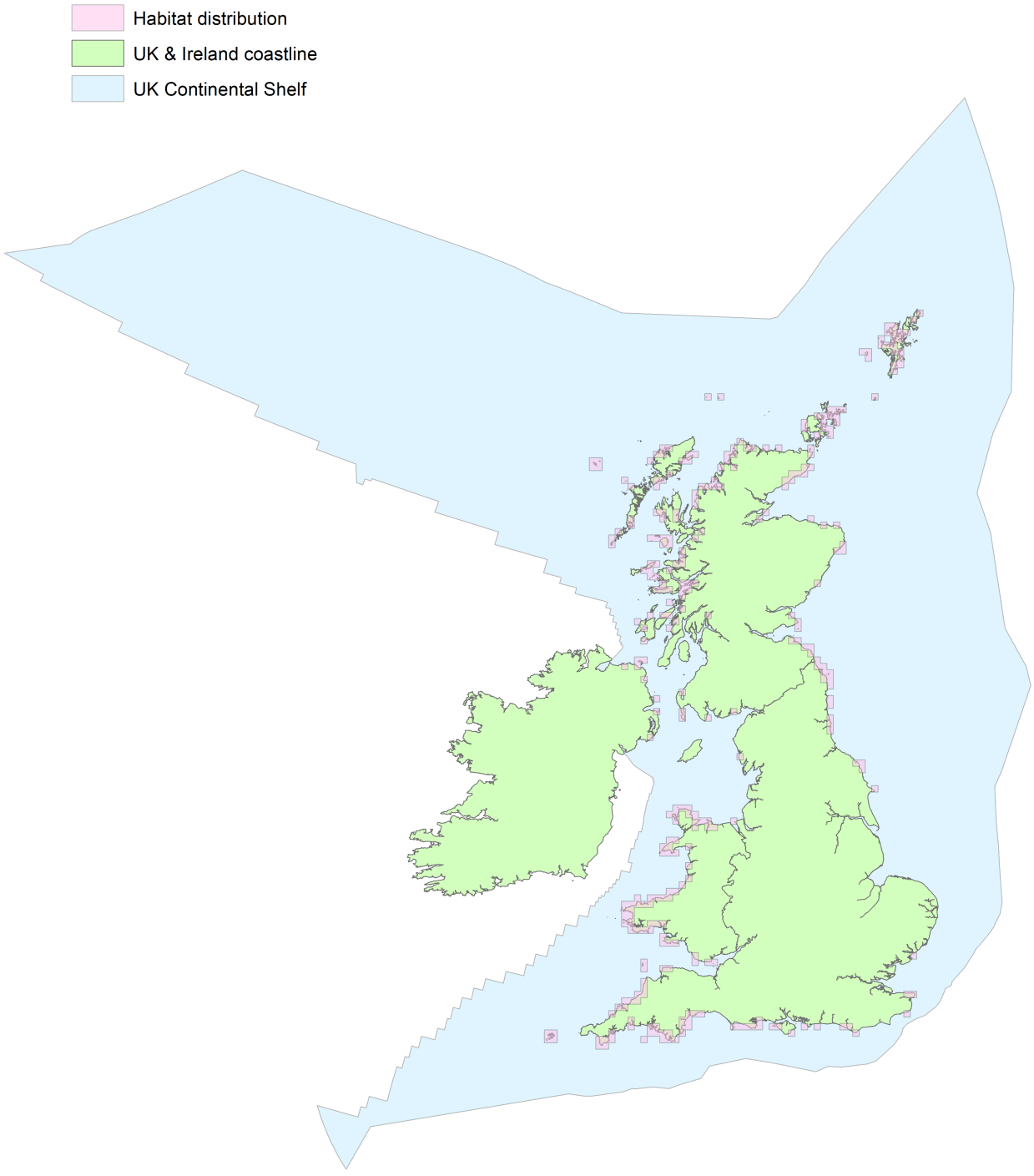

Figure 1: UK distribution map for H8330 - Submerged or partially submerged sea caves.

The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period. For further details see the 2019 Article17 UK Approach document.

Range Map

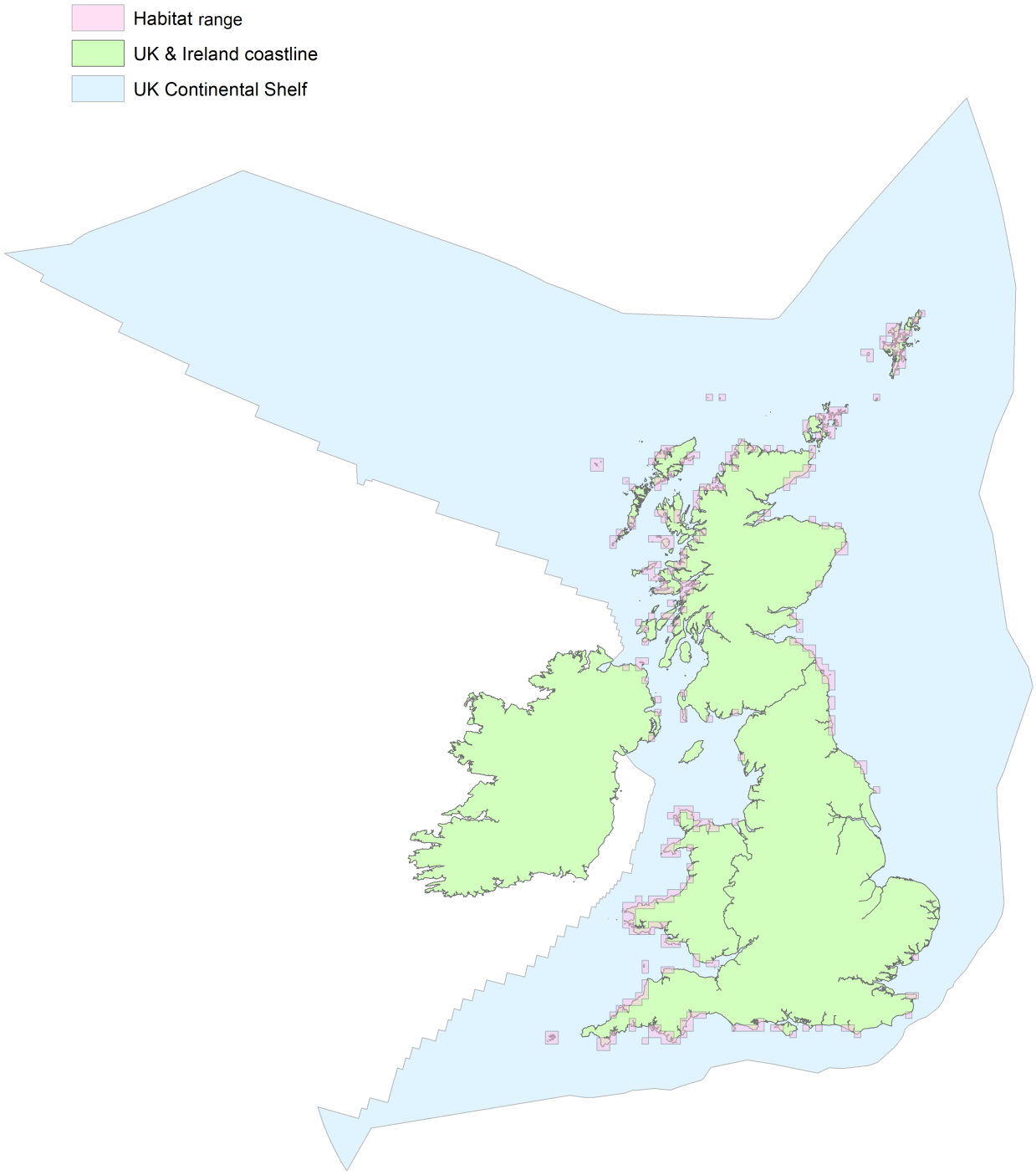

Figure 2: UK range map for H8330 - Submerged or partially submerged sea caves.

Sea caves are physiographic features and so their range is determined primarily by geomorphological and hydrographic processes occurring over long time-scales and is not related to biological communities or processes supported by communities. Therefore, the range was considered equivalent to the distribution and was calculated from the distribution map, but additionally included areas that had the potential for the habitat to occur based on an understanding of seabed geology.

Explanatory Notes

Habitat code: 8330 Region code: MATL

Field label	Note
6.1 Condition of habitat	Evidence on the condition of this feature is available for a limited amount of submerged and partially submerged sea caves in English waters. Monitoring data and thus detailed full condition assessments are available for this feature from within 5 SACs, which contain 38% of the sea cave biotope points mapped in English waters. These assessment results indicate that the feature is assumed to be in good condition within these 5 sites. The condition is not known for the remaining 62% of sea caves in English waters due to lack of evidence. The proportions are derived from the numberof point locations where sea cave biotopes were recorded. Area values for sea caves are not available, due to the small size of most sea caves and the resultant mapping approaches that were chosen: sea caves are predominantly mapped as point data lacking extent information. Therefore, it is not possible to report on the area covered by this habitat (section 5) and also not possible to supply area values of the feature in 'good/ not good condition' (section 6.1). There is however a high degree of confidence in the proportion of the number locations with sea cave biotopes that were recorded in good condtion. Short term trend of the number of seacave point locations in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been broadly stable over this period.
6.2 Condition of habitat; Method used	Evidence on the condition of this feature is available for a limited amount of submerged and partially submerged sea caves in English waters. Monitoring data and thus detailed full condition assessments are available for this feature from within 5 SACs, which contain 38% of the sea cave biotope points mapped in English waters. These assessment results indicate that the feature is assumed to be in good condition within these 5 sites. The condition is not known for the remaining 62% of sea caves in English waters due to lack of evidence. The proportions are derived from the numberof point locations where sea cave biotopes were recorded. Area values for sea caves are not available, due to the small size of most sea caves and the resultant mapping approaches that were chosen: sea caves are predominantly mapped as point data lacking extent information. Therefore, it is not possible to report on the area covered by this habitat (section 5) and also not possible to supply area values of the feature in 'good/ not good condition' (section 6.1). There is however a high degree of confidence in the proportion of the number locations with sea cave biotopes that were recorded in good condtion. Short term trend of the number of seacave point locations in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been broadly stable over this period.

6.3 Short term trend of habitat area in good condition; Period	Evidence on the condition of this feature is available for a limited amount of submerged and partially submerged sea caves in English waters. Monitoring data and thus detailed full condition assessments are available for this feature from within 5 SACs, which contain 38% of the sea cave biotope points mapped in English waters. These assessment results indicate that the feature is assumed to be in good condition within these 5 sites. The condition is not known for the remaining 62% of sea caves in English waters due to lack of evidence. The proportions are derived from the numberof point locations where sea cave biotopes were recorded. Area values for sea caves are not available, due to the small size of most sea caves and the resultant mapping approaches that were chosen: sea caves are predominantly mapped as point data lacking extent information. Therefore, it is not possible to report on the area covered by this habitat (section 5) and also not possible to supply area values of the feature in 'good/ not good condition' (section 6.1). There is however a high degree of confidence in the proportion of the number locations with sea cave biotopes that were recorded in good condtion. Short term trend of the number of seacave point locations in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been broadly stable over this period.
6.4 Short term trend of habitat area in good condition; Direction	Evidence on the condition of this feature is available for a limited amount of submerged and partially submerged sea caves in English waters. Monitoring data and thus detailed full condition assessments are available for this feature from within 5 SACs, which contain 38% of the sea cave biotope points mapped in English waters. These assessment results indicate that the feature is assumed to be in good condition within these 5 sites. The condition is not known for the remaining 62% of sea caves in English waters due to lack of evidence. The proportions are derived from the numberof point locations where sea cave biotopes were recorded. Area values for sea caves are not available, due to the small size of most sea caves and the resultant mapping approaches that were chosen: sea caves are predominantly mapped as point data lacking extent information. Therefore, it is not possible to report on the area covered by this habitat (section 5) and also not possible to supply area values of the feature in 'good/ not good condition' (section 6.1). There is however a high degree of confidence in the proportion of the number locations with sea cave biotopes that were recorded in good condtion. Short term trend of the number of seacave point locations in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been broadly stable over this period.
6.5 Short term trend of habitat area in good condition; Method used	Evidence on the condition of this feature is available for a limited amount of submerged and partially submerged sea caves in English waters. Monitoring data and thus detailed full condition assessments are available for this feature from within 5 SACs, which contain 38% of the sea cave biotope points mapped in English waters. These assessment results indicate that the feature is assumed to be in good condition within these 5 sites. The condition is not known for the remaining 62% of sea caves in English waters due to lack of evidence. The proportions are derived from the numberof point locations where sea cave biotopes were recorded. Area values for sea caves are not available, due to the small size of most sea caves and the resultant mapping approaches that were chosen: sea caves are predominantly mapped as point data lacking extent information. Therefore, it is not possible to report on the area covered by this habitat (section 5) and also not possible to supply area values of the feature in 'good/ not good condition' (section 6.1). There is however a high degree of confidence in the proportion of the number locations with sea cave biotopes that were recorded in good condtion. Short term trend of the number of seacave point locations in good condition is stable between 2013-2018. This is on the basis that the pressures that the features are sensitive to which may lead to unfavourable condition have been broadly stable over this period.

7.1 Characterisation of pressures/ threats	N01: Sea caves are exposed to a range of pressures resulting from climate change, for example changes in temperature regimes that may be leading to changes in species composition. This is likely going to continue in the future.
7.1 Characterisation of pressures/ threats	N04: Sea caves are exposed to a range of pressures resulting from climate change, in particular a change in exposure regimes and hydrodynamic conditons that may cause complete cave loss and/or decline in their extent due to increasing erosion. Also, rising sea-levels may lead to a decline in intertidal sea caves. This is likely going to continue in the future.
7.1 Characterisation of pressures/ threats	F08: Coastal squeeze can impact sea caves, causing changes in emergence regimes and causing the decline and/ or loss in the extent of partially submerged (intertidal) sea caves. This is likely going to continue in the future.
7.1 Characterisation of pressures/ threats	J02: Sea caves can be exposed to a whole range of pollution sources. Sea caves can act as sinks for drift litter (macro and microplastic, drift wood, ghost nets) that may get trapped in sea caves. This is likely going to continue in the future.
7.1 Characterisation of pressures/ threats	D01: Wind, wave and tidal power and their infrastrucutres are a possible threat in the future, as they are likely to increase in future. If in proximity to sea caves, especially wave power generation could reduce wave height, changing community composition as a result of reduced submergence.
7.1 Characterisation of pressures/ threats	I02: There are currently very few records of invasive species from sea caves, but this is likely going to change in the future, due to likely increases in species introductions and their spread.
7.1 Characterisation of pressures/ threats	F22: Marine macro- and micro- particulate pollution caused by recreational or residential activities and structures can have very negative impacts on sea cave conditon. Sea caves can act as sinks for drift litter (macro and microplastic, drift wood, household litter) that may be trapped in sea caves. This likely to continue in the future.
7.1 Characterisation of pressures/ threats	F23: Marine macro- and micro- particulate pollution caused by industrial or commercial activities and structures can have very negative impacts on sea cave conditon. Sea caves can act as sinks for drift litter (macro and microplastic, drift wood, ghost nets) that may be trapped in sea caves. This likely to continue in the future.
7.1 Characterisation of pressures/ threats	N08: Sea caves are exposed to a range of pressures resulting from climate change, for example changes in species composition due to changes in temperature regimes. This is likely going to continue in the future.
7.1 Characterisation of pressures/ threats	F07: Human activities causing trampling and possibly impacting the condition of the feature are a pressure, in particular for partially submerged sea caves. This is likely going to continue in the future.
7.2 Sources of information	This information is mostly based on expert judgement by habitat specialists using their knowledge about the ecology and geology of the feature and site-specific information on activities potentially impacting the feature.
9.1 Future prospects of parameters	This judgement is based on expert judgement due to the limited occurrence of pressures impacting on the feature currently and in the next 2 reporting cycles, and the resilient nature of the feature. There are a number of uncertainties affecting this judgement of future prospects; these include the application and interpretation of EU Caselaw to small scale developments within European Sites.
11.4 Short term trend of habitat area in good condition within the network; Direction	Area values for sea caves are not available and therefore could not be provided. As explained in section 6.8, instead the proportion of number of point locations where sea cave biotopes were recorded (by number, not area) in good condition has been reported for this feature. We suggest that the proportion of point locations with sea cave biotopes inside the N2K network is also used by the JNCC to populate sections 11.1-11.3 as discussed on marine habitat expert group calls.

11.5 Short term trend of habitat area in good condition within the network; Method used	Area values for sea caves are not available and therefore could not be provided. As explained in section 6.8, instead the proportion of number of point locations where sea cave biotopes were recorded (by number, not area) in good condition has been reported for this feature. We suggest that the proportion of point locations with sea cave biotopes inside the N2K network is also used by the JNCC to populate sections 11.1-11.3 as discussed on marine habitat expert group calls.