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:

H1150 - Coastal lagoons

NORTHERN IRELAND

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 (Northern Ireland information only)**
1.2 Habitat code	**1150 - Coastal lagoons**

2. Maps

2.1 Year or period	2013-2018
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Atlantic (ATL)**
3.2 Sources of information	http://niopa.qub.ac.uk/bitstream/NIOPA/1095/1/proposed-changes-to-water-body-boundaries-2015.pdf https://www.daera-ni.gov.uk/sites/default/files/publications/doe/water-report-north-eastern-river-basin-plan-2015.pdf https://www.daera-ni.gov.uk/sites/default/files/publications/doe/water-report-north-western-river-basin-plan-2015.pdf https://www.daera-ni.gov.uk/sites/default/files/publications/doe/water-report-neagh-bann-river-basin-plan-2015.pdf https://www.daera-ni.gov.uk/sites/default/files/publications/doe/delivering-the-programme-of-measures-in-the-river-basin-management-plans.PDF DAERA; 2018, Strangford Lough SAC condition Assessment. Internal Document. DAERA; 2018, Strangford Lough Part 3 Area of Special Scientific Interest (ASSI) and Intertidal Special Area of Conservation (SAC) Condition Assessment 2017. Internal Document. SLLP; 2017, Draft Management Report for Strangford Lough Marine Protected Area Management Scheme 2017. Autumn 2016 Coastwatch Survey Results, Island of Ireland. Part 1-Coast Character, Biodiversity and Water Quality. JNCC, 2013. Coastal Lagoons H1150 in Northern Ireland, 3rd Reporting Cycle. http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H1150_NORTHERNIRELAND.pdf Ministry of Finance Northern Ireland, 1967. The Bateman Formula for Coast Protection. Departmental Memo. University of Ulster, Centre for Coast and Marine Research 2018. Northern Ireland Coastal Data: Current Status and Future Options Report. comissioned by Ulster Wildlife. https://www.nationaltrust.org.uk/documents/northern-ireland-coastal-data-research-report-feb-2018-.pdf

4. Range

4.1 Surface area (in km²)	1.77	
4.2 Short-term trend Period		
4.3 Short-term trend Direction	Stable (0)	
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum

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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	2013-2018		
5.2 Surface area (in km²)	a) Minimum 1.77	b) Maximum 1.77	c) Best single value 1.77
5.3 Type of estimate	Best estimate		
5.4 Surface area Method used	Based mainly on extrapolation from a limited amount of data		
5.5 Short-term trend Period	2013-2018		
5.6 Short-term trend Direction	Stable (0)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on expert opinion with very limited data		
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 0.35	Maximum 0.35
	b) Area in not-good condition (km²)	Minimum 0	Maximum 0
	c) Area where condition is not known (km²)	Minimum 1.42	Maximum 1.42
6.2 Condition of habitat Method used	Based mainly on extrapolation from a limited amount of data		

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6.3 Short-term trend of habitat area in good condition Period	2009-2018	
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 extrapolation from a limited amount of 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		

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Application of synthetic (mineral) fertilisers on agricultural land (A20)	H

Threat	Ranking
Application of synthetic (mineral) fertilisers on agricultural land (A20)	M
Modification of hydrological flow or physical alteration of water bodies for agriculture (excluding development and operation of dams) (A33)	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)	M
Other invasive alien species (other then species of Union concern) (I02)	M
Sea-level and wave exposure changes due to climate change (N04)	M

7.2 Sources of information	
7.3 Additional information	

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)

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Manage drainage and irrigation operations and infrastructures (CB14)

Management, control or eradication of other invasive alien species (CI03)

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	

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 0.47 b) Maximum 0.47 c) Best single value 0.47
11.2 Type of estimate	Best estimate
11.3 Surface area of the habitat type inside the network Method used	Based mainly on extrapolation from a limited amount of data
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 extrapolation from a limited amount of data
11.6 Additional information	

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12. Complementary information

12.1 Justification of % thresholds for trends

12.2 Other relevant information

Distribution Map

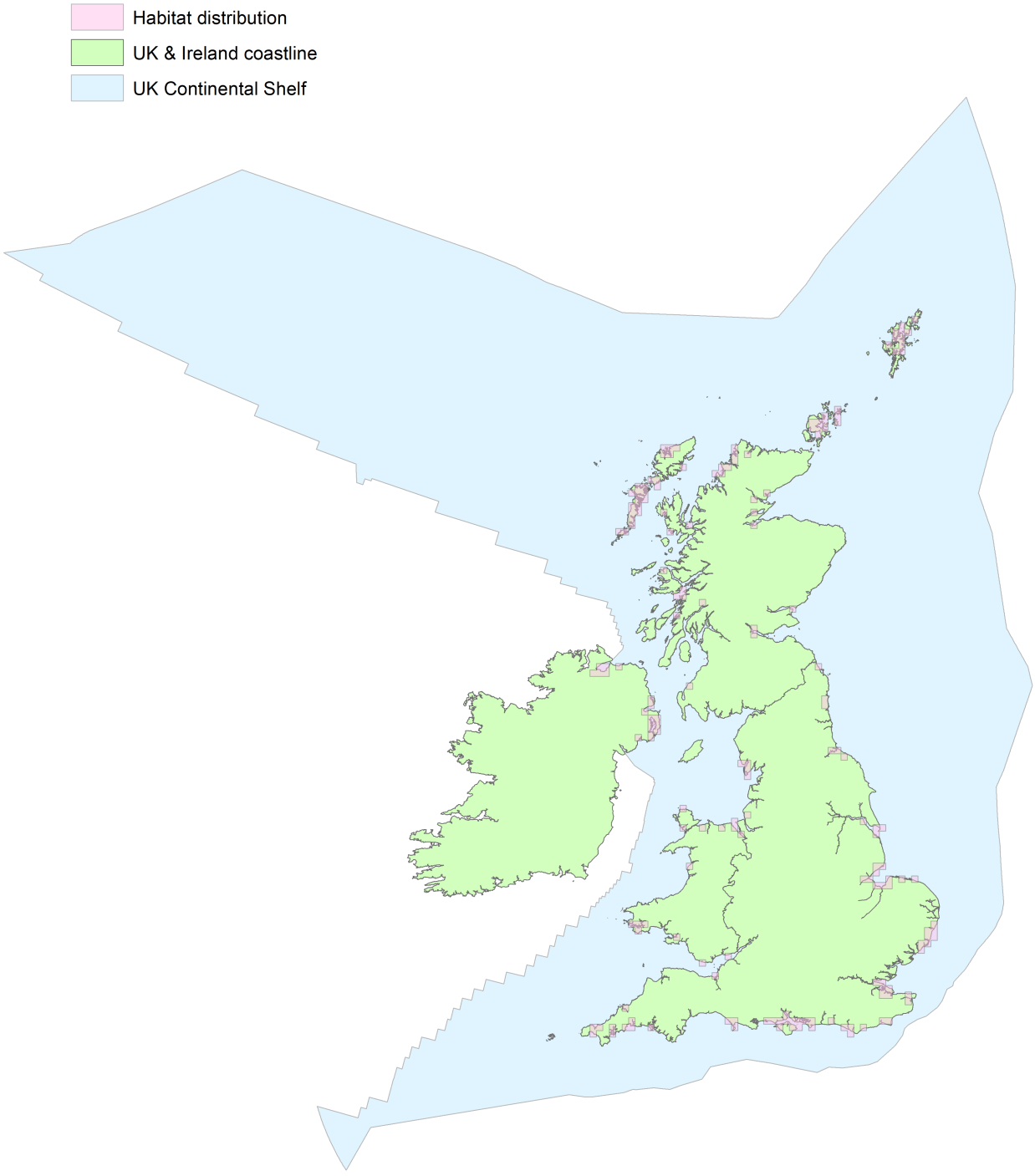

Figure 1: UK distribution map for H1150 - Coastal lagoons.

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

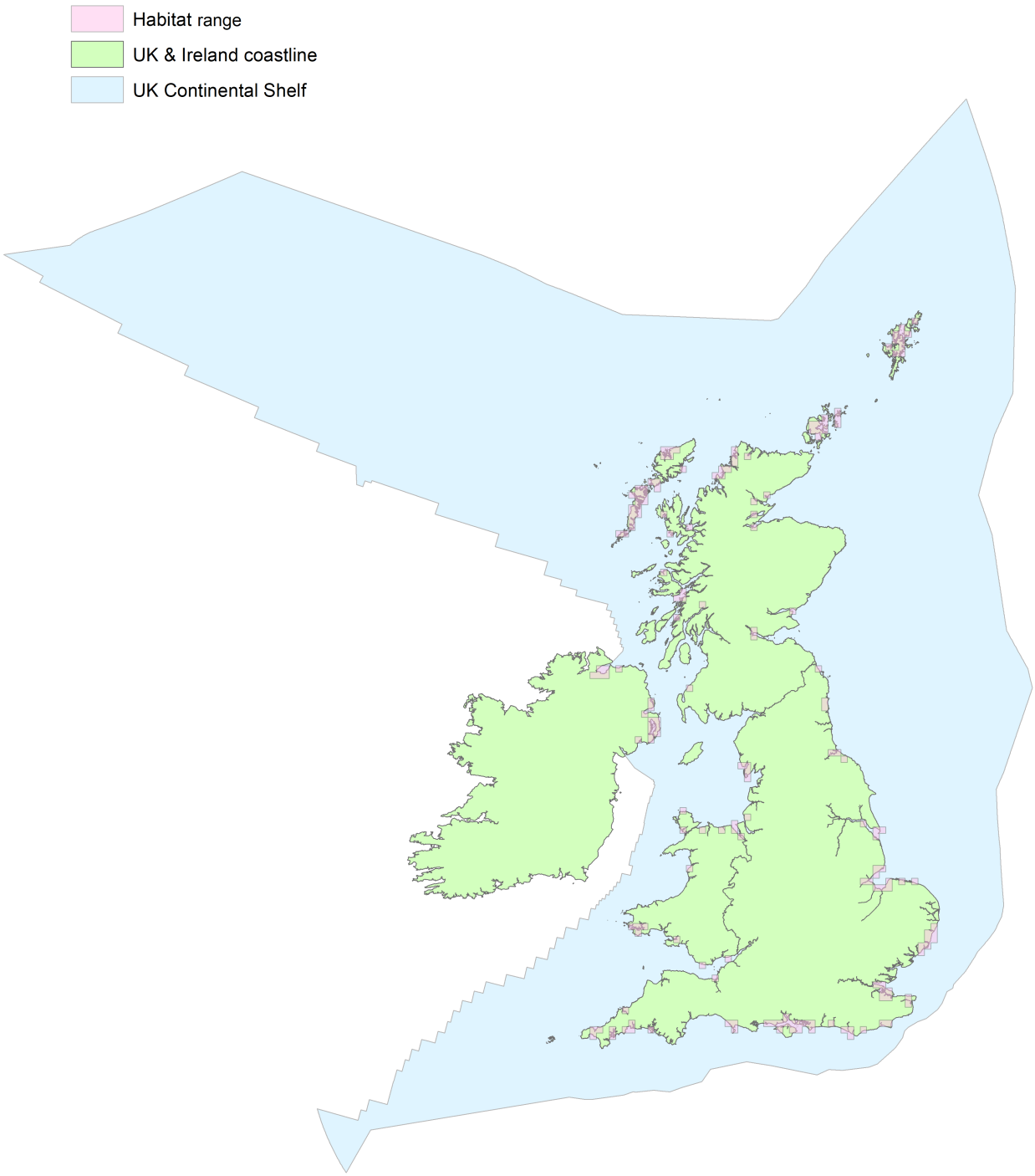

Figure 2: UK range map for H1150 - Coastal lagoons.

The range was considered equivalent to the surface area. Coastal lagoons 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.

Explanatory Notes

Habitat code: 1150 Region code: ATL

Field label	Note
4.3 Short term trend; Direction	This was listed as 'Stable', after discussions with the Marine Habitats Expert Group, as a physiographic feature, the range is highly unlikely to change within this relatively short period of time.
4.11 Change and reason for change in surface area of range	No survey work was carried out on the Coastal Lagoons identified in the previous Article 17 report with the exception of the Dorn in Strangford Lough which is a designated feature within the SAC. However it unlikely that there has been any change in the Range of Coastal Lagoons in NI.
5.2 Surface area	This figure has not changed since the previous Article 17 report.
5.6 Short term trend; Direction	It is highly unlikely that the area of this Annex I habitat is likely to change in the short term which is why the short term trend was identified as 'Stable'.
5.8 Short term trend; Method used	Based mainly on expert opinion with very limited data was chosen as while the designated Lagoon in Strangford Lough SAC has been surveyed at twice within the last reporting period the remaining Lagoons have not.
5.14 Change and reason for change in surface area	No change in area
6.1 Condition of habitat	Area calculated here refers to 'the Dorn' a silled lagoon designated within Strangford Lough SAC. The most recent condition assessment carried out in within Strangford SAC in which this feature is found showed that the number of species and biotope have remained stable over the surveys carried out in 2012, 2014 & 2016. Furthermore the results are comparable with the first large scale survey done in this area (NILS, 1986) when taking into account the different survey techniques used which further demonstrates the stable short and long term trend of habitat area in good condition.
6.2 Condition of habitat; Method used	Even though The Dorn Lagoon has been assessed by survey twice since the last reporting cycle, DAERA cannot use 'complete survey or a statistically robust estimate' as this is described as having complete habitat mapping which has not yet been completed therefore the description of of 'based mainly on extrapolation from limited amount of data' was used instead.
6.4 Short term trend of habitat area in good condition; Direction	Stable -which was reported for the last Art 17 cycle. See 3.1 for further information
7.1 Characterisation of pressures/ threats	F08: Modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures)-Many of NIs Coastal lagoons are artificial formed by road or railway crossings that require periodic maintenance which is why this was listed a potential threat with Mediumrisk of damage.
7.1 Characterisation of pressures/ threats	A33: Modification of hydrological flow or physical alternation of water bodies for agriculture (excluding development and operation of dams)-Introduction of valves to minimise input from saline waters to intensive agriculture adjacent to Coastal Lagoons in Foyle. In the last reporting cycle Ruppia had been lost from a number of sites due to decrease in salinity as a result of new valves which reduce saline input in artificially created lagoons. This remains a medium threat to Lagoons in the future.

7.1 Characterisation of pressures/ threats	I02: Other invasive alien species (other then species of Union concern)-Four invasive species were reported in the Dorn in 2012, 2014 & 2016 but not in NILS 1986: Sargassum muticum, Corella eumyota, Austrominius modestus,Crepidula fornicata. While there is no evidence of impact yet it remains a threat with medium risk of damage to the feature.
7.1 Characterisation of pressures/ threats	N04: Sea-level and wave exposure changes due to climate change- with rise in sea levels many of the Lagoons identified in NI, including The Dorn a designated features of Strangford Lough SAC, would become submerged and no longer be classified as Lagoons. While this may not occur in the short term it remains a viable threat and is considered to have a medium risk of damage to the habitat in the future.
7.1 Characterisation of pressures/ threats	A20: Application of synthetic (mineral) fertilisers on agricultural land - many of the coastal lagoons in Northern Ireland have drainage channels flowing from adjacent land which has intensive agriculture which can with increased nutrient loading draining into the adjacent Lagoons lead to eutrophication. For this reason this activity was ranked as High risk from the pressure but with mitigation measures in place this reduces to a medium risk as a future threat.
8.2 Main purpose of the measures taken	The first conservation measure relates to the reduction/removal of pollution from agricultural runoff which is managed under the local River Basin Management Plan. The second measure was taken by the owners of the land near the St Anne's Point Lagoon in Strangford Lough. The National Trust have reduced the height of the sea walls and the drainage valves left open to allow for saline flooding of the Lagoon to maintain the saline lagoon and saltmarsh habitat.
8.5 List of main conservation measures	CA13: Reduce/eliminate marine pollution from agricultural activities- The Annex I Lagoons fall within Nitrate Sensitive area which have targeted management measures to reduce the impact from agricultural waste and therefore reduce nutrient enrichment in these areas under the Water Framework Directive.
8.5 List of main conservation measures	CB14: Manage drainage and irrigation operation and infrastructures - The current approach to managing the Northern Ireland coastal assets which include sea defences, rail and road, etc are outlined by the Bateman Formula devised in 1967. This is essentially a coast protection policy, stating that Government Departments will protect their own coastal assets and, individual land-owners will protect their own coastal assets. Any proposed work is subject to the necessary consents e.g. marine licence, planning permission, ASSI consent/assent (Environment Order), Habitats Regulations Assessment etc. A recent review has shown that this approach doesn't adequately cover coastal erosion and a survey has been commissioned to establish a baseline study and gap analysis of coastal erosion due for publication in 2018.
8.5 List of main conservation measures	CI03: Management, control or eradication of other invasive alien species- There is a Spartina eradication programme in place which uses a herbicide under licence and specific conditions to eradicate swarths of Spartina anglica, an invasive species, which includes Strangford Lough where the Dorn Lagoon is located. The Department also runs an aquatic invasive species Surveillance monitoring programme with regular checks of harbours & marina's. In addition Fisheries Officers also check aquaculture imports and movement of stock between sea loughs for the presence of non-native species.
9.1 Future prospects of parameters	This is subject to further discussion but it is thought unlikely that there will be any change in the future propects of Lagoons within in the next 12 years, provided there is no increase in pressures or threats and the existing management measures are maintained. For this reason the future prospects were listed as 'Overall Stable'
11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network	The area value in 11.1 includes all of the Lagoons which fall within NIs SACs. This explains the difference between the value in 6.1 (the Dorn only) and the value in 11.1 which includes Lagoons which have not been designated but still fall within the boundary of designated SACs.

11.4 Short term trend of habitat area in good condition within the network; Direction	The Dorn silled lagoon has been surveyed and assessed in 2012,2014 & 2016.The number of species and biotopes along with area and range have remained stable over the last reporting cycle. This stability along with the management measures put in place to mitigate against the identified pressures in this Lagoon should ensure that the short term trend of this habitat continuing to remain in good condition is Stable.
11.5 Short term trend of habitat area in good condition within the network; Method used	See notes for 6.2 above