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 species:

S1355 - Otter (*Lutra lutra*)

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 species, 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 species 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; (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species) and/or (iv) the field was only relevant at UK-level (sections 9 Future prospects and 10 Conclusions).
- For technical reasons, the country-level future trends for Range, Population and Habitat for the species 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 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK (Northern Ireland information only)**
1.2 Species code	**1355**
1.3 Species scientific name	**Lutra lutra**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Otter

2. Maps

2.1 Sensitive species	No
2.2 Year or period	1994-2018
2.3 Distribution map	Yes
2.4 Distribution map Method used	Complete survey or a statistically robust estimate
2.5 Additional maps	No

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

3.1 Is the species taken in the wild/exploited?	No	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

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

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

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

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

Atlantic (ATL)

4.2 Sources of information

CHAPMAN, P.J. & CHAPMAN, L.L. 1982. Otter Survey of Ireland 1980-1981. The Vincent Wildlife Trust. PRESTON, J., PRODHOL, P., PORTIG, A. & MONTGOMERY, I. 2004. Reassessing otter Lutra lutra distribution in Northern Ireland. Enviroment and Heritage Service Research and Development Series. No. 06/24. Available to download from the Environment and Heritage Service website (Hwww.ehsni.gov.uk/pubs/publications/otterreportNov2004.pdf).
PRESTON, S.J & REID, N.2010. Northern Ireland Otter Survey. Report prepared by the Natural Heritage Research Partnership, Quercus, Queen's University Belfast for the Northern Ireland Environment Agency. Northern Ireland Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B) Environment Agency Research and Development Series No. 11/06.
Cooper, A., McCann, T. and Rogers, D. (2009) Northern Ireland Countryside Survey 2007: Broad Habitat Change 1998-2007. Northern Ireland Environment Agency Research and Development Series No. 09/06
Unpublished data. (2010-2015) CSM Survey Presence/Absence (% Coverage). NIEA. Natural Heritage. DoE.
Northern Ireland Species Action Plan-Otter (Lutra lutra)-2008. DOE NIEA Publication.
Department of the Environment (2002) Northern Ireland Biodiversity Strategy.
REID, N., HAYDEN, B., LUNDY, M.G., PIETRAVALLE, S., MCDONALD, R.A. & Montgomery, w.i. (2012) National Otter Survey of Ireland 2010/12. Prepared by Quercus, Queen's University Belfast for the National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht, Dublin, Ireland.
MARK HORTON & DAVID BELL (2017) Ballinderry River Otter (Lutra lutra) Survey 2016. Prepared by the Ballinderry Rivers Trust for CEDaR and NIEA.

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5. Range

5.1 Surface area (km²)		
5.2 Short-term trend Period		
5.3 Short-term trend Direction	Stable (0)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum
5.5 Short-term trend Method used		
5.6 Long-term trend Period		
5.7 Long-term trend Direction		
5.8 Long-term trend Magnitude	a) Minimum	b) Maximum
5.9 Long-term trend Method used		
5.10 Favourable reference range	a) Area (km²) b) Operator c) Unknown d) Method	
5.11 Change and reason for change in surface area of range	No change The change is mainly due to:	
5.12 Additional information		

6. Population

6.1 Year or period	1994-2018	
6.2 Population size (in reporting unit)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	1209
	c) Maximum	
	d) Best single value	1209
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit	number of breeding females (bfemales)
	b) Minimum	1600
	c) Maximum	
	d) Best single value	
6.5 Type of estimate	Best estimate	
6.6 Population size Method used	Based mainly on extrapolation from a limited amount of data	
6.7 Short-term trend Period	2007-2018	
6.8 Short-term trend Direction	Stable (0)	
6.9 Short-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval	
6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	

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6.11 Long-term trend Period	
6.12 Long-term trend Direction	
6.13 Long-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval
6.14 Long-term trend Method used	
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	a) Population size b) Operator c) Unknown d) Method
6.16 Change and reason for change in population size	No change The change is mainly due to:
6.17 Additional information	

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (to maintain the species at FCS)?	Yes
	b) Is there a sufficiently large area of occupied AND unoccupied habitat of suitable quality (to maintain the species at FCS)?	
7.2 Sufficiency of area and quality of occupied habitat Method used	Based mainly on extrapolation from a limited amount of data	
7.3 Short-term trend Period	2007-2018	
7.4 Short-term trend Direction	Stable (0)	
7.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
7.6 Long-term trend Period		
7.7 Long-term trend Direction		
7.8 Long-term trend Method used		
7.9 Additional information		

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Drainage for use as agricultural land (A31)	M
Bycatch and incidental killing (due to fishing and hunting activities) (G12)	M
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Mixed source marine water pollution (marine and coastal) (J02)	M

Abstraction from groundwater, surface water or mixed water (K01)	H
Drainage (K02)	H
Modification of hydrological flow (K04)	H
Physical alteration of water bodies (K05)	H
Change of habitat location, size, and / or quality due to climate change (N05)	M
Decline or extinction of related species (e.g. food source / prey, predator / parasite, symbiote, etc.) due to climate change (N07)	M

Threat	Ranking
Drainage for use as agricultural land (A31)	M
Bycatch and incidental killing (due to fishing and hunting activities) (G12)	M
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	M
Mixed source marine water pollution (marine and coastal) (J02)	M
Abstraction from groundwater, surface water or mixed water (K01)	H
Drainage (K02)	H
Modification of hydrological flow (K04)	H
Physical alteration of water bodies (K05)	M
Change of habitat location, size, and / or quality due to climate change (N05)	H
Decline or extinction of related species (e.g. food source / prey, predator / parasite, symbiote, etc.) due to climate change (N07)	H

8.2 Sources of information

8.3 Additional 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)

9.5 List of main conservation measures

Reduce bycatch and incidental killing of non-target species (CG05)

Reduce impact of other specific human actions (CH03)
Reduce impact of mixed source pollution (CJ01)
Restore habitats impacted by multi-purpose hydrological changes (CJ03)
Other measures related to mixed source pollution and multi-purpose human-induced changes in hydraulic conditions (CJ04)
Adopt climate change mitigation measures (CN01)
Implement climate change adaptation measures (CN02)
Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities (CF02)
Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)

9.6 Additional information	Measures have been taken via the Water Framework Directive to maintain the water quality within all catchments in which the species is present.

10. Future prospects

10.1 Future prospects of parameters	a) Range b) Population c) Habitat of the species
10.2 Additional information	

11. Conclusions

11.1. Range	
11.2. Population	
11.3. Habitat for the species	
11.4. Future prospects	
11.5 Overall assessment of Conservation Status	
11.6 Overall trend in Conservation Status	
11.7 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:
11.8 Additional information	

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

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12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	125
	c) Maximum	
	d) Best single value	125
12.2 Type of estimate		Best estimate
12.3 Population size inside the network Method used		Complete survey or a statistically robust estimate
12.4 Short-term trend of population size within the network Direction		Stable (0)
12.5 Short-term trend of population size within the network Method used		Complete survey or a statistically robust estimate
12.6 Additional information		

13. Complementary information

13.1 Justification of % thresholds for trends
13.2 Trans-boundary assessment
13.3 Other relevant Information

Distribution Map

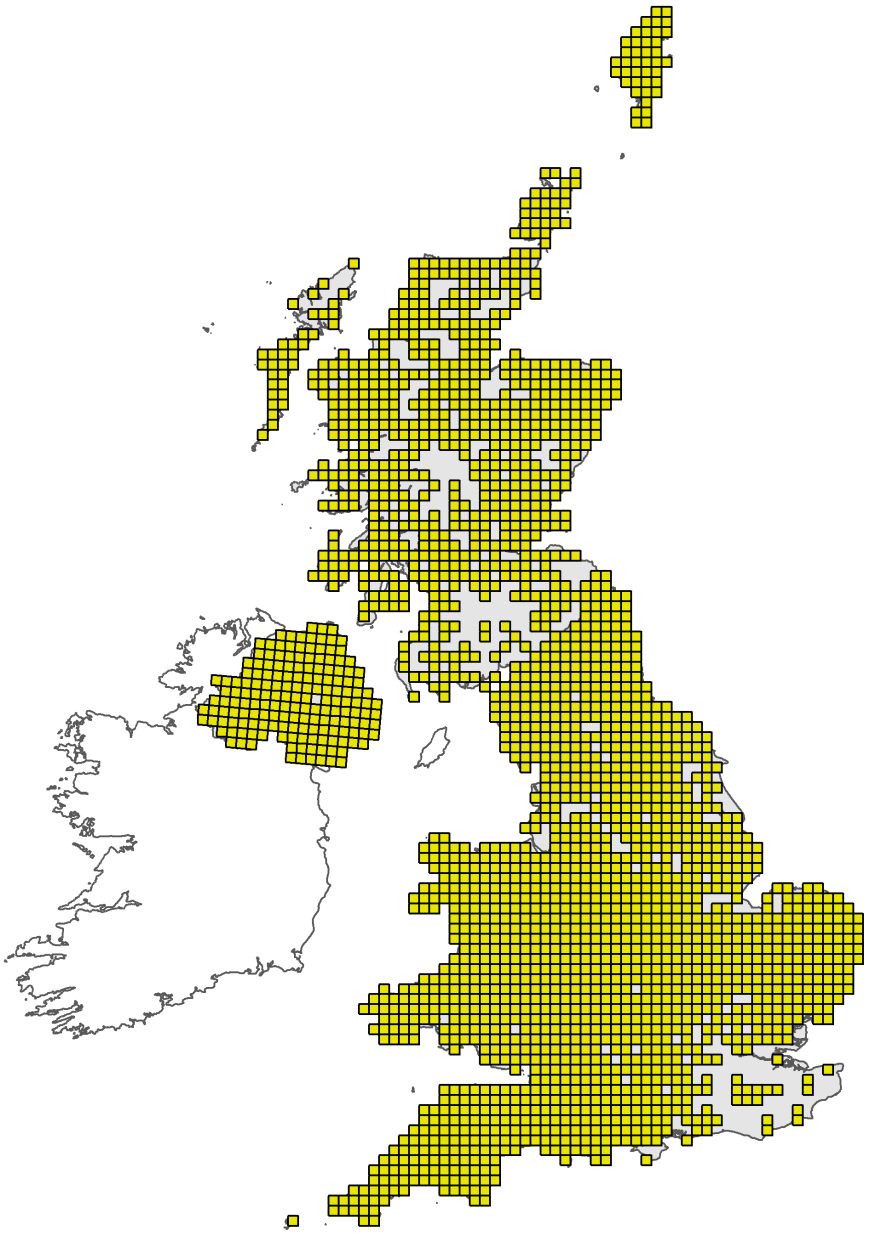

Figure 1: UK distribution map for S1355 - Otter (*Lutra lutra*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.

Range Map

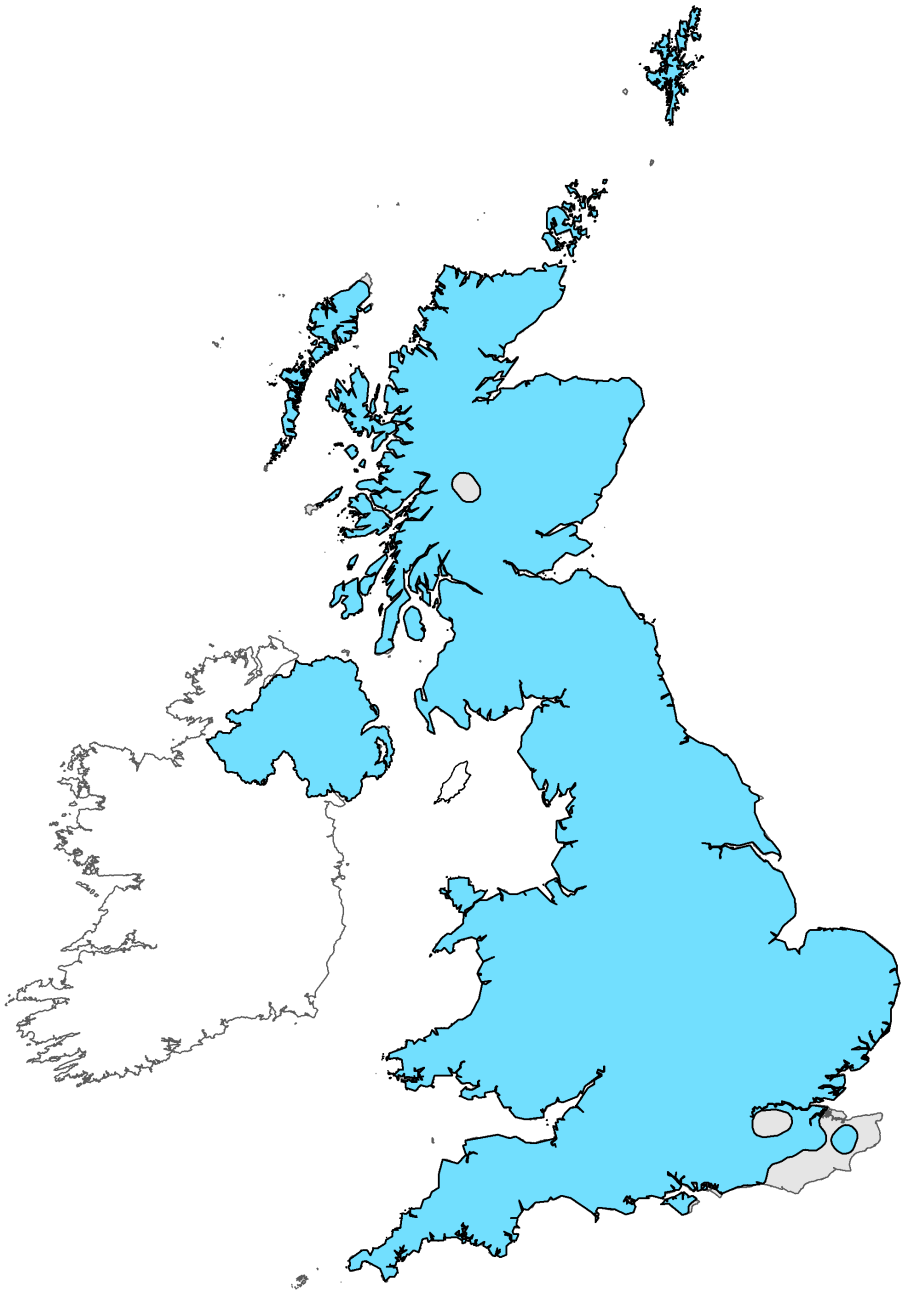

Figure 2: UK range map for S1355 - Otter (*Lutra lutra*).Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by The Mammal Society applying a range mapping tool as outlined in Matthews et al. (2018), to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 20km. For further details see the 2019 Article 17 UK Approach document.

Explanatory Notes

Species name: Lutra lutra (1355)

Field label	Note
2.4 Distribution map; Method used	Three national surveys have been undertaken for Northern Ireland since 1982 - Chapman and Chapman, 1982; Preston et al. 2004; with the most recent survey in 2010 (Preston et al, 2010). Between 2006 and 2017, Otter surveys have also taken place on selected SACs - i.e. Upper Lough Erne (2006 & 2010), Upper Ballinderry River (2006, 2010 & 2016), Owenkiller Rive (2006, 2010 & 2015), River Foyle and Tributaries (2006, 2011 & 2015), River Roe and Tributaries (2006 & 2010) and River Faughan and Tributaries (2006, 2010 & 2015).

Species name: Lutra lutra (1355) Region code: ATL

Field label	Note
5.3 Short term trend; Direction	Although the number of occupied 10km squares decreased between the 2001-2006 reporting period and the 2007-2012 period in NI, the most recent survey in 2010 indicated a significant increase in occurrence of 26.9% since the previous NI Otter survey in 2001-2002. This survey showed 88.6% occupancy of sites surveyed compared to 62.5% in 2001-2002. The long term trend derived from the 3 NI national surveys shows no clear trend, with the 1981-82 recording 78.4% presence, dropping to 62.5% presence 2001-02 survey, and then increasing to 88.6% during the 2010 survey. No systematic survey has been carried out during the current reporting period, but the overall breakdown of recorded Otter presence during the period since 1994 was 193 in 1994-2000, 693 in 2001-2006, 804 in 2007-2012 and 409 in 2013-2018. These figures clearly show the influence of recording effort on Otter records, but do not suggest any decline on the overall range of the species within NI. Hence recorded as stable
6.1 Year or Period	1994-2018
6.4 Additional population size	The report (REID, N., HAYDEN, B., LUNDY, M.G., PIETRAVALLE, S., MCDONALD, R.A. & Montgomery, W.I. (2012) National Otter Survey of Ireland 2010/12. Prepared by Quercus, Queen's University Belfast for the National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht, Dublin, Ireland.) gives a figure of 1,600 adult breeding females for Northern Ireland based on the availability of habitat per catchment, or specifically 1,600 is the mean number of adult breeding females +/- 95% CIs in NI2. This information was provided by Neil Reid per.com. As the report has not attempted to estimate adult male or sub adults the 1,600 figure represents the minimum number present in NI.
6.8 Short term trend; Direction	Similar to 5.3, although the number of occupied 10km squares decreased between the 2001-2006 reporting period and the 2007-2012 period in NI, the most recent survey in 2010 indicated a significant increase in occurrence of 26.9% since the previous NI Otter survey in 2001-2002. This survey showed 88.6% occupancy of sites surveyed compared to 62.5% in 2001-2002. The long term trend derived from the 3 NI national surveys shows no clear trend, with the 1981-82 recording 78.4% presence, dropping to 62.5% presence 2001-02 survey, and then increasing to 88.6% during the 2010 survey. No systematic survey has been carried out during the current reporting period, but the overall breakdown of recorded Otter presence during the period since 1994 was 193 in 1994-2000, 693 in 2001-2006, 804 in 2007-2012 and 409 in 2013-2018. These figures clearly show the influence of recording effort on Otter records, but do not suggest any decline on the overall population of the species within NI. Hence recorded as stable

7.1 Sufficiency of area and quality of occupied habitat	The surface area of habitat currently used by L. lutra is unknown. It is impossible to estimate total length of inland water or coastal bank that might be occupied by L. lutra currently, however using the estimate of total length of riparian habitats provided in Harris et al. (1995), population densities provided by Jefferies et al. (2003) and number of occupied sites in a number of national surveys a figure of 198,362 km of linear riparian habitat occupied by L. lutra in Great Britain (GB) was previously estimated: 6,357 in England; 20,821 km in Wales; and 131,184 km in Scotland, which represents approximately 64% of the total riparian habitat across GB. There is no estimate for Northern Ireland. However, the reliability of this estimate is very low because it is based on expert opinion and extrapolation from densities in local surveys to a national scale estimate. It also does not provide an area estimate because the measurement is of linear features. Although the actual area of habitat required by a favourable reference population of L. lutra is unknown, there is some information on trends in quality and amount of suitable habitat used by L. lutra in the UK. River and riparian habitat suffered degradation in the UK during the 20th century. However, there is evidence to suggest that these trends are now in reverse. Riparian habitats have been assessed in the two most recent Countryside Surveys, in 1998 and 2007 (Cooper, A., McCann, T. and Rogers, D. 2009) and a comparison of results showed that the overall area of streams, rivers and standing waterbodies has remained stable in Northern Ireland during this period, while Fen, marsh and swamp decreased by 10.7%.
8.1 Characterisation of pressures/ threats	Apart from the direct impact on the physical health of an individual from the use of biocides, hormones and chemicals and from accidental killing (A36 & G12), the main threats and pressures relate to the quality and extent of available habitat and the species' food source. Decline in water quality through pollution will have a direct detrimental effect on the quality and availability of their food source, as will the predicted rise in water temperature, frequency of droughts and floods caused by climate change. Drainage of wetlands and physical alterations to water bodies and their hydrology are likely to reduce the quality and area available for feeding and as a refuge.
12.4 Short term trend of the population size within the network; Direction	Otter surveys carried out between 2006 and 2017 on the 6 SACs in which Otter is a selection feature indicate a stable population within the designated sites with only minor, if any, change within individual sites; 3 SACs showing an increase in occurrence, 2 showing a decrease in occurrence and 1 showing no change.