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:

S1106 - Atlantic salmon (*Salmo salar*)

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.

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**
1.2 Species code	**1106**
1.3 Species scientific name	**Salmo salar**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Atlantic salmon

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2007-2018
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?	Yes	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	Yes
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	Yes
	c) regulation of the periods and/or methods of taking specimens	Yes
	d) application of hunting and fishing rules which take account of the conservation of such populations	Yes
	e) establishment of a system of licences for taking specimens or of quotas	Yes
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	Yes
	g) breeding in captivity of animal species as well as artificial propagation of plant species	Yes
	h) other measures	Yes

England
Restrictions to stocking to the wild.
Scotland
Prohibition on mixed stock coastal netting (already in place in Scotland and now extended to include Northumbrian netting stations), development of Conservation Limits (and annual river-by-river exploitation levels set on probability of achieving these). These were implemented through The Conservation of Salmon (Scotland) Regulations 2016. The implementation of new closed seasons/temproal restrictions to protect vulnerable life history types (such as the Spring multi-sea-winter stock component). These were implemented under The Conservation of Salmon (Annual Close Times and Catch

and Release) (Scotland) Regulations 2014. Voluntary Catch & Release continues to be operated in most rivers for all other Atlantic salmon stock components (and can be mandatory in rivers which are designated as Grade 3 (unlikley to acheive their conservation limits) in any given year.

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

England

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5. Range

5.1 Surface area (km²)	159801.7	
5.2 Short-term trend Period	2007-2018	
5.3 Short-term trend Direction	Increasing (+)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum
5.5 Short-term trend Method used	Complete survey or a statistically robust estimate	
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	Approximately equal to (≈)
	c) Unknown	
	d) Method	The FRR has changed since 2013. An FRR operator has been used because it has not been possible to calculate the exact FRR. The FRR is considered to be sufficient to maintain a viable population and is no less that when the Habitats Directive came into force in the UK. For further details see the 2019 Article 17 UK Approach document.
5.11 Change and reason for change in surface area of range	Genuine change Improved knowledge/more accurate data Use of different method	
	The change is mainly due to:	Genuine change
5.12 Additional information	The current range surface area calculation does not represent the real range surface area. Change in availability of underpinning mapping data has resulted in an apparent decrease in range area compared to 2013, but this is not due to genuine change. Expert opinion considers the trend in range to be stable. The real range surface area is considered to be the range in 2013 - 180,057.75km2. The FRR in 2013 was 163,132km2. The FRR has been changed to an operator 'approximately equal to current' to reflect this. For further information see the 2019 Article 17 UK Approach document.	

6. Population

6.1 Year or period	2007-2018	
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	16216
6.3 Type of estimate	Minimum	

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6.4 Additional population size (using population unit other than reporting unit)	a) Unit	number of adults (adults)
	b) Minimum	
	c) Maximum	
	d) Best single value	709784
6.5 Type of estimate	Minimum	
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	Decreasing (-)	
6.9 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.10 Short-term trend Method used	Complete survey or a statistically robust estimate	
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	741000 with unit number of adults (adults)
	b) Operator	
	c) Unknown	
	d) Method	The FRP is the same as in 2013. The value is considered to be large enough to support a viable population and no less than when the Habitats Directive came into force in the UK. For further information see the 2019 Article 17 UK Approach document.
6.16 Change and reason for change in population size	Genuine change Use of different method	
	The change is mainly due to:	Genuine change
6.17 Additional information	This species exhibits large inter-annual fluctuations in population size. The short-term trend in population is declining. There are also underlying issues in population age structure which are considered strongly deviating from normal.	

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)?	Yes
	b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	
7.2 Sufficiency of area and quality of occupied habitat Method used	Complete survey or a statistically robust estimate	

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7.3 Short-term trend Period	2006-2018
7.4 Short-term trend Direction	Increasing (+)
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	At a UK scale there is considered to be sufficient occupied and unoccupied habitat combined, but there are continuing problems in certain parts of the UK with regard to poor water quality and the existence of historical physical barriers impinging migration.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Agricultural activities generating point source pollution to surface or ground waters (A25)	M
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	M
Forestry activities generating pollution to surface or ground waters (B23)	M
Management of fishing stocks and game (G08)	H
Introduction and spread of species (including GMOs) in marine aquaculture (G17)	H
Introduction and spread of species (including alien species and GMOs) in freshwater aquaculture (G24)	M
Physical alteration of water bodies (K05)	H
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	H
Increases or changes in precipitation due to climate change (N03)	H
Desynchronisation of biological / ecological processes due to climate change (N06)	M

Threat	Ranking
Agricultural activities generating point source pollution to surface or ground waters (A25)	M
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	M
Forestry activities generating pollution to surface or ground waters (B23)	M
Management of fishing stocks and game (G08)	H
Introduction and spread of species (including GMOs) in marine aquaculture (G17)	H
Introduction and spread of species (including alien species and GMOs) in freshwater aquaculture (G24)	M

Physical alteration of water bodies (K05)	H
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01)	H
Increases or changes in precipitation due to climate change (N03)	H
Desynchronisation of biological / ecological processes due to climate change (N06)	M

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: Short-term results (within the current reporting period, 2013-2018)

9.5 List of main conservation measures

Reduce impact of hydropower operation and infrastructure (CC04)
Management of professional/commercial fishing (including shellfish and seaweed harvesting) (CG01)
Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants (CG02)
Reducing the impact of (re-) stocking for fishing and hunting, of artificial feeding and predator control (CG03)
Early detection and rapid eradication of invasive alien species of Union concern (CI01)
Management, control or eradication of other invasive alien species (CI03)
Management of problematic native species (CI05)
Reduce impact of multi-purpose hydrological changes (CJ02)
Adopt climate change mitigation measures (CN01)
Implement climate change adaptation measures (CN02)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters

a) Range Good

b) Population Poor

c) Habitat of the species Good

10.2 Additional information: Future trend of Range is Positive - increasing <=1% (one percent or less) per year on average; Future trend of Population is Negative - decreasing <=1% (one percent or less) per year on average; and Future trend of Habitat for the species is Positive - increasing <=1% (one percent or less) per year on average. For further information on how future trends inform the Future Prospects

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conclusion see the 2019 Article 17 UK Approach document.

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Unfavourable - Inadequate (U1)
11.3. Habitat for the species	Favourable (FV)
11.4. Future prospects	Unfavourable - Inadequate (U1)
11.5 Overall assessment of Conservation Status	Unfavourable - Inadequate (U1)
11.6 Overall trend in Conservation Status	Stable (=)
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	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is increasing; and (ii) the current Range surface area is not less than the Favourable Reference Range. Conclusion on Population reached because: (i) the short-term trend direction in Population size is decreasing by 1% per year or less; and (ii) the current Population size is not more than 25% below the Favourable Reference Population. Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is sufficiently large and (ii) the habitat quality is suitable for the long-term survival of the species; and (iii) the short-term trend in area of habitat is increasing. Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Population are poor; and (iii) the Future prospects for Habitat for the species are good. Overall assessment of Conservation Status is Unfavourable-inadequate because one or more of the conclusions are Unfavourable-inadequate. Overall trend in Conservation Status is based on the combination of the short-term trends for Range - increasing, Population - decreasing, and Habitat for the species - increasing. Overall assessment of Conservation Status has not changed since 2013. Overall trend in Conservation Status has not changed since 2013.

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)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	5987

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12.2 Type of estimate	Minimum
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	Decreasing (-)
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

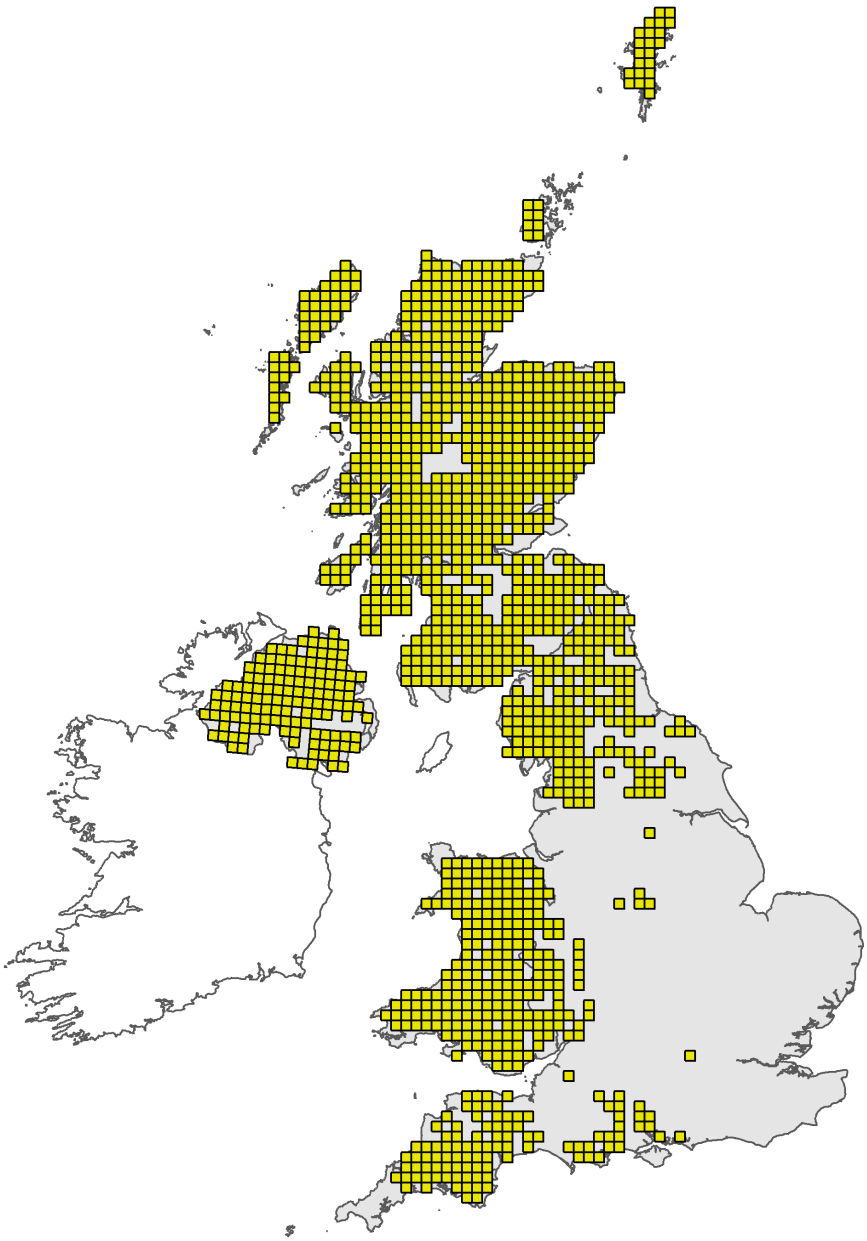

Figure 1: UK distribution map for S1106 - Atlantic salmon (*Salmo salar*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

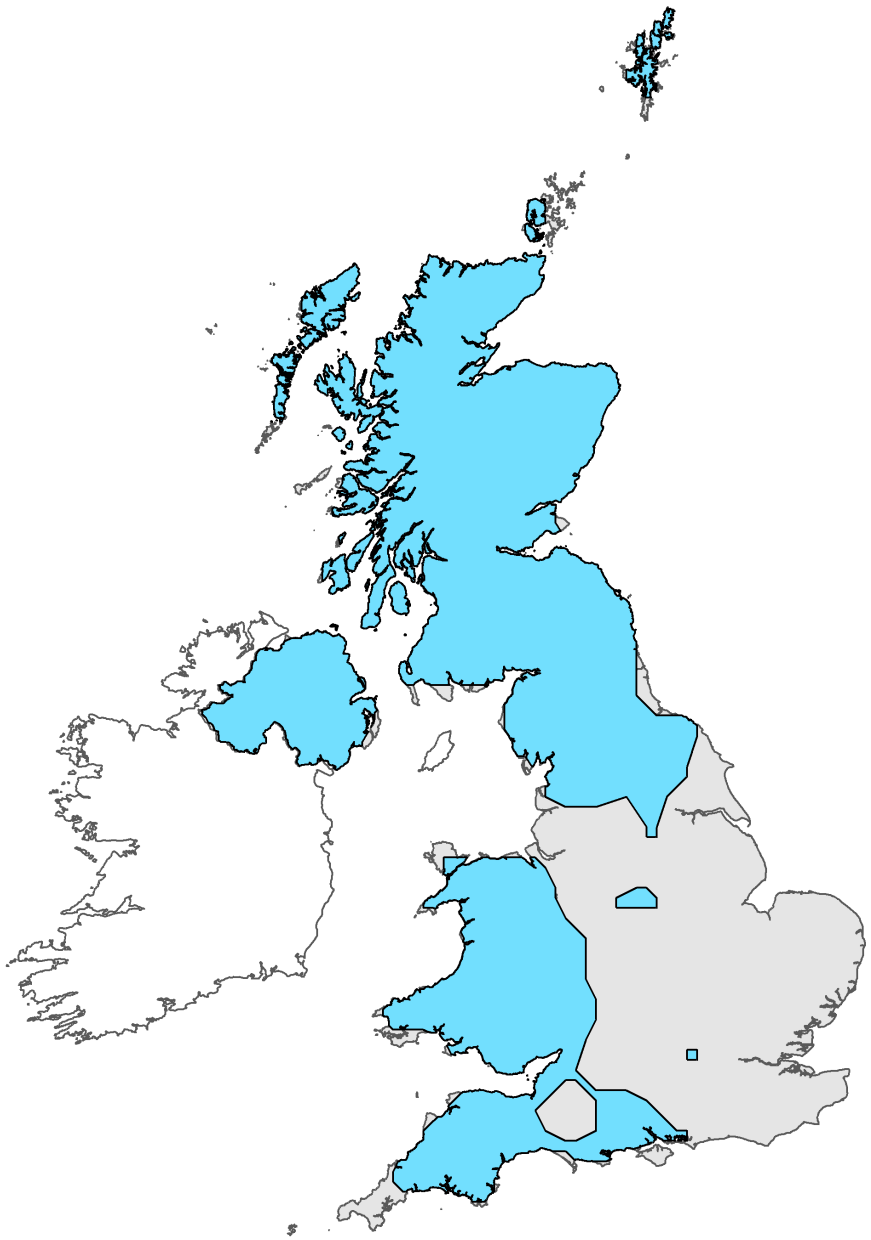

Figure 2: UK range map for S1106 - Atlantic salmon (*Salmo salar*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 25km. For further details see the 2019 Article 17 UK Approach document.