European Environment Agency
European Topic Centre on Biological Diversity

Salmo salar

Annex	II, V
Priority	No
Species group	Fish
Regions	Alpine, Atlantic, Boreal, Continental

The Atlantic Salmon is an anadromous fish from the North Atlantic Ocean that spends most of its life in freshwater; in Europe, was present in most rivers of the Atlantic, North Sea and Baltic Sea; there are also some landlocked populations.

Its conservation status in the Alpine region is 'unfavourable-inadequate', but improving. However, its status is 'favourable' in Finland, and 'unfavourable-bad' in France; in the Polish Alpine region there are mostly juveniles, and its status is 'unfavourable-bad'. Main pressures are fishing, water abstraction, and barriers to migrations (dams).

In the Boreal region its conservation status is 'unfavourable-inadequate' but improving; however, its status is 'unfavourable-bad' in Latvia, and 'favourable' in Finland and Lithuania. Main pressures are professional passive fishing, predation, barriers to migration and acid rain. According to the Finish report, *in south-eastern Finland there is a very small river area with landlocked salmon that has its main distribution on the Russian side; the population size for the River Tornionjoki includes also those salmon which reproduce on the Swedish side and in alpine headwaters of the river system. During the assessment period the overall conservation status of salmon has improved substantially.*

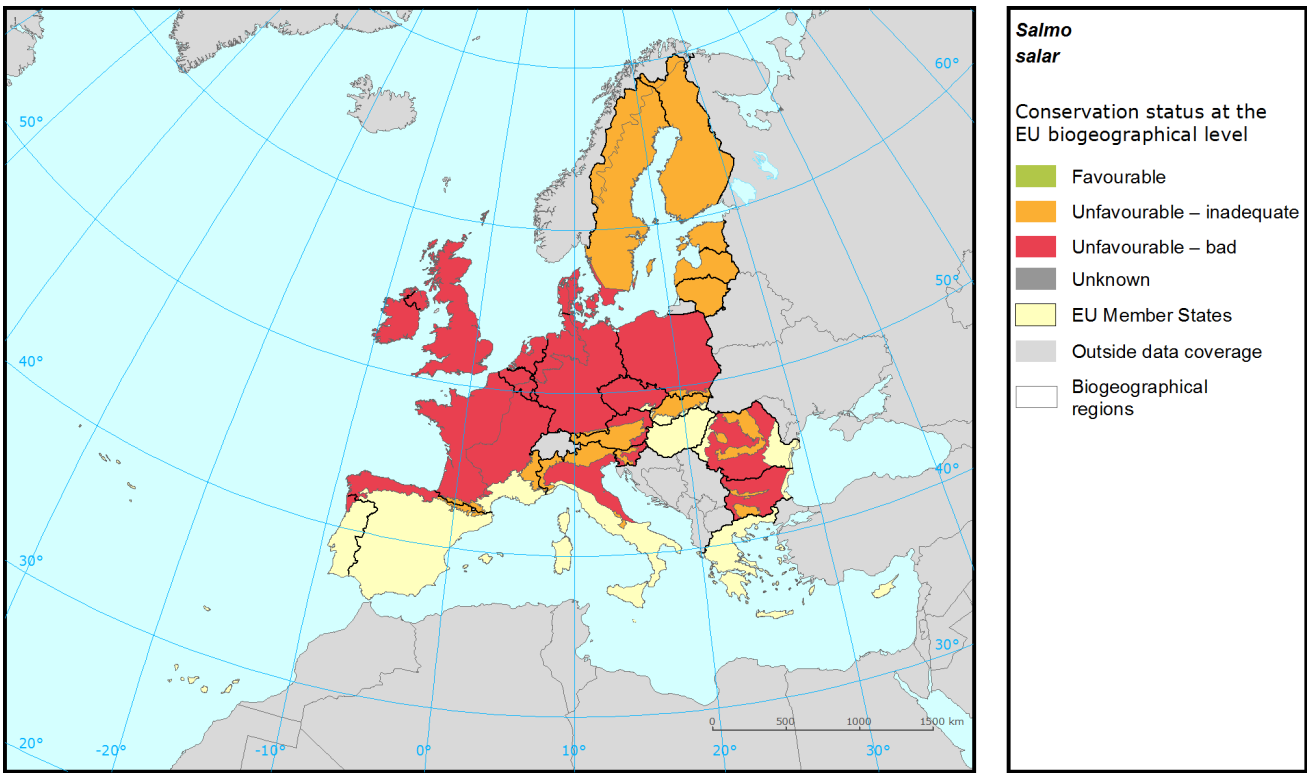
Its conservation status in the Atlantic region is 'unfavourable-bad'; however, its status is 'unfavourable-inadequate' in Denmark, Ireland, and the United Kingdom. Main pressures are water pollution and abstraction, barriers to migration, professional fishing, poaching, agriculture intensification, disposal of household and recreational waste, marine and freshwater aquaculture. According to the Irish report, *rivers are managed on a single stock status and no fisheries are allowed to fish on stocks deemed to be below their Conservation Limit (CL). The closure of the Irish mixed stock fishery at sea was implemented in 2006. There are currently three inshore mixed stock fisheries in Ireland: Killiary Harbour, Tullaghan Bay and Castlemaine Harbour. The risk assessment for the common estuary quotas results in a higher requirement for spawners than simply combining the CL's for the rivers to ensure simultaneous attainment of CL in all rivers; the total available surplus for the rivers combined is reduced in a common estuary analysis to ensure that each river meets its CL simultaneously. 143 rivers have been identified as salmon catchments. Currently 56 of the 143 rivers are meeting conservation limits. Conservation limits for North Atlantic salmon stock complexes have been defined by ICES as the level of stock (number of spawners) that will achieve long-term average maximum sustainable yield (MSY), these CLs are limit reference points; having populations fall below these limits should be avoided*. According to the United Kingdom report, *this assessment is focussing on the freshwater habitat for this species, but its marine habitat is also a very important factor affecting its status. Marine habitat has declined in extent and quality as a result of large-scale regional changes in climate of the Arctic area. In the sea, Atlantic salmon feed pelagically on small fish and crustaceans in very specific thermal habitat off Greenland and the Faroes (Hansen et al. 2007). Climate change has caused the*

extent of this habitat to reduce substantially in recent years (Davidson et al. 2007, JNCC 2007). Furthermore, climate change is thought to have caused the timing of the seaward migration to be poorly synchronised with conditions in the marine environment (Friedland et al., 2003). The magnitude of these changes greatly exceeds the total of any measures that can be taken in freshwaters to conserve salmon populations and further large-scale habitat changes in Arctic areas seem likely as sea ice cover reduces (Arrigo et al. 2008). Nevertheless, the reductions in fishing effort and a continued programme of habitat management for salmon have been successful in maintaining salmon populations at a broadly stable level, at least for the moment.'

Its conservation status in the Continental region is 'unfavourable-bad' but improving. Main pressures are barriers to migration (weirs, dams, small hydropower plants, sea and coastal defence), water pollution and abstraction, professional passive fishing, and acid rain. According to the report from Luxembourg*, the species was extinct prior to the Habitats Directive came into force. Species presence records for the period 2001-2012 are the result of reintroduction initiatives; problems still remain along barriers of the Rhine; few individuals in insufficient numbers pass these barriers to develop a stable population for the moment*.'

The species is classified by IUCN as 'least concern', but this assessment is out of date (http://www.iucnredlist.org/details/19855/0, consulted on 24 April 2014).

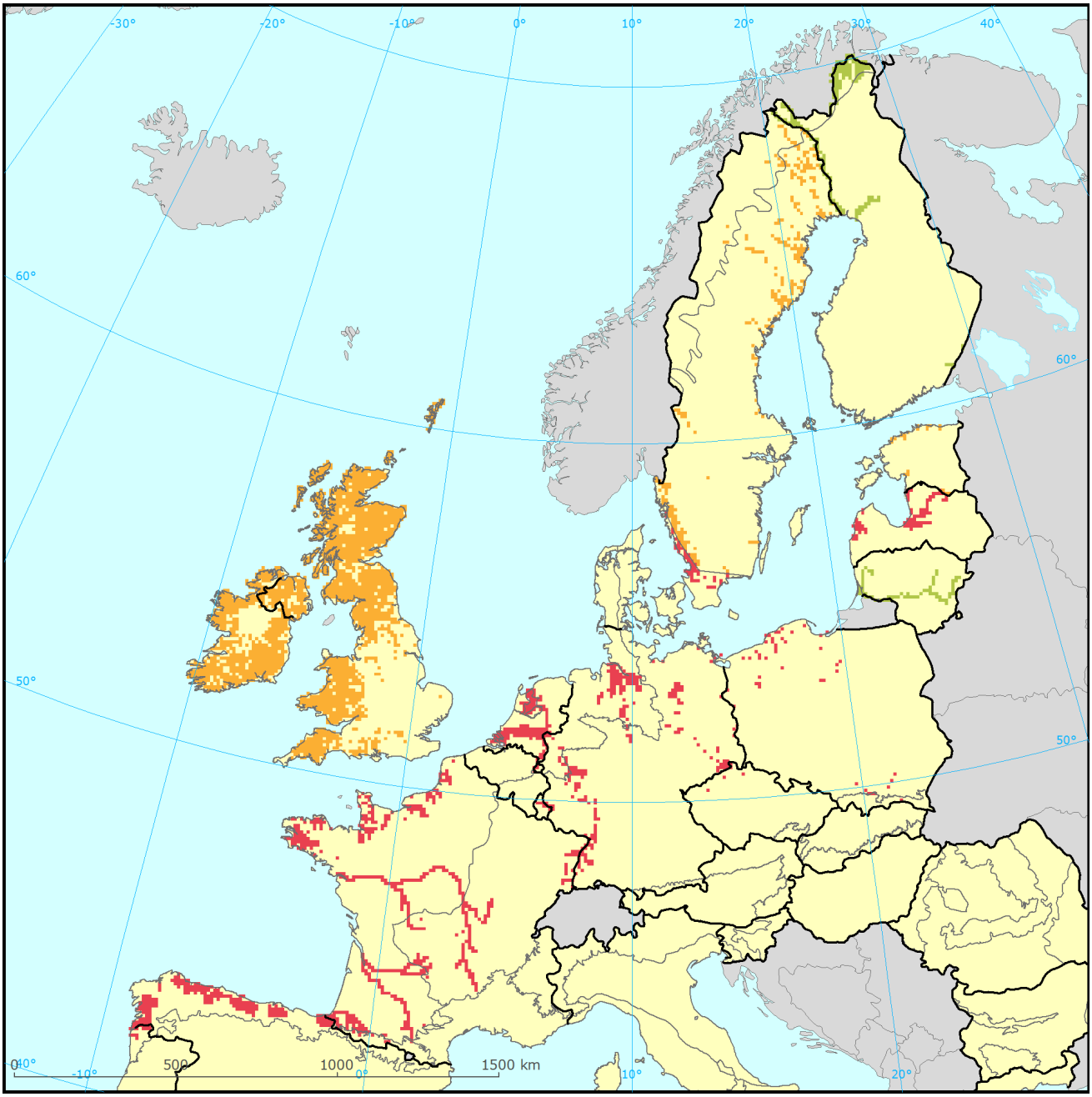
Assessment of conservation status at the European biogeographical level



Region	Conservation status (CS) of parameters				Current CS	Trend in CS	% in region	Previous CS	Reason for change
	Range	Population	Habitat	Future prospects					
ALP	FV	FV	FV	U1	U1	+	4	U2	Not genuine
ATL	U1	U2	U1	U1	U2	=	74	U2	
BOR	FV	U1	U1	U1	U1	+	13	U2	Not genuine
CON	U2	U2	U2	U1	U2	+	9	U2	

See the endnote for more information[i]

Assessment of conservation status at the Member State level



Salmo salar

Distribution and conservation status at the Member State level

- Favourable
- Unfavourable – inadequate
- Unfavourable – bad
- Unknown
- EU Member States
- Outside data coverage
- Biogeographical region

The map shows both Conservation Status and distribution using a 10 km x 10 km grid. Conservation status is assessed at biogeographical level. Therefore the representation in each grid cell is only illustrative.

MS	Region	Conservation status of parameters				Current CS	Trend in CS	% in region	Previous CS	Reason for change
		Range	Population	Habitat	Future prospects					
FI	ALP	FV	FV	FV	FV	FV		79.0	FV	
FR	ALP	U2	U2	U2	U1	U2	x	6.5	U2	
SE	ALP	FV	FV	FV	U1	U1	+	14.5	U2	
DE	ATL	U2	U2	U1	U1	U2	+	3.4	U2	Genuine
DK	ATL	FV	U1	FV	U1	U1	+		U2	Genuine
ES	ATL	U2	U2	U1	U2	U2	-	6.6	XX	Changed method
FR	ATL	U2	U2	U1	U1	U2	=	13.1	U2	
IE	ATL	FV	U1	FV	U1	U1	=	18.1	U2	Changed method
NL	ATL	FV	U2	FV	U2	U2	=	4.5	U2	
PT	ATL	FV	U2	XX	U2	U2	-	0.4	U2-	
UK	ATL	FV	U1	FV	U1	U1	=	53.9	U1	
EE	BOR	U1	U1	U1	U1	U1	+	4.2	U1	Better data
FI	BOR	FV	FV	FV	FV	FV		14.4	FV	
LT	BOR	FV	FV	FV	FV	FV		13.8	U1	Better data
LV	BOR	U2	U1	U1	U2	U2	=	14.6	FV	Better data
SE	BOR	FV	U1	U1	U1	U1	+	52.9	U2+	
CZ	CON	U2	U2	U2	U2	U2	=	1.2	U2+	Genuine
DE	CON	U2	U2	U1	U1	U2	+	35.9	U2	Genuine
FR	CON	U2	U2	U2	U1	U2	=	35.4	U2	
LU	CON	U2	U2	FV	U1	U2	+	2.9	U2	
PL	CON	U2	U2	U2	U2	U2	+	11.6	U1	Changed method
SE	CON	FV	U2	U1	U1	U2	+	13.0	U1	

Knowing that not all changes in conservation status between the reporting periods were genuine, Member States were asked to give the reasons for changes in conservation status. Bulgaria and Romania only joined the EU in 2007 and Greece did not report for 2007-12 so no reason is given for change for these countries. Greek data shown above is from 2001-06.

Main pressures and threats reported by Member States

Member States were asked to report the 20 most important threats and pressures using an agreed hierarchical list which can be found on the Article 17 Reference Portal. Pressures are activities which are currently having an impact on the species and threats are activities expected to have an impact in the near future. Pressures and threats were ranked in three classes ‘high, medium and low importance’; the tables below only show threats and pressures classed as ‘high’, for some species there were less than ten threats or pressures reported as highly important.

Ten most frequently reported 'highly important' pressures

Code	Activity	Frequency
J02	Changes in water bodies conditions	23
J03	Other changes to ecosystems	18
F02	Fishing and harvesting aquatic resources	11
H01	Pollution to surface waters	11
M01	Abiotic changes (climate change)	7
A09	Irrigation in agriculture	5
F06	Other hunting, fishing and collection activities	5
C03	Production of renewable energy (abiotic)	4
H04	Air pollution, air-borne pollutants	4
A02	Modification of cultivation practices	2

Ten most frequently reported 'highly important' threats

Code	Activity	Frequency
J02	Changes in water bodies conditions	21
F02	Fishing and harvesting aquatic resources	14
J03	Other changes to ecosystems	14
H01	Pollution to surface waters	11
M01	Abiotic changes (climate change)	9
A09	Irrigation in agriculture	5
F06	Other hunting, fishing and collection activities	5
C03	Production of renewable energy (abiotic)	4
F05	Illegal taking of marine fauna	4
H04	Air pollution, air-borne pollutants	4

Proportion of population covered by the Natura 2000 network

For species listed in the Annex II of the Directive Member States were asked to report the population size within the Natura 2000 network. The percentage of species population covered by the network was estimated by comparing the population size within the network and the total population size in the biogeographical/marine region.

Percentage of coverage by Natura 2000 sites in biogeographical/marine region

	ALP	ATL	BOR	CON
CZ				x
DE		11		60
DK		x		x
EE			100	
ES		29		
FI	x		x	
FR	x	0		2
IE		49		
LT			100	
LU				73
LV			77	
NL		100		
PL	x			x
PT		x		
SE	16		58	48
UK		x		

See the endnotes for more information[ii]

Most frequently reported conservation measures

For species listed in the Annex II of the Directive Member States were asked to report up to 20 conservation measures being implemented for this species using an agreed list which can be found on the Article 17 Reference Portal. Member States were further requested to highlight up to five most important ('highly important') measures; the table below only shows measures classed as 'high', for many species there were less than ten measures reported as highly important.

Ten most frequently reported 'highly important' conservation measures

Code	Measure	Frequency
4.2	Restoring/improving the hydrological regime	19
4.1	Restoring/improving water quality	17
7.2	Regulation/ Management of fishery in limnic systems	13
6.3	Legal protection of habitats and species	11
7.4	Specific single species or species group management measures	9
4.0	Other wetland-related measures	6
4.3	Managing water abstraction	4
6.1	Establish protected areas/sites	4
7.1	Regulation/ Management of hunting and taking	4
7.3	Regulation/ Management of fishery in marine and brackish systems	4

This information is derived from the Member State national reports submitted to the European Commission under Article 17 of the Habitats Directive in 2013 and covering the period 2007-2012. More detailed information, including the MS reports, is available at: http://bd.eionet.europa.eu/article17/reports2012/species/summary/?group=Fish&period=3&subject=Salmo+salar

[i]**Assessment of conservation status at the European biogeographical level:** Current Conservation Status (Current CS) shows the status for the reporting period 2007-2012, Previous Conservation Status (Previous CS) for the reporting period 2000-2006. Reason for change in conservation status between the reporting periods indicates whether the changes in the status were genuine or not genuine. Previous Conservation Status was not assessed for Steppic, Black Sea and Marine Black Sea regions. For these regions the Previous status is therefore considered as 'unknown'. The percentage of the species population occurring within the biogeographical/marine region (% in region) is calculated based on the area of GIS distribution.

[ii]**Percentage of coverage by Natura 2000 sites in biogeographical/marine region:** In some cases the population size within the Natura 2000 network has been estimated using a different methodology to the estimate of overall population size and this can lead to percentage covers greater than 100%. In such case the value has been given as 100% and highlighted with an asterisk (*). The value 'x' indicates that the Member State has not reported the species population and/or the coverage by Natura 2000. No information is available for Greece. The values are only provided for regions, in which the occurrence of the species has been reported by the Member States.