



UK priority species pages – Version 2

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SPECIES PAGES FOR 2007 UK BAP PRIORITY SPECIES

(see endnotes for an explanation of the various components of this compilation).

Salmo salar Linnaeus, 1758

Atlantic Salmon

1 General information

Level 1	Fish (excluding purely marine species)
Level 2	bony fish
On 1997 UK BAP list	

2 UK BAP criteriaⁱ

1. International threat	2. International responsibility (2a) + moderate decline in UK (2b)	3. Marked decline in the UK	4. Other important factor(s)
False	False	False	True

3 Evidence for Criteriaⁱⁱ

Criterion 1	
Criterion 2a	
Criterion 2b	
Criterion 3	
Criterion 4	Existing 'old' UK BAP species and Natura 2000 species. Considered to be vulnerable, endangered, threatened or extinct in sixteen European countries but recent European assessment was "Lower risk". Significant declines observed in Pre-Fishery-Abundance (PFA) estimates in UK over the last 25 years – most notably within the multi-sea-winter component. 44% decline in Great Britain which is an international stronghold for this species.

4 Distribution by Country

England	Scotland	Wales	Northern Ireland	International Waters
Y	Y	Y	Y	

5 Distribution Information

Distribution data source	Stage 1 information
Distribution data notes	long-term catch data available for many sites
number of sites (where	

less than or equal to 10)	
Units used for number of sites	

6 Actions identified by expertsⁱⁱⁱ

Action number	Action text	Reporting category
1	monitor stocks in all SACs using standard protocols and establish a monitoring/surveillance programme for sites outwith the SAC series	Species-specific monitoring/survey
2	establish the extent of genetic variability within, and between UK Atlantic salmon stocks	Species-specific research
3	assess all major Atlantic salmon stocks within the UK against soundly based Conservation Limits which are sensitive to genetic population structuring	Monitoring/survey
4	investigate the impact of climate change on Atlantic salmon in freshwater and in the sea	Species-specific research
5	investigate the impact of stocking and fish farm escapes on wild populations	Species-specific research
6	develop genetic protocols for monitoring the breeding size of populations to complement traditional trap and electrofishing censusing methods	Species-specific monitoring/survey

7 Signpost to Priority Habitat^{iv}

Priority Habitat Name
Rivers and Streams: Rivers (including Chalk rivers)
Standing Open Water and Canals: Oligotrophic and Dystrophic Lakes

8 Additional information from specialists^v

Attribute	Value
NBN current scientific name	<i>Salmo salar</i>
NBN common name	Atlantic Salmon
classification level 1	Fish (excluding purely marine species)
classification level 2	bony fish
Latest UK Population/extent Estimate	Long term decline in numbers and some populations lost. MSW fish are considered to be under particular threat.
Units of measurement	10 km sq/no. of waterbodies known to host this species. Hydrometric areas also used in past. Prefishery abundances have been used as the main method of assessment.
Starting estimate	1301481
Ending estimate	722471
Proportion left	0.55511452
Additional comments/ information	For salmon, the pre-fishery abundance estimates produced for the ICES Working Group reports show a 44% drop in the 25

	year period from the late 70s (average 1975-79 = 1301481) to the early 2000s (Average 2000-03/04 = 722471) in the GB
Global or European IUCN category if known	LR/lc
fraction of European countries where taxon is Red-listed (where	Ireland, Sweden, Denmark, Holland, Belgium, France, Spain, Portugal, Switzerland, Germany, Czech Republic, Finland, Poland, Russia, Estonia, Lithuania. Note: Other Salmo salar sub-spp. (including land-locked forms) listed in IUCN checklist and national Red lists.
Crit1 satisfied Yes/No/ Unknown	yes
Additional comments/ information including confidence in assessm	Last published European Status is Lower Risk. No Red List in existence for fish in UK. The UK is considered to be an international stronghold for Atlantic salmon, and a species for which we have an international responsibility. Note evidence for recent hi
decline over 25% in UK	yes
Crit2 satisfied Yes/No/ Unknown	yes
Crit3 satisfied Yes/No/ Unknown	yes
Comments on UK decline and confidence in assessment	For salmon, the pre-fishery abundance estimates produced for the ICES Working Group reports show a 44% drop in the 25 year period from the late 70s (average 1975-79 = 1301481) to the early 2000s (Average 2000-03/04 = 722471) in the GB
Crit4 satisfied (Yes/ No/ Unknown)	yes
1st source	Davies et al. (2004)
2nd source	Maitland (2004)
Quality of data	generally good quality and completeness

9 Additional information for species listed under the Habitats Directive^{vi}

Attribute	Value
Conclusions - overall assessment	(U1) - Inadequate
Conclusions - range	(FV) - Favourable
Conclusions - population	(U1) - Inadequate
Conclusions - habitat	(U1+) - Inadequate but improving
Conclusions - future prospects	(U1) - Inadequate
Published sources and/or websites	<p>CARDENAS, M.B. & WILSON, J.L. 2006. The influence of ambient groundwater discharge on exchange zones induced by current–bedform interactions. <i>Journal of Hydrology</i> 331: 103– 109.</p> <p>CENTRE FOR ENVIRONMENT FISHERIES & AQUATIC SCIENCE (CEFAS) & ENVIRONMENT AGENCY. 2007 Annual assessment of salmon stocks and fisheries in England and Wales, 2006. Cardiff: Environment Agency</p> <p>CRISP, D.T. & CARLING, P.A. 1989. Observations on the siting, dimensions and structure of salmonid redds. <i>Journal of Fish Biology</i> 34: 119-134.</p> <p>DEVRIES, P 1997. Riverine salmonid egg burial depths: review of published data and implications for scour studies. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> 54: 1685-1698.</p> <p>DAVIES, C.E., SHELLEY, J., HARDING, P.T., MCLEAN, I.F.G., GARDINER, R & PEIRSON, G (eds.) 2004. <i>Freshwater fishes in Britain. The species and their distribution.</i> Colchester: Harley Books.</p> <p>DOUGHTY, R. AND GARDINER, R. 2003. The Return of Salmon to Cleaner Rivers – A Scottish Perspective. Chapter 15 in: <i>Salmon at the Edge</i> (Ed. MILLS, D.). Oxford: Blackwell Scientific.</p> <p>ENVIRONMENT AGENCY. 2006 Fisheries Statistics 2005 - Salmonid and freshwater</p>

	<p>fisheries statistics for England and Wales, 2005. Bristol: Environment Agency.</p> <p>FISHERIES RESEARCH SERVICES 2006. Scottish Salmon and Sea Trout Catches, 2005. Statistical Bulletin. Fisheries Series No. Fis/2006/1. FRS Freshwater Laboratory, Montrose.</p> <p>FRIEDLAND, K.D., REDDIN D.G., MCMENEMY, J.R., & DRINKWATER, K.F. 2003. Multidecadal trends in North American Atlantic salmon (<i>Salmo salar</i>) stocks and climate trends relevant to juvenile survival. Canadian Journal of Fisheries and Aquatic Sciences 60: 568-583.</p> <p>HENDRY, K. & CRAGG-HINE, D. 2003. Ecology of the Atlantic salmon. Conserving Natura 2000 Rivers - Ecology Series No. 7. English Nature, Peterborough. 32pp.</p> <p>HUGHES, S & TURRELL, W.R. 2003. Prospects for Improved Oceanic Conditions. Chapter 20 in: Salmon at the Edge (Ed. MILLS, D.). Oxford: Blackwell Scientific.</p> <p>INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA. 2000. Report of the Working Group on North Atlantic Salmon. Copenhagen, 3-13 April 2000. Copenhagen: International Council for the Exploration of the Sea (ICES CM2000/ACFM:13).</p> <p>INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA. 2003. Report of the Working Group on North Atlantic Salmon. Copenhagen, 31 March – 10 April 2003. Copenhagen: International Council for the Exploration of the Sea (ICES CM2003/ACFM:19).</p> <p>INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA. 2007. Report of the Working Group on North Atlantic Salmon.(ICES CM2007/ACFM:13).</p> <p>LUTHCKE, SB, ZWALLY, HJ, ABDALATI, W, ROWLANDS, DD, RAY,</p>
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	<p>RD, NEREM, RS, LEMOINE, FG, MCCARTHY, JJ AND CHINN, DS. 2006. Recent Greenland Ice Mass Loss by Drainage System from Satellite Gravity Observations. Science 314 (24 November 2006): 1286-1289</p> <p>MAWLE, GW & MILNER, NJ. 2003. The Return of Salmon to Cleaner Rivers – England and Wales. Chapter 16 in: Salmon at the Edge (Ed. MILLS, D.). Oxford: Blackwell Scientific.</p> <p>SOLOMON, DJ. 2005. Anthropogenic influences on the temperature regime in a chalk river. Science Report SC040025/SR. Bristol: Environment Agency</p> <p>YOUNGSON, A.F., MALCOLM, I.A., THORLEY, J.L., BACON, P.J. & SOULSBY, C. 2004. Long-residence groundwater effects on incubating salmonid eggs: low hyporheic oxygen impairs embryo development. Canadian Journal of Fisheries and Aquatic Sciences 61: 2278–2287.</p> <p>Map Data Sources</p> <p>Biological Records Centre - Database for the Atlas of Freshwater Fishes; Joint Nature Conservation Committee - Marine Nature Conservation Review (MNCR) and associated benthic marine data; Highland Biological Recording Group Fish and Herptiles dataset; Countryside Council for Wales - Pembrokeshire Marine Species Atlas (via the NBN Gateway)</p>
surface area of range in km2	165049
surface area of range in km2 EU	165049
Date of range determination	1990-2003
Quality of data concerning range	Moderate
Range trend	Stable (=)
Range trend magnitude (%)	Not applicable
Range trend period	1994-2006
Range trend reasons 0 - Unknown	False
Range trend reasons 1 - Improved knowledge/more accurate data	False
Range trend reasons 2 - Climate change	False
Range trend reasons 3 - Direct human	False

influence	
Range trend reasons 4 - Indirect anthropo or zoogenic influence	False
Range trend reasons 5 - Natural processes	False
Range trend reasons 6 - Other (specify)	False
Reasons for reported trend in range specify	Not applicable
Population_min	556000
Population_min EU	556000
Population_max	556500
Population_max EU	556500
Population units	Other
Population units other specified	Spawning adults
Population date	1997-2006
Population method	2 - Extrapolation from surveys of part of the population
Population quality	Good
Population trend	Decreasing (-)
Population magnitude (%)	Unknown
Population period	1994-2005
Pop trend reasons 0 - Unknown	False
Pop trend reasons 1 - Improved knowledge/more accurate data	False
Pop trend reasons 2 - Climate change	True
Pop trend reasons 3 - Direct human influence	True
Pop trend reasons 4 - Indirect anthropo or zoogenic influence	True
Pop trend reasons 5 - Natural processes	False
Pop trend reasons 6 - Other (specify)	False
Surface area of the habitat in km2	Unknown
Date of area estimation	05/2007
Quality of data on habitat area	Poor
Habitat trend	Stable (=)
Habitat trend period	1994-2006
Hab trend reasons 0 Unknown	False
Hab trend reasons 1 Improved knowledge	False
Hab trend reasons 2 Climate change	False
Hab trend reasons 3 Direct human influence	False
Hab trend reasons 4 Indirect anthropo or zoogenic influence	False
Hab trend reasons 5 Natural processes	False
Hab trend reasons 6 Other (specify)	False
Reasons for reported trend in Hab specify	Not applicable
Justification of % thresholds for trends	Not applicable

Future prospects	Poor prospects_Species likely to struggle unless conditions change
Favourable reference range	165049
Favourable reference range EU	165049
Favourable reference population	741000
Habitat name	<p>Freshwater: Clean well-oxygenated river gravels for spawning. Rivers with good water quality, coarse boulder / cobble / pebble substrates for fry and parr (juvenile fish), preferably with appropriate additional cover from woody debris, overhanging vegetation, aquatic macrophytes etc. Abundant supply of insect prey both from the river and from surrounding terrestrial habitats. Unimpeded access to and from the sea.</p> <p>Marine: Nutrient-rich, cold water habitat supporting abundant plankton, especially krill, squid and small fish (e.g. sandeels, sprats, anchovies). Most UK fish feed off Greenland.</p>
Other relevent information	Population units (not on EU standard list): Spawning adults See audit trail documents for further information.

10 Species designations^{vii}

Abbreviation	Reporting Category	Designation	Designation description	Year	Source	Comment
HabReg:Sch3	The Conservation of Habitats and Species Regulations 2010	Schedule 3	Schedule 3: Animals which may not be taken or killed in certain ways	1994	The Conservation of Habitats and Species Regulations 2010	Freshwater only
Bern:A3	Bern Convention	Appendix 3	Special protection through 'appropriate and necessary legislative and administrative measures', of the listed wild fauna species.	1982	Bern Convention	Note on status="...shall not apply to salmon in sea waters" natural range includes GB
OSPAR	OSPAR	OSPAR	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic. OSPAR List of Threatened and/or Declining Species and Habitats.	2008	OSPAR List of Threatened and/or Declining Species and Habitats, 2008.	Note on status=In accordance with the comments of ICES in its review, the varying states of the numerous different stocks have to be taken into account. OSPAR Regions where the species occurs= I, II, III, IV. OSPAR Regions where the species is under thre
HabDir:A2*	Habitats Directive	Annex 2 - non-priority	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in	1992	Habitats Directive	Note on status=Only in

		species	the European Community) whose conservation requires the designation of special areas of conservation. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.			fresh water. Also on Ann V.
HabDir:A5	Habitats Directive	Annex 5	Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures.	1992	Habitats Directive	
England NERC S.41	Biodiversity Lists - England	England NERC S.41	Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.	2008	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (section 41) and Wales (section 42)	Geographic constraint=Listing is for England only
NI_Priority	Biodiversity Lists - Northern Ireland	Priority Species (Northern Ireland)	The Northern Ireland Priority List of threatened species requiring conservation action in Northern Ireland. Criteria have been developed to ensure that Priority Species have been chosen using a scientific basis (See http://www.habitas.org.uk/priority/criteria.html). The list is designed to assist those involved in the conservation of biodiversity by guiding decisions on where to target action and invest resources.	2010	Northern Ireland Priority Species List, March 2010	
Scottish Biodiversity List	Biodiversity Lists -	Scottish Biodiversity	The Scottish Biodiversity List is a list of flora, fauna and habitats considered by the Scottish	2005	Scottish Biodiversity	Geographic constraint=Listing

	Scotland	List	<p>Ministers to be of principal importance for biodiversity conservation. The development of the list has been a collaborative effort involving a great many stakeholders overseen by scientists from the Scottish Biodiversity Forum. Completion of the list is the first time such a stocktake has been done in Scotland.</p> <p>The Scottish Biodiversity List is a tool for public bodies and others doing their Biodiversity Duty. The publication of the Scottish Biodiversity List satisfies the requirements of Section 2(4) of The Nature Conservation (Scotland) Act 2004.</p>		List of species of principal importance for biodiversity conservation	is for Scotland only
Wales NERC S.42	Biodiversity Lists - Wales	Wales NERC S.42	Species “of principal importance for the purpose of conserving biodiversity” covered under Section 42 (Wales) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.	2009	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (section 41) and Wales (section 42)	Geographic constraint=Listing is for Wales only
BAP:2007	Biodiversity Action Plan UK list of priority species	Priority Species	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).	2007	UK list of Priority Habitats and Species	not on former UK BAP list
ConsRegsNI:Sch3	The	Schedule 3	Schedule 3: Animals which may not be taken or	1995	The	

	Conservation (Nature Habitats, etc.) Regulations (NI) 1995		killed in certain ways.		Conservation (Nature Habitats, etc.) Regulations (Northern Ireland) 1995, amended 2004	
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UK BAP 2008 reporting^{viii}

(nb this only applies to species on the original 1997 UK BAP priority species list)

ENDNOTES

ⁱ An explanation of these criteria is included at Annex 3 of [UK Biodiversity Action Plan: Report on the Species and Habitat Review](#). BRIG (ed. Ant Maddock) 2007. This review was organised in two stages. Stage 1 looked at the scientific evidence for selecting the UK List of Priority Species and Habitats while stage 2 considered the conservation action needed for these species and habitats and provided signposts to the means of implementing action.

ⁱⁱ The information on evidence and the species distribution is as presented on the UK BAP website. Users can download a spreadsheet of the [Stage 1 species evidence](#) from the home page of the UK BAP website.

ⁱⁱⁱ Actions were assigned to each and every priority species by expert groups convened at Stage 2 of the Review process. These were subsequently categorised into “signpost categories”. This information is as shown on the UK BAP website See the link for [categorisation \(signposting\) of UK priority species](#).

^{iv} Where a species action is clearly linked to a BAP priority habitat, the name of the relevant habitat or habitats was identified by the stage 2 expert group.

^v This information has been derived from Stage 1 of the priority species review, and is presented in the “marine”, “terrestrial invertebrates” and “other terrestrial species” sheets within the spreadsheet of the [Stage 1 species evidence](#). The information presented here varies according to the taxonomic group. Please note that some of these data have been written for other Expert Group members and may not be of great value to a wider audience.

^{vi} This is only applicable to Species listed under the Annexes 2 4 and 5 of the Habitats Directive. The information presented here was collated by the UK Government in fulfilment of the requirement under Article 17 of the Habitats Directive. For further information see the [2nd UK Report](#) on the implementation of the Habitats Directive.

^{vii} Information on conservation designations has been extracted from JNCC’s collation of information on [species designations](#). The designations shown in version 2 of these pages are as at December 2010.

^{viii} As part of the 2008 UK BAP reporting round lead partners of national plans were asked to answer a number of specific questions. The data will be analysed and used for the UK and country level reports. All of the responses provided through BARS as part of the 2008 reporting exercise are available to [download](#). Note that in the December 2010 version of these pages (version 2) includes corrections to previously truncated text fields.