Action Plan Scope:

This Action Plan covers Atlantic salmon (Salmo salar) and trout (Salmo trutta) - including brown trout, the non-migratory form of the sea trout.

1. CURRENT STATUS

1.1 Legislation and priority status

International Habitats Directive^a (Annexes II, Annex V - atlantic salmon (in freshwater only))

Bern Convention (Appendix III)

UK and Wales Habitat Regulations^b (Schedule 3 - Atlantic salmon, only in freshwater)

Salmon and Freshwater Fisheries Act (1975) (as modified)

Salmon Act (1986)^c

SoCC^d

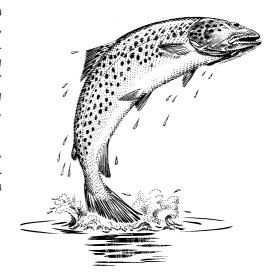
Gwynedd None known

1.2 Status in Wales and beyond

Salmon are a widespread species, occurring in the Atlantic north from Biscay, the English Channel, North Sea and Baltic Sea. The UK salmon population comprises a significant proportion of the total European stock, with Scottish rivers in particular providing a European stronghold for the species^e.

The Atlantic salmon is a widespread species in the UK and is found in several hundred rivers, many of which have adult runs in excess of 1000. The latest estimates of the UK spawning population size (ICES 2000) are, however, about 50% down on the ten-year average^e. Breeding populations are present in most Welsh rivers, notably the Wye, Usk, Teifi, Dyfi and Dee^f.

Sea trout occur in the Atlantic north of Spain, the English Channel, North Sea and Baltic Sea. Brown trout are a non-migratory form of the sea trout.



f Biodiversity - A Species Audit for Wales.



 $^{^{}m a}$ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauma and flora

^b European Conservation (Natural Habitats) Regulations 1994

^c Protects fish stocks from poaching

d UK Species of Conservation Concern List

http://www.jncc.gov.uk/ProtectedSites/SACselection/

1.3 Status in Gwynedd⁹

A number of rivers, including the Llifon, Carrog, Ogwen, Seiont, Gwyrfai, Llyfni, Erch, Dwyfor, Glaslyn, Mawddach, Dysynni, Dyfi and Dwyryd, have runs of atlantic salmon. The Afon Gwyrfai contains a largely unexploited salmon population with a characteristically late run, and Environment Agency Wales electrofishing data indicates the presence of healthy juvenile populations downstream of Llyn Cwellyn (see section 4.1).

Sea trout are present in the rivers mentioned above and in most other streams and rivers in the area. Brown trout are also found in all rivers including Daron, Soch, Rhyd-hir, Erch, Wen, Llyfni, Cegin, Ogwen, Ddu and in most lakes, including Llyn Padarn, Llyn Cwmorthin, Llyn Manod, Llyn Ganallt and Llyn Bowyd. In Llyn Padarn a very important outlet spawning population of wild brown trout is suspected and current management adopts the precautionary principle. Outlet spawning, an indication of an ancient race, is usually restricted to old glacial lakes and as wild brown trout normally spawn on inlets this could be a genetically distinct race of trout.

Catches of migratory trout and salmon are declining in Gwynedd, but brown trout still appears to be maintaining steady numbers. A major discharge from the Gwynfynydd Gold Mine in 1984 on the River Mawdddach led to the loss of over 2,000 adult salmon and trout, with many more juveniles being lost. After the closure of the mine in 1999, a minor incident of discharged mine-water occurred, but the leak has been plugged by the Environment Agency Wales. The Mawddach Trust which was formed following the incident has effectively managed to restore the local populations.

2. FACTORS AFFECTING THIS SPECIES IN GWYNEDD^h

- Water pollution, including diffuse agricultural runoff of insecticides, nitrates, farm wastes (synthetic pyretheroid sheep dip in particular); point source pollution including sewage discharge, drainage from mines and from quarries; effects are both direct (toxic effects) and indirect (deoxygenation of water through eutrophication).
- Acidification of catchments likely to limit juvenile survival in some stretches of river or stream during spate conditions.
- Silt eroded from surrounding areas (as a result of management practices in the river catchment, for example overgrazing, afforestation) can smother important breeding habitats.
- Invasive "exotic" plant species, in particular Japanese Knotweed, are a problem on many river catchments, as they outcompete native marginal flora and can cause severe erosion.
- River works can cause habitat degradation (especially important where spawning sites are
 affected, and where timing coincides with spawning) or pose barriers for returning fish (e.g.
 weirs or estuarial barrages).
- Stocking of rivers and lakes with non-native trout effects the genetic integrity of the local population.
- Illegal catches and by-catches: both in coastal waters and in-river. Along the Gwynedd coast sea trout and salmon may be poached or become by-catches of fishermen fishing for bass and other sea species.
- Possible effects of global climate change on sea temperatures.
- Effects of international fisheries, including Irish, Greenland and Faroes, on salmon and sea trout while in their marine phase.

 $^{^{9}}$ Within this document the term "Gwynedd" refers to areas outside the Snowdonia National Park area, except where specified otherwise

^h See also associated HAPs for more general factors affecting this species habitats

3. ASSOCIATED GWYNEDD SAPS / HAPS

Mudflats, Coastal saltmarsh, River corridors, Lakes, ponds and ditches

Otter, Water vole, Arctic charr, Lampreys, Freshwater pearl mussel, Floating water plantain, Pillwort

4. CURRENT ACTION IN GWYNEDD

4.1 Site and habitat protection

 Atlantic salmon and sea trout may occur in areas of habitat identified as potential Wildlife Sites, or designated as SSSI, candidate SAC or SPA. The population of Atlantic salmon within Afon Gwyrfai is one of the primary reasons for selection of the Afon Gwyrfai a Llyn Cwellyn candidate SAC.

4.2 Management and programmes of action

- Salmon action plans for the Rivers Seiont, Ogwen, Dwyfor, Dwyryd, Mawddach, Dysynni, Dyfi and Glaslyn have been prepared for salmon and sea trout. These aim to address, at a local level, the main objectives of the National Salmon Management Strategy (National Rivers Authority 1996), which are primarily aimed at securing the well being of the stock while improving catches and the associated economic returns to the fisheries. These action plans also contain information and proposals to maintain and improve sea trout fisheries
- A fish pass and diversion tunnel is in operation to facilitate access to Nant Peris.
- Gwynedd Sustainable Angling Initiative is using Objective 1 funding to enhance the habitat of some of Gwynedd's river catchments of importance for fisheries.
- The UK wide Water for Wildlife project (formerly Otters and Rivers Project), is run by the Wildlife Trusts, and aims to carry out conservation work with local communities in riverside and wetland habitats. There is currently a Wales manager, who will be joined in the near future by a North Wales project officer.
- As part of the Clean Rivers Project (Keep Wales Tidy), there are currently five River Care groups in Gwynedd (outside Snowdonia National Park).
- Local Sea Fisheries bylaws

4.3 Survey, research and monitoring

- General quality assessments are carried out every five years by Environment Agency Wales which determine the water quality and invertebrate fauna of all major waterways.
- Salmon and sea trout populations within each catchment are surveyed on a five year rolling programme as part of the Regional Juvenile Salmonid Monitoring Programme. Most survey sites are on tributaries, which are the prime spawning and nursery areas.

5. ACTION PLAN OBJECTIVES

- 1. To protect, maintain and enhance existing populations of salmon and sea trout (including brown trout) and associated habitats, in particular spawning and nursery grounds.
- 2. To ensure the genetic integrity of native stocks of brown and sea trout.
- 3. To increase awareness among anglers and other recreational users of river corridors, estuaries and lakes of conservation issues related to salmonids.
- 4. To use salmonids as flagship species to raise awareness of the importance of appropriate management of their associated habitats.

6. PROPOSED ACTIONS

Code	Action	Partner(s)
Policy an	d legislation	
1	Use planning conditions to ensure developments in sensitive locations are compatible with salmonid conservation TARGET/TIMESCALE: Ongoing	GC, Relevant partners
2	Include conservation actions for salmon and sea trout within all relevant EAW plans to be published in the future TARGET/TIMESCALE: Ongoing	EAW
3	Ensure that appropriate EAW plans are put in place for SSSI's where salmonids are known to be present TARGET/TIMESCALE: Ongoing	EAW, CCW
Species	/ habitat management and protection	
4	Where fish passes are present, ensure their maintenance and protection from possible upstream problems, including abstraction TARGET/TIMESCALE: Ongoing	EAW, CCW
5	Consider the provision of additional fish passes depending on the results of future surveys TARGET/TIMESCALE: Ongoing	EAW, CCW
Advisory		
<u> </u>	None identified	
Survey,	research and monitoring	
6	Continue the EAW salmonid monitoring programme TARGET/TIMESCALE: Ongoing	EAW, CCW, GC
Communi	cations and publicity	
7	Encourage anglers and other recreational users of relevant habitats to report salmonid catches and sightings, through publishing articles in relevant publications and giving talks to relevant groups (e.g. angling clubs, Clean Rivers Project groups, and Water sports centres). TARGET/TIMESCALE: Ongoing	EAW, GC
8	Raise awareness, among anglers and other recreational users of relevant habitats, of the conservation issues associated with salmonids, through publishing articles in relevant publications and giving talks to relevant groups (e.g. angling clubs, Clean Rivers Project groups, and Water sports centres). TARGET/TIMESCALE: Ongoing	EAW, GC, KWT

Lead partner for this action is indicated by bold typeface, see section 7.2 for explanation of abbreviations



7 PARTNERS & OPPORTUNITIES

7.1 Overall Lead Partner for SAP

Environment Agency Wales (EAW)

7.2 Key partners

Countryside Council for Wales (CCW)

Gwynedd Council (GC)

Keep Wales Tidy (KWT)

7.3 Opportunities

Recreational users, anglers, Clean Rivers Project Groups

8 ACKNOWLEDGEMENTS

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Line drawings: English Nature

9. ABBREVIATIONS

BAP: Biodiversity Action Plan, HAP: Habitat Action Plan, SAC: Special Area of Conservation, SAP: Species Action Plan, SPA: Special Protection Area, SSSI: Site of Special Scientific Interest

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