

**RURAL ECONOMY AND CONNECTIVITY COMMITTEE
SALMON FARMING IN SCOTLAND**

Response from Scottish Natural Heritage (SNH) to supplementary question following RECC meeting of 18 April 2018

What funding do your organisations provide for research and innovation projects relating to salmon farming, including assessments of wild fish stocks?

SARF research

SNH has been a Director of the Scottish Aquaculture Research Forum (SARF) since 2004 and over the last five years we have contributed £140k towards SARF research, and commissioned other research and developed guidance on landscape and visual impacts to help support the sustainable growth of the sector. Table 1 highlights SARF research projects in which SNH has had a particularly active role.

Table 1:

SARF010 - Piloting a network for determining spatial and temporal variation in marine survival of Atlantic salmon and effects of anti-sea lice agents	SNH on Expert Steering Group Project concluding 2018
SARF031 - Scoping study of appropriate EIA trigger thresholds for shellfish farms and other non-fish farm aquaculture.	SNH on steering group.
SARF035 Determination of the fate of chemical/faecal material which is transported beyond the Allowable Zone of Effects (AZE).	
SARF036 Establishing the effects of fish farm discharges on Biodiversity Action Plan (BAP) habitats and assessing their recoverability.	SNH on steering group
SARF040a - Review of Marine Fish Farm EIA Thresholds.	SNH on steering group
SARF040b - Potential for Permitted Development Rights and Use Classes for Fin and Shellfish Developments.	SNH on steering group
SARF044 - Assessment of the impacts and utility of acoustic deterrent devices.	SNH on steering group
SARF082 - Scottish Aquaculture's Utilisation of Environmental Resources.	SNH staff external referee
SARF090 - Impacts of salmonid pen aquaculture on hard substrates.	SNH on steering group
SARF098 - PAMP Refreshment Study – A literature review considering the effects of sealice medicines on benthos.	
SARF098C – PAMP Refreshment -The association between emamectin benzoate use and crustacean assemblages around Scottish fish farms	
SARF099 - Survey of Pacific oysters in Scotland	SNH on steering group
SARF110 - Strategic Considerations for Locational Regulation of Shellfish Aquaculture in Scotland.	SNH on steering group
SARF112 – Influences of lower-frequency acoustic deterrent devices (ADDs) on cetaceans in Scottish coastal waters	SNH on steering group currently out for peer review
SARF113 – Feasibility of a single marine Licence development consent for aquaculture in Scotland.	SNH on steering group – ongoing started in Jan 2018

Other research supporting the aquaculture sector:

Landscape: In 2011, we commissioned pilot studies into landscape/seascape capacity for aquaculture for Orkney and the Western Isles. The results informed the development of guidance on landscape and aquaculture.

- [Orkney landscape capacity for aquaculture: Scapa Flow and Wide Firth: SNH Commissioned Report No. 466](#)
- [Landscape/seascape capacity for aquaculture: Outer Hebrides pilot study: SNH Commissioned Report No. 460](#)

ADDs and cetaceans: SNH is currently involved with 2 PhD projects, one considering noise pollution from ADDs and the other focusing on behaviour of harbour porpoise in the vicinity of fin fish farms. Both PhDs are based at the Scottish Association for Marine Science in Oban and commenced in October 2017; due to complete 2020/21. We have a supervisory role in the porpoise behaviour PhD and an informal advisory role for the noise pollution one.

Wrasse harvesting: Planned 2018 SNH research project on the interactions between the wrasse fishery and protected sites/ species to inform our future advice

Wild salmonid populations: SNH contribution in 2018 to first national juvenile electrofishing survey of Atlantic salmon (joint MS/SEPA/SNH project)

We are also involved in wider research which has some relevance to aquaculture issues. This includes:

- FASMOP (Focusing Atlantic Salmon Management On Populations) – Genetic variability research. Partnership Project. SNH provided funds and is on Steering Group.
- Pearls in Pearls – work on freshwater pearl mussels which includes monitoring of wild salmonids – SNH partner and funder.