AFT Biologist's Report



AFT AGM November 2024

AFT Activities 2024-25

Assessing status of salmon & sea trout populations Count Data, ASSES, juvenile fish & habitat studies,

Responses to declines - freshwater
 Smolt survival, Habitat improvement, Nutrient study, hatchery support, Beaver dam mitigation

Responses to declines - MarineEMPs & Sea Lice Framework

Preventing further decline

- Saprolegnia / Pink salmon eDNA
- Renewable development Surveys



Assessing status of salmon populations – River Awe fish counter – R. Awe

5-year Average (2013-17) tracks historical weekly proportion of count

- 2024 (550) count < than 5-yr avg. (1,500)
- Early Multi-sea-winter count closer to historical
- More significant decrease in One-sea-winter count.
- Some delays in upstream migration due to high water flow
- Increased seal activity at higher water flow





Assessing status of salmon populations – ASSES 2021-24 Adult Salmon S





Adult Salmon Scale Sampling 2024

- 4th year of MSS Project
- June-September 2024
- River Awe 29 adult salmon sampled
- RVD / RSD evident in some fish
 Seal damage



Assessing status of salmon populations -Juvenile Surveys 2024

- Awe catchment: (inc. 300 genetic samples) L. Awe, R. Orchy & L. Tulla tribs.
- Loch Etive Rivers: (inc. 300 genetic samples) R. Awe, Etive, Kinglass, Nant, Allt Nathias & Lusragan
- Loch Fyne Rivers: R. Fyne, Aray, Kinglas, Douglas, Leacan & Auchalick
- Carradale EMP: Carradale, Machrie & Glenlussa Waters
- Provide estimate of fish
 density against benchmark





Assessing status of fish habitats -River Eachaig & Massan 2024

- Identify sources of riverbed instability and bank erosion
- Flood damage in the R. Eachaig (Oct. 2023 storm)
- Influence of forestry operations in the R. Massan
- Report provided to riparian owners
- SEPA reviewing forestry operating guidelines





Response to declines – freshwater Improving downstream smolt migration - River Awe

Identify issues for downstream migration in relation to hydroelectric generation at Inverawe (2022-24)

- 26 smolts tagged & released Pass of Brander of barrage in 2022
- 110 smolts tagged & released R. Awe / pass of Brander in 2023
- 96 smolts tagged & Released in R. Orchy in 2024 included predator tags.
- 13 ferox trout also tagged in 2022-24



Response to declines – freshwater Yr 2 of Salmon Nutrient Project – R. Creran

- Experimental stocking of eggs from on-grown wild parr
- Loss of nutrients due to low adult salmon sea returns
- Feeding of marine pellets
- Fed & unfed control sites
- Electrofishing surveys of fish density / condition
- RCIA, AFT & Glasgow Uni.







Response to declines – freshwater Salmon Living Gene Bank – R. Ruel Yr 1 (of 3)

Evaluate experimental approach to hatchery support for small populations

- RRIA & Otter Ferry Seafish Ltd (WFF)
- 150 wild parr grown on to mature adult
- Genetic baseline of population
 & hatchery group

Measure hatchery contribution to the wild population





Response to declines – freshwater Habitat Improvement – Cowal



- GBR & LWD: R. Ruel (WFF, RRIA, SSE, CWFT)
- Riparian habitat: R. Eachaig (LLNP, WFF)
- INNs: R. Goil & Eachaig (LLNP)
- FMP Development: FMS







Other Activities – Beaver & sea trout interactions - Knapdale

Surveys Electrofishing
 Habitat / barrier
 Spawning

Mitigation
 Removal of old dams
 'notching' existing dams
 NS 3-yr cooperation agreement



Response to declines – Marine EMPs - Sea lice / Sea trout Monitoring

11 locations:

Lower Loch Linnhe EMP 3 sites (SSF / FMS) Sound of Shuna EMP 1 site (Mowi / Kames)

Loch Fyne / W. Mull / W. Arran / Gigha / Ardyne (5 EMP sites BFS)

Carradale EMP (Mowi) Loch Riddon (FMS)





Response to declines – Marine EMPs – Lower Loch Linnhe

- 1st yr of farm production (L. Creran fallow)
- 47 sea trout sampled at Dunstaffnage & 41 at Loch Creran (<150g)
- Prevalence of lice: 74.5 % at Dunstaffnage & 36.6 % at L. Creran
- Intensity of infection: 6.5 lice at Dunstaffnage & 2.5 lice in Loch Creran
- Lice-related risk at Dunstaffnage: low (9.8 %)
- Lice-related risk at Loch Creran: low (0.0 %)
- low on-farm sea lice reported







Response to declines – Marine EMPs – Loch Etive

- Sites stocked with salmon post-smolts from week 14
- 47 sea trout sampled: 25 <150g & 22 >150g
- Prevalence of lice: 40.0 % <150g & 68.2 %
 >150g
- Intensity of infection: 2.30 lice <150g & 2.7 lice >150g
- Lice-related risk <150g: low (0.0 %)</p>
- Lice-related risk >150g: low (5.7 %)
- No on-farm sea lice reported



% of trout (< 150 g) - Sea lice g⁻¹ fish weight





Response to declines – Marine EMPs - Loch Fyne Sea trout sampling

- End of 2-yr production cycle / harvesting
- 115 sea trout sampled: 104 <150g & 11
 >150g
- Prevalence of lice: 15.4 % <150g & 27.3 %
 >150g
- Intensity of infection: 1.25 lice <150g & 0.44 lice >150g
- Lice-related risk <150g: none / low (0.0 %)</p>
- Lice-related risk >150g: none / low (0.0 %)

No / low on-farm sea lice reported







Response to declines – Marine EMPs - Ardyne / L. Riddon Sea trout sampling (< 150g)

- 1st yr of production cycle
- 49 sea trout sampled >150g : 37 Ardyne & 12
 L. Riddon
- Prevalence of lice: 70.3 % Ardyne & 75.0 % L. Riddon
- Intensity of infection: 7.15 lice Ardyne & 5.2 lice L. Riddon
- Lice-related risk <150g: High (34.7 %) Ardyne</p>
- Lice-related risk <150g: low (5.0 %) L. Riddon</p>
- Low on-farm sea lice reported







Response to declines – Marine EMPs - Ardyne / L. Riddon Sea trout sampling (> 150g)

- 1st yr of production cycle in Firth of Clyde area
- 41 sea trout sampled >150g : 7 Ardyne & 34
 L. Riddon
- Prevalence of lice: 100 % Ardyne & 100 % L. Riddon
- Intensity of infection: 23.7 lice Ardyne & 12.6 lice L. Riddon
- Lice-related risk >150g: High (42.9 %) Ardyne
- Lice-related risk >150g: High (34.4 %) L. Riddon
- Low on-farm sea lice reported







Hydro Surveys Garbhaig Hydro (W. Ross)
 Allt Eilidh (R. Creran)
 Allt Teanga (Mull)
 Inverleiver (L. Awe)

Wind Farm surveys Barachander (L. Etive) Killean (W. Kintyre) Cruach Glenmachrie (L. Etive) Barr Water (W. Kintyre) Deucheran Hill (Carradale) Fish, habitat & eDNA surveys

Preventing further decline - Commercial contracts



Thank you for your support



info@argyllfisheriestrust.co.uk