

Aquaculture Report



AFT AGM Nov, 2022

Aquaculture & wild fish

- Regulation

- Currently sea lice and wild fish interactions are considered by local authorities during the determination of planning applications of new sites or changes to production only. This is delivered through EMPs.
- **SEPA are currently developing a Sea Lice Framework that will monitor and regulate sea lice in the environment. This Framework will include both Salmon migration pathways and sea trout.**
- The current monitoring of sea lice impacts on wild fish under Marine Scotland and EMPs may therefore be adopted by the regulator. This is yet to be determined.
- Only Sea louse levels on farm fish, salmonid diseases, and farmed fish escapes are regulated by Marine Scotland (Fish Health Inspectorate)
- **It is illegal to not to report escapes of farm fish, but not illegal to have an escape**

Wild sea trout / Sea lice Monitoring

Monitoring at sites in;

- Loch Riddon (MSS)
- Loch Etive (MSS)
- Carradale (Mowi)
- Sound of Shuna (Mowi/Kames)
- Loch Fyne (BKS)
- Loch na Keal (BKS)
- Dunstaffnage (SSF)
- Loch Creran (SSF)

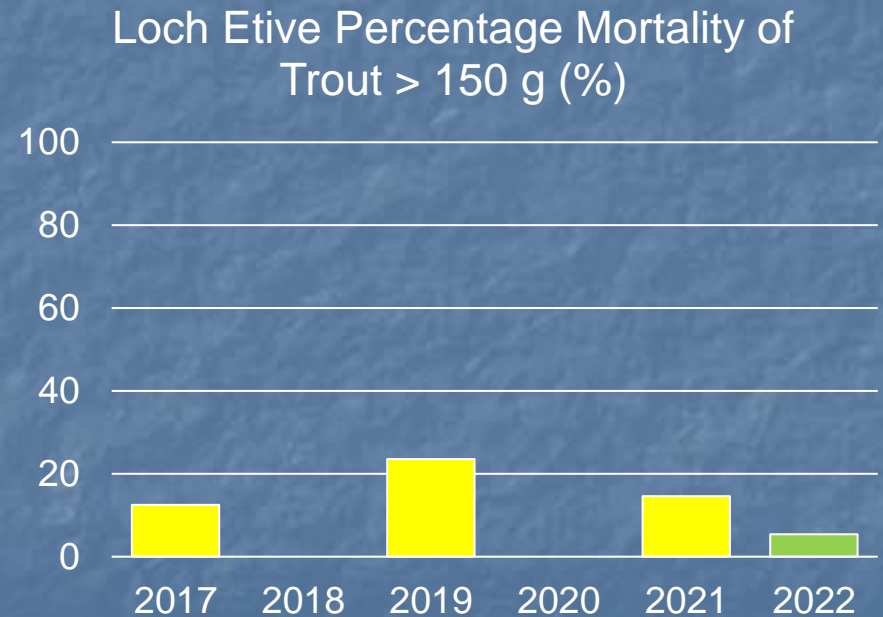
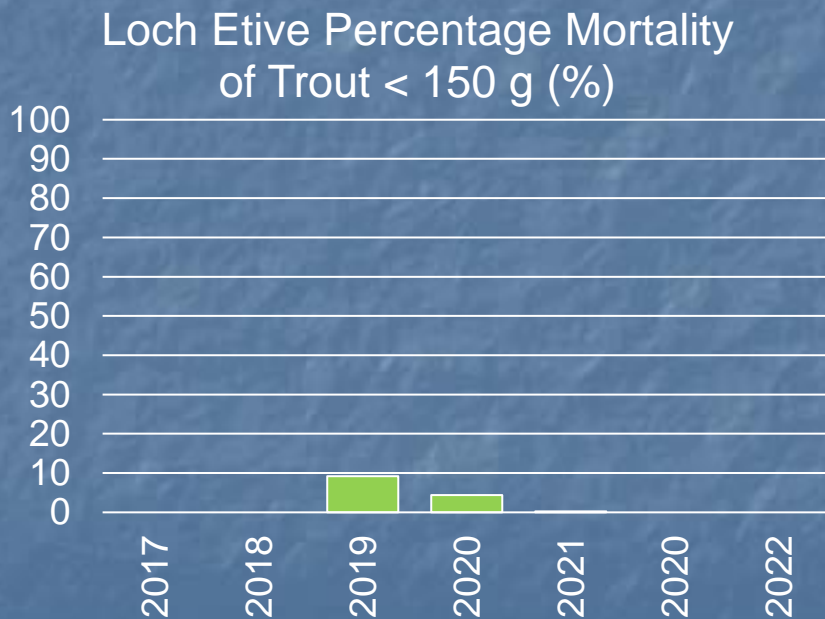
- Data compared to Framework for Risk Assessment
- Based on no. lice/g⁻¹
- Estimate lice-related mortality or reproductive reduction
- Two different size groups
- < 150 & > 150g
- Total mortality or reproductive reduction estimated as:
 - Low < 10% mortality
 - Moderate 10-30% mortality
 - High > 30% mortality

Wild sea trout sea lice counts

Loch Etive

100 trout sampled in 2022 in May & June

Lice-related risk **Low** for trout < 150g & > 150 g in 2022

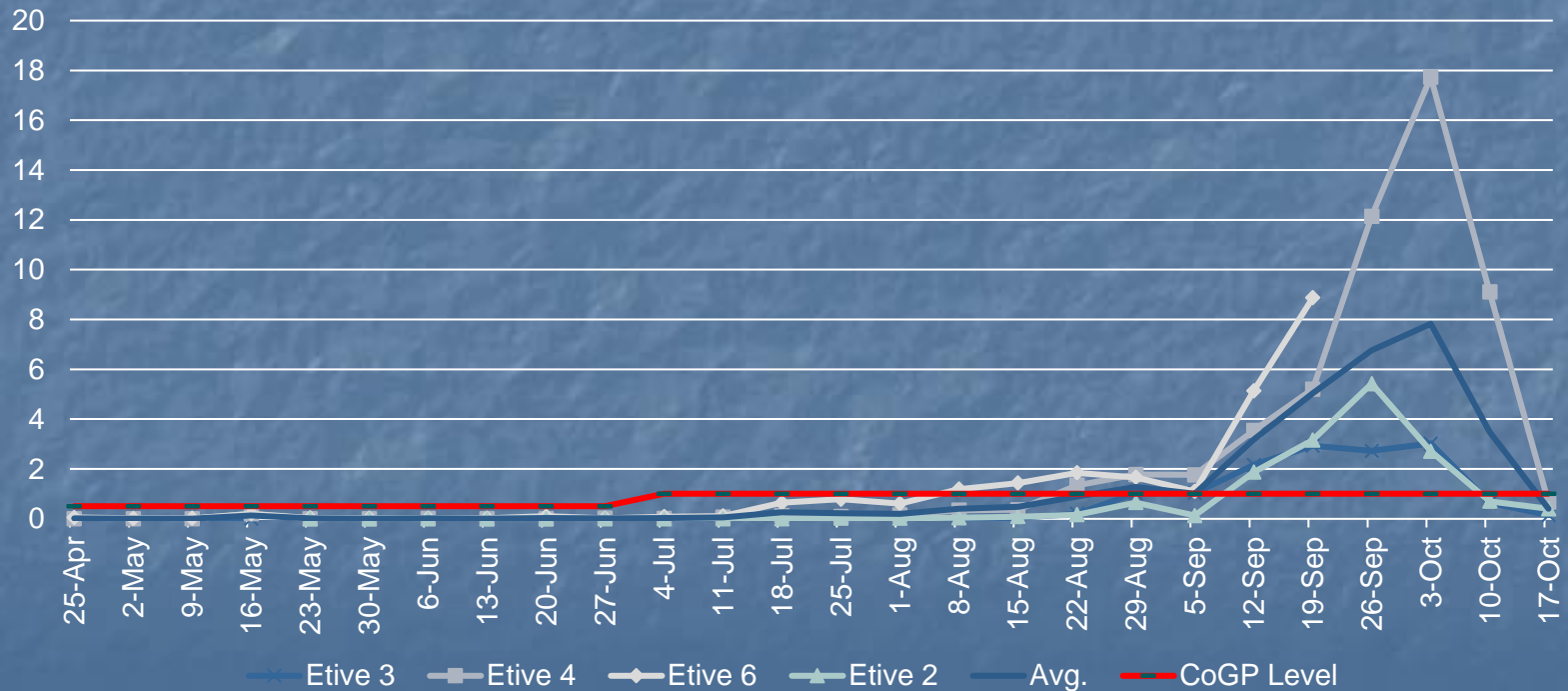


Farm sea lice counts (Avg. Adult Female)

Loch Etive

4 Rainbow Trout Sites – Dawnfresh

Loch Etive Farm Sea Lice (Avg. female) 2022

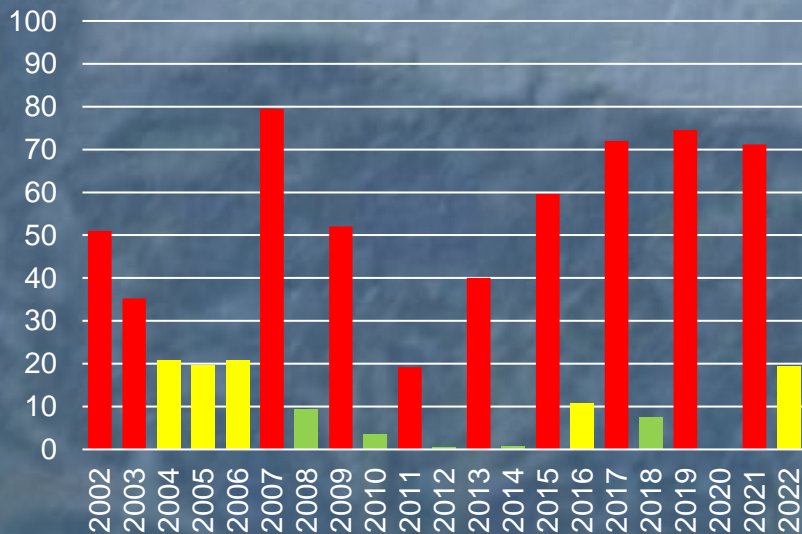


Wild sea trout sea lice counts Dunstaffnage

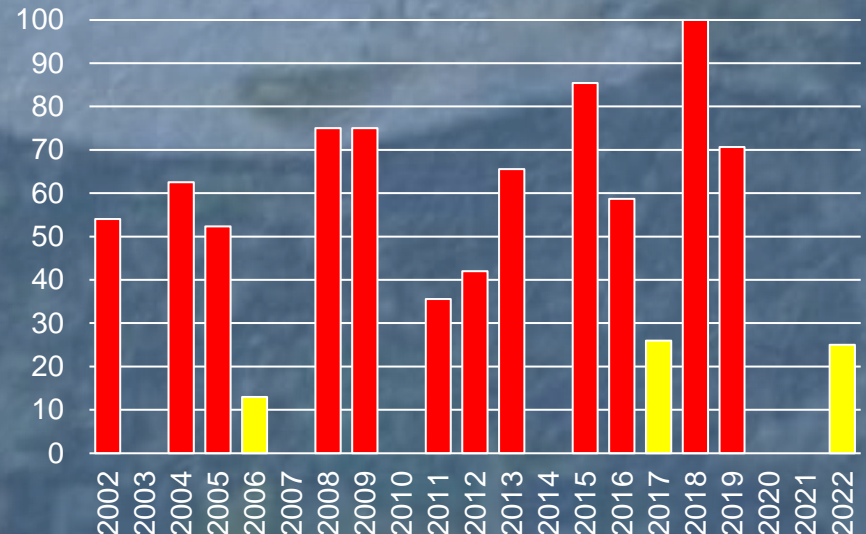
35 trout sampled in 2022 in May & June

Lice-related risk **Moderate** for trout < 150g & > 150 g in 2022

Percentage Mortality of Trout < 150 g
(%)



Percentage Mortality of Trout > 150 g (%)

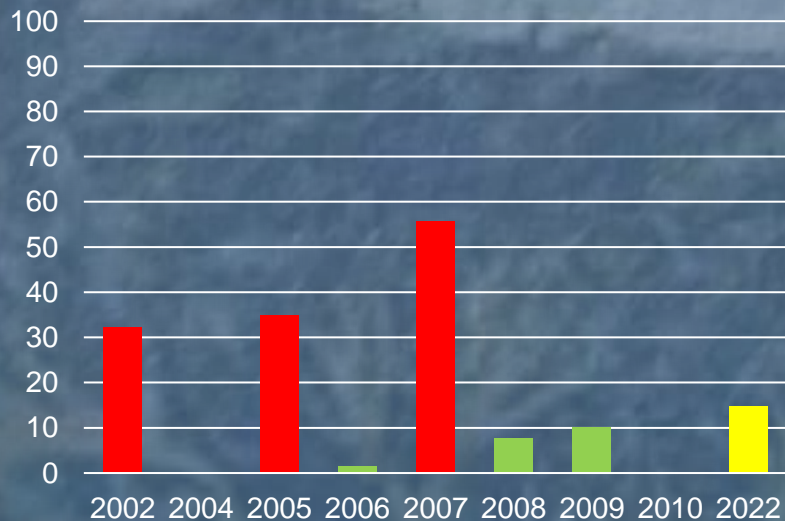


Wild sea trout sea lice counts Loch Creran

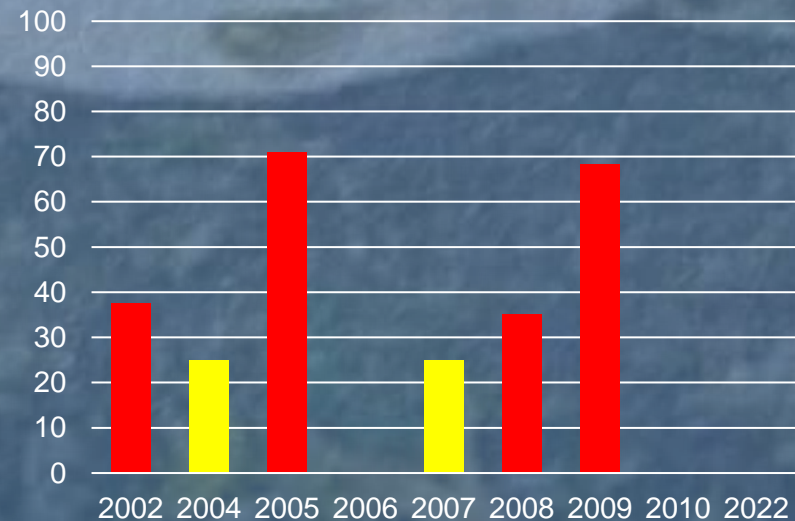
35 trout sampled in 2022 in May & June

Lice-related risk **Moderate** for trout < 150g & > 150 g in 2022

Creran Lice-related Mortality % of Trout
<150g



Creran Lice-related Mortality % of Trout
>150g

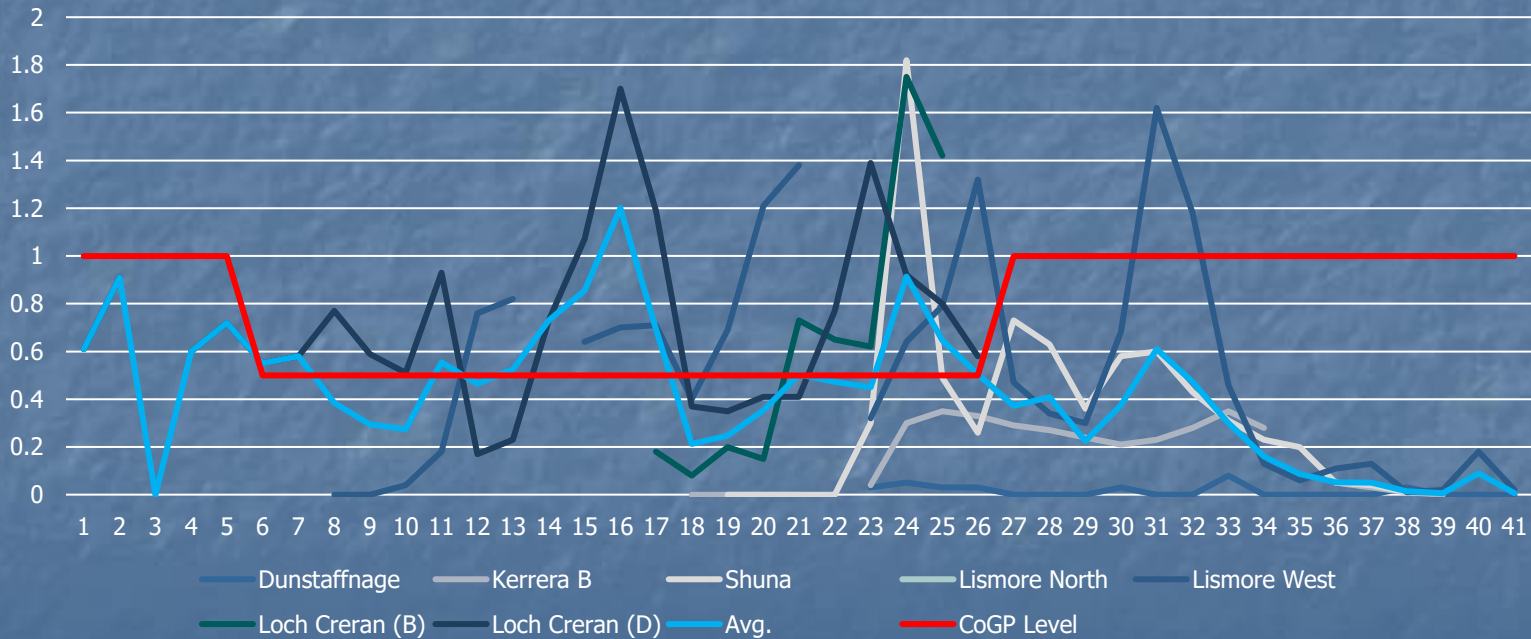


Farm sea lice counts (Avg. Adult Female)

Firth of Lorn

7 Sites – Scottish Sea Farms

Loch Linnhe Avg. Sea Lice (adult Female/Fish) 2021 - 23 Cycle

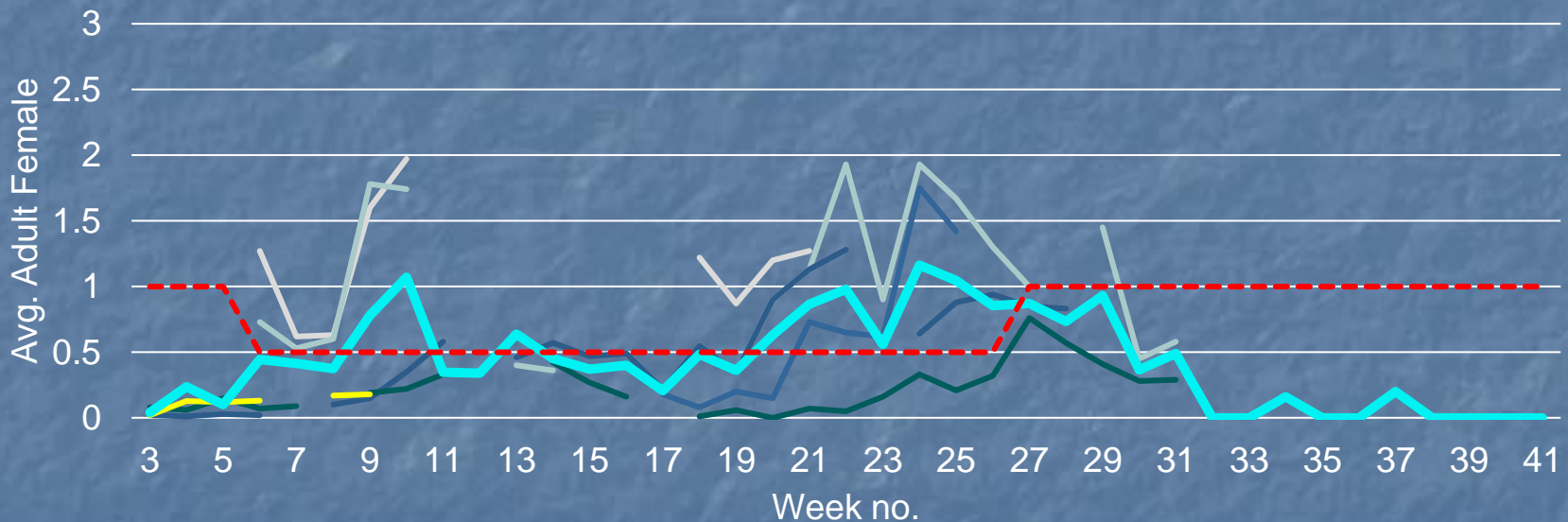


Farm sea lice counts (Avg. Adult Female)

Sound of Mull

7 Sites – Scottish Sea Farms (6 sites) Mowi (1 site)

SSF Sound of Mull Sea Lice (Avg. Adult Female/Fish)



- Loch Spelve (B)
- Fishnish (B)
- MacLean's Nose
- Bloody Bay
- Fiunary
- Avg.
- Fishnish (A)
- Scallastle
- CoGP Level

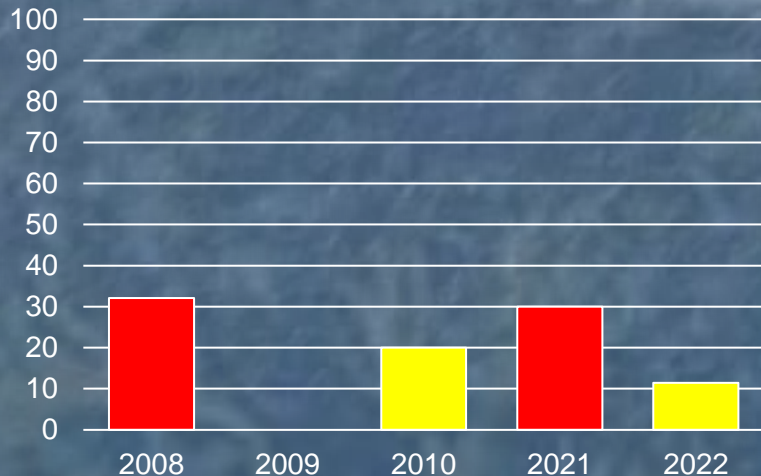
Wild sea trout sea lice counts

Sound of Shuna

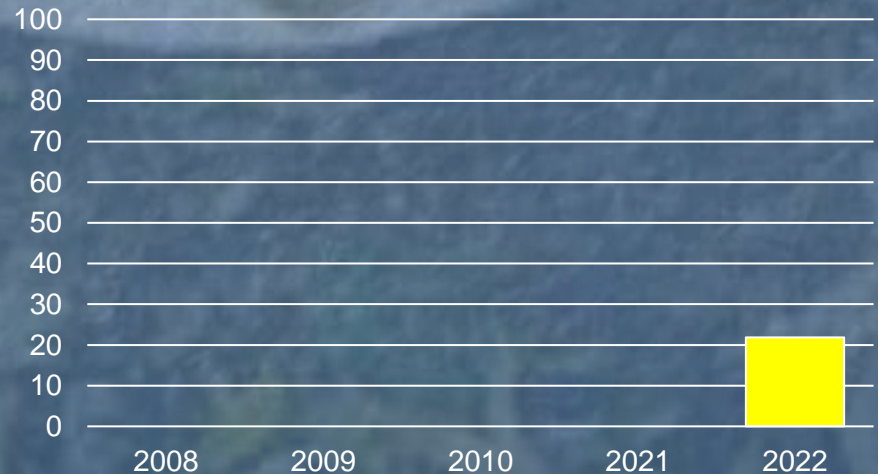
133 trout sampled in 2022 June to September (Fyke net)

Lice-related risk **Moderate** for trout < 150g & > 150 g in 2022

Sound of Shuna Total Mortality < 150g
(% of sample)



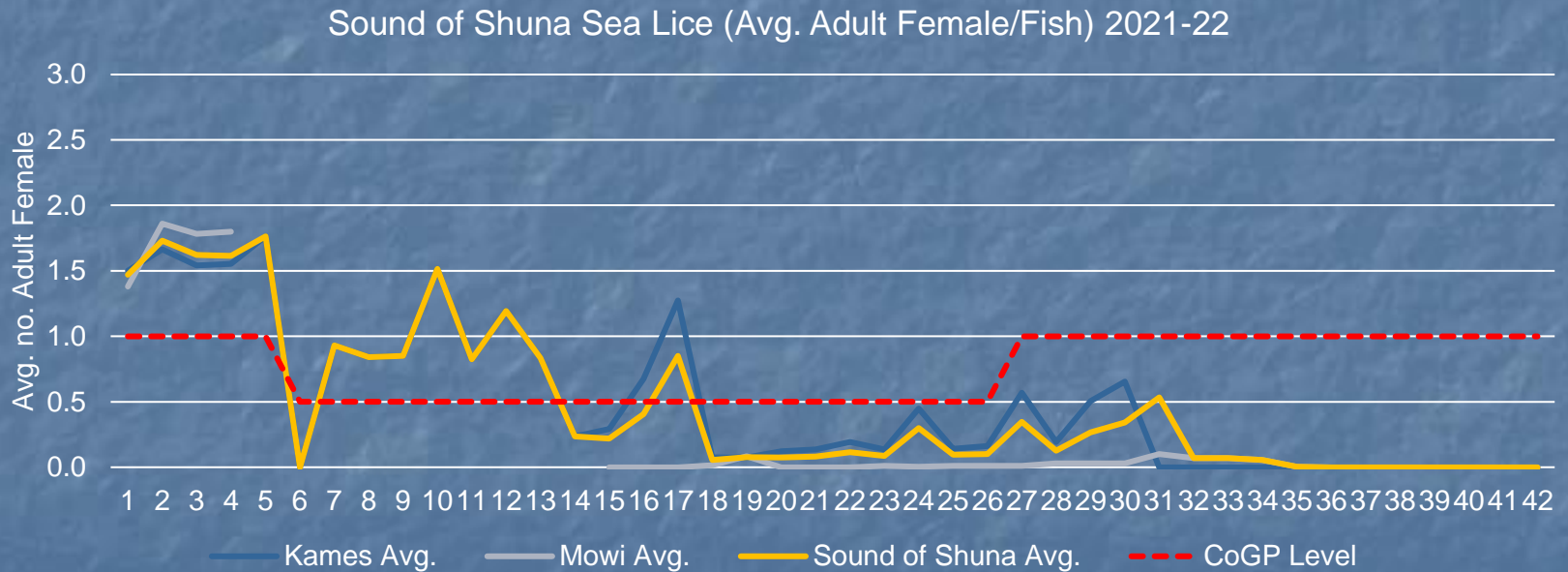
Sound of Shuna Total Mortality > 150g
(% of sample)



Farm sea lice counts (Avg. Adult Female)

Sound of Shuna

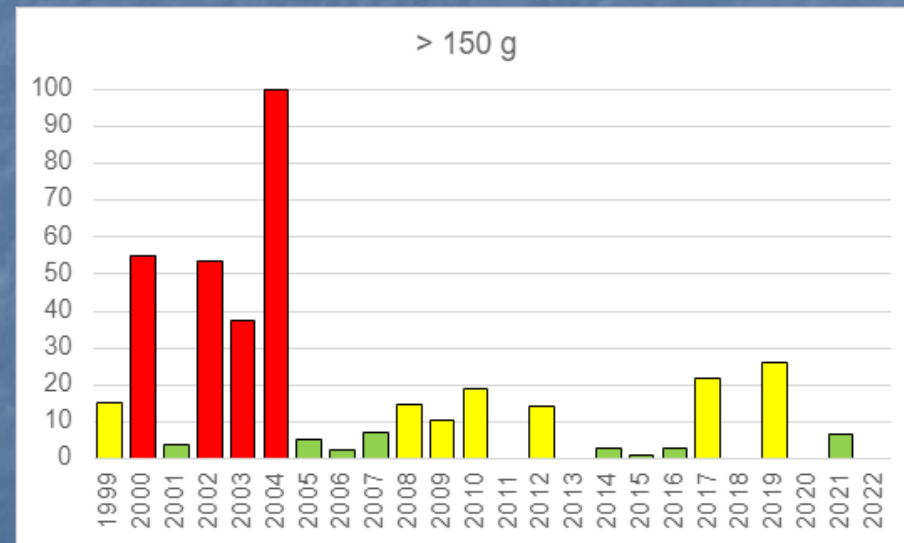
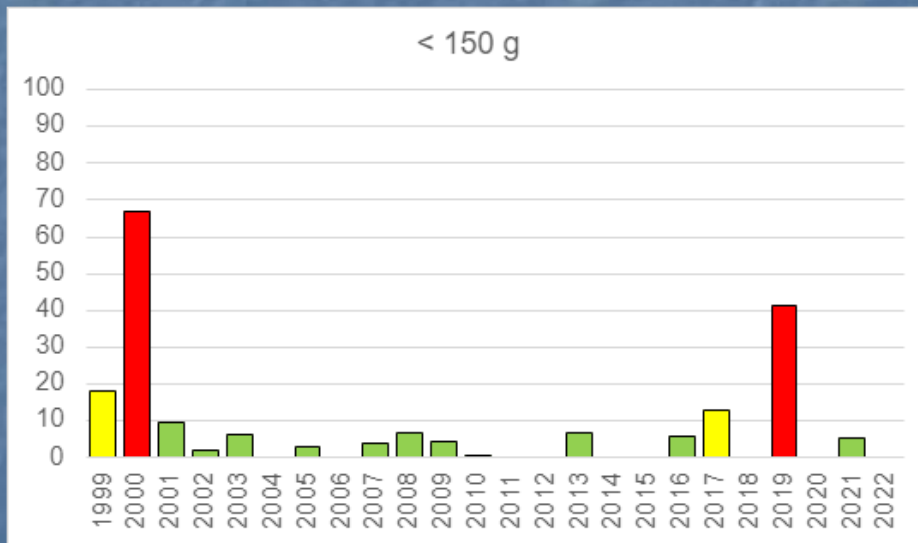
7 Sites – Mowi (3 sites) & Kames (4 sites)



Wild sea trout sea lice counts Loch Fyne

25 trout sampled in 2022

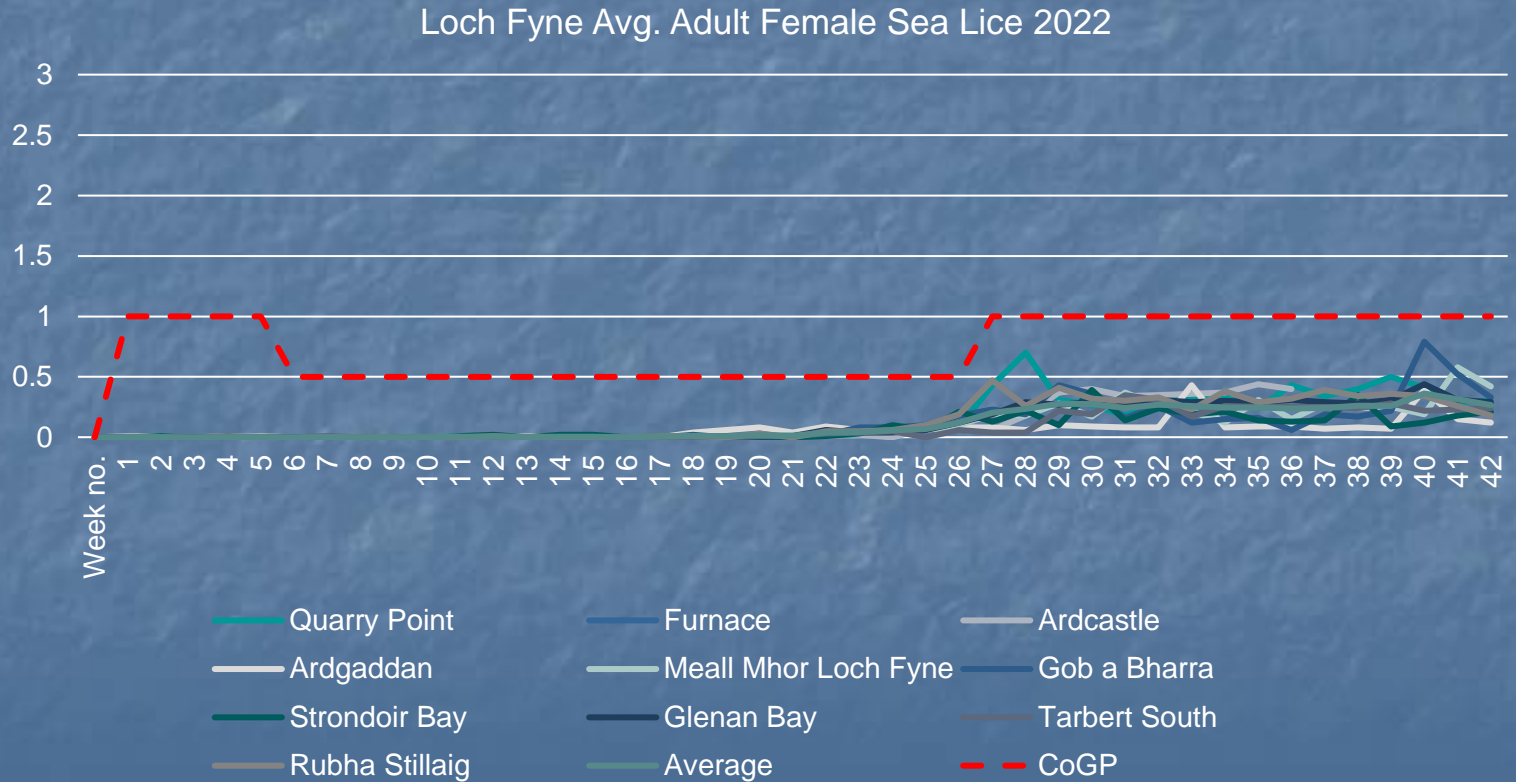
Lice-related risk **Low** for trout < 150g & > 150 g in 2022



Farm sea lice counts (Avg. Adult Female)

Loch Fyne

10 Sites - Scottish Salmon Company

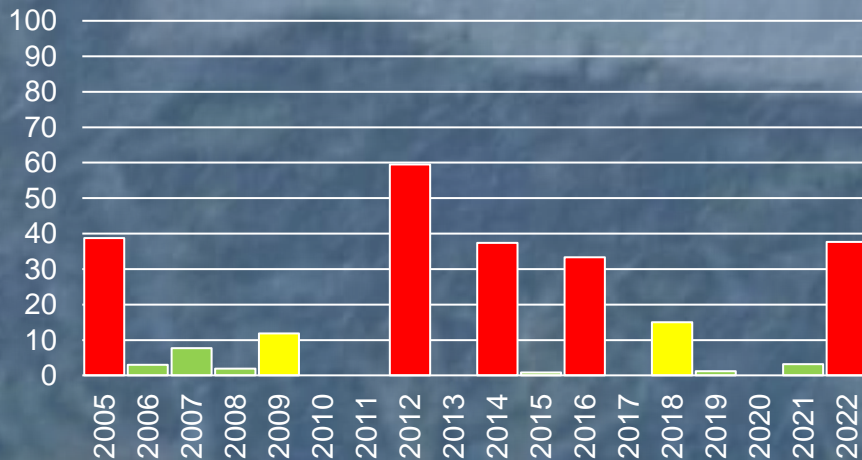


Wild sea trout sea lice counts Loch Riddon

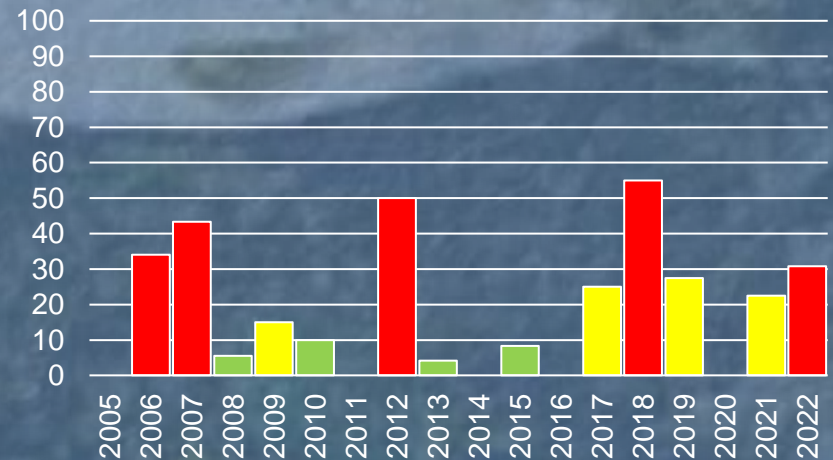
89 trout sampled in 2022

Lice-related risk **High** for trout < 150g & > 150 g in 2022

Total Lice-related Mortality (% of sampled trout) < 150g



Total Lice-related Mortality (% of sampled trout) > 150g

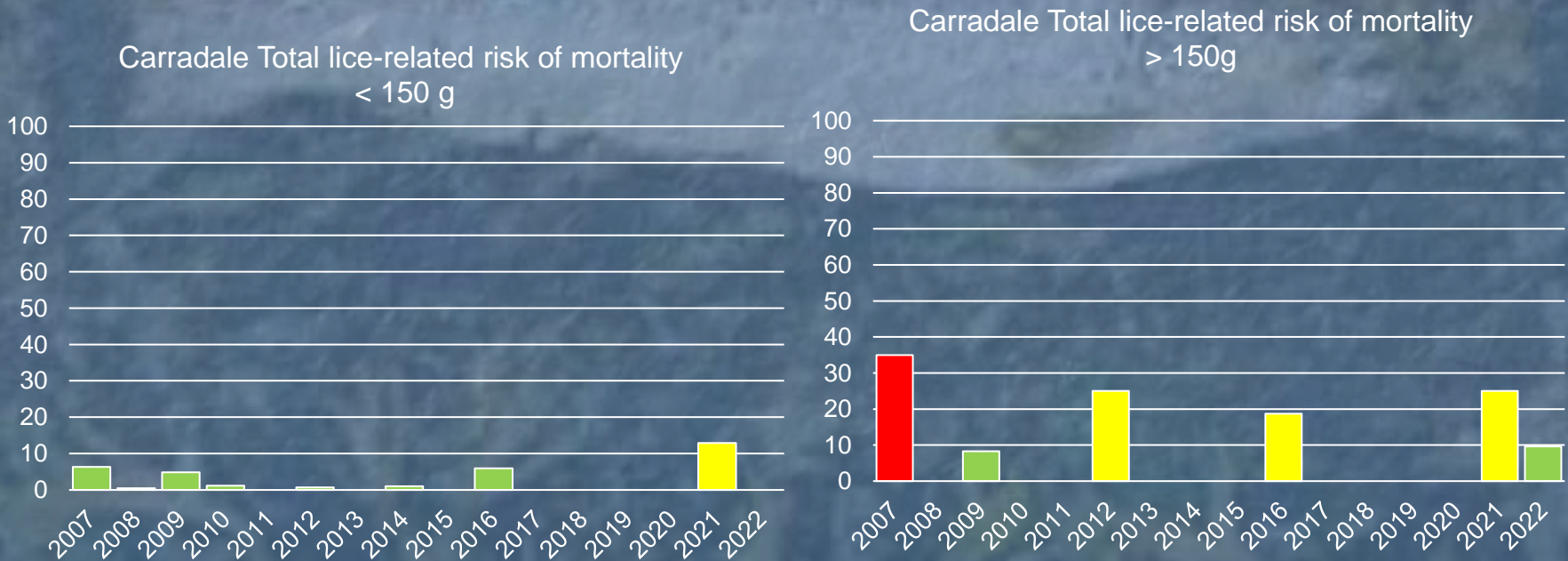


Wild sea trout sea lice counts Carradale

29 trout sampled in 2022

No Lice-related risk for trout < 150g

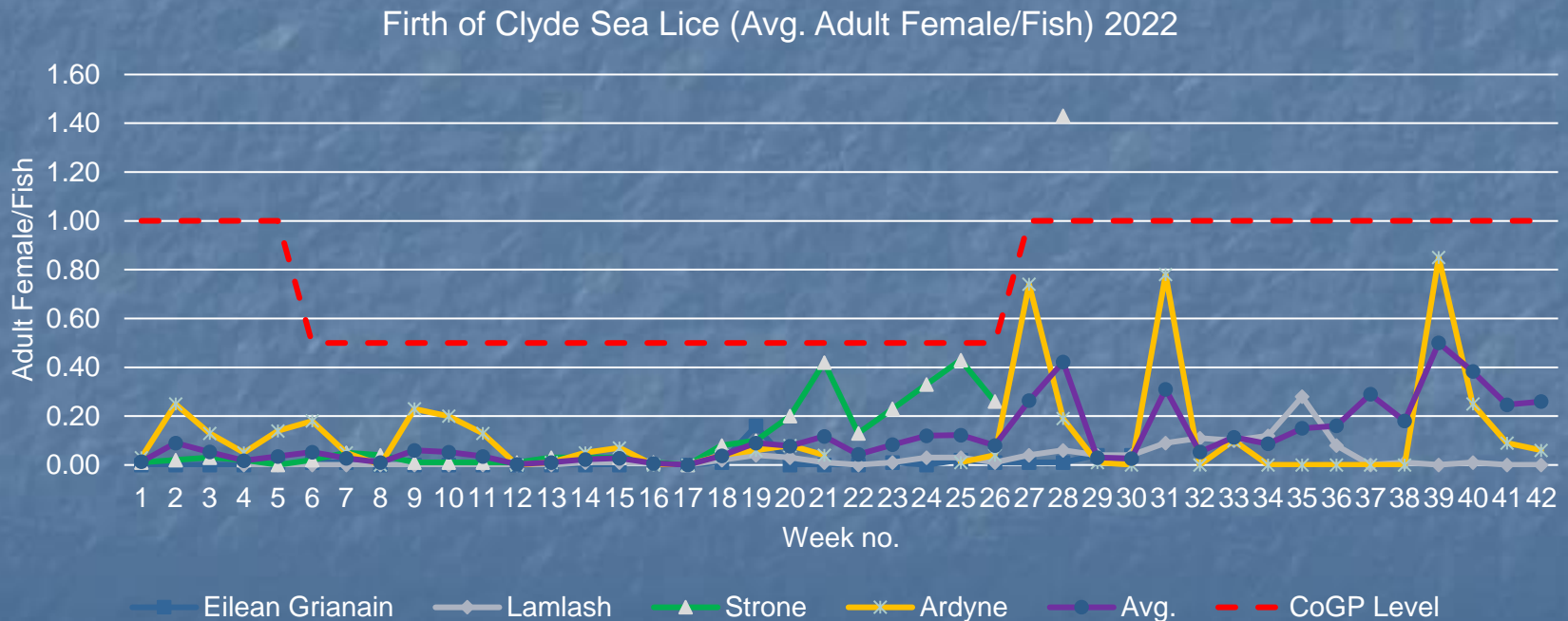
Low lice-related risk for trout > 150 g in 2022



Farm sea lice counts (Avg. Adult Female)

Firth of Clyde

4 Sites – Mowi (1 site), Bakkefrost Scotland (3 sites)



Aquaculture Consultations

Argyll DSFB consultation on proposed developments in 2021/22:

- Dawnfresh Rainbow trout farms – 3 sites in the Firth of Clyde
- Scottish Salmon Company at North Arran
- Scottish Sea Farms at Dunstaffnage, Lismore & Loch Spelve
- Loch Long Salmon Co. (semi-closed containment)

Consultations coordinated by FMS

- SEPA – Sea Lice Framework