




The Sea Trout Project Annual Report 2025

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27.02.2025	21	Kirstin Eliassen	
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<p>Eftir áheitan frá Havbúnaðarfelagnum eru kanningar av sjósílum framdar við tí endamáli at staðfesta, nær á árinum smolt fara á sjógv á fyrsta sinni, og hvussu trivnaðurin hjá sjósílum er á sjónum.</p> <p>Í 2025 vórðu kanningarnar framdar við trimum ymiskum mannagongdum:</p> <ol style="list-style-type: none"> 1. PIT-merking av sílum og antennuskipan í Norðagøtu. 2. Veiða við gørnum á Kaldbaksfirði og við Gøtugjógv/Norðagøtu. 3. Innsavnan av roðslu frá sílafiskarum kring landið. <p>Síðani februar 2024 hevur antennuskipanin í Norðagøtu støðugt skrásett nær merkt síl fara á sjógv, og nær tey koma niðan í áanna aftur. Tann 8. mai 2025 vórðu 160 síl merkt, og samlaða talið av merktum sílum er nú 554. Av hesum eru 203 skrásett av antennunum, harav 132 eru farin á sjógv. Av teimum eru 55 ikki skrásett at vera komin niðan í áanna aftur.</p> <p>Høvuðstíðarskeiðið har síl, ið verða mett at vera smolt, fóru á sjógv í 2025, var frá 12. til 25. mai. Tó var tíðarskeiðið, har flest síl samlað fóru á sjógv, fleiri vikur fyrr í 2025 enn í 2024.</p> <p>Aftur í ár komu tíverri sera fáir brævbjálvar frá sílafiskarum - einans 58 í tali, harav 32 vóru frá sílum fingnum á sjónum.</p>			

Við loyvi frá Vørn vórðu 50 síl veidd í 2025. Eins og undanfarnu trý árin varð veitt bæði nærhendis aling og burtur frá aling. Í 2025 vórðu sílini nærhendis aling veidd við Norðagøtu/Gøtugjógv (N = 22), meðan sílini burtur frá aling vórðu veidd á Kaldbaksfirði (N = 28).

Eins og undanfarin ár vísa úrslitini, at lítil munur er á trivnaðinum hjá sílunum í mun til frástøðu frá aling. Í mun til undanfarin ár var heldur eingin munur á lúsátølunum ella á metingini av hvussu nógv síl kunnu væntast at doyggja orsakað av lús. Tó skal havast í huga, at í 2025 var staðið, har veitt varð eftir sílum burtur frá aling, eitt annað enn undanfarin ár.

Leitið:

Sjósíl, *Salmo trutta*, longd, vekt, aldur, vøkstur, PIT, ferðing, antennuskipan

Fyrivarni:

Tilfar og upplýsingar í hesi frágreiðing eru eftirkannað og góðskukannað við teimum avmarkingum, sum henda verkætlan ásetir. Upphavsfólk til tilfarið og upplýsingarnar ella umboð

teirra eiga ikki at ábyrgast nakrar niðurstøður og avgerðir, ið eru grundaðar á tilfarið og upplýsingarnar.

Tilfar úr hesari frágreiðing kann bert endurgevast, um upprunin verður greitt tilskilaður.

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Føroyskur samandráttur

Hóast ávísar áir eita Laksá og Laksará, hefur laksur (*Salmo salar*) neyván nakrantíð verið áarfiskur í Føroyum. Hinvegin eru síl (*Salmo trutta*) at finna í nærum øllum áum, og tey eru bæði góður matfiskur og væl umtókt hjá stuttleikafiskarum; so væl umtókt at fram móti 1900-talinum var so nógv fiskað, at sílastovnurin minkaði munandi (www.trap.fo). Tí er tað av stórum týdningi at fylgja við fiskastovnum, soleiðis at neyðug tiltøk kunnu setast í verk áðrenn støðan gerst ov álvarsom.

Í Føroyum hefur alivinnan stóran búskaparlígan týdning. Tó munnu tey fægstu vænta at ein so stór vinna ikki ávirkar umhvørvið hon virkar í. Ein møgulig avleiðing kann vera ein minkandi føroyskur sjósílastovnur. Orsøkin til, at tað serliga eru síl, sum kunnu hugsast at kenna árinini frá alivinnuni er, at sílini hoyra til laksafiskarnar og tí kunnu smittast við laksalús, ið er ein sníkur sum einans livir á laksafiski. Tá ið talið av alilaksi veksur, veksur eisini talið av laksalús, og verður tað mett, at hetta kann hava neiliga ávirkan á villan laksafisk, t.d. síl, ið liva í nærumhvørvinum.

Laksalýs (*Lepeophtheirus salmonis*) eru krabbadjór sum skifta skal fyrri at vaksa. Til tess at gerast vaksin hefur laksalúsini átta menningarstig. Kynsbúna kvennlúsini ber eggini í tveimum streingjum sum hanga aftur úr henni til tey klekjast. Úr eggnum koma lúsayinglini sum skifta skal tvinnar ferðir áðrenn tey kunnu festa seg á ein fisk. Í hesum tíðarskeiðinum kunnu tey spjaðast til aðrar fiskar, so sum sjósíl. Tá ið lúsini hefur fest seg á fiskin, byrjar hon at liva av honum. Í fyrstani er lúsini so lítil, at hon mest livir av slípu, men so hvørt hon veksur, verður ávirkanin á fiskin størri. Við tíðini kann fiskurin fáa opin sár, og í ringasta føri kann hann doyggja.

Fyri at meta um hvussu stóra ávirkan alivinnan hefur á føroyska sjósílastovnin bað Havbúnaðarfelagið í 2018 Firum kanna hetta nærri. Hetta bar við sær at Sjósílaverkætlanin varð sett í verk í 2019.

Høvuðsendamálini við verkætlanini eru:

1. At kanna nær sílasmolt fara á sjógv fyrstu ferð.
2. At meta um trivnaðin hjá sílum á sjónum, serliga við atlit á lús.

Sambært kunngerð nr. 75 frá 28. juni 2016 um yvirvøku og tálming av lúsum á alifiski (Lúsakunngerðin), er alivinnan áløgd at halda lúsatøluni á einum lægri støði í mai, juni og juli. Hetta fyrri at verja tey síl, sum fara á sjógv fyrstu ferð, tí tey verða mett at vera serliga viðkvæm fyrri lús. Við hesi verkætlan fæst greiða á, um hesir mánaðir eru teir røttu fyrri føroysku sjósílini.

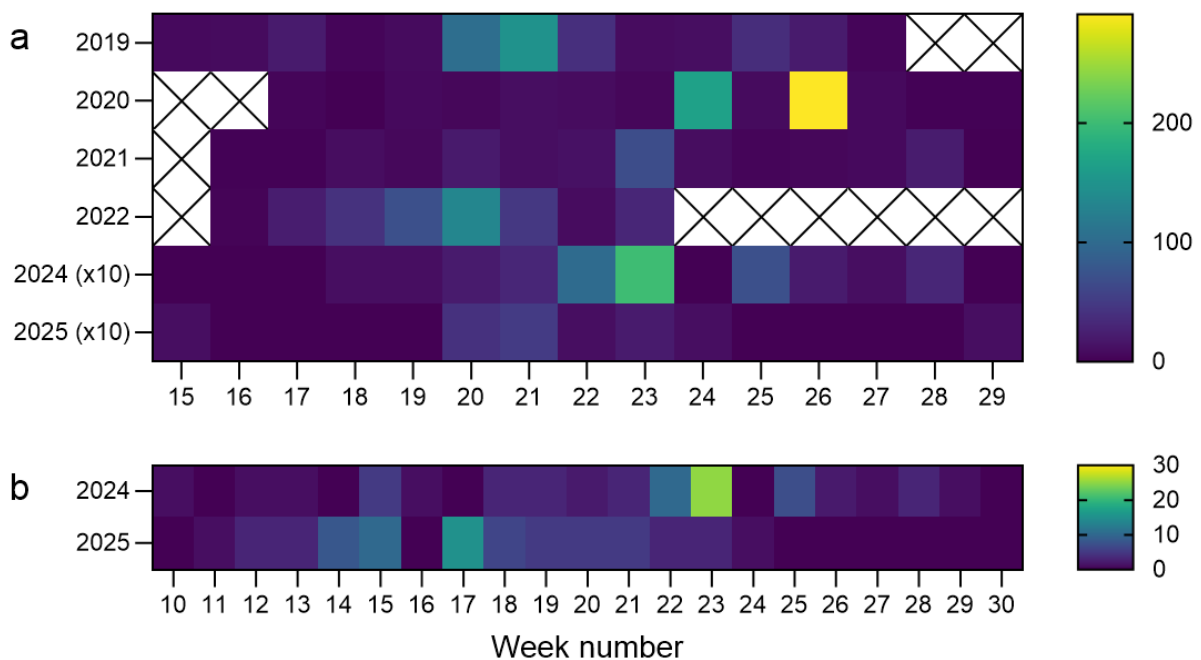
Av tí at hetta er fyrsta verkætlan av sínum slag í Føroyum, hava ymiskar mannagongdir verið royndar. Eitt nú varð ein fella sett upp í Sandá frá apríl til juli í árunum 2019-2022, og gav hon okkum tær fyrstu ábendingarnar um ferðingarmynstrið hjá sjóbúnum sílum, ið fóru á sjógv fyrri fyrstu ferð. Kortini hevði hendan mannagongdin sínar avmarkingar. Fellan kundi ikki standa uppi alt árið, hon virkaði ikki tá ið áin var ov stór, og hon forðaði sílum í at ferðast niðan ána. Tí valdu vit í 2023 at leggja um og í staðin merkja síl, soleiðis at ferðingin hjá sílunum ístaðin kundi skrásetast við einari antennuskipan. Hetta verður gjørt við etiskari góðkenning frá landsdjóralæknanum.

Við undantaksloyvi frá kunngerð nr. 92 frá 26. juni 1990 um síla- og laksaveiðu flýggja út av Vørn, hava vit veitt 50 síl árliga við gørnum. Fyrstu árin varð hetta gjørt á tilvildarligum støðum kring Føroyar, men í 2022 broyttu vit mannagongdina. Nú verður helmingurin av sílunum veiddur nærhendis aling, meðan hin helmingurin verður veiddur longur burtur. Hetta fyrri betur at kunna greina møguligan mun á sílum í mun til, hvussu nær aling tey liva.

Síðani verkætlanin byrjaði hava sílafiskarar havt móguleika at stuðla kanningunum við at senda inn roðslu og aðra vitan um síl, ið teir hava fingið. Hetta verður gjørt við serligum brævbjálvum sum eru mentir til endamálið. Umvegis sílafiskararnar er savnað nógv vitan um aldur, vøkstur og lúsastøðu hjá sjósílum.

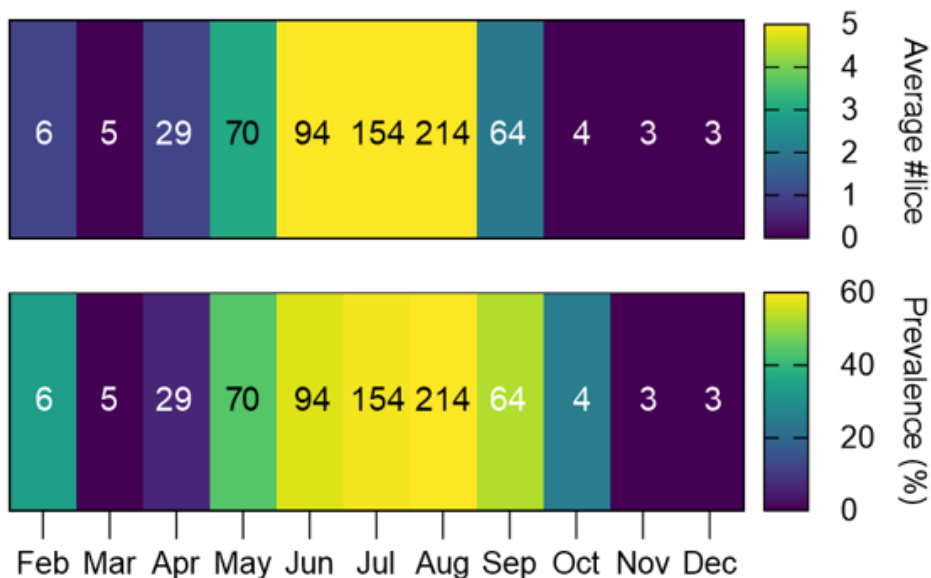
Í 2025 komu 58 brævbjálvar inn, ið tíverri er tann lægsta nógdin higartil. Tann 8. maí vórðu 160 síl merkt í Eiðisá í Norðagøtu, og við hesum er samlaða talið av merktum sílum nú komið upp á 554. Harumframt vórðu 50 síl veidd við gørunum: 22 við Norðagøtu og Gøtugjógv, og 28 á Kaldbaksfirði. Av tí, at alibrúkini sunnarlaga í Sundalagnum lógu brakk um hesa tíðina, umboða sílini fingin á Kalbaksfirði, tey ið liva longur burtur frá aling.

Á mynd 1a sæst nær flest síl eru skrásett at fara á sjógv fyrri fyrstu ferð, bæði sambært felluni í Sandá (2019-2022) og antennunum í Eiðisá (2024-2025). Støddin verður nýtt sum grundarlag at meta um, hvørt eitt síl er smolt. Sambært hesum fóru 17 síl á sjógv fyrri fyrstu ferð í 2025. Flestu smoltini fóru á sjógv í vikunum 20 og 21, tað er frá 12. til 25. maí. Hetta var nakað fyrr enn í fjør og meira líkt ferðingini í 2019. Sama mynstrið sæst tá ið tey størru sílini verða tikin við (Mynd 1b). Tá var fyrsta ferðingin í ár fleiri vikur fyrr samanborið við 2024.



Mynd 1. **a.** Vikuligar skrásetingar av smolti ið fór á sjógv fyrri fyrstu ferð. Vikur merktar við krossum eru ongar mátingar gjørdar. Fyri at gera myndina greiðari, og tí at tvær ymiskar mannagongdir eru nýttar, er talið av skrásetingum í 2024 og 2025 faldað við 10. **b.** Vikuligar skrásetingar av fyrstu árligu ferðingini á sjógv hjá øllum sílum (bæði smolti og vaksnum).

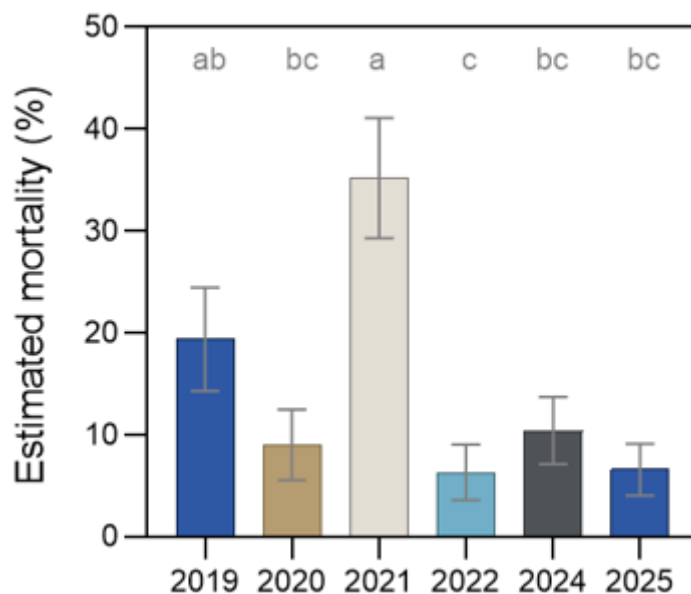
Á mynd 2 sæst hvussu nógvar lús sílini, ið sílafiskarar hava fráboða, hava havt í miðal ymisku mánaðirnar. Samlaða myndin vísir, at sílini hava flest lús um summarið, serliga í juni, juli og august, meðan lutfalsliga flest síl hava lús í august. Tá ið talið av lús á alilaksi vanliga ikki er hægst um summari, bendir hetta mynstrið á, at lítið avfall hesa árstíðina avmarkar møguleikarnar hjá sílunum at lúsa seg av í vatni.



Mynd 2. Mánaðarligir munir í miðaltali av lús á sílum fráboðað av sílafiskarum (ovara) og lutfallinum av somu sílum ið hava havt lús (niðara).

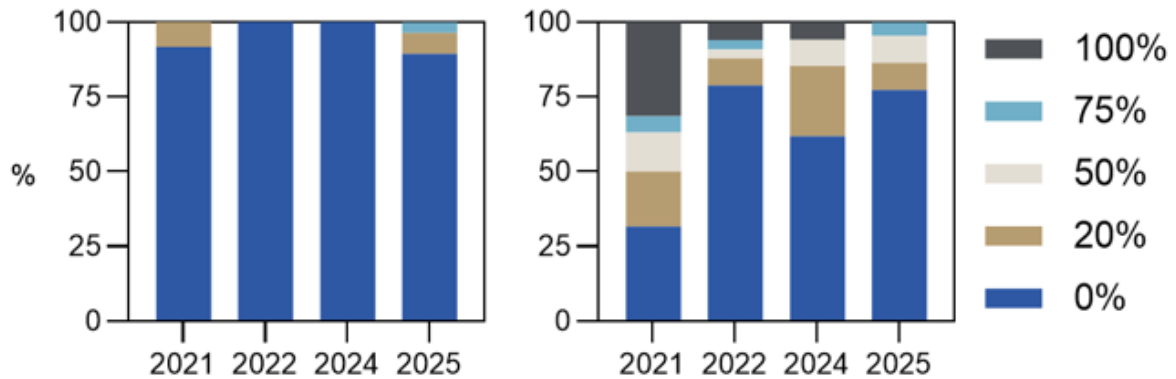
Tey 50 sílini ið vórðu veidd við gørnum í 2025 vigaðu í miðal 300 g (frá 41 g til 1290 g), høvdu eina miðallongd á 29.3 cm (frá 17.1 cm til 52.4 cm), og í miðal 5.4 lýs í part.

Norðmenn fylgja væl við teirra villu laksafiskum, eisini sílunum. Fyri at meta um í hvønn mun lús ávirkar síl hava teir ment eina flokkingarskipan ið skipar sílini eftir, hvussu nógv lús tey hava per gramm kropsvekt. Hvør flokkur umboðar sannlíkindini fyri, at eitt síl doyri orsakað av lús: 0%, 20%, 50%, 75% og 100%. Tá ið sílini, ið vórðu fingin við gørnum í 2025, vórðu flokkaði eftir hesum lestinum, vóru umleið 7% av sílunum, ið kundu væntast at doyggja orsakað av lús.



Mynd 3. Árligir munir á metta lutfallinum av sílunum ið kunnu væntast at doyggja orsakað av lús. Ymiskir stavir omanfyri vísa um munirnir eru hagfrøðiliga signifikantir.

Mynd 4 lýsir sannlíkindini fyrir deyða orsakað av lús í mun til um sílini eru veidd burtur frá ella nærhendis aling. Sjónligur munur sæst millum báðar bólkarnar. Í 2025 var hendan deyðiligheit umleið 4% fyrri sílini, ið livdu burtur frá aling og 10% fyrri tey, ið livdu nærhendis aling, men í mun til undanfarin ár, var hesin munurin ikki hagfrøðiliga signifikantur.



Mynd 4. Lutfall av sílum, ið eru mett at hava eitt væntað felli á ávikavist 0%, 20%, 50%, 75% og 100% orsakað av lús. Sílini eru veidd við gørnum burtur frá (vinstra) og nærhendis (høgra) aling.

Introduction

Although some Faroese rivers bear names such as Laksá and Laksará, wild Atlantic salmon (*Salmo salar*) has likely never been native in the Faroe Islands. Sea trout (*Salmo trutta*), on the other hand, occur in nearly all rivers and are both valued by recreational anglers and regarded as a good food. By the late 19th century, however, fishing pressure had increased to the point that trout populations declined markedly (www.trap.fo). This history underscores the importance of monitoring fish stocks so that necessary management measures can be implemented before declines become severe.

Aquaculture is a central pillar of the Faroese economy, but an industry of this scale also carries environmental risks. One potential concern is its impact on the Faroese sea trout population. Trout are particularly vulnerable because they, like salmon, are salmonids and therefore suitable hosts for the salmon louse (*Lepeophtheirus salmonis*), a parasitic copepod that can only survive on salmonid fish. As the biomass of farmed salmon increases, so does the abundance of salmon lice, which are known to negatively affect wild salmonids, including sea trout.

Salmon lice are crustaceans that grow through a series of molts and pass through eight developmental stages before reaching adulthood. Mature females carry their eggs in two strings until they hatch, releasing larvae that molt twice before becoming capable of attaching to a host fish. During this free-swimming phase, the larvae can disperse and infect new hosts such as sea trout. Once attached, the louse begins feeding, initially on mucus, but increasingly on skin and tissue as it grows. This can lead to open wounds, reduced condition, and, in severe cases, mortality.

To assess the extent to which Faroese aquaculture influences local sea trout, the Faroese Fish Farmers Association commissioned Firum in 2018 to investigate this issue. This led to the launch of the Sea Trout Project in 2019. The project has two main objectives:

- to determine when sea trout smolts migrate to sea for the first time, and
- to assess the condition of sea trout in the marine environment, with particular focus on sea lice infestation.

According to Regulation No. 75 of 28 June 2016 on monitoring and controlling lice in farmed fish, the aquaculture industry must maintain lower lice levels on farmed salmon during May, June, and July. This requirement is intended to protect sea trout smolts during their first entry into the marine environment, when they are considered most vulnerable to lice. The Sea Trout Project aims to evaluate whether these designated months correspond to the actual peak migration period of Faroese sea trout smolts and to assess the broader impact of salmon lice on sea trout at sea.

Project 1: Smolt migration to sea

Material and methods

Two Litz cord antennas, each connected to an IS1001 Standalone Reader (Biomark Inc.), are installed in the river Eiðisá, which flows through the village of Norðagøtu (62.198N, 006.744W). Positioned approximately 30 meters apart, the antennas monitor tagged trout as they pass through the system. By utilizing two antennas, it is possible to determine the direction of the trout's movement. Furthermore, placing one antenna as close to the river mouth as possible, while still in freshwater, enables precise tracking of both seaward migration and return timing (see Picture 1). The antennas were installed in November 2023. However, due to testing of the energy supply, data registration may have occasional gaps up until February 2024.

Trout were caught approximately 50 meters upstream of Antenna 1. To minimize unnecessary electrofishing of larger specimens, tagging was conducted in May, after the main spring seaward

migration of older trout and before the spawning period. To reduce potential mortality associated with tagging, only fish larger than 100 mm were tagged (Eliassen *et al.* 2025).



Picture 1. The two antennas span the river Eiðisá, both positioned in freshwater. However, Antenna 2 is located near a steep slope (indicated by the dotted white line), which marks the boundary of high tides. The light blue area indicates the area of electrofishing and tagging.

All fish were anesthetized using Benzocaine (Tjaldurs Apotek, Tórshavn), measured for total length (mm) and weight (g), and scale samples were collected for potential future age determination. Fish

meeting the size threshold were implanted with a PIT tag (APT12 PL 12.5 mm, 134.2 kHz ISO FDX-B preloaded tag, Biomark Inc.) into the peritoneal cavity using an MK25 PIT tag implanter (Biomark Inc.). Immediately after tagging, each fish's ID number was recorded using a handheld reader and stored. Following tagging, the fish were held in live wells until they fully recovered, after which they were released back into the habitat unit where they were captured.

Results

On 8 May 2025, 223 trout were sampled. Of these, 38 were under 10 cm and therefore did not meet the minimum size requirement for tagging, and 25 (~14%) were recaptures from previous years. This left 160 trout available for tagging, bringing the total number of tagged individuals to 554.

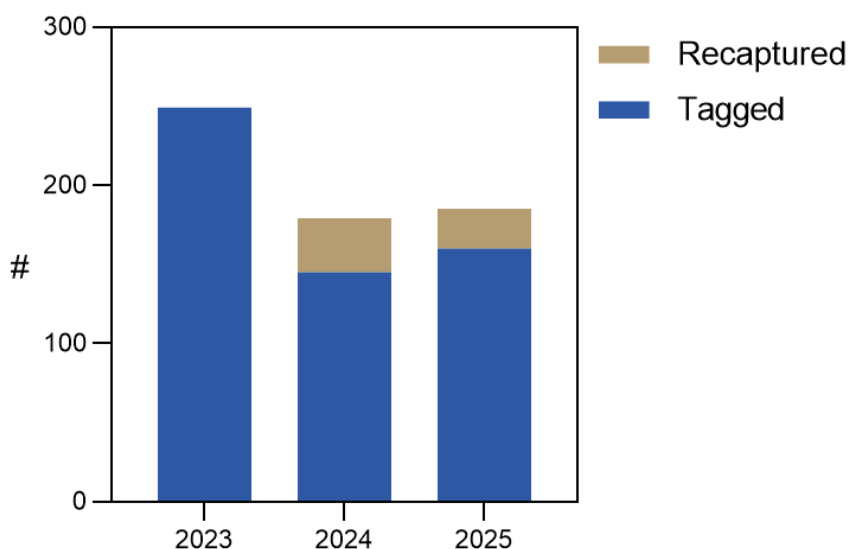


Figure 1. Number of trout tagged and recaptured in 2023-2025.

On average, the trout tagged in 2025 weighed 44.3 g (range: 3-453 g), measured 149 mm in length (range: 81-358 mm), and had a condition factor (Fulton's K) of 0.97 (range: 0.46-1.32). Most of the tagged trout (approximately 81%) were under 200 mm in length (Figure 2), suggesting that they were predominantly juveniles.

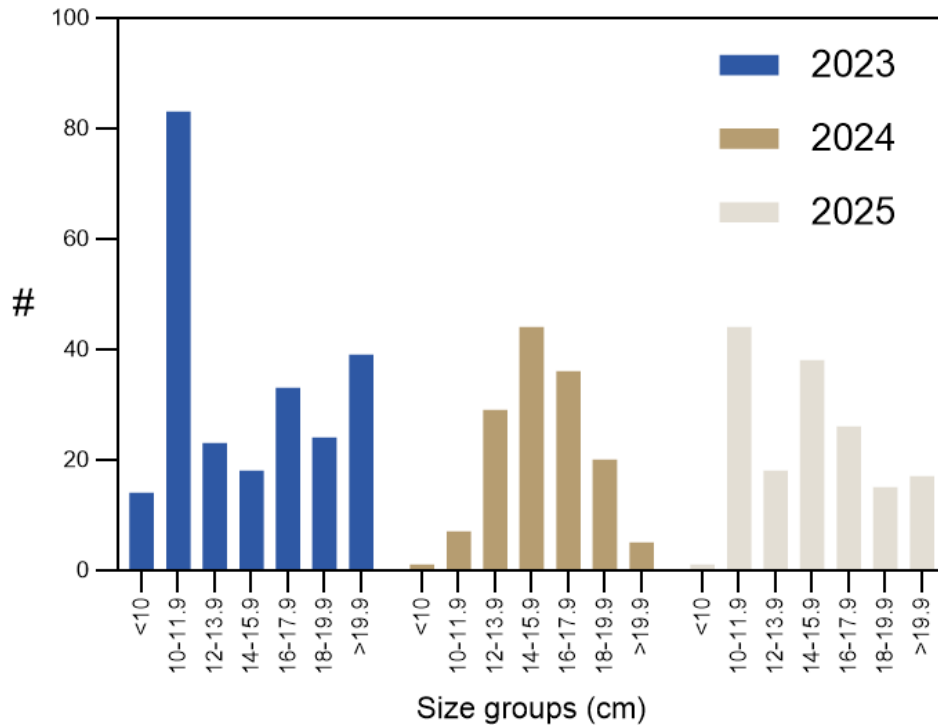


Figure 2. Length distribution of trout tagged in 2023-2025.

A seaward migration was defined as a trout passing both antennas in the seaward direction and remaining at sea for at least 72 hours. Of the 554 tagged trout, 203 individuals have been registered at antenna 1 and 142 at antenna 2, however, ten fish were detected only at antenna 2 despite having been tagged upstream of antenna 1 (Picture 1). This results in a confirmed total of 132 trout undertaking a seaward migration, of which 55 have not yet returned. Among the migrants tagged prior to 2025 (N = 93), 45 migrated to sea in both 2024 and 2025. In 2025, the frequency of seaward migration averaged 1.4 migrations per individual (range: 1-4).

Scales from 84 trout that had been sampled in connection with tagging in 2023 and 2024 have been analysed. Their average age was 1.8 years (1 year (N = 21), 2 years (N = 59), and 3 years (N=4)), spanning a wide range of sizes (8.6-25 cm), but their scales showed no evidence of prior marine residence. The size criteria previously used in this project to identify smolts, i.e., < 13.1 cm for trout tagged in 2023 or 2024 with no recorded migration, and < 20 cm for those tagged in 2025 (see also Eliassen *et al.* 2025), aligned well with these findings. 17 trout met the smolt definition for seaward migration in 2025.

The onset of the migration period appeared somewhat earlier in 2025 compared with 2024, whereas the return phase in 2025 was more sporadic and lacked the pronounced peaks observed in 2024 (Figure 3).

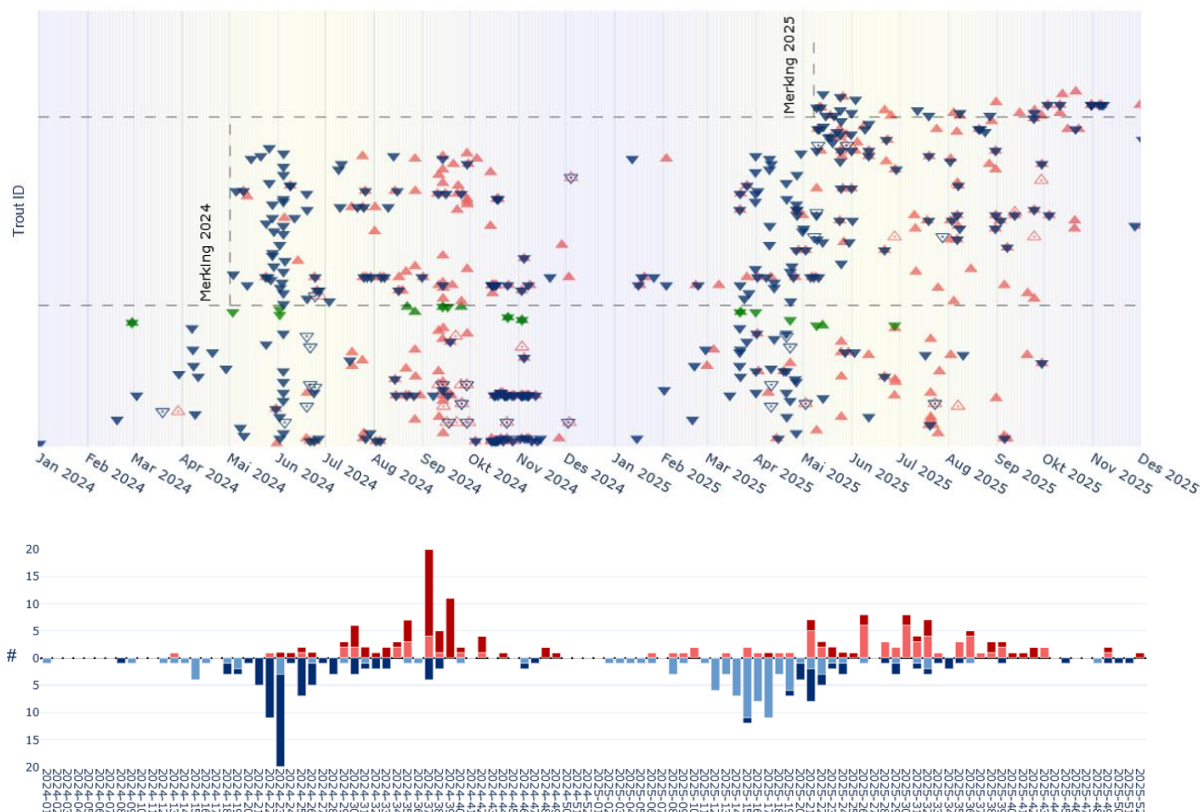


Figure 3. Seaward migration and return of tagged trout. The upper panel shows the movements of individual trout (blue and red triangles represent seaward migration and return, respectively; open triangles indicate recaptured individuals; green triangles denote fish for which data are missing due to technical issues). “Merking” means tagging event. The lower panel summarizes the weekly number of trout migrating to sea (blue) and returning (red), with dark and light colors representing smolts and older trout, respectively.

From 2019 to 2022, a trap was installed in the Sandá River (61.999 N, 006.781 W) from April to July, capturing nearly all seaward-migrating trout during that period. In 2025, most smolts migrated to sea during weeks 20-21 (12-25 May), representing an earlier peak in smolt migration than observed in 2024, but closely matching the timing recorded in Sandá in 2019 (Figure 4a). When considering the seaward migration of all trout, the migration peaks in 2025 occurred several weeks earlier than in 2024 (Figure 4b).

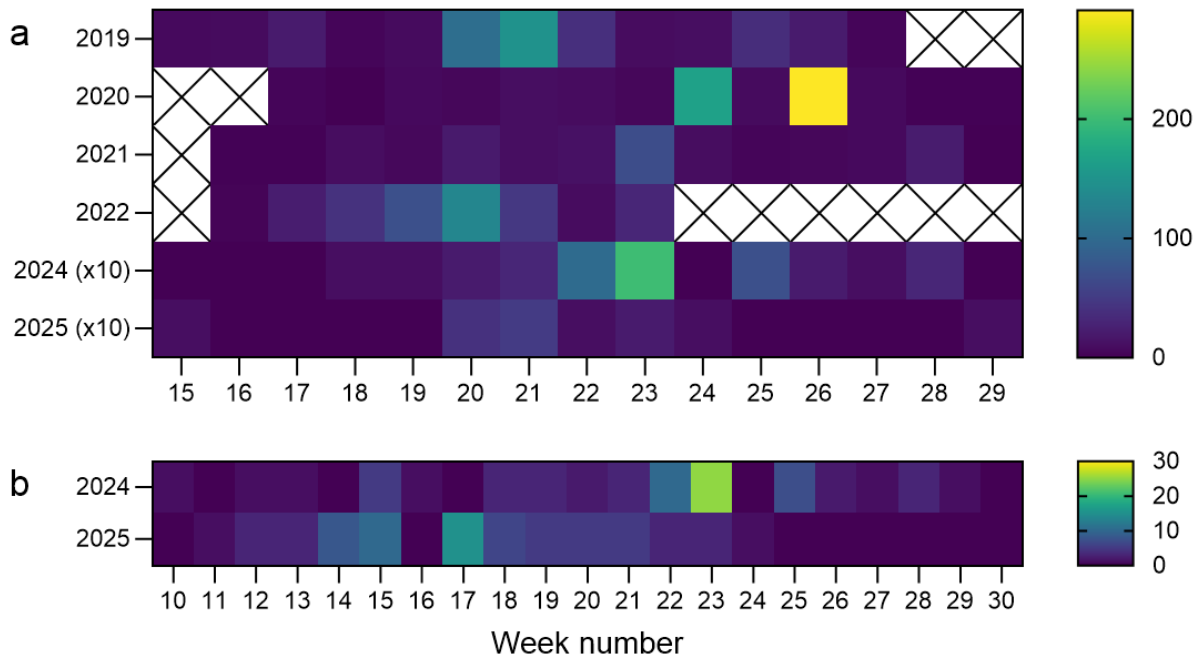


Figure 4. **a.** Weekly registrations of the first seaward migration of trout smolts recorded in the Sandá trap (2019-2022) and by the antennas (2024-2025). Cross-hatched areas indicate periods without sampling. Because trout numbers recorded by the two methods are not directly comparable, smolt counts from 2024 and 2025 are scaled up by a factor of 10 for visualisation. **b.** Weekly registrations of the first seaward migration of all trout recorded by the antennas in 2024 and 2025.

Project 2: The condition of sea trout at sea

Material and methods

Sea trout caught at sea were sampled using two methods: (1) gillnets measuring 5 meters in width, 2 meters in height, and with a 20 mm mesh size, and (2) scales and additional information donated by anglers. Anglers provide details such as the trout's length, weight, and sea lice count using specially designed envelopes (Picture 2) and, in return, participate in an annual prize draw for 10,000 DKR.



Picture 2. Envelopes designed for anglers to donate sea trout scale samples and additional data. Inspired by: <https://www.nina.no/sjoorret>

In addition to the prize incentive, anglers were encouraged to donate scale samples and other data on caught trout through Facebook advertisements. Free sampling envelopes were also made

available in stores selling fishing supplies throughout the Faroe Islands. As a new initiative, anglers who contributed scale samples received the results of the scale analysis via SMS, sent to the phone number provided on the envelope.

Gillnets were deployed at approximately a 90° angle to the shoreline and checked at least once every 30 minutes. To minimize the influence of salinity on sea lice counts, the nets were set in waters with salinity levels greater than 32‰, measured using a YSI Pro30. After sampling, the fish were transported to shore for further analysis.

On land, sea lice were counted and categorized into the following groups: (1) adult female *Lepeophtheirus salmonis*, (2) adult male and preadult *L. salmonis*, (3) *Caligus elongatus*, and (4) chalimus. For species identification using PCR analysis, chalimus were collected and preserved in ethanol. The sea trout were weighed to the nearest 0.1 g and their length measured to the nearest 0.1 cm. Scales were sampled from each fish and stored for subsequent age and growth analysis. Finally, the fish were gutted, and stomach contents were examined.

In 2025, gillnet sampling was conducted from July 3 to July 6, consistent with the sampling period in previous years. As the farming sites near Kaldbaksfjørður were fallow, the trout collected there (N = 28) were considered to represent individuals living far from active salmon farming sites. In contrast, trout captured near Norðagøta and Gøtugjógv (N = 22) were considered to represent individuals living near active salmon farming sites (Figure 5).

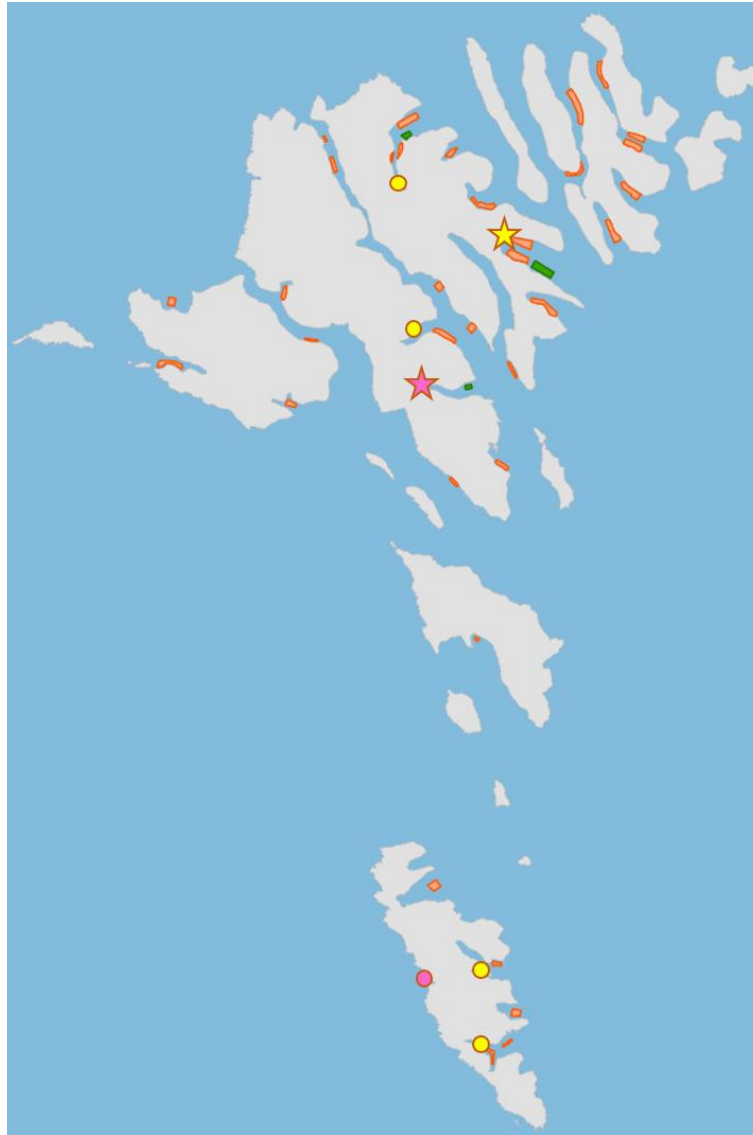


Figure 5. Locations of gillnet sampling sites. Yellow and pink symbols indicate sites close to and far from active salmon farming sites, respectively. Stars represent sampling conducted in 2025, while circles denote sampling from previous years. Orange markings show the locations of salmon farming sites (www.kortal.fo).

Results

Scale samples and associated data from sea trout caught at sea, either with gillnets or by anglers, have now been collected from a total of 971 specimens (Table 2). In 2025, only 58 sample envelopes were received from anglers. Of these, four were from trout caught in 2024, two were registered as salmon, four lacked species identification, and 16 were from trout caught in freshwater. This left just 32 envelopes representing sea-caught trout by anglers in 2025.

Table 2. Number of sea trout caught at sea by anglers and gillnets from 2019 to 2025. Numbers in brackets represents the number of different anglers contributing to the project.

	Anglers	Gillnets	Total
2019	145 (24)	32	177
2020	127 (18)	46	173
2021	118 (20)	50	168
2022	144 (21)	61	205
2023	88 (25)		88
2024	28 (15)	50	78
2025	32 (14)	50	82
Total	682	289	971

In 2025, sea trout caught at sea by anglers had a mean age of 4.3 years (range: 3-7 years), an average weight of 688 g (264-1595 g), an average length of 40.9 cm (30-54 cm), and a mean condition factor (Fulton’s *K*) of 1.00 (0.71-1.22). In all respects, the trout caught by anglers in 2025 were in significantly good condition (Kruskal-Wallis, $p < 0.0001$; Dunn’s post hoc tests, $p < 0.05$) (Figure 6).

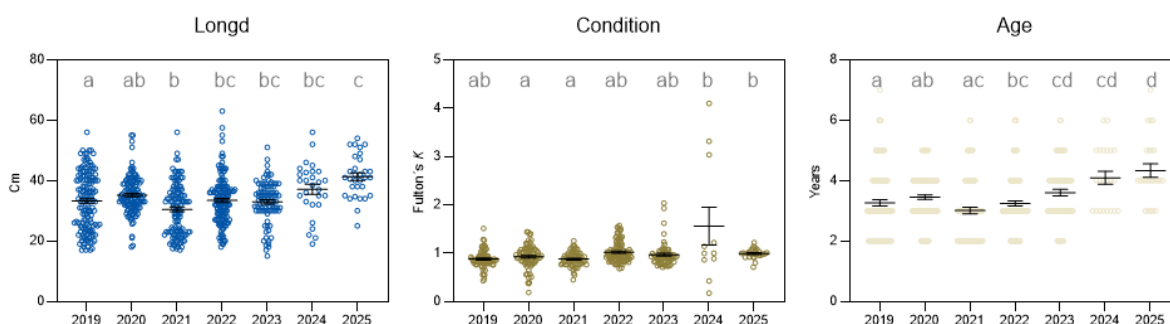


Figure 6. Average length (cm), condition (Fulton’s *K*) and age of sea trout caught by anglers. Vertical bars represent standard errors. Different letters indicate statistically significant differences (Dunn’s post hoc tests, $p < 0.05$).

Sea trout caught at sea by anglers carried an average of 8.1 sea lice, with a prevalence of 59%. The lice load in 2025 did not differ significantly from previous years (Kruskal-Wallis, $p < 0.005$; Dunn’s post hoc test, $p > 0.05$), nor did lice prevalence (Chi-square, $p < 0.05$; Fisher’s exact post hoc test, $p > 0.05$) (Figure 7).

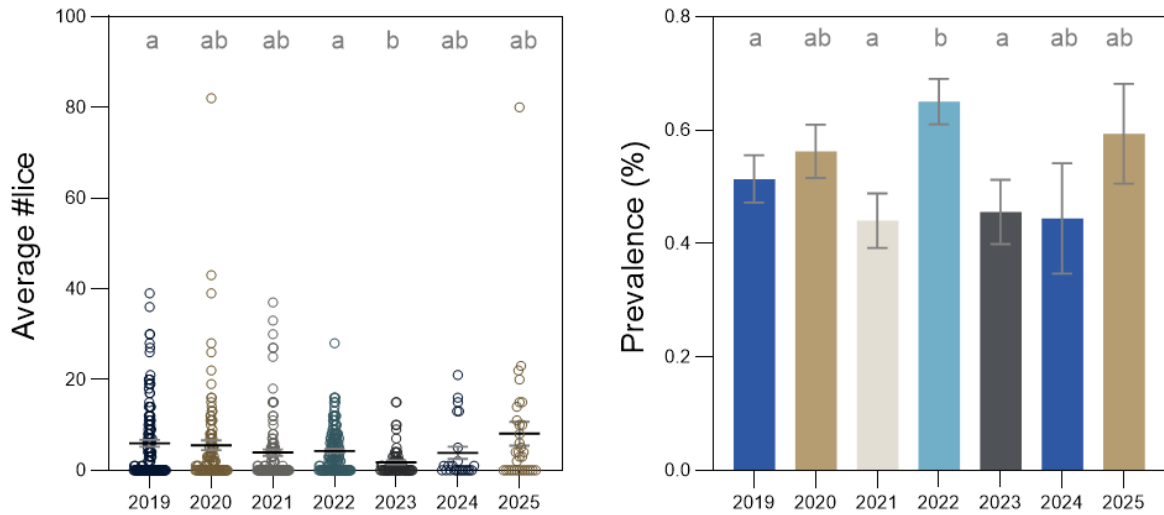


Figure 7. Annual variation in the average number of sea lice per fish (left) and the prevalence of sea lice on sea-caught trout captured by anglers (right). Vertical bars represent standard errors. Different letters indicate statistically significant differences (Dunn’s and Fisher’s exact post hoc tests, $p < 0.05$, respectively).

The overall trend from 2019 to 2025 shows that sea lice are most abundant on sea trout in June, July, and August, while lice prevalence peaks in August (Figure 8).

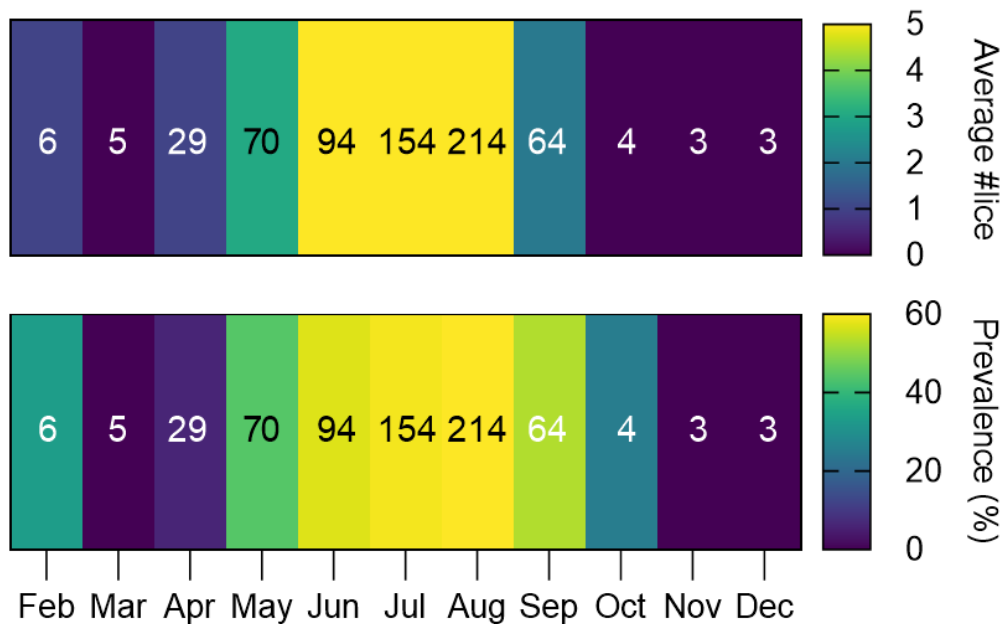


Figure 8. Annual variations in the average number of sea lice per fish (top) and the prevalence of sea lice (bottom) on sea trout caught at sea by anglers. Numbers indicate the amount of sea trout each month is represented by.

The sea trout caught with gillnets in 2025 had an average weight of 300 g (range: 41-1290 g) and an average length of 29.3 cm (range: 17.1-52.4 cm). Their average condition factor was 0.91 (range: 0.78-1.19), and they carried an average of 5.4 sea lice (range: 0-25).

In 2025, trout sampled near and far from active salmon farming sites did not differ significantly in any measured metric (Mann-Whitney, $p > 0.05$) (Figure 9).

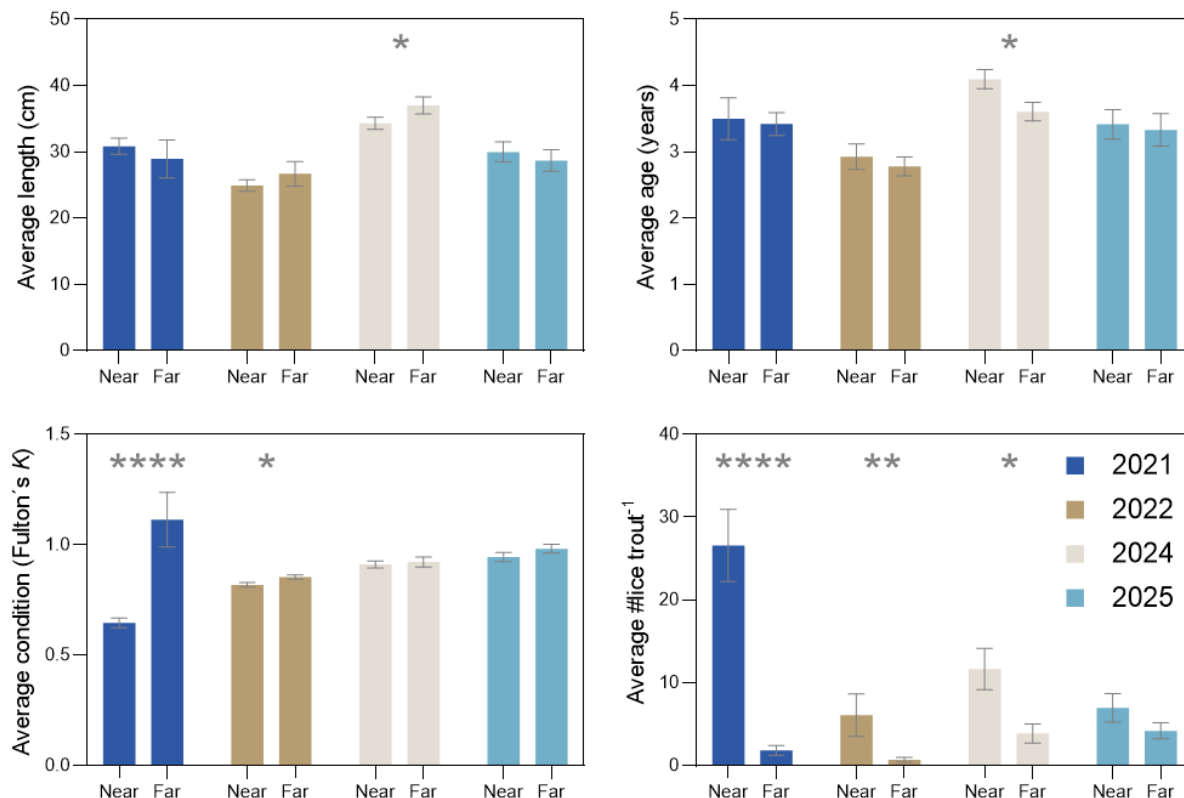


Figure 9. Average length (cm), age (years), condition factor (Fulton’s K), and sea lice counts for sea trout caught with gillnets near and far from active salmon farming sites. Vertical lines show standard errors, and asterisks indicate the level of statistical significance (* = $p < 0.05$, ** = $p < 0.01$, **** = $p < 0.0001$) based on Mann-Whitney tests.

Based on the salmon lice index of Taranger *et al.* (2012), salmon-lice-induced mortality was categorized as 0%, 20%, 50%, 75%, or 100%. Chalimus stage sea lice are included in this classification, and since 2022 a subsample of these stages has been collected for PCR verification. In 2025, 37 and 43 chalimus were sampled at the sites far from and close to active salmon farming sites, respectively, and all were identified as salmon lice.

The estimated average salmon-lice-induced mortality of sea trout caught with gillnets in 2025 was approximately 6.6%. This value was significantly lower than in 2021, but comparable to the remaining years (Kruskal-Wallis, $p < 0.0001$; Dunn’s post hoc test, $p < 0.05$) (Figure 10).

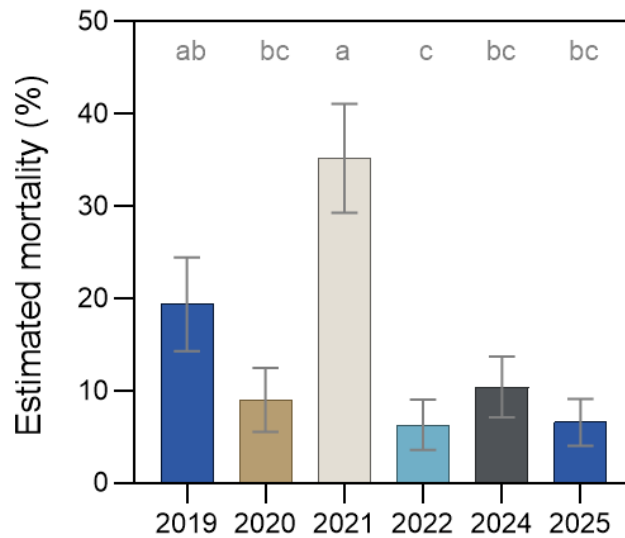


Figure 10. Estimated average mortality of sea trout caught with gillnets in six different years. Vertical lines represent standard error, and different letters indicate significant difference based on Dunn's post hoc test ($p < 0.05$).

In 2025, the estimated salmon-lice-induced mortality was approximately 4% for trout living far from active salmon farms, compared with about 10% for trout living near active farms (Figure 11). However, unlike in previous years, this difference was not statistically significant (Mann-Whitney, $p > 0.05$). Overall, combining all study years, the estimated salmon-lice-induced mortality of trout living near active salmon-farming sites averages ~22%, compared with ~2% for trout living farther away, a difference that is highly significant (Mann-Whitney, $p < 0.0001$).

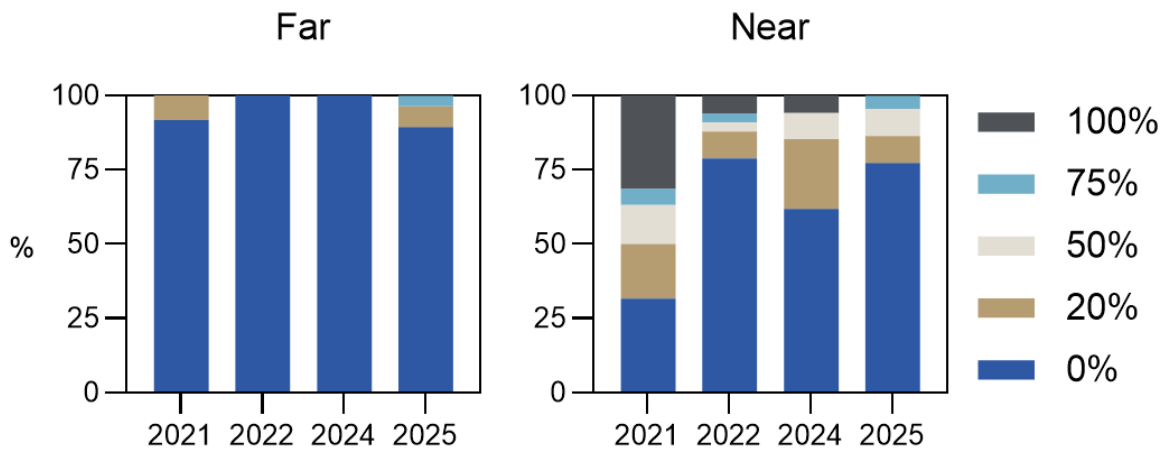


Figure 11. Proportion of sea trout caught with gillnets near and far from active salmon farming sites, categorized according to salmon lice loads corresponding to estimated mortality levels of 0%, 20%, 50%, 75%, and 100% as defined by Taranger *et al.* (2012).

Discussion

Monitoring trout movements to and from the marine environment through tagging continues to be an effective and reliable approach. The high number of recaptures (Figure 1) and the substantial proportion of repeat migrants (Figure 3) both indicate a high post-tagging survival rate. The low number of first-time migrants recorded in 2025 (17 individuals), however, is notable. Trout were initially tagged in June 2023, the antennas were installed late that year, and a second tagging event took place on 2 May 2024, ahead of the main seaward migration in late May to early June. In 2025, by contrast, tagging occurred on 8 May, while the major migration appears to have taken place already in late April (Figure 3). This mismatch in timing is likely the primary reason for the low number of smolts registered migrating seaward in 2025. The lower number of small trout (<12 cm) tagged in 2024 compared to 2023 (Figure 2) may also have contributed to the reduced number of migrating smolts detected.

An early smolt migration in 2025 is further supported by the behaviour of older trout, whose marine departures occurred several weeks earlier than in 2024 (Figure 4). These patterns highlight the importance of reconsidering the timing of future tagging efforts and are also relevant when evaluating how well the legislation on reduced lice levels on farmed salmon during May, June, and July aligns with the actual migration period of wild trout smolt.

The number of envelopes returned by anglers declined further in 2025, yet the number of usable samples was still higher than in 2024. In several earlier years, a few anglers contributed disproportionately large numbers of samples, meaning that the recent decline cannot be attributed to reduced participation alone (Table 2).

The sea trout caught by anglers in 2025 were generally in good condition, comparable to those sampled in 2022-2024 and clearly better than those caught in 2020-2021 (Figure 6). However, this improvement was not reflected in lice load or in the prevalence of lice-infested trout (Figure 7). Incorporating the 2025 angler data into the existing time series did not alter the overall pattern of average lice numbers peaking in June to August, but it did sharpen the prevalence peak in July and August while showing a reduction in September. Despite these shifts, indications of freshwater delousing activity remain evident (Figure 8).

Sea trout sampled with gillnets in 2025 showed no significant differences between fish caught close to active farming sites and those caught farther away in any measured parameter (Figure 9), including the estimated lice-induced mortality (Figure 11), which had been significantly higher near farming sites in all previous sampling years. In 2025, however, the “far from farming” site was relocated to a more geographically central area rather than the more isolated site used previously (Figure 5). Because pelagic salmon lice stages can disperse widely but are still largely retained around the islands by tidal currents (Kragesteen *et al.* 2018), this central location may not adequately represent trout living truly far from farming activity. The selection of future reference sites should therefore be reconsidered to ensure that they reflect areas with genuinely low exposure to farm origin lice.

References

Eliassen K, Østerø SL, Hansen, JF, Johannesen Á, Kruse H, Vazques D, í Stórustovu T, Johannesen TT, Johannesen UV (2025) The Sea Trout Project - Annual Report 2024. Firum rit 2025-01: 22pp

Kragesteen TJ, Simonsen K, Visser AW, Andersen KH (2018) Identifying salmon lice transmission characteristics between Faroese salmon farms. *Aquacult Environ Interact* 10:49–60

Taranger GL, Svåsand T, Kvamme BO, Kristiansen TS, Boxaspen KK (2012) Risk assessment of Norwegian aquaculture [Risikovurdering norsk fiskeoppdrett] (In Norwegian). *Fisken og havet*, særnummer 2: 131 pp