

## News



In Norway, Critical Situation for Salmon from Sea Lice and Escapes

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Note: Also see news link below for images

This spring and summer there have been large numbers of escaped farmed salmon found in several of the most important fjords and rivers for wild Atlantic salmon (*Salmo salar* L.) in Norway. In addition, severe levels of salmon lice (*Lepeophtheirus salmonis* L.) have been registered on both migrating wild salmon smolts and on sea trout (*Salmo trutta* L.) in the fjords.

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NJFF (The Norwegian Association of Hunters and Anglers).

Monitoring the salmon lice situation along the Norwegian coast is a cooperation between The Marine Institute, The Norwegian Institute for Nature Research (NINA), Rådgivende Biologer and Uni Research. Several methods are combined to examine the impacts of salmon lice on salmon and trout, including capture of wild sea trout and salmon in the fjords and off-shore by pelagic trawls, seines, gill nets, and counting of lice on the fish caught.

Additionally, one uses electrofishing to catch lice-infected sea trout that returns prematurely to fresh waters in the outlets of small rivers and creeks, to avoid the lice in the fjords. The Marine Institute coordinates these investigations. A report from The Marine Institute to The State Food Authority (Mattilsynet) published June 13 revealed that lice levels have increased dramatically since 2010.

- It does not look good

Researcher Kristin Kroon Boxaspen, from The Marine Institute were cited in the newspaper Adresseavisen on Thursday July 7 on new data on salmon lice on wild salmon smolt outside the coast of the county Trøndelag, saying: It does not look good.

In addition, 97 % of the sea trout in the outer part of the Trondheim fjord were infected with more than 0,1 salmon lice per gram fish, or 10 lice pr 100 gram fish. More than 0,1 lice per gram fish will cause problems for the fish. 0,7 lice per gram fish will be deadly for the fish, according to Boxaspen. The collected data suggest a negative impact from salmon lice from the fish farms in the area on the migrating salmon smolts from the rivers in the Trondheims fjord in 2011. Leading salmon biologist, Thorbjørn Forseth from The Norwegian Institute for Nature Research, says this could lead to fewer salmon returning to the rivers, and a reduction in the duration of the fishing season in the rivers as a result. This will reduce income for river owners, camping sites, hotels and others.

Hundreds of salmon lice

The salmon lice situation is particularly problematic along the Norwegian coast from Stavanger in the south, to Troms County in the north. This is where the majority of the fish farms are located. In parts of the Hardangerfjord wild salmon and sea trout were found to have on average 50 lice. In excess of 10 lice are considered to greatly increase mortality. On several fish there were found hundreds of salmon lice. This is an increase compared to the years prior to 2011. The Marine Institute found high levels of salmon lice on migrating wild salmon smolts from the middle of May, in the outer parts of the Sognefjord.

The research data collected in May – July 2011 clearly shows that the Norwegian salmon farmers were unable to sufficiently reduce the levels of salmon lice on farm fish. This must be executed successfully prior to the critical smolt migration period in May – June. This is to avoid heavy sea lice infestations on the wild salmon smolts.

- Worst possible time

In a press-release General Secretary, Bjarne Oppedgård in the Norwegian Association of Hunters and Anglers says:

- This happens at the worst possible time for the wild salmon. The situation is out of control. This must have consequences, such as a reduction of the total number of farmed fish in the sea.

Advisor Atle Kambestad, from The Norwegian Directorate for Nature Management confirms to NJFF that it recently have been a significant increase in the amount of salmon lice found on the sea trout, also in the fjords in Ryfylke in Rogaland county. In 2010 this increase in Ryfylke came three – four weeks earlier, so the situation this year is a slight improvement. Kambestad also reports about dangerously high levels of salmon lice on some salmon smolts caught in pelagic trawls off the coast of Norway. The majority of the smolts caught had few or no salmon lice on them, also the total number of smolts caught were too small to draw any absolute conclusions from this study.

Escaped farmed salmon

The Norwegian institute for nature research (NINA) has registered large numbers of escaped farmed salmon in Western Norway this summer, and further north in Trøndelag County. Fisherman Arne Jørrestol from Agdenes tells in the paper Sør-Trøndelag that he until July 6 has caught 200 escaped salmon in his two salmon seines in the Trondheim fjord, since he started fishing June 4. This represents 40 % of the total salmon catch.

Jørrestol claims that "somewhere some salmon farms are leaky as a sieve". Arne Jørrestol has been fishing salmon for 35 years, and today he works for The Norwegian Institute for Nature Research (NINA), among others. In just one month's fishing, half a season, he has caught more escaped farmed salmon in 2011 than in the two months of fishing in his previous 35 seasons.

In several of the important salmon rivers in Trøndelag County anglers report unusually large numbers of salmon which have escaped from fish farms. It is reason to believe that a high percentage of the spawning population of salmon in many of these rivers will be farmed salmon. This causes a loss of genetic properties in the rivers and genetically unique salmon populations.

Difficult to distinguish

Also in many of the rivers in Western Norway fishermen have caught numerous escaped salmon. In some of these rivers farmed salmon that seemingly must have escaped as smolts are being caught. Unfortunately, these fish are difficult to distinguish from wild fish since they lack farmed fish characteristics, such as damaged fins or shortened tails.

The website [www.kyst.no](http://www.kyst.no) reports July 6 that there are two different companies which claim to be able to tag farmed salmon at a low cost of just NOK 0,03-0,04 til 0,13 – 0,14 a fish. The Norwegian Association of Hunters and Anglers and other organizations, demand that all farmed salmon are individually tagged, in order to identify those responsible for each individual escaped salmon. As an added benefit, tagging will make it possible to

remove escaped farm salmon from the rivers prior to the spawning of the wild salmon.

[www.njff.no/portal/page/portal/njff/artikkel?element\\_id=125837979&displaypage=TRUE](http://www.njff.no/portal/page/portal/njff/artikkel?element_id=125837979&displaypage=TRUE)