

Underwater prison break

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SALMON ESCAPES

If there are more cases of salmon (*Salmo salar*) escapes, it can affect the wild salmon stocks we have. Farmed salmon threatens wild salmon with diseases, and the great danger of infection may pose a threat to the wild population if escapes is not under control in the facilities. Several major escape scandals can also promote a negative image of aquaculture. As late as 2002 there were reported over 600,000 escapes from salmon farm facilities in Norway, as a result of propeller injuries and technical failure. What is the best solution to prevent escapes?

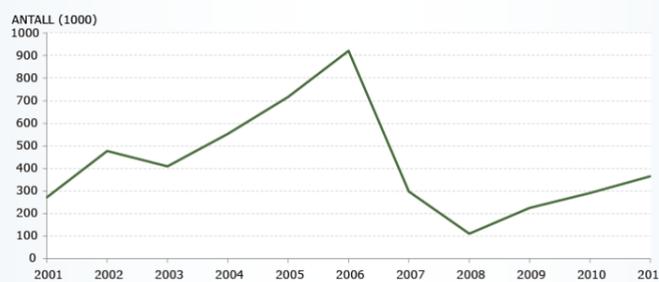


Density in the tanks.

AQUACULTURE

Aquaculture is the cultivation of organisms such as plants, algae and shells in water. Farmed fish also falls under aquaculture. There has been a huge growth in aquaculture in modern times, and it now accounts for one third of the world's output of seafood.

Norway is small farming nation on a global scale, but domestic is it one of our biggest export industries. Norway is also the largest producer of Atlantic salmon internationally. Every year around 200 million salmon and rainbow trout (*Oncorhynchus mykiss*) are put into the sea.



Number of escaped salmon in Norway (In thousands).

CONSEQUENCES

Salmon escapes can lead to undesirable environmental consequences. One of the biggest problems for wild salmon is that the farmed salmon comes up the rivers and interbreeds with wild salmon. It is not clear yet how this affects the wild populations, but we know that farmed salmon have a harder time surviving than wild salmon, because they are not adapted to a life which includes a lot of movement.

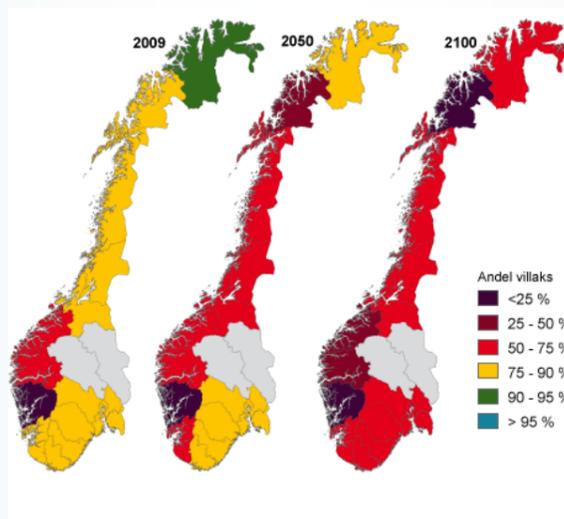
The unique Norwegian wild salmon stocks are slowly but surely being replaced by hybrids with genes from farmed salmon. The process has already come far in many rivers, and in a few decades only every third salmon in affected rivers will be original wild salmon. The number of escaped farmed fish in Norwegian wild salmon populations are still way too high.



Salmon tanks in Lofoten, Norway.

THE MYTH ABOUT SALMON ESCAPES

It is said that escaped farmed salmon that come in contact with wild salmon spread disease and genetic weaknesses. This accusation is debatable. We've got solved that due to lack of natural instincts in farmed salmon, they normally just end up swimming around confused and rarely manages to reproduce with wild salmon. So there are different opinions about how dangerous salmon escapes really is for the environment.



Percentage of Wild Salmon in Norwegian rivers.

MEASURES

The aquaculture has no tolerance towards fish escapes and they are determent to clean up after themselves, when it happens. It is the industry's responsibility to ensure the tanks.

These somewhat easy measures can reduce numbers of escaped salmon drastically.

- Stricter rules and control of the tanks.
- Replace older equipment.
- Find new and safer solutions.
- Get better routines and training.
- Label farmed salmon.
- Increase readiness, so the recapture improves.

When the fish first has escaped you want to fetch it as fast as possible, before it starts to spawn in the rivers. The method that has been proven to be the most effective is labelling the salmon. That makes it easier to track and fetch the escaped fish.

Until better tracking devices are in place, the industry has established an environment fund on 30 million Norwegian kroner. This should, among other things, help fund the work to remove escaped fish from the rivers.

CONCLUSION

The consequences of salmon escapes are often accessibly negatively discussed. Those who struggle the most are the owners of the farming facilities, because they are the ones losing products. They are also left with a bad reputation, because of all the bad rumours about the damage farmed salmon cause.

The best solution to the problem is most likely to label the fish. This way those way are responsible for the salmon escapes can track down the escaped salmon.

To retrieve escaped salmon are often very expensive. But by labelling the salmon, they do not have to spend money to find it, and only need to have enough resources to retrieve the salmon. This way one can also avoid picking up wild salmon.

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