### Join the S&TA now and help us to help save our wild Scottish salmon and sea-trout!

The S&TA is leading the campaign to stop the unsustainable farming of salmon which threatens the very survival of wild fish.

#### But we can't do it without your help!

Join the S&TA today - Give a donation Support the campaign

And remember – if you Gift Aid your donation, S&TA gains an extra 25% - without costing you a penny

# To find out more visit our website www.salmon-trout.org

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# Salmon farming and wild fish just don't mix!

#### What is the problem?

There is overwhelming scientific consensus that salmon farms pose a threat to wild salmon and sea trout. Parasitic sea-lice from salmon farms can kill wild fish, particularly juveniles migrating to sea, while farm escapees breed with wild adults, diluting natural gene pools.

Fish farms are struggling to control sea-lice problems. In Norway, farm-origin fish can constitute up to 20% of salmon found on the spawning grounds.

Salmon are currently farmed in open-net cages, allowing parasites, disease, waste products and pesticides to flow freely into the wild and impact wild fish. And many fish farms are located close to estuaries important for wild salmon and sea trout, making interaction between farmed and wild fish inevitable.

## **Open-net cage system**

**Problem:** Sea lice transfer from farmed salmon to wild fish. Although sea lice do occur naturally in the water, salmon farms provide the ideal conditions for their numbers to multiply to devastating levels. **Impact:** Sea lice feed on salmon, causing lesions which can be fatal to juvenile fish.

**Problem:** Location- salmon farms are typically located in lochs, bays and estuaries in areas protected from storms. **Impacts:** Wild salmon and sea trout migration routes run close to the fish-farms. This results in maximum exposure of wild fish to diseases and parasites coming from the farms.

**Problem:** Farmed salmon can escape from the open-net cages. These can be both operational losses and catastrophic mass escapes when nets are damaged by storms, boat collisions, accidents or predator attacks. **Impacts:** The escapee salmon breed with wild salmon, diluting natural gene pools, which could result in reduced spawning success. Genetically distinct wild salmon populations could be lost forever, limiting the ability of the species to adapt to change such as global warming.

**Problem:** Uneaten food and fish faeces drop out of the open-net cages and on to the sea-bed **Impacts:** This can smother species below the cages, resulting in 'dead zones'. Also elevated levels of phosphates and nitrates can impact water quality.

**Problem:** Fish-farms discharge untreated chemicals, such as the pesticides used to treat sea-lice, directly into sea-lochs. **Impact:** Non-target marine organisms such as crustaceans can be harmed.

## Enclosed System

No transfer of sea lice between farmed and wild salmon

With enclosed systems, location does not matter- farms could be on land or in the sea.

No fish should escape to interbreed with wild fish.

Waste is contained and can be processed and recycled, so it will not impact the surrounding environment.

Pesticide treatments can be controlled, the need for treatments reduced and the discharge of active pesticide to sealochs eliminated.

# What is the solution?

The Salmon & Trout Association (S&TA) believes that all poorly-sited farms must be moved urgently, to give migrating wild salmon and sea-trout smolts some chance of avoiding the lethal diseases and parasites coming from the fish-farms.

The medium and long-term solution is closed containment – the farming of the fish within an impermeable barrier. Research is already under way in Canada and Norway into closed containment for salmon farming, and should be instigated in Scotland as a matter of priority.

The key advantage of closed containment is that there is a complete biological separation of farmed and wild fish.