Aquaculture Governance Indicators (AGIs) assessment synthesis report

Country:
Norway

Species:
Atlantic salmon (*Salmo salar*)

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Country overview

Norway is the world's largest salmon producer, representing 60% of global production. In 2017, the country produced 1.2 million tons of salmon. This assessment focuses on open net pen farming of Atlantic Salmon (*Salmo salar*). Salmon farming is a well-established industry with decades of history. Starting in 1970, Norway now has 13 production zones across 11 counties along its coastline with about 1,000 licensed sites.

The most recent sustainability assessment of Norway's salmon farming, conducted by Seafood Watch in 2017, determined that the main issue areas were related to chemical usage, high levels of escapes and prevalence of disease. The areas that Norway excelled in were data use/availability and source of stock.

Legislation

The key piece of legislation that governs salmon farming in Norway is the Aquaculture Act (2005) whose objective is promoting the aquaculture industry within the context of sustainable development, covering inland and marine waters, as well as land-based aquaculture. There are other pieces of legislation that help to govern the salmon farming industry covering sea lice, chemical residues, data management and submission, and escapes.

Overall, Norway has a strong legislative framework covering all major areas of concern. Responsibilities are clearly defined for various stakeholders, site-level information is readily accessible on the Directorate of Fisheries website, and there is communication between regulators and industry.

However, an area that could be improved relates to the inadequate level of embedding the precautionary principle within its legislation. Specifically, legislation focused on site-specific instead of cumulative and potential impacts.

Voluntary codes and standards

The three main standards used are: i) ASC; ii) Global GAP; and iii) EU Organic. Global GAP has been the dominant standard within the industry in Norway, however, there has been concerted effort on achieving ASC. In general, there is a high level of participation to third party standards.

However, one shortcoming is that there is inadequate coordination and orchestration between codes and standards which results in competition within industry for their adoption. Here, there are limitations to the extent

Norway can affect change because the codes and standards themselves are out of the control of any government or country. Relatedly, there is lack of coordination within state policy and regulation. This also applies to the area of coordination with global frameworks.

Collaborative arrangements

There are four distinct kinds of collaborative arrangements in Norway's salmon farming industry: 1) Industry Self-Governance (e.g. GSI); 2) Public-Private Governance (e.g. Barents Watch Portal); 3) Non-State Self Governance (e.g. Ctrl Aqua); and 4) Centralized Governance (e.g. Seafood Research Fund).

The assessment noted that environmental NGOs were not heavily involved within the industry, but this was not due to any explicit exclusion. It is currently unclear why this sector is not as involved despite ample opportunity provided through existing collaborative arrangements.

Capabilities

Norway's salmon farming industry shows high levels of reflexivity with spaces for information sharing and problem solving between industry stakeholders (e.g. forum on Directorate's website). Given the well matured nature of the industry, the drive for innovation is strong in areas such as addressing sea lice (e.g. cleaner fish, hydrolicer). Moreover, evidence suggests that issues are dealt with at scale by the industry and collectively with the state.

Areas where the industry could improve include its agility, specifically training of staff and resource allocation to address key issue areas. Lastly, in terms of responsiveness, communication tends to be more reactive than proactive, although the level of communication itself between various actors is high compared to other industries.

Actionable insights

Legislation: while legislation hints at precautionarity, it mainly covers site-specific rather than cumulative and potential impacts. Thus, a more explicit focus on these aspects would improve legislation governing Norwegian salmon farming.

Voluntary codes and standards: transparency and resource allocation should be increased for codes and standards to align them with levels for monitoring, enforcement, and auditing by regulators; there is little coordination among and between the various standards initiatives in Norway's salmon farming industry.

Collaborative arrangements: transparency could be improved through area-based legislation and using collaborative arrangements to drive research and innovation; and addressing the lack of involvement and collaboration with civil society (e.g. environmental NGOs in the industry) could help contribute to addressing some of the issues identified above by utilizing the existing levels of coordination and engagement within the industry.

Capabilities: communication tends to be more reactive than proactive, thus, the type of responsiveness could be improved for dealing with issue areas between different actors; and there is little environmental NGO or civil society activity, when compared to other salmon farming regions like Canada.