

Aquaculture Governance Indicators (AGIs) assessment synthesis report

Country:

Chile

Species:

Atlantic salmon (*Salmo salar*)

Information presented based on assessment conducted July 2019 – July 2020.

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Country overview

Chile is the world's second-largest producer of farmed salmon. The industry also produces turbot, molluscs and algae, yet salmonids (Atlantic salmon, coho salmon and rainbow trout) make up by far the largest aquaculture sector. In 2019, production of Atlantic salmon was 697,400 tonnes. Main production occurs in marine pen nets, in the main production regions Aysén and Los Lagos,

Seafood Watch's broader recommendation for farmed salmon from Chile is to Avoid (red rating). According to the [2017 Seafood Watch report](#), the critical issue for Atlantic salmon is chemical use. For coho salmon, chemical use and escapes are red-rated criteria.

Governance of the Chile's aquaculture sector has been significantly marked by the outbreak of infectious salmon anaemia virus (ISAV) between 2008 and 2011. Responses to the crisis have resulted in substantial changes and

improvements particularly in the regulatory system and industry collaboration. Ongoing increase of production however have been associated with challenges in managing antibiotic and pesticide use. In 2016, mass algal bloom mortalities were experienced, also leading to societal protests which is indicative for tensions with fishers and communities at the local level.

Legislation

Chile's regulatory regime has been modified and improved as a result of the ISA sanitary crisis. The general framework is the General Law of fisheries and Aquaculture (GLFA). Post-crisis regulations included four new laws, and strengthening of existing regulations, most notably Reglamento Ambiental para la Acuicultura (RAMA, environmental regulation for aquaculture) and Reglamento de Medidas de Protección, Control y Erradicación de Enfermedades de Alto Riesgo para las Especies Hidrobiológicas. (RESA, Regulation of Measures for the Protection, Control and Eradication of High Risk Diseases for Hydrobiological Species) which have become specific and prescriptive.

Main regulatory authority lies with Sub Secretariat for Fisheries (SubPeca, Subsecretaría de Pesca). At a more operational, the National Service for Fisheries (SerNaPesca, Servicio Nacional de Pesca) is responsible for executing national fisheries policy. Overall, roles and responsibilities are clearly formulated in the law. RAMA and RESA identifies specific roles of agencies related to sanitary and environmental issues. Practice may show a different reality than what is on paper, but compliance is generally good. While law focuses on site-by-site management, it does explicitly address area-based management through "barros"

("neighbourhood") requiring that farms need to follow the same production pace, and have to collectively deal with sanitary issues.

Internationally, Chile shows high interest in collaboration and coordination. The country signed most relevant treaties and is actively engaged in the global and regional setting.

Voluntary codes and standards

In Chile, the range of voluntary codes and standards includes national public codes and global private sustainability standards. On the national level, codes are concerned with chemical use, describing guidelines for, and good practices in the use of antimicrobials and antiparasitics. The three private standards in Chile are Aquaculture Stewardship Council (ASC), GAA Best Aquaculture Practices, and GlobalG.A.P. While together, the codes and standards cover a wide scope of issues, focus is on the farm level, leaving cumulative impacts as a main gap.

The voluntary codes and standards in Chile show transparent processes of standard-setting and systematic monitoring. In development and application, the global private standards (ISO/ISEAL accredited) have organized multi-stakeholder input including providing opportunities for public commentary. Development of public codes have been in consultation with industry partners, with limited to no involvement of civil society actors. The standards operate mostly in isolation from each other.

Collaborative arrangements

There is a range of collaborative arrangements in Chile. There is a collaborative attitude of industry actors, vis-à-vis each other, and the government regarding the way

in which environmental problems are defined and addressed. The collaborations are tailored to specific issues, covering a range of topics, however the most important arrangements center around the issue of chemical use. While attention to cumulative impacts has been limited, there is a growing recognition of the need to think beyond single issues. In the industry-led Pincoy project for example, aimed to reduce the use of antibiotics by 50 %, a holistic approach to SRS and sea lice has been discussed

The arrangements are well-organized, deliberate according to a clear set of rules, and a relatively open attitude to information sharing. Coordination between arrangements is good. Generally, findings and results from a project are communitated to, and are taken up by others. Industry commitment is high. For example, approximately 95% of the Chilean salmon industry has signed on to participate in the Chilean Salmon Antibiotic Reduction Program (CSARP).

While challenges can be discussed, there seems to be a disconnect of policy and industry, with local concerns. Most arrangements are industry-led or public-private projects. The Programa Salmón Magallánico included WWF to some extent, and CSARP was co-developed by SalmonChile, Intesal and Seafood Watch. However, overall it can be concluded that there is limited inclusion of civil society actors.

Capabilities

The six actors selected to assess the overall ability of key actors to address environmental challenges in Chilean aquaculture were: SERNAPESCA and the Navy (state actors); Intesal and Aquabench (market actors); and WWF and OCEANA (civil society actors).

Actors are very open to discuss issues. The ISAV crisis has forced reflection, and lead to a considerable reframing of Chilean aquaculture. On the national level, actors are well-organized, and have well-informed and well-connected staff. Although organization have a scalar division of responsibilities, (national level more strategically oriented; regional offices more operationally oriented), there is a gap to bring problems to the national level. Particularly local discourses remain unconnected to dominant perspectives in industry. Actors seem to be well-aware of the different positions, but a lack of trust has been indicated as a barrier for open deliberation among actors with conflicting views.

Actionable insights

Legislation: Current developments show acknowledgement of the need to move towards ecosystem-based management. Legislative attention as well as implementation of measures, regarding wildlife interactions, escapes, and cumulative impacts, could enhance to the sector.

Codes and standards: More coordination could lead to ensuring consistency and complementarity between voluntary codes and standards.

Collaborative arrangements: There seems a need to better include civil society actors, particularly regarding problems on the local and regional level. This probably means that collaborative arrangements need to broaden their objectives they initially set, so expand scope to include controversial issues.

Capabilities: A lack of trust, or willingness to collaborate, between some actors with

competing views seems to impede deliberation. Resolving barriers will open up room for joint reflection.