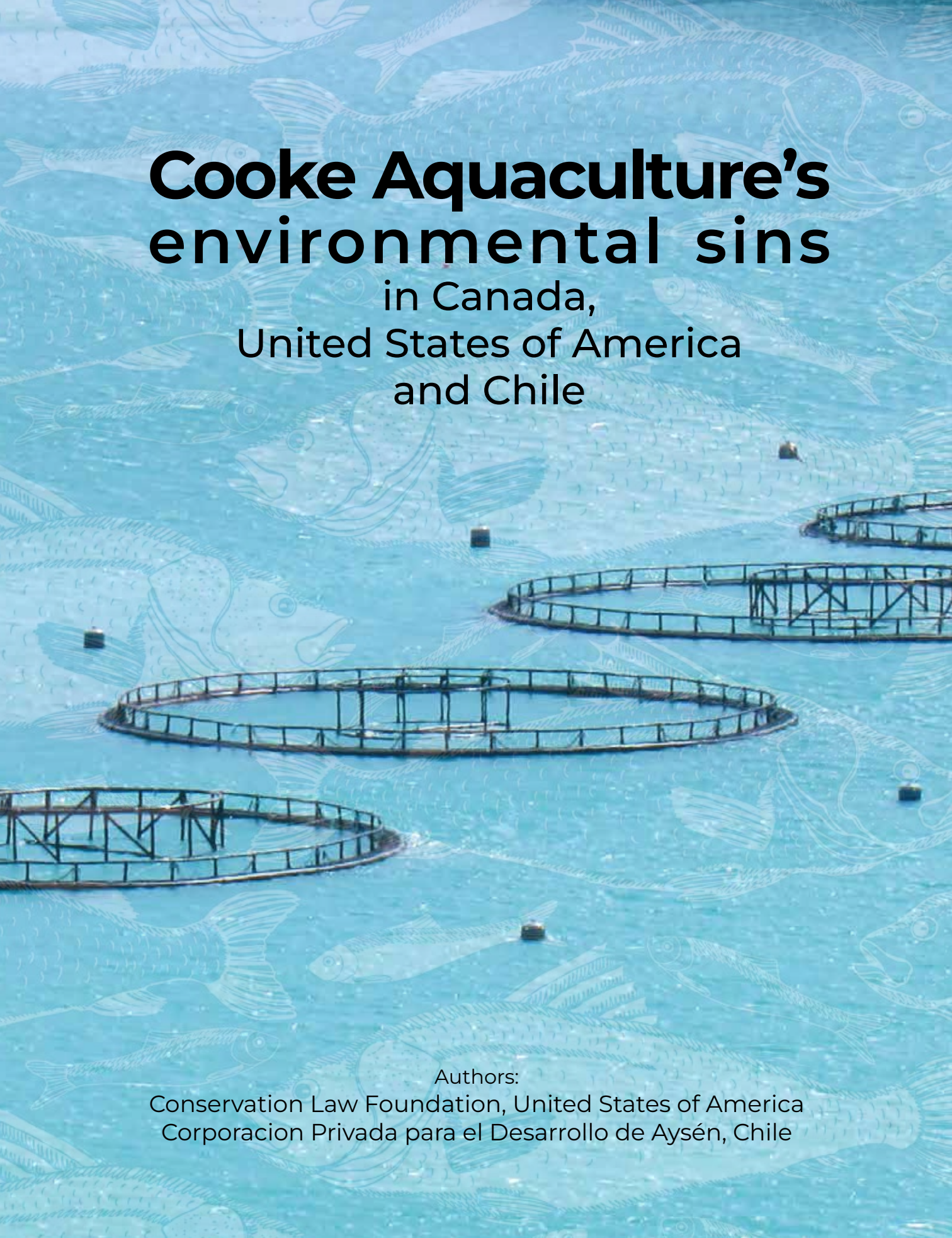
Cooke Aquaculture's environmental sins

in Canada, United States of America and Chile



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Design: Lola de la Maza W.

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SALMON FARMING IN THE WORLD

Salmon farming dates back to the mid-1800s.[1] The salmon industry emerged in the United States in the late 1900s, with private Oregon farms beginning in the 1970s.[2] Net Pen Aquaculture was invented by a Danish farmer who created a system of ponds for rearing freshwater rainbow trout.[3] From there the practice of farming fish spread, and Norway was the first country to rear salmon in open water pens.[4] As the industry boomed, and technology developed, regulation in Norway caused the industry to spread to other countries like Scotland, Ireland, Chile, Iceland, Canada, Australia, and the United States. Today, salmon rearing in North America is predominantly done through cage or net pen systems in the ocean.

In Norway, the aquaculture and seafood industry accounted for 2.3% of Norway's GDP. In Canada, a 2017 report found that the aquaculture industry contributed $5.1 billion to the Canadian economy. In Chile, salmon aquaculture contributes less than 1% to the country's GDP, according to Chile Salmon Council Executive Director Loreto Seguel in a 2024 meeting about salmon overproduction discourse in Chile. In 2024, Fishfarming Expert reported the aquaculture industry contributed $4 billion to the U.S. economy.

1 Gunnar Knapp et al., The Great Salmon Run: Competition Between Wild and Farmed Salmon, 60 (2007).
2 *Id.*
3 *Id.*
4 *Id.*

There are multiple types of salmon aquaculture, and multiple types of salmon are used for aquaculture. The most farmed salmon is the Atlantic Salmon.[5] In 2020, 2.7 million metric tons of Atlantic salmon were farmed globally, making up 71.4% of total global salmon production.[6]

Salmon can be farmed in cages in the ocean, also known as open-ocean net-pen or cage aquaculture, or on land. Cage aquaculture uses cages, or "net pens" anchored to the ocean floor. The fish grow from a youth stage known as smolts to harvest size in these cages. Ocean water flows freely through the cages, and all the waste from the cages (fish feces, fish feed, and dead fish) fall to and settle on the ocean floor.

Photo of Cooke's cage aquaculture operations in Maine.

There are multiple types of land-based systems: (1) Recirculating Aquaculture Systems, (2) Flow-Through Systems, and (3) Pond Systems.

Recirculating Aquaculture Systems or "RAS" are closed tanks where the fish can be grown for their whole lifecycle. The water in the tanks is pumped and filtered through to remove the waste. The water after filtration is "recirculated" through the tank system, and wastewater is discharged.

5 Rudresh Pandey et al., Production Growth, Company Size, and Concentrations: The Case of Salmon, 557 AQUACULTURE 1, 2 (2023).
6 *Id.*

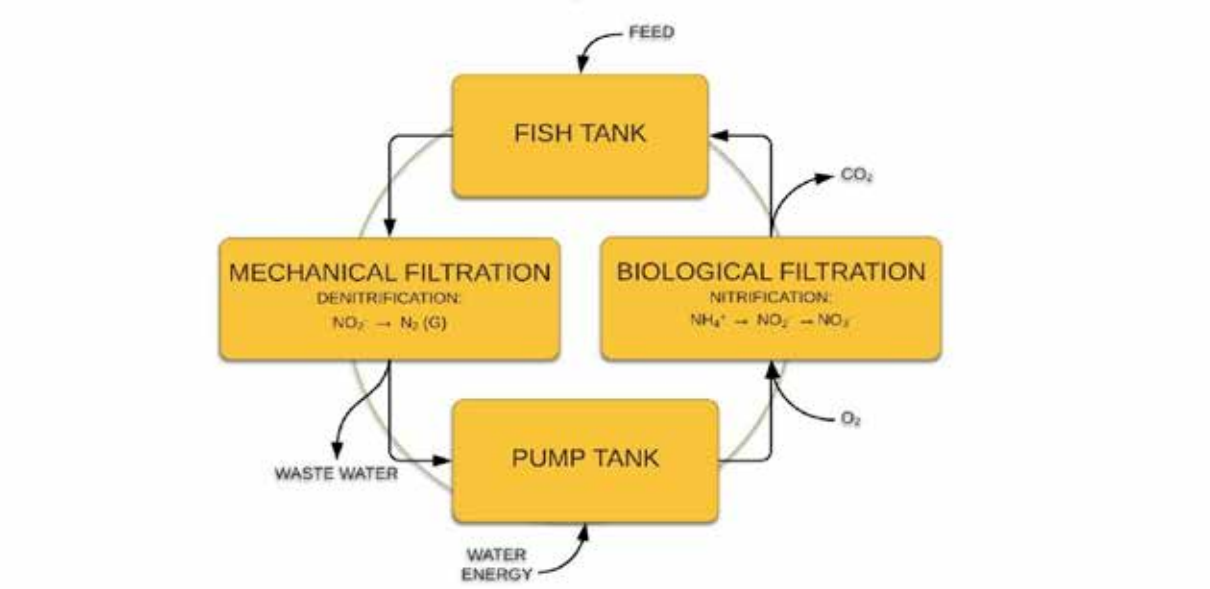

Diagram of an RAS system offered by Aquaculture ID.

Flow-through systems are also tank systems but differ from RAS, as they do not recirculate the water through the system. Instead, flow-through systems pull water from a source such as rivers and then discharge the water after some filtration. The water used is “flowing” in and out of the system, rather than “recirculating” through it.

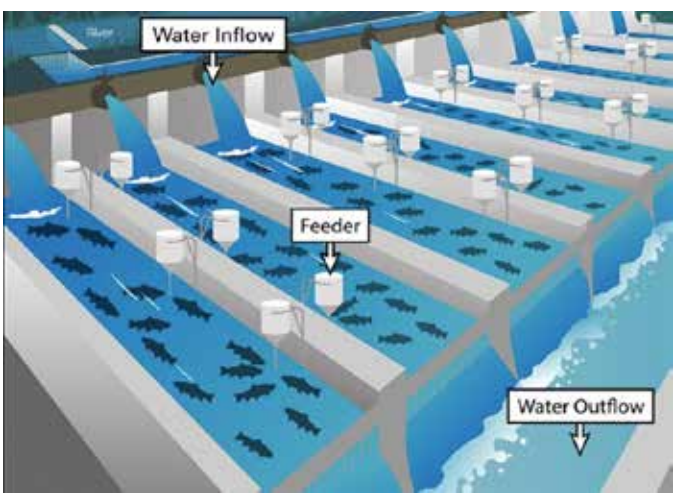

Diagram of Flow Through System illustrated by Melissa D. Smith taken from North Carolina Sea Grant.

Pond systems mimic the earliest forms of aquaculture, where earthen ponds are dug into the ground and lined. Pond systems are typically preferred for rearing freshwater fish.

In January 2025, the state of Washington banned open-ocean net-pen aquaculture. The Washington Department of Natural Resources (”DNR”) said the ban was the “legal and moral responsibility” of the state given how “fragile life is for our orcas and our salmon.” The decision to protect the native environment of the Puget Sound came after realizing the cost of open-ocean net pen finfish aquaculture is not worth the damage caused by the industrial facilities.

While the decision was supported by tribes within the Puget Sound, like the Suquamish, and conservation groups like the Wild Fish Conservancy, the decision also spurred some backlash. The Northwest Aquaculture Alliance, an aquaculture advocacy group, filed suit to overturn DNR's ban, claiming the decision was improper under the Washington Administrative Procedure Act.

Most recently, the Trump Administration published Executive Order 14276 titled *Restoring American Seafood Competitiveness* which states the goal to make the United States the "world's dominant seafood leader." While the order discusses multiple seafood industries and focuses on fisheries, it does reference aquaculture. The order requires the Secretary of Commerce and Secretary of Agriculture to develop and implement ways to promote U.S. aquaculture products and increase U.S. processing capacity. This order, by promoting the rapid growth of aquaculture within the United States, at a time when environmental regulation is at an all time low, will further pollute our U.S. waters and put the marine environment at risk.

Both the case against the ban on salmon net pens in Washington and EO 14276 show that the battle to end polluting finfish aquaculture must continue as industry efforts to expand and to exploit marine waters grows.

IN FOCUS: COOKE AQUACULTURE

Cooke Inc. began 1985 when the Cooke family grew 5,000 salmon in New Brunswick, Canada. Cooke quickly grew and is now the largest privately-owned seafood company in the world. Cooke, Inc. now owns fully integrated systems with hatcheries, aquaculture farms, product lines, and distribution networks. Globally Cooke operates aquaculture and wild fishery divisions in 14 countries. Cooke farms multiple types of seafood, but farms salmon specifically in Canada, the United States, Chile, Scotland, and Spain.

Cooke established its operations in the United States in 2004, when it acquired Atlantic Salmon, a company based in Maine. It later expanded its operations to Virginia and Washington, although it has faced problems in Washington due to the earlier discussed ban on open-ocean net-pen aquaculture. This measure was implemented after the escape of more than 200,000 salmon from Cooke's facilities in that state in 2017.

Cooke Inc. has estimated annual revenues of $4 billion and employs approximately 13,000 people worldwide.

COOKE IN CANADA: THE ORIGIN

Cooke started in Canada. Its operations are primarily in New Brunswick, where it originates and where its international headquarters are located. It is also involved in salmon farming, in the Atlantic provinces of Nova Scotia, Prince Edward Island, and Newfoundland and Labrador.

The company was founded in 1985 under the name Kelly Cove by Gifford Cooke and his sons, Michael and Glenn. The latter is its current CEO.

In these years, the company has not been exempt from environmental and labor problems.

In 2020, an outbreak of the ISA virus (infectious salmon anemia) was reported in its Cold Ocean Salmon division in Newfoundland and Labrador. This forced the company to eliminate 1.18 million salmon in order to avoid a bigger problem.

Over the years, Cooke has worked to relax environmental measures globally. Relaxing environmental measures prioritizes corporate profits over marine health. In December 2024, CEO Glenn Cooke called on the Newfoundland and Labrador government to "withdraw from the proposed National Marine Conservation Area (NMCA) for the south coast fjords." NMCAs are protected areas for the "benefit, education, and enjoyment of the people of Canada and the world." They are promoted by the Government of Canada, the Government of Newfoundland and Labrador, Miawpukek First Nation, Qalipu First Nation, and the Town of Burgeo, which signed a Memorandum of Understanding in 2023 to advance this goal.

In 2013, Kelly Cove Salmon, a Cooke company, faced fines of CA$500,000 and pleaded guilty to the deaths of hundreds of lobsters in the Bay of Fundy due to the illegal use of pesticides (cypermethrin) in its salmon farms in 2010.

In Nova Scotia, Premier Tim Houston has opposed the expansion of Cooke Inc. in that province, specifically in Liverpool Bay, supporting local communities.

COOKE IN THE UNITED STATES: POLLUTION AND THREATENING ENDEMIC SPECIES

Cooke used to operate in both Maine and Washington state, but now only operates in Maine after Washington banned net-pen aquaculture. Before the ban, Wild Fish Conservancy sued Cooke over the collapse of a net pen system. The case settled for over $2 million.

Presently, Cooke is the largest company producing salmon through open-ocean net-pen aquaculture in the United States. Cooke holds 24 leases in Maine with 13 leases currently active and producing salmon. Lease sites in Maine range in size with maximum cage allowances between 6 and 30 cages. The number of fish in a single cage can vary, but typically one cage raises at least tens of thousands of salmon.

Cooke is the sole industrial cage aquaculture producer of salmon in Maine. The mass amounts of waste coming from its cages are not only threatening the health and quality of Maine's waters but impacting those who use and rely on the water for their livelihood.

Cooke's fish grow, eat, and defecate in the cages for most of their lifetime. This waste is never collected, and instead builds up on the sea floor, creating a toxic sludge. This layer smothers the vital ocean life on the sea floor, reducing their ability to support the marine food chain.

Cooke not only discharges this solid waste, but also sea lice, disease, and escaped fish, threatening the health and preservation of the endangered Atlantic salmon. The

close quarters of the pens increase the presence of sea lice and disease within the cages, and beyond. These diseases impact the wild fish near the pens. Additionally, Cooke's farmed fish escapes disrupt the natural marine ecosystem, as farmed fish and wild fish are genetically different. Farmed fish develop and encourage traits that are unsuccessful in the wild such as aggression. Escaped farmed fish mating with wild fish causes contamination of wild fish genetics with these undesirable traits. Cooke's lease sites are near the migration path of the endangered Atlantic salmon, therefore disease, sea lice, and potential escapes from Cooke's cages, all threaten this endangered species.

Finally, Cooke's discharges negatively impact those recreating on the water and historic Maine industries like lobstering and fishing. Debris from Cooke's operations like plastic feed bags, plastic tubing, and ropes, finds itself entangled in fishermen's boats and on shore.

On January 14, 2025, environmental group Conservation Law Foundation ("CLF") filed a lawsuit under the Clean Water Act in the District of Maine to address these harms. CLF alleged Cooke, in operating its 13 active lease sites, violated and continues to violate the Clean Water Act. CLF's lawsuit outlines the following ways Cooke violated its General National Pollution Discharge Elimination System Permit for Aquaculture: (1) violating the Permit's numeric pollutant limitations and monitoring requirements; (2) violating the Permit's narrative effluent limitations; (3) discharging pollutants not authorized by the Permit, and from sources not authorized by the Permit; (4) violating the Permit's Best Practicable Treatment standards; and (5) violating the Permit's monitoring and reporting requirements.

CLF's suit seeks to prevent the further degradation of Maine's coastal waters and to bring Cooke into compliance with the Clean Water Act. To achieve this Cooke will need to hire additional staff and experts like scientists to conduct more frequent monitoring and inspections. CLF's case aims to mitigate the impacts of Cooke's operations on the environment and Mainers.

COOKE IN CHILE: IMPACTING PROTECTED AREAS

Cooke Aquaculture arrived in Chile in 2008, when it acquired the facilities of the local company Salmones Cupquelán, which operated in the Aysén region of Chilean Patagonia. Its processing plant is located in Puerto Montt, 600 kilometers away from its farms.

In 2024, Cooke exported approximately 10,000 tons of salmon, earning US$83 million in revenue. With more than 20 salmon farming permits in the area (the exotic species used come from the Northern Hemisphere), its salmon farms are located in the southern fjords. These include two farms within the Laguna San Rafael National Park and UNESCO Biosphere Reserve.

In 2019, Cooke produced more than 8,000 tons of salmon, when only 125 tons were permitted. At that time, the company farmed more than 64 times the amount that was authorized by the State.

One of the latest marketing initiatives Cooke has promoted in Chile uses the term "organic salmon," and states that the salmon is produced using "environmentally, economically, and socially responsible" practices. However, this promotion clashes with reality.

Two of its salmon farms (Huillines 2 and Huillines 3) are located within the Laguna San Rafael National Park, a Biosphere Reserve (with the Guayaneco sector). In its buffer zone (where unsustainable commercial use is not allowed) Cooke has 17 salmon farm permits.

Sites in Patagonia, Chile

Over the years, Cooke has had multiple problems with the justice system due to regulatory noncompliance, which have resulted in multiple sanctioning procedures by the Environmental Superintendency. As of the publication of this report, irregularities at its centers within this protected area are being investigated, including unauthorized facilities, a lack of contingency plans for hydrocarbon spills, overproduction of salmon, emissions of waste into the environment, and evasion of the Environmental Impact Assessment System.

A Puerto Aysén court fined them $34,000 earlier this year for failing to provide essential information to determine fish mortality rates at their salmon farms, which would allow measures to be taken to prevent marine pollution and the outbreak of health problems.

In addition to the already known impact of its activities, the company was mentioned in the national press in 2024 due to the appearance of a dead whale near its facilities in the Laguna San Rafael National Park. For this reason, they face a lawsuit by local communities and international NGO Greenpeace. As of today, there is a preliminary report from Sernapesca linking salmon operations to the whale's death. And in mid-August of this year, the National Fisheries Service filed a criminal complaint over the death of another cetacean discovered in May, also near Cooke's salmon farms in that protected area. In the park, there are also Cooke facilities with chemicals, as well as a partially dismantled and abandoned site.

Dead whale near Cooke Inc. facilities in Chile (October 2024)

This situation has generated criticism from communities and NGOs. Corporación Privada para el Desarrollo de Aysén, a local organization, has said with other NGOs that "It is not possible to produce 'organic' salmon that impacts protected areas, with proven overproduction and circumventing the Environmental Impact Assessment System.". And NGO FIMA, an organization that supports communities on environmental legal issues, have sued Cooke alongside local communities, Corporación Privada para el Desarrollo de Aysén, Agrupación Aysén Reserva de Vida and others, for the company's bad practices in protected areas. This has led to a harsh response from Cooke's executives in Chile, who have been part of a campaign to silence critics. They have also accused state agencies of wanting to "destroy a foreign company that is a leader in environmental protection" and have threatened to leave the country if the environmental courts rule against them. This, given that as of today an Environmental Court has upheld the decision of the Environmental Superintendency to suspend salmon stocking in its centers in Laguna San Rafael National Park due to Cooke's overproduction and other violations.

A CALL TO ACTION

Cooke Inc., through its multiple subsidiaries, is considered one of the largest private salmon farming companies in the world. Its global expansion should not only consider its profits, but also a greater responsibility to protect the nature on which it, and the communities where it operates, depend.

Unfortunately, this brief summary of Cooke's practices proves otherwise:

- Operations in protected areas
- Marine pollution from chemical use, overloading of organic matter, harm to other species, salmon escapes in virtually pristine environments
- Regulatory noncompliance
- Pressure on authorities to ignore the law, fail to advance the protection of marine biodiversity, or change regulations in their favor.

A company that promotes itself as "sustainable" and has even launched "organic salmon" (from the pristine areas of Patagonia, where it has been accused and sanctioned for overproduction, withholding information, and operating in national parks) cannot act this way.

This is a call to the company, but also to authorities, workers, and even consumers, to promote the protection of biodiversity, including that of the sea, and of local communities, at all levels.

Because we can generate wealth by caring for nature. Something that, unfortunately, Cooke Inc. has failed to understand.

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