

SIN AZUL NO HAY VERDE
SIN OCEANOS NO HAY VIDA

SALMON FARMING

BEAGLE CHANNEL, TIERRA DEL FUEGO

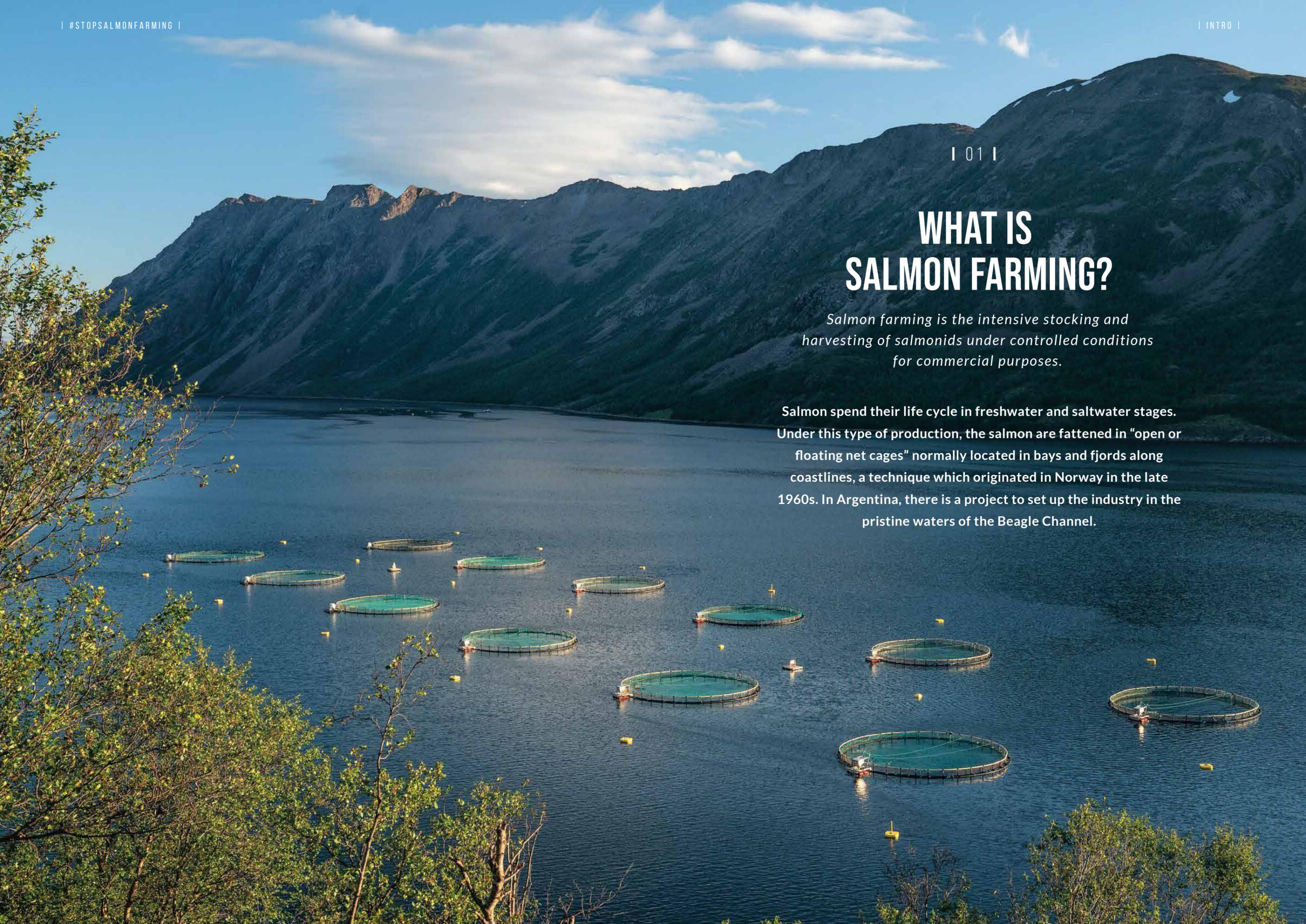


FUNDACIÓN
REWILDING
ARGENTINA

WHAT IS SALMON FARMING?

Salmon farming is the intensive stocking and harvesting of salmonids under controlled conditions for commercial purposes.

Salmon spend their life cycle in freshwater and saltwater stages. Under this type of production, the salmon are fattened in “open or floating net cages” normally located in bays and fjords along coastlines, a technique which originated in Norway in the late 1960s. In Argentina, there is a project to set up the industry in the pristine waters of the Beagle Channel.



01. PISCICULTURE / Hatching stage

The starting point for the production of salmon is the harvesting and fertilization of the eggs. They are then incubated until their hatching (birth) to begin the stage of intensive feeding of the fry.

01
Once the fry turn into smolts and show physiological changes that allow their adaptation to salt water, they are transported to the fattening cages at sea.

02. SEA / Fattening stage

In this stage the fish are fattened with balanced feed. Since the density of caged fish is very high, antibiotics are also provided to them along with the feed.

[Feeding cages]

03. SLAUGHTERING / Harvesting stage

Once the fish attain the appropriate size they are harvested. To transport them, "well boats" are used; their function is to arrive at the killing plant on land with the live fish, to be processed there. The slaughtering involves the slitting of gills, beheading and evisceration.

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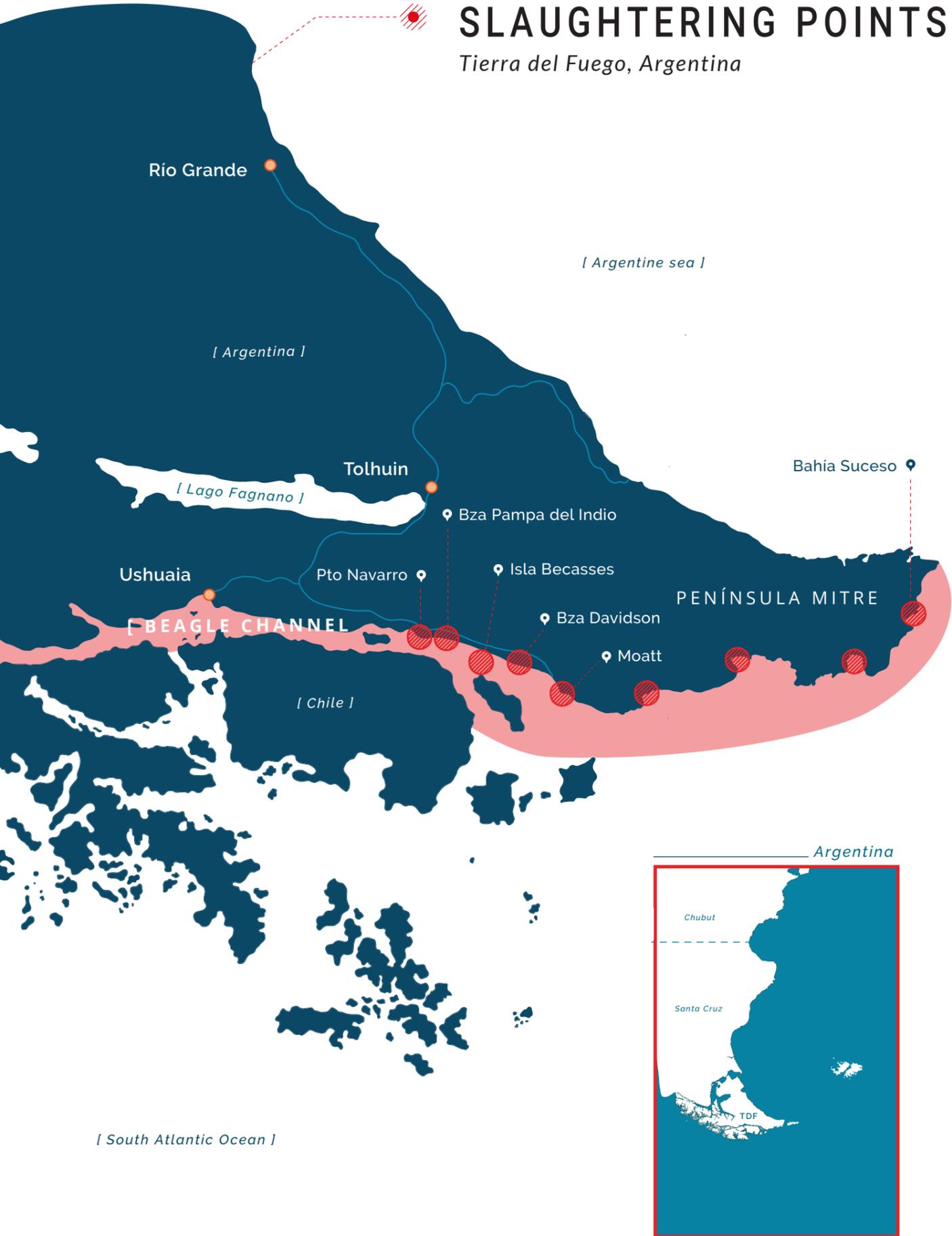
HOW IS SALMON PRODUCED?

Salmon farming is based on anadromous fish, which must go through freshwater and saltwater stages during their life cycle; it's for this reason that their production implies different stages. Pisciculture is the first, in which the salmon must develop in fresh water. The fattening stage continues at sea, and takes between 14 and 30 months. Then the fish are slaughtered on land.

Each step in the intensive production of salmon entails diverse consequences both in fresh water and at sea as well as on land. This is because the practices have a large environmental, sanitary and social impact.

SLAUGHTERING POINTS

Tierra del Fuego, Argentina



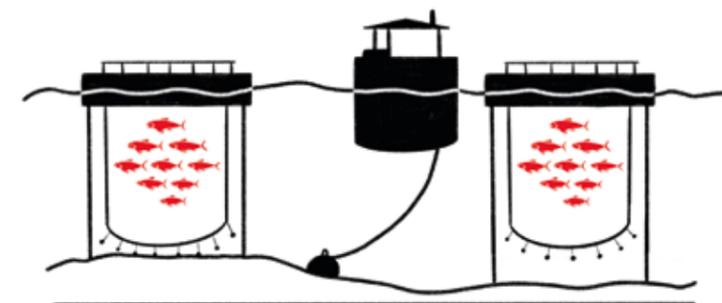
SALMON FARMING IN TIERRA DEL FUEGO ?

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Last year the government of Argentina and that of the province of Tierra del Fuego awarded the Norwegian Crown the possibility of developing salmon farming in the Beagle Channel.

In March 2018, three agreements were signed among Innovation Norway, the Agroindustry Ministry, the Argentine Foundation for the Promotion of Investment and Foreign Trade, and the province of Tierra del Fuego. These agreements were reached within the framework of the National Aquaculture Law, which promotes the development of the industry.

The first stage under these agreements was the load and feasibility study for the setting up of cages in the Beagle Channel made by Norway. In early March 2019, the results of the study revealed the possible sites for the farming of salmon, under the name of "slaughtering points."



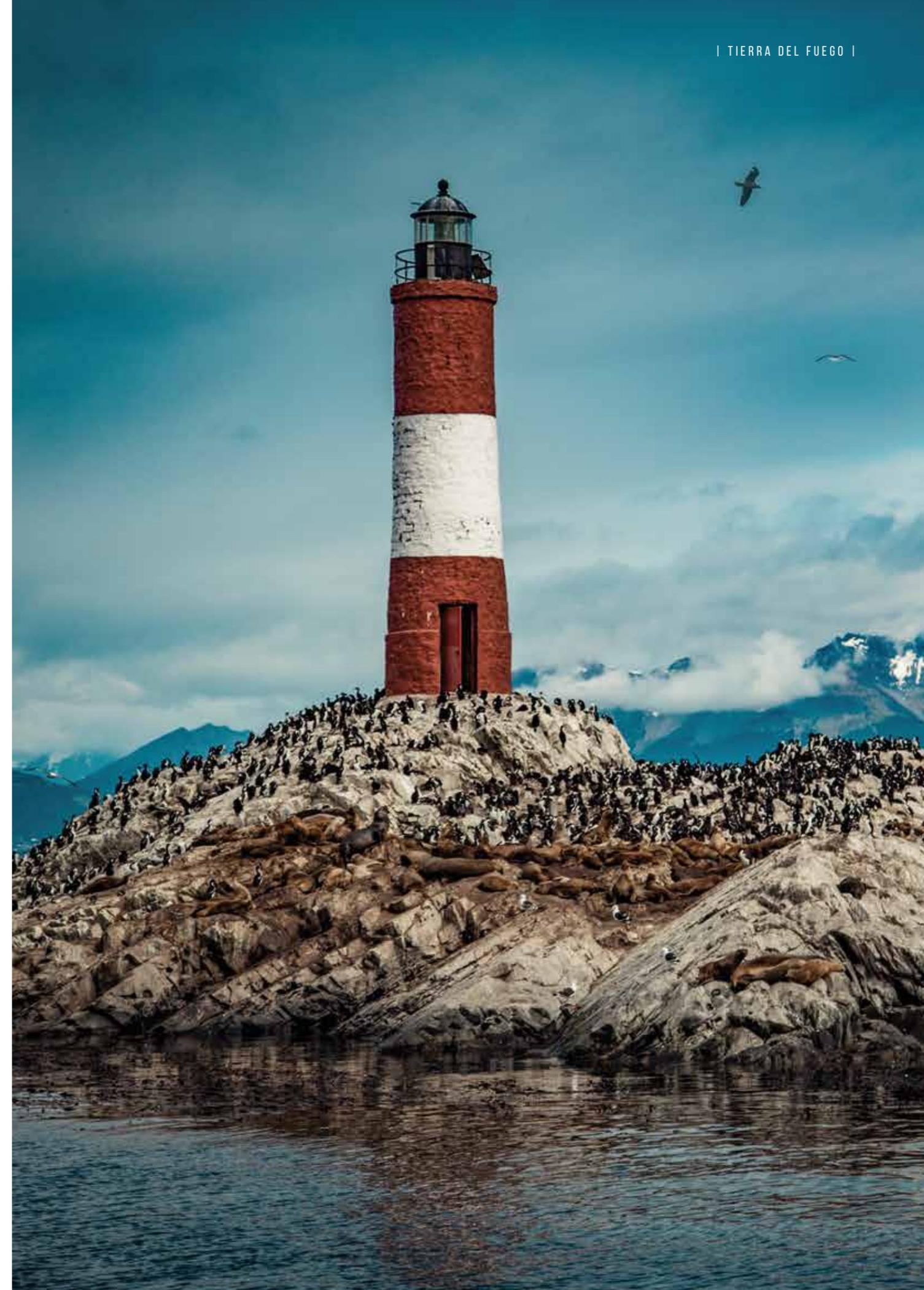
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Faced with the possibility that the industry might be set up in the province, and understanding the risk not only to the biodiversity and ecosystems of Tierra del Fuego, but likewise to the entire region's tourist orientation, the island's society expressed a firm and energetic repudiation of the installation of salmon farms in the Beagle Channel, by means of diverse campaigns. Issuing a call at both the local and the national and international levels to halt the setting up of the industry, it managed to draw the attention of the representatives of the city government of Ushuaia and of the national Ministry of Foreign Affairs.

On March 20, 2019, through a municipal edict, the Ushuaia City Council forbade the setting up of any infrastructure for the intensive breeding of salmon within municipal limits. The following month, and owing to society's reaction, representatives of the provincial government publicly stated that the salmon farms were "off the agenda." In addition, by means of an official statement, the Ministry of Foreign Affairs demonstrated its rejection of the activity in the Beagle Channel, both in Argentina and in Chile.

On May 20, 2019, legislators Mónica Urquiza and Pablo Villegas proposed a bill that aims at a prohibition in the entire jurisdiction of the province of Tierra del Fuego, the Antarctic and South Atlantic Islands, on land, lake or maritime areas.

Additionally, they submitted a draft resolution by which the Tierra del Fuego Legislature through the Ministry of Foreign Affairs, may request the Republic of Chile diplomatic and vigilance actions - within the framework of existing international norms - for the purpose of avoiding the environmental impact that pisciculture and an industrial exploitation of that kind could have on the ecosystem of the "Southern Zone Sea," an indivisible natural area involving the two countries.





SO...

WHY SUCH REJECTION OF SALMON FARMING?

El cultivo intensivo de salmónidos ha tenido un alto costo en la Patagonia Chilena y, en general, en los países que lideran su producción en el mundo como Noruega, Canadá, Irlanda y Escocia.

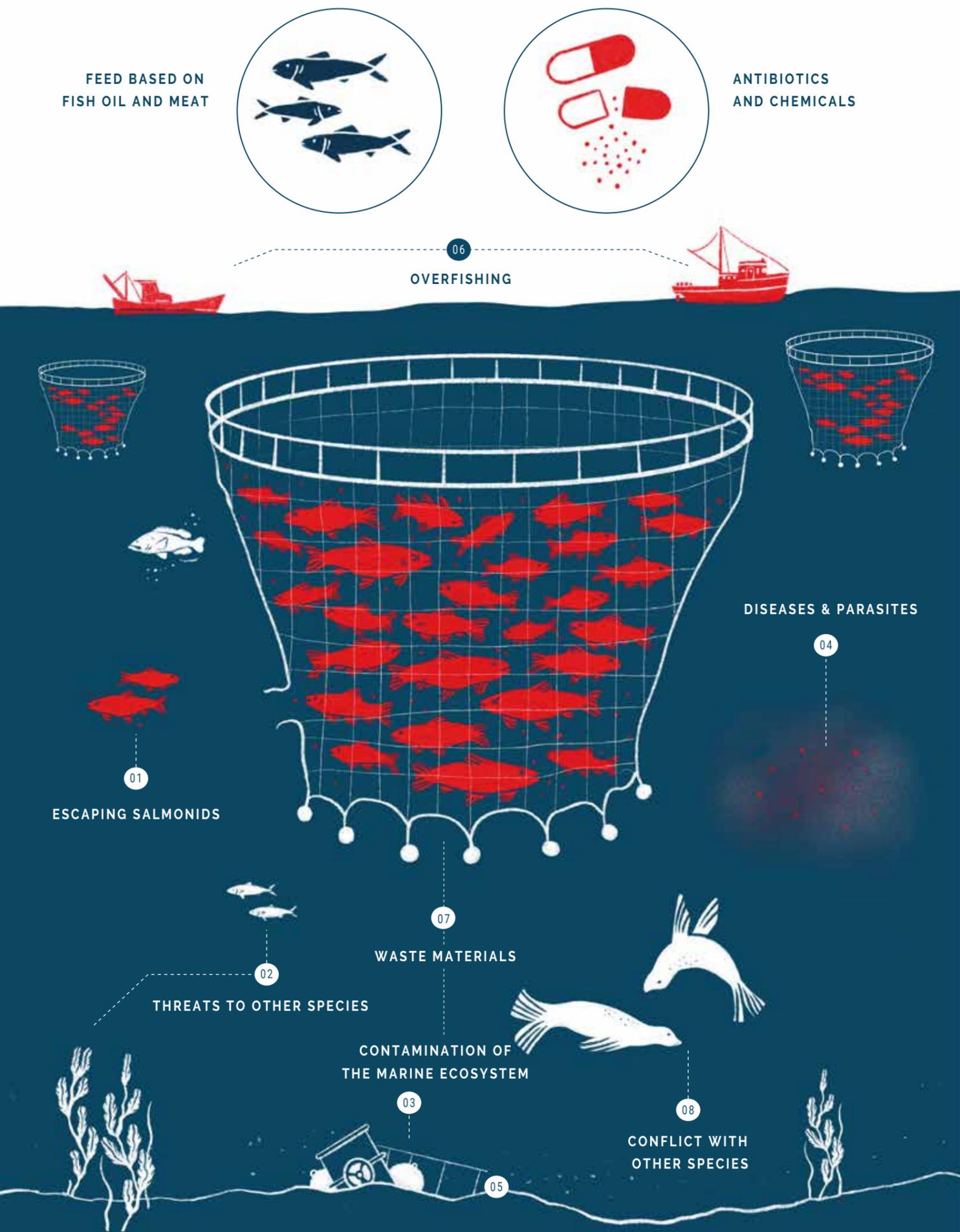
El ejemplo de la salmonicultura en **Chile** sirve para ilustrar el impacto ambiental, sanitario, social y económico de la la cría intensiva de salmones.

Lamentablemente hoy se conocen las consecuencias de la industria debido al **devastador golpe que han sufrido los ecosistemas y las comunidades costeras del país vecino**. Ya son varios los países que están renunciando a esta práctica insostenible, como Estados Unidos y Canadá.



**WHAT ARE
THE IMPACTS?**

ENVIRONMENTAL IMPACTS



01 ESCAPING SALMONIDS

Salmon escape is very frequent and entails the introduction of an exotic species, from the growing cages to the natural environment. The salmonids alter the ecosystems by preying on native species and competing with them for food. Exotic species are the second-leading cause of biodiversity loss, following the degradation and loss of habitat.

02 THREATS TO SPECIES

The high densities of caged fish favor the spread of diseases. To control the latter, antibiotics and antiparasitic drugs are employed. To fight the salmon louse, chemicals are used that affect juvenile southern king crabs and other crustaceans which other sea animals depend on for survival.

03 CONTAMINATION OF THE MARINE ECOSYSTEM

The use of herbicides to control micro algae causes the contamination of the entire marine ecosystem.

04 NEW DISEASES

The high densities of caged fish favor the spread of parasitic and infectious diseases to other fish populations that lack the appropriate antibodies to defend themselves.

05 ACCUMULATION OF WASTES ON THE SEABED

The concentration of organic waste beneath the cages, the product of the feed not consumed by the fish and of the precipitating feces, leads to the loss of seabed biodiversity. With time, the oxygen in the water is exhausted, causing what is known as a "dead zone."

06 OVERFISHING

The growth of salmon farming increases the exploitation of wild species to be turned into fishmeal and fish oil to feed the salmon. Without an adequate fisheries management plan, the breeding of fish that eat other fish can be a factor that worsens the problem of overfishing.

07 CONTAMINATION BY WASTE

Industrial activity generates contaminating waste: floating plastic refuse, toxic paint, nets and sunken structures that affect the sea bottom and its biodiversity.

08 CONFLICT WITH OTHER SPECIES

Predators such as sea lions and some marine birds approach the nets to eat the salmon. This interaction between predator and prey often leads the persons in charge of the farms to kill the animals that come near, to keep them from breaking the nets.

UNHEALTHY FOOD

SALMON FROM
HATCHERIES

WILD
SALMON

54 G FAT

1.8% CALCIUM

21% POTASSIUM

4.9% SODIUM

824 KCAL

ANTIBIOTICS &
ADDITIVES

26 G FAT

2.4% CALCIUM

24% POTASSIUM

3.6% SODIUM

562 KCAL

FREE OF
ANTIBIOTICS &
ADDITIVES

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HEALTH IMPACTS

EXCESSIVE ANTIBIOTICS

SALMON UNFIT FOR HUMAN CONSUMPTION

The intensive farming of fish generates overcrowding conditions that lead to the spread of infections and diseases.

To attempt to control this situation, and to attain higher production indices, an indiscriminate amount of antibiotics is applied.

Excessive and indiscriminate use generates bacterial resistance, putting world health and food safety at risk. In addition, there is a gradual accumulation of substances that are harmful to health, increasing governments' long-term expenditure on public health.

UNHEALTHY FOOD:

In their wild state, salmon obtain their orange pigment from the consumption of crustaceans. In captivity, on the other hand, petrochemical products are used to imitate the original color, since their feed is based on chicken meal, fishmeal, soybean meal and corn flour and other vegetable byproducts.

The impact and the negative effect caused by this type of production is so high, that for countries like Norway it is more feasible to seek new places to expand the industry, since the policies and standards for production they must comply with in their own waters are always more strict and costly.



WHAT DO THE BEST-KNOWN CHEFS SAY?



FRANCIS MALLMANN

Prestigious Argentine chef

"After 25 years of selling ten of thousands of farmed salmons in all our restaurants, we've decided to put a ban on this product that's deeply troubling the health and soul of our seas. It's never late to learn and to start anew We apologize for the damage done."



MAURO COLAGRECO

Argentine chef with 3 Michelin stars.

"Thanks to the work and the effort of many organizations, scientists and communities in several parts of the world, today we know that the intensive production of salmon, especially in places where the species is exotic, has irreversible consequences."



FERNANDO TROCCA

Prestigious Argentine chef

"Just like we realized that eating chickens or cows that are raised in an extensive fashion (on feedlots) isn't good for the environment or for health, the same is going to happen with salmon. They are quickly going to choose fish growing freely in the sea, instead of one that was given balanced feed, antibiotics and foodstuffs to transform white meat into pink."



NARDA LEPES

Prestigious Argentine chef, influencer and leader.

"Just like we realized that eating chickens or cows that are raised in an extensive fashion (on feedlots) isn't good for the environment or for health, the same is going to happen with salmon. They are quickly going to choose fish growing freely in the sea, instead of one that was given balanced feed, antibiotics and foodstuffs to transform white meat into pink."



LINO ADILLÓN

With a more than 30-year experience in cuisine at the End of the World, Lino Adillón is an icon of the defense of the Beagle Channel and its products.

"Before dining, we give our customers a taste of the Channel's sea water, which is known as isotonic water. With this tasting of pristine water, we begin to develop the care of the Patagonian sea with the commitment to care against contamination and losing what we have. In the Channel, we have many species; salmon would devastate southern king crabs. If the salmon farms are set up, in five, ten years' time my restaurant would have to turn into a shoe store because it wouldn't have any more local products to offer."



GERMAN MARTITEGUI

Argentine chef. Currently owner of one of the best restaurants in Latin America.

“As they’re trying to bring the industry to Argentina, in the rest of the world it’s being banned – it has an environmental, social and economic cost that has devastating and irreversible consequences.”



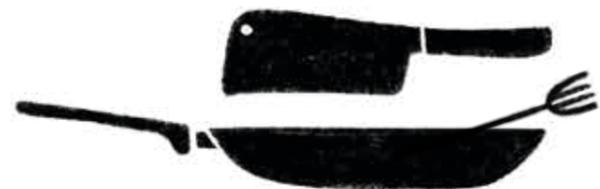
CHRISTOPHE KRYWONIS

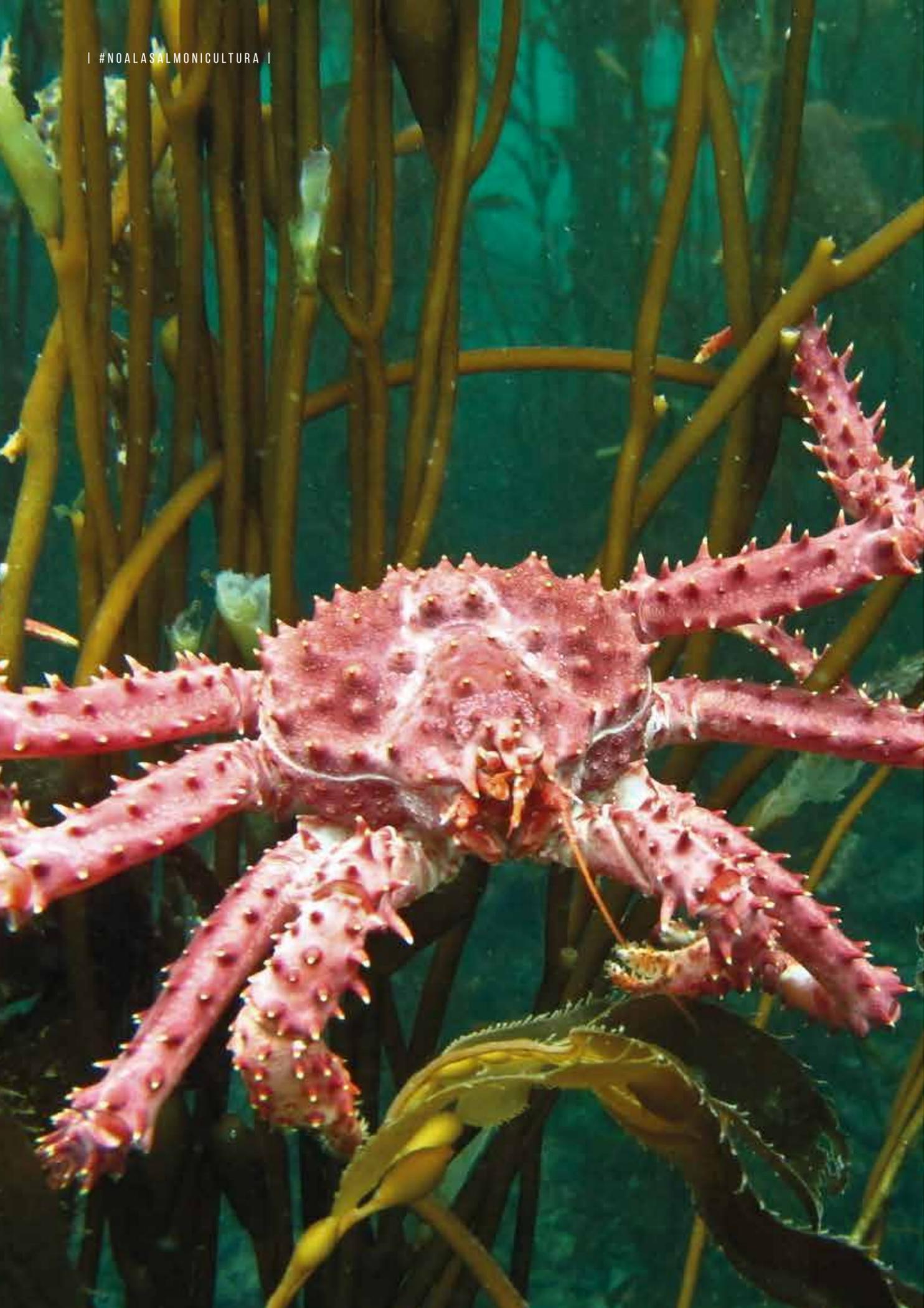
Christophe Vladimir Bernard Krywonis is a French chef specializing in his country's cuisine. Since 1989, he lives in Buenos Aires, Argentina.

“Salmon is five times more toxic than a hamburger from any fast-food chain. With the pink salmon bred in a farm in Chile, Norway, Canada, Scotland or wherever – since they have the same genetic origin – the problem is always the same: the astronomic amount of antibiotics they get during breeding.

“It has been shown that whales have changed their trajectory along the Norwegian coast to avoid areas with contaminated sea. So there are a great many proofs of the toxicity of cage-bred salmon.”

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SOCIAL IMPACTS

GOODBYE, TIERRA DEL FUEGO SOUTHERN KING CRAB ANGLERS:

The chemicals that are used to combat salmon parasites affect the juveniles southern king crabs and other crustaceans, directly harming the community of Almanza anglers which encompasses more than 50 craft fishermen who live from the southern king crab as the principal natural asset of the Beagle Channel along with tourism.

KILLING OFF THE TOURISM INDUSTRY:

According to a survey of the situation of tourism on the island in 2017, a cruise on the Beagle Channel is the second most frequented attraction by tourists. If the salmon industry were set up, the cages would cause a break in its landscape and biodiversity that could possibly lead to a collapse of tourism in the province.

The cages would entail an extremely high cost in economic terms, possibly causing major losses to companies and other activities related to tourism.



TOURISM

WHAT DOES TOURISM REPRESENT FOR TIERRA DEL FUEGO?

According to estimates obtained based on information supplied by the Ushuaia Ministry of Tourism in its annual reports, foreign tourists are believed to spend more than 100 million dollars a year in the city, constituting the province's top export category.

EMPLOYMENT

15% of recorded private employment.

615 small and medium-sized companies.

76 restaurants and teahouses.

62 travel agencies.

11 maritime transport companies.

12 overland transport companies.

3 airlines operating in the city.

171 stores.

**50% OF USHUAIA FAMILIES
DEPEND ON TOURISM**

DIRECT EMPLOYMENT: 7,200

INDIRECT EMPLOYMENT: 16,500

Workforce with diverse and local skill profiles.



SALMON FARMING

DIRECT EMPLOYMENT: 75

INDIRECT EMPLOYMENT: 177 (48 POSSIBLY IN THE REGION)

ECONOMIC ENCLAVE FEATURES.

WORKFORCE WITH SPECIALIZED PROFILES, HUMAN RESOURCES ORIGINATING IN OTHER TERRITORIES.

The requirements for skilled labor probably cannot be met with local professionals and technicians; therefore, a share of those job offers is expected to be covered by human resources originating in other territories.

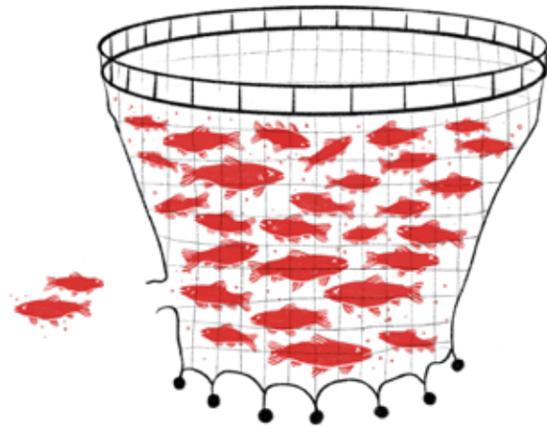
This situation is associated with the customary working systems for fieldwork (15 days on the job and 15 days off).

INDIRECT EMPLOYMENT: 177 (48 POSSIBLY IN THE REGION)

The indirect employment generated by the sector is associated with the network of services moved to accompany the activity. To the extent that this network isn't developed in the territory, it is supplied from abroad or from other regions.

SPECIALIZED/SKILLED

CONCLUSION



The salmon farming industry puts the province's identity at risk, since it threatens its unique nature, which thousands of Tierra del Fuego inhabitants depend on for their livelihood.

Unlike salmon farming, tourism brings together several sectors and activities since it constitutes an industry that permeates the productive tissue of an entire region, providing an inclusive view that is necessary for achieving equity. However, tourism at the End of the World depends on the intrinsic strengths of the province, its landscapes and natural values, and on the need to preserve the territory so more people can continue to benefit from it. Salmon farming in the Beagle Channel and tourism aren't compatible, since the latter industry demands the conservation of biodiversity while the former generates irreversible environmental damage.

The Beagle Channel is one of the 24 sites that remain pristine on the planet.

Given the major climate and extinction crisis that we are facing, preserving these places is a commitment that we must all make for the sake of future generations.



WE, THE UNDERSIGNED,

KNOWING

that the Beagle Channel is one of Argentina's most important reservoirs of marine biodiversity,

INSPIRED

by the protection of a healthy environment and the promotion of activities that will turn this region into a worldwide natural attraction and

RESOLVED

to encourage public authorities to join efforts to consolidate a comprehensive management of resources based on the local community,

HAVE DECIDED

to join our voices with an echo for future generations and to declare that

THE EXPLORATION AND EXPLOITATION OF NATURAL RESOURCES IN COMMON AREAS MUST BE REGULATED, ESPECIALLY IN THE BEAGLE CHANNEL, ON THE BASIS OF THE WISHES AND INTERESTS OF THE LOCAL COMMUNITIES IN PURSUIT OF THE PROTECTION OF THE ENVIRONMENT AND FOR THE BENEFIT OF CURRENT AND FUTURE GENERATIONS.



SAY NO! TO SALMON FARMING

✦ INFO : WWW.NOALASALMONICULTURA.COM

✦ INFO : WWW.SINAZULNOHAYVERDE.COM