

FINLAND'S FISHERIES INDUSTRY





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1

SEAFOOD IS IN DEMAND

p. 6

More than 90% of Finns eat fish, and four out of five would like to eat it more than they currently do.

2

COMMERCIAL FISHING

p. 7

Commercial fishermen produce all domestic wild fish offered in shops and restaurants.

3

FISH FARMING

p. 9

Fish farming increases fish self-sufficiency and strengthens natural fish stocks.

4

FISH PROCESSING AND TRADE

p. 12

A chain of professionals ensures the quality and steady supply of fish.

5

THE IMPACT OF THE FISHERIES INDUSTRY

p. 14

The fisheries industry brings work, livelihood and well-being.

6

THE FUTURE OF THE FISHERIES INDUSTRY

p. 16

There is a demand for fish – the operating conditions for primary production must be secured.



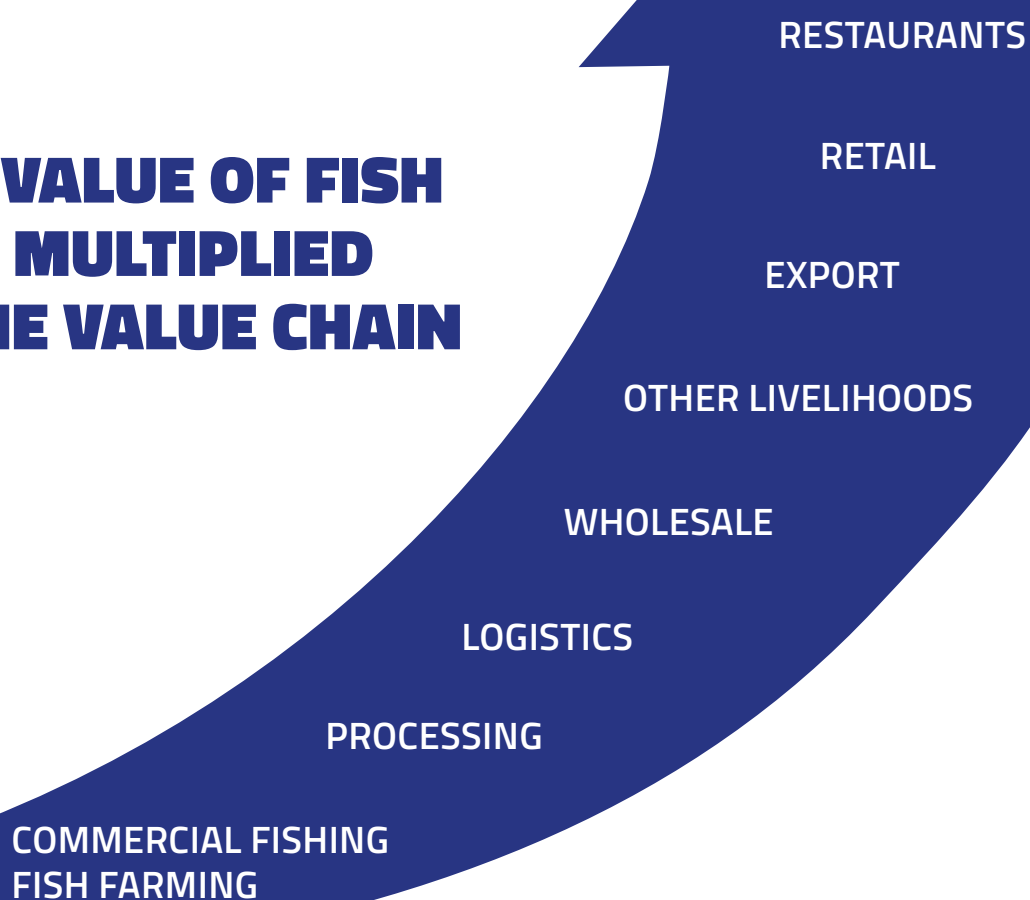


THE FISHERIES INDUSTRY MEANS SUSTAINABLE UTILISATION OF NATURAL WATER RESOURCES

The value chain of the fisheries industry consists of companies and entrepreneurs who deliver fish from the water to the dinner tables of consumers. This chain works to serve Finns and meet consumers' desire to eat fish.



THE VALUE OF FISH IS MULTIPLIED IN THE VALUE CHAIN



Commercial fishermen and fish farmers produce all domestic seafood available in shops or restaurants.



1. SEAFOOD IS IN DEMAND

Finns need more fish on their plates. Fish is the most significant source of natural vitamin D obtained from food, and thanks to its excellent fatty acid composition, it also provides important omega-3 fatty acids. Finns eat a lot of fish already, but according to the nutritional recommendations fish consumption should be increased further, and this is what the majority of consumers would also like to do.

- ▶ **More than 90% of Finns eat fish.**
- ▶ **80 % of Finns would like to eat more fish. ***
- ▶ **Finns eat approximately 14 kg/hlö of fish per person each year. ****
- ▶ **Fish should be eaten at least 2–3 times a week.**

* Consumer survey "Kala suomalaisten ruokapöydässä", Consumer Compass, 2019, 2021

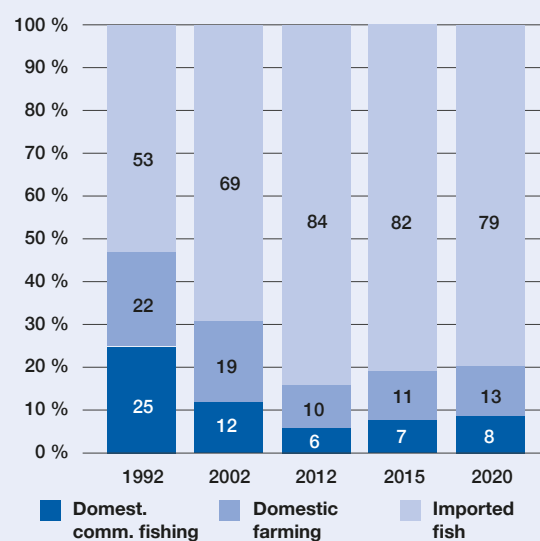
** Natural Resources Institute Finland

Fish consumption

According to the statistics of Natural Resources Institute Finland, Finns eat approximately 14 kg of fish per person per year, calculated as filleted weight. This amount includes all fish: commercially fished, farmed and imported fish as well as fish caught in recreational fishing.



ORIGIN OF COMMERCIALY PRODUCED FISH AND THE DEVELOPMENT OF SELF-SUFFICIENCY IN FINLAND



Source: Natural Resources Institute Finland



PHOTO: MARKKU SAIHA

2. COMMERCIAL FISHING

When fish is caught to be sold, it is commercial fishing. In order to act as a commercial fisherman, an entrepreneur must be enrolled in the register of commercial fishers maintained by the local ELY Centre (Centre for Economic Development, Transport and the Environment), and the person or company must have a fishing vessel in the fishing vessel register maintained by the authorities.

Only commercial fishermen have the right to sell the catch caught in sea areas. In inland waters, the occasional sale of a small batch of fish directly to the consumer is also allowed for non-commercial fishers.

Commercial fishermen are divided in two groups based on turnover

- ▶ **Group I** exceeding the VAT limit (turnover over 10,000 euros), of whom the term “commercial fisherman” is used in this publication.
- ▶ **Group II** others.

According to the Fishing Act, a commercial fisher is an administrative registration unit. Therefore the number of commercial fishermen does not directly indicate the number of persons working as professional fishers, either self-employed or employed.

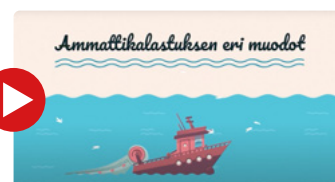
- There were 738 full-time commercial fishermen in Finland at the end of 2021, of whom 420 fished in sea areas and 318 in inland waters.
- There were approximately 2,739 part-time fishers, of whom 1,937 worked in sea areas and 802 in inland waters.
- The number of commercial fishers has halved during the 2000s.
- 70% of full-time commercial fishers are approaching retirement age, and the average age is approximately 58 years.
- The future development of the business will be influenced by the age structure of the entrepreneurs.

Only professional fishers have the right to sell their catch to wholesale and retail stores for resale.

The number of professional fishers is decreasing and their average age is increasing.

Finnish commercial fishing is divided into offshore fishing, coastal fishing and inland water fishing.

See video
(in Finnish)



See video
(in Finnish)



PHOTO: MARKKU SAIHA

“New fishermen can’t come into the field unless they can live off fishing.”

Jarno Aaltonen,
commercial fisherman

See
video
(in Finnish)



QUANTITY AND VALUE OF CATCH BY FISHING METHOD

Offshore fishing

Trawl fishing for Baltic herring, sprat and cod

Amount: approximately 88,300 tonnes

Value: approximately 19.7 million euros (2021)*

Coastal fishing

Fishing for whitefish, pikeperch, perch, smelt, salmon and Baltic herring with fykes and nets

Amount: approximately 8,900 tonnes

Value: approximately 8.2 million euros (2021)*

Inland water fishing

Trawl fishing for vendace; fishing for whitefish, zander and perch with fykes and nets; crayfish and roe

Amount: approximately 5,300 tonnes

Value: approximately 15.4 million euros (2020)*

*Value as producer prices excluding VAT.



PHOTO: MIKA REMES

REGULATION OF FISHING

Commercial fishing is sustainable utilisation of natural water resources. Fishing is business done on nature's terms, and it is regulated, supervised and controlled both at the national and at the EU level.

Fishing quotas

- Commercially fished species in Finland that are subject to quotas are Baltic Sea salmon, cod, Baltic herring, sprat and plaice.
- In the beginning of 2017, mainland Finland implemented individual fishing quotas, and the fishing rights for the quotas for Baltic herring, sprat and salmon were divided among actors.

The fishing fleet

- The EU has set a maximum amount for the capacity of the Finnish fishing fleet in gross tonnes (GT) and kilowatts (kW). Enrolling a fishing vessel in the register and starting fishing requires that there is free space in the register.

Supervision and control of fishing

- Fishing is governed by a wide range of EU regulations, and at the national level the Fishing Act and Fishing Decree. Among other things, these define fishing rights, permitted fishing gear, fish sizes and closed seasons.
- Fishing gear intended for commercial fishing may only be used by commercial fishermen.
- In Finland there is private ownership of water areas, and the right to practice fishing and to decide about it belongs to the owner of the waters.
- The Ministry of Agriculture and Forestry manages fishing at the central level. At the regional level, ELY Centres are responsible for fisheries issues, handling things such as sea area catch monitoring and fishing control tasks. The police, border guard, customs and fisheries supervisors also monitor compliance with regulations and orders.

Fish-specific strategies

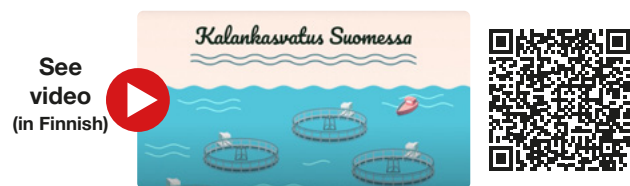
- Multiannual plan for managing Baltic Sea cod, sprat and herring stocks (EU).
- Whitefish research programme (Finland).
- National salmon and sea trout strategy (Finland).

3. FISH FARMING

Finland has excellent conditions for self-sufficiency in fish farming. In Finland, fish is grown in both sea and inland water areas. New technology is represented by recirculating aquaculture plants built on land.

The most important species in Finnish aquaculture are rainbow trout and whitefish.

In addition to food production, fish are also grown for planting in natural waters in order to improve their condition, strengthen endangered fish stocks and support recreational fishing.

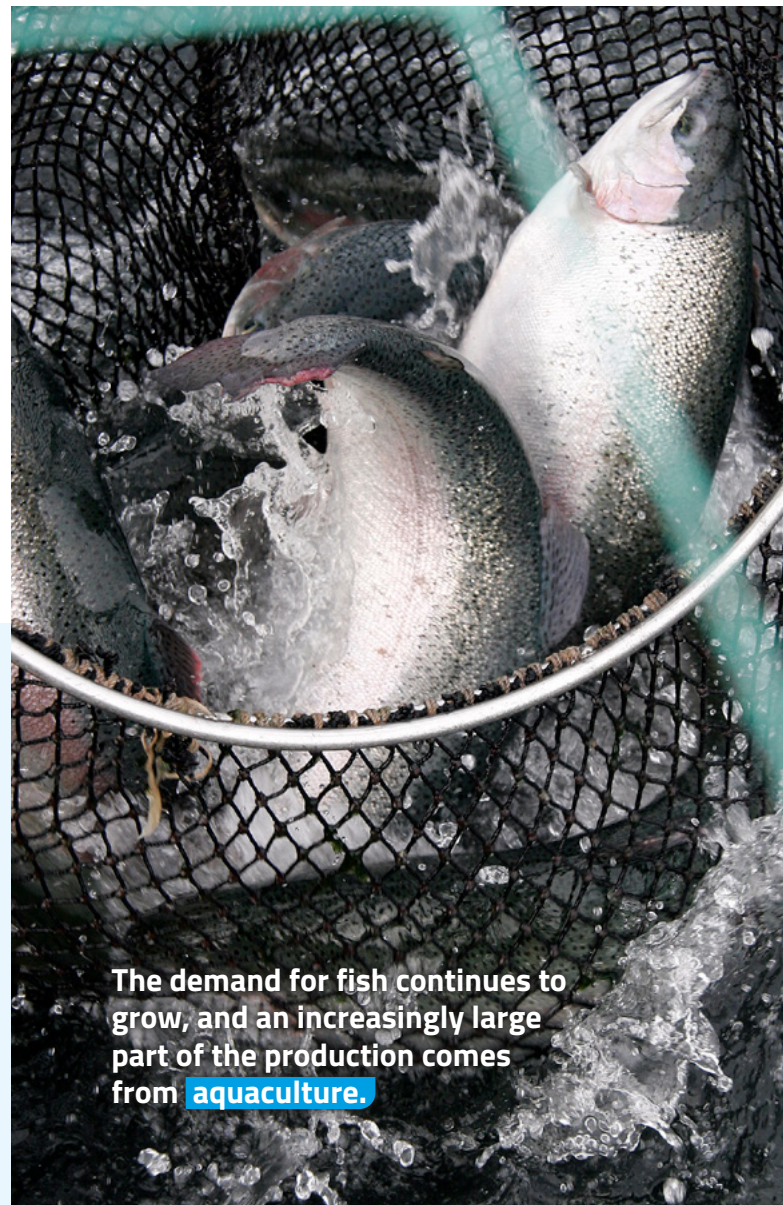
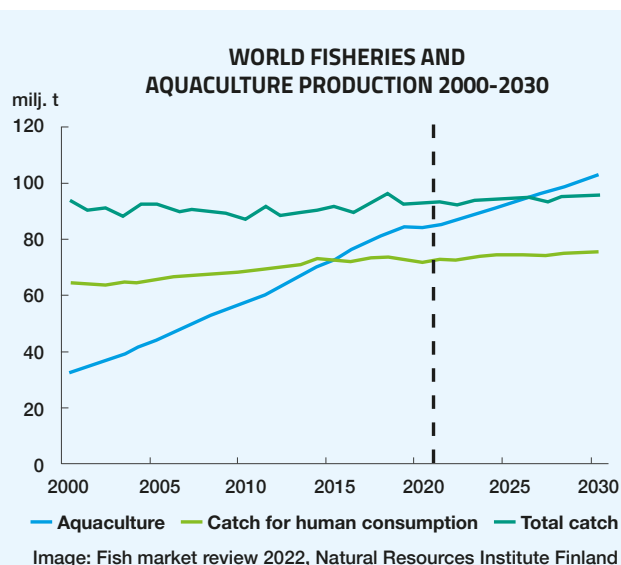


Fish farming is developing

Farmed fish, just like many wild fish, is a responsible and competitive food. It is healthy, climate-friendly and able to efficiently convert its food into high-quality animal protein. Also, its impact on the water system is small as a whole: only approximately 1% to 2% of Finland's nutrient load to the Baltic Sea. Developing feeds and modernised operating methods have reduced the environmental impact of fish farming and strengthened the ecological and social sustainability of the industry.

Finland has excellent conditions for sustainable fish farming. Finland's abundant water resources offer excellent opportunities for the development of aquaculture. Increasing fish farming is one of Finland's – and also the EU's – most central goals for blue growth.

In order to achieve the growth goals, it is now necessary to identify the water areas suitable for farming and to issue the necessary environmental permits.



The demand for fish continues to grow, and an increasingly large part of the production comes from **aquaculture**.

Aquaculture production in Finland 2021

Approximately 14,400 tonnes of food fish

(value approximately 73.3 million euros)

13,500 tonnes of rainbow trout

700 tonnes of whitefish

391 tonnes of rainbow trout and whitefish roe

There were a total of 240 fish farming businesses in Finland in 2021*

There are approximately 240 fish farming businesses in Finland, of which about 140 are natural food ponds. The companies have several different plants and production lines. Of the fish farming facilities, 147 facilities grow seafood, and there are 104 hatcheries.

- ▶ The fish farming sector employs approximately 371 person-years.
- ▶ In addition to the above, there were 5 recirculating aquaculture plants producing fish for food.

*Companies have several fish farms and many also have several production lines.

The majority of food fish is produced in sea areas

Finnish aquaculture production includes growing of the parent fish, roe incubation and fry growth in inland plants, as well as food fish production that is done both in sea areas and in inland plants. More than 80% of seafood is produced in sea areas.

See
video
(in Finnish)



Offshore farming and recirculating aquaculture

In fish farming, the growth opportunities are seen to be the best in the offshore production of seafood and in fry fish production in recirculating aquaculture plants.

It is believed that there are areas in the open sea where it is possible to place plant units larger than the current ones so as to minimise the local effects. However, even a functioning offshore unit needs support and maintenance areas in the archipelago or coastal zone.

In recent years, significant investments have been made in recirculating aquaculture. With recirculating aquaculture, it is possible to reduce the nutrient load and obtain optimal conditions for the fish to grow throughout the year. A challenge for recirculating aquaculture are the high investment and operating costs.

Traditional net cage farming is so far the most economical and reliable way to produce rainbow trout as seafood.



LICENSING AND MONITORING PROCEDURES FOR FISH FARMING

Fish farming is a strictly regulated and supervised field. The environmental permit for fish farming combines the permit for breeding operations under the Environmental Protection Act with the permits under the Water Act for water supply to the plant, construction in the water area and keeping structures in waterways.

A permit is also required for a fish processing plant or for premises where fish products are processed.

See
video
(in Finnish)



Environmental permits

- The environmental permit for a fish farming facility is granted by the Regional State Administrative Agency (AVI). Compliance with the requirements of the permit is monitored by the local ELY Centre.
- The environmental permit defines the area used for fish farming, the production method and the quantity allowed to be produced. The conditions of the permit precisely regulate the nutrient amounts of the feed used and the nutrient emissions resulting from the operation.

Supervision and monitoring

- The effects of each fish farming facility on the environment and the state of the waters are monitored by studies that are part of the monitoring programme approved by AVI or the ELY Centre.
- The environmental health authorities are responsible for monitoring tasks related to food products, veterinary medicine and the living environment.

"We want to secure the availability of domestic fish in Finland, but it is unreasonably difficult to obtain environmental permits to increase production."

Mikko Pajula, Haverön Lohi Oy



4. FISH PROCESSING AND TRADE

Companies engaged in fish trade and fish processing ensure the availability of fish products to consumers. The companies collect fish from coastal and inland fishermen and fish farmers, process them into a ready-to-use form for consumers and professional kitchens, and deliver the products to retail stores and catering.

Domestic primary production alone is not enough to cover the demand for fish in Finland. Imported fish is also needed, and it has taken on an increasingly larger role in the Finnish fisheries economy.

In 2019 there were 124 companies processing fish, of which 19 processed more than half a million kilograms. They processed 94% of the total amount of processed fish.

- In 2019, **30%** of the fish processed was domestic Baltic herring and sprat frozen for export, **29%** other domestic fish and **41%** imported fish.

- Centralised fish collection and distribution enables the cost-effective provision of smaller amounts of fish as well as ensuring availability for larger customers.

See
video
(in Finnish)



PHOTO: HÄTÄLÄ OY

"We and the fishermen
are in the same boat,
at the mercy of the elements.
We have to live with what
the catch of the day
happens to be."

Riku Isohätälä, Hätälä Oy



Fish processing and wholesale trade

In Finland, companies engaged in fish processing also operate as wholesalers. Both in Finland and throughout the EU, companies that process fish are dependent on imported raw materials. Although consumers appreciate local food and local fish, the availability of raw materials is a prerequisite for profitable production operations. Companies have several different procurement channels at their disposal both at home and abroad. Imported fish is needed not only to ensure availability, but also to supplement the domestic selection of species.

The distribution of fish products from the processing plant/wholesaler onwards takes place using two distribution channels: either as the fish wholesalers' own direct distribution or through central stores.

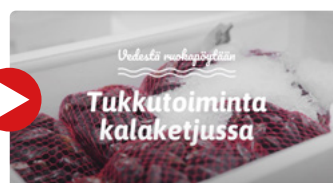
The quality of fish products is ensured by an unbroken cold chain across the entire supply chain.

Fish products require precise temperature regulation and have a fairly short shelf life, which is why efficient logistics is very important in the supply chain of fish products.

Most of the fish is sold to consumers through grocery stores. The share of fish in grocery sales is on average less than 2%, but it is often stated that its image value is greater for the store than its direct monetary value. Fish is also sold to consumers at fishers' direct sales points, through REKO local food rings on Facebook and at trade and summer markets.

The quality of fish products is ensured by an unbroken cold chain across the entire supply chain.

See
video
(in Finnish)



"Fish is in demand! We need to urgently put all possible means to use for fishermen to be able to fish and for fish farmers to be able to farm domestic fish"

Juha Lindberg,
Kalakauppa E.Eriksson Oy,
Old Market Hall, Helsinki

PHOTO: MIKA REMES

Approximately one quarter of all fish is sold through the catering sector. In professional kitchens, more and more portions are now made from fish. Most of the food was prepared from rainbow salmon, salmon, saithe and cod.

See
video
(in Finnish)



5. IMPACTS OF THE FISHERIES INDUSTRY

ECONOMIC IMPACTS

- In 2020, a total of 1,860 companies operated in the fisheries sector. 70% of these are fishing companies, most of which engage in small-scale fishing.
- The total income of fisheries companies was 845 million euros. The industry with the largest yield was fish processing.
- The fisheries field had 2,517 person-years of employment.
- The value of domestic commercial fishing in 2020 was around 47 million euros, and the value of aquaculture was around 75.8 million euros.
- Commercial fishing and fish farming have many kinds of multiplier effects in companies that produce production equipment (e.g. vessels, fishing gear, feed) and services, as well as in the processing of fish products, fish trade and fur animal production.

Fishing is one of the most efficient ways to remove nutrients from waterways.

See video
(in Finnish)



ECOLOGICAL IMPACTS

Commercial fishing and aquaculture are renewable resources, operations that utilise fish stocks and the aquatic environment, with implications for the business environment.

Impact of commercial fishing on fish stocks

Commercial fishing follows the principles of sustainable fishing. The status of the fish stocks is constantly monitored. The position of Natural Resources Institute Finland is that the Finnish fish stocks are mostly strong and can withstand the current level of fishing or even more. Regarding the fish species subject to quotas, the fishing quotas defined for Finland based of scientific consultation are followed.

Commercial fishing removes nutrients

In 2021, approximately 450 tonnes of phosphorus and more than 2,200 tonnes of nitrogen were removed from Finnish waterways with the catch of commercial fishing. Most of this is removed in fishing for Baltic herring and sprat.

	Catch, tonnes	Concentration / kg fish		Removes tonnes of nutrients		Share of total removed	
		Phosphorus	Nitrogen	Phosphorus	Nitrogen	Phosphorus	Nitrogen
Baltic herring and sprat	91 500	0,004	0,021	366	1 982	82 %	87 %
Other sea-caught	5 763	0,0075	0,0275	43	158	10 %	7 %
Inland fish*	5 312	0,0075	0,0275	40	146	8 %	6 %
				449	2 286		

*Most recent inland statistics from 2020.



"I am producing healthy, locally-sourced food for Finnish consumers while doing environmental work, of which I am very proud."

Mikael Lindholm,
commercial fisherman

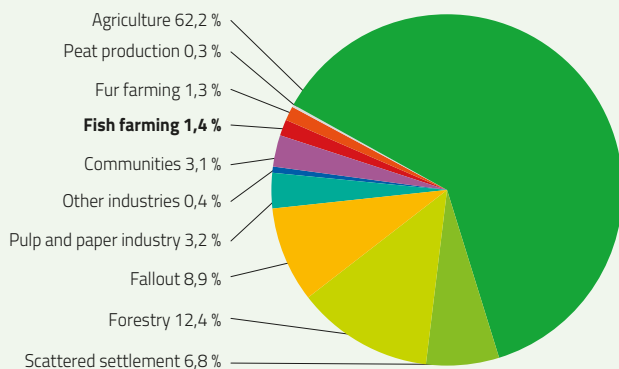
Environmental impacts of fish farming

The environmental effects of fish farming often come up in discussion. However, the share of fish farming in Finland's total nutrient load is only 1% to 2% (Finnish Environment Institute SYKE).

In comprehensive mandatory monitoring, the state of the facility's immediate environment is regularly monitored and the effects of its operations on the state of the environment are assessed. The results of the monitoring are published annually.

The share of fish farming in Finland's total phosphorus load in relation to other fields

SOURCES OF PHOSPHORUS EMISSIONS



Effects of fish farming on natural fish stocks

Fish farming has not been found to spread parasites or fish diseases to natural fish stocks. As rainbow trout do not reproduce naturally in our waterways, potential escapees do not pose a risk to natural fish stocks. Fish farming supports the preservation of natural fish stocks by maintaining a number of endangered fish stocks, and by strengthening them with fry plantings.

Other environmental impacts

A significant part of the environmental impact of the processing of fish products is caused by the energy consumption, water consumption and wastewater of the production facilities.

SOCIAL IMPACTS

Primary production in the form of fishing and fish farming is an important part of the culture and identity of coastal and inland water areas. Fishing and fish farming bring work and livelihood to areas where the creation of new jobs in other sectors is slight. In addition to fish farming and fishing companies, the employment effects extend to fish cleaning plants, fish processing, wholesalers, fish feed production, retail and distribution.

Fish and public health

Eating fish has many positive effects on health. It is especially beneficial for heart health, thanks to the excellent fatty acid composition of fish. Cardiovascular diseases are cited as the most common cause of death in Finns, and they are greatly influenced by lifestyle and diet.

- For Finns, fish is the most important source of natural vitamin D. Especially in the dark seasons, vitamin D can be obtained here in the north either from food or as a nutritional supplement.
- It is recommended to eat fish at least twice a week.

People who eat a lot of fish have been found to be **healthier** and get more of several important nutrients than the rest of the population.



"Farmed Finnish rainbow trout and whitefish are on WWF's recommended species list."

Yrjö Lankinen,
Savon Taimen Oy

See
video
(in Finnish)



6. FUTURE OF THE FISHERIES INDUSTRY

The demand for fish is constantly increasing, and there will continue to be a good market for fish in Finland as well. The availability of fish is one of the biggest challenges for the future of the fishing industry. Although wild fish are being utilised better than before, no increase in catch amounts is expected. Instead, growth will probably come through fish farming.

NO DOMESTIC FISH WITHOUT VIABLE PRIMARY PRODUCTION

From the point of view of the future of the entire fisheries industry, securing the position of primary production in water use policy is decisive. There is no domestic fish on the market without commercial fishing and fish farming.

The future of fish farming is governed by a strict permit policy. A prerequisite for the continuation of commercial fishing is solving the predator problem and ensuring access to fishing rights.

Fish farming

The goal of domestic fish farming is to increase production volumes. By simplifying licensing practices, it is possible to triple domestic fish farming by 2030. It is estimated that the value of the production will increase by more than 30% by that time, and the degree of domesticity of the fish grown will rise to more than 50%. At that time, fish farming can also employ approximately 30% more people than at present.

Commercial fishing

In recent years the impact of predators, i.e. seals and cormorants, on fishing and fish stocks has grown, and in some areas we can already talk about a crisis.

The damage caused to fishing by seals consists of lost catch (eaten and damaged fish) and broken gear.



"Many of the field's problems are external, and the industry's work alone is not enough to solve them; political willpower and concrete actions are needed. When individual decisions are made, their effect on a fishing entrepreneur's operations should always be thought over."

Kim Jordas,
Finnish Association of
Commercial Fishers



Seals and cormorants

Based on calculations in the Baltic Sea region, the total population of the grey seal is 52,500 to 70,000*, and according to a Swedish estimate, the actual population size of the ringed seal is more than 20,000. An adult grey seal eats 4.5 to 7.5 kilograms of fish daily, and a ringed seal 2.5 to 3.5 kilograms.

The total number of cormorants in Finland is estimated to be around 135,000 during the nesting season in July. A cormorant eats 350 to 500 grams of fish daily.

Roughly estimated, seals and cormorants eat at least as much fish annually as the entire catch of commercial fishing.

Fishers and fish farmers have developed seal-resistant fishing gear and mesh fences around fish breeding ponds, but the problem is wider, and the effects of predators on fish stocks cannot be prevented by fencing.

*Source: Ministry of Agriculture and Forestry, 9 June 2022

The global market situation regulates the price of rainbow trout as well as Baltic herring and sprat

The market for Baltic herring and sprat, the most important catch species in commercial fishing, follows the business cycle of fur farming and the global market situation for fish meal. The producer price of rainbow trout is affected by the price of salmon on the world market.

In the domestic market, food produced nearby has a market advantage, since consumers want to eat fish of domestic origin. However, price competition cannot be avoided, and the efficiency of production is of great importance to succeeding in the competition.

Impacts on fisheries of the war in Ukraine

Russia's war of aggression in Ukraine affects the entire Finnish fishing industry. The sharply increased fuel and energy costs directly affect the operations of companies in the entire chain of the fisheries industry, from primary production to trade. Some important export markets have been closed, and both the global fish market and the domestic market have undergone major changes. Fish consumption in the domestic market will probably decrease as the economic situation tightens. This is not a momentary crisis; the situation will be difficult and unstable for fish companies for a long time.

Consumers want to eat fish

Finnish consumers want to eat domestic fish.

For the retail trade, fish is an important image-building product, which has been reflected in the growth of the consumer-packaged selection and thus an improvement in the availability of fish products. As the availability of domestic fish decreases, the retail trade's selection of fish products expands with the help of imported fish. In order to meet the demand, the operating conditions of domestic primary production must be ensured. Security of supply also requires a rapid increase in the self-sufficiency rate of fish products.



The Baltic Sea is a common cause

Actions to improve the condition of the Baltic Sea are carried out by many different parties. In their own work, commercial fishermen take care of the Baltic Sea by removing nutrients from it along with the fish. Removal and treatment fishing projects have locally been able to improve the state of the waters and provide living space for desirable fish stocks. In fish farming, the use of Baltic Sea feed recycles and removes nutrients from the sea. Work for the benefit of the Baltic Sea, both nationally and internationally, must definitely continue in the future as well.

Improving profitability in the entire chain and especially in primary production creates a basis for the entry of new entrepreneurs into the industry.

The sustainability of the fisheries industry must be seen as a whole that takes into account economic, ecological and social sustainability.

"Fish farming can be increased without increasing the detrimental environmental impacts. We need information based on unbiased research and new innovations."

Jouni Vielma, principal scientist,
Natural Resources Institute Finland

There must be a commitment to developing fisheries

The aim of fisheries industry organisations is to safeguard the continuity of the industry.

In primary production, we live in critical moments that determine the future of the industry. If decisions regarding the licensing practices of fish farming and the predator problem of commercial fishing are not reached soon, an industry that produces clean, domestic food for domestic consumers will become history as unprofitable.

The situation is widely known and dealing with it is generally seen as important, but no effective solutions have yet been found.

Good decisions are needed in order to be able to respond to the existing demand for fish and thus produce added value and jobs.



There is a demand for fish

– in order to meet the demand,
the operating conditions of the entire
production chain must be secured.



www.sakl.fi

www.kalankasvatus.fi

www.kalakauppiasliitto.fi

www.prokala.fi

Get to know the Finnish fisheries industry!

In the “Vedestä ruokapöytään” video library you can find information and inspiration about fish and the fishing industry (in Finnish)



Publication partially funded by the EMFF