

Aquaculture license regimes

Allocation of aquaculture
licenses for salmonids



September 2023

[Kpmg.no/aquaculture](https://www.kpmg.no/aquaculture)

Introduction

Aquaculture of salmonids is one of the fastest growing food-production sectors in the world, and is expected to further dominate the seafood market in the coming years¹. Although aquaculture is one of the most sustainable ways to produce animal protein, it is necessary to regulate the production scale carefully to limit the impact on the surrounding environment and natural diversity, promote profitability for the industry and ensure purposeful use of land and coastal areas. Most countries have introduced regulations to safeguard these purposes by establishing aquaculture license regimes.

This comparative study looks into the allocation regime for aquaculture licenses for salmonids. The purpose of the report is to show how aquaculture is regulated worldwide. The report covers both sea based and land-based aquaculture of salmonids and focuses on the process for license allocation.

¹ [A deep dive into Zero Hunger: farming the seas | UN News](#)
[The state of world fisheries and aquaculture. \(un.org\)](#)
[Farmed Salmon | Industries | WWF \(worldwildlife.org\)](#)



Summary

Term	Definition
License	A granted right to produce salmonids of a specific quantity and/or at a specific site.
Salmonids	Fish of the salmon family (Salmonidae), including salmon, trout and chars.
Consideration	Amount paid in order to be granted the right to operate aquaculture.
Initiatives	Proposed or planned changes to the regime described for the various countries.
Restrictions on ownership	Regulatory restrictions relating to being able to own, transfer or lease aquaculture licenses.
MAB	Maximum Allowed Biomass

Regulation of aquaculture

The collected information shows that all the countries covered in the report have established license regimes for aquaculture of salmonids. The regimes are mainly based on consideration of the environment and natural diversity, as well as purposeful use of area. In general aquaculture is not permitted by any of the countries unless holding a license, and most countries have extensive allocation regimes. Due to increase in aquaculture activity, aquaculture legislation is under evaluation and/or development in several of the countries.

Due to the complexity in aquaculture production, several different sectoral regulations apply to the allocation and operation of aquaculture licenses. Consistently we see that most of the countries included in the report involve a number of sectoral authorities in the allocation process, which reflects the complexity of aquaculture as a form of food production.

The most common forms of delimitation of aquaculture licenses are Maximum Allowed Biomass ("MAB") and/or allocation of sites after an environmental assessment of tolerance for the specie to be produced. Most of the countries has not established separate regimes for salmonids, which entails salmonids being regulated by the same regulatory requirements as marine finfish.

Regarding consideration for the licenses, there are severe differences between the various countries. Most of the countries, however, have a system where a fee is paid upon application in combination with an annual license fee. Only Norway requires consideration for "purchase" of licenses.

All countries, apart from Norway, have chosen to time-limit their licenses. There are significant variations in the duration of the licenses between the countries with a range from 6 years to 25 years. However, these countries allow renewal of the licenses upon expiration. Also, this must be seen in the context of the fact that in several countries it is very easy both to obtain and to renew aquaculture licenses, and time limitation is therefore of less importance. At the same time, the value the licenses represent varies considerably between the different countries.

The most common restriction on ownership is prohibitions against leasing and/or renting out licenses. Other restrictions relate to foreign ownership, as well as limitation on the proportion of licenses that can be owned by one company/person.

Continuous improvements of the report – additional countries

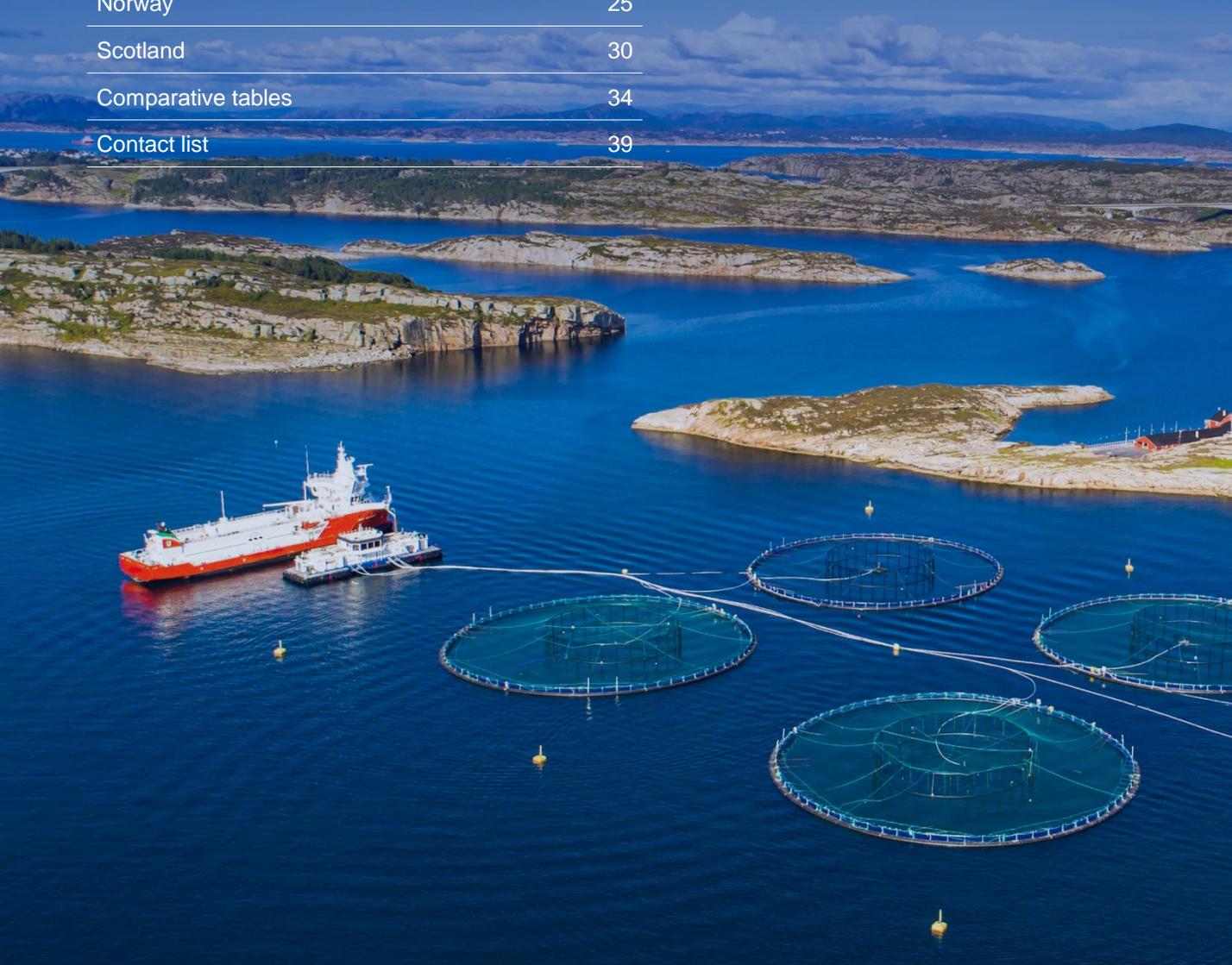
This report intends to present a brief country overview of aquaculture license regimes. We have chosen to focus on a few selected subjects in the regulation of aquaculture licenses which we believe is suitable for a basic comparison of the various countries in our first version of the report.

Further, this first version focuses on a few selected countries, representing some of the largest and most advanced salmon farming producing countries in the world, or which has potential to become large future salmon producers.

We aim at continuously improving the report, including also to expand the report to include additional countries or subjects in future editions. Thus, we welcome any feedback that can contribute to fulfill this goal.

Contents

Introduction	4
Summary	5
Chile	5
The Faroe Islands	10
Iceland	13
Ireland	17
New Zealand	21
Norway	25
Scotland	30
Comparative tables	34
Contact list	39





Chile

Description	Comment
Form of regulation	Concession (license) required
Time limitation	25 years, renewable
Restrictions on ownership	<p>Some restrictions apply to foreigners.</p> <p>Transfer of an aquaculture license application and all contract related to exploitation by third parties of a no-granted aquaculture concession is prohibited.</p> <p>No person may apply for aquaculture concessions representing more than 20 % of the total concessionable area of a region.</p> <p>Aquaculture licenses shall be transferable and generally subject to business but only once they have been granted.</p>
Consideration/Fee	<p>Holders of aquaculture license must pay annually an aquaculture patent of UTM 20 (USD 1,550 app.) per hectare.</p> <p>For aquaculture license of less than one hectare, the above patent will be paid in the corresponding proportion.</p>



Introduction

Aquaculture licensing is regulated by different laws and regulations.

The main regulations include:

General Law on Fishery and Aquaculture (Law N° 18.892 or Ley General de Pesca y Acuicultura).

Regulation of Small-Scale Aquaculture (Supreme Decree N° 45-2021 of the Ministry of Economy, Development and Tourism or Reglamento de Acuicultura de Pequeña Escala).

Regulation on aquaculture concessions and authorizations (Supreme Decree N° 290-1993 of the Ministry of Economy, Development and Tourism or Reglamento de Concesiones y Autorizaciones de Acuicultura).

Environmental Regulation for Aquaculture (Decree N° 320-2001 of the Ministry of Economy, Development and Tourism or Reglamento Ambiental para la Acuicultura).

Regulation on Hydrobiological Pests (Supreme Decree N° 239-2010 of the Ministry of Economy, Development and Tourism or Reglamento sobre Plagas Hidrobiológicas).

Regulation of administrative procedures related to the actions of governmental authorities (Law N° 19,880 or Bases de los Procedimientos Administrativos que rigen los actos de los Órganos de la Administración del Estado).

Method to determinate preliminary site characterization and environmental information (Resolution N° 3612-2009 of the Undersecretariat of Fishery and Aquaculture or Resolución que fija las Metodologías para elaborar la caracterización preliminar de sitio (CPS) y la información ambiental (INFA).

Regulation on Limitation of Areas of Aquaculture Concessions and Authorizations (Supreme Decree N° 550-1992 of the Ministry of Economy, Development and Tourism or Reglamento sobre Limitación de Áreas de las Concesiones y Autorizaciones de Acuicultura).

National Aquaculture Register (Supreme Decree N° 499-1994 of the Ministry of Economy, Development and Tourism or Reglamento del Registro Nacional de Acuicultura).

Biodiversity and Protected Areas Service and regulation of the National System of Protected Areas (Law N° 21,600).

Economic Crimes Law (Law N° 21,595). Among other conducts, it sanctions anyone who harvests, extracts, transports or markets contaminated hydrobiological resources or without required authorizations.

The Fishery and Aquaculture Law provides the framework for the allocation process, while the regulations specify the requirements according to the purposes of the law.

It is illegal to engage in aquaculture production without concessions or authorizations.

Form of regulation

Aquaculture license is an authorization granted by the Ministry of Defense to use and benefit of some public goods to develop aquaculture activities for a renewable 25-year period.

The types of aquaculture concessions (licenses) recognized by law are: beach concessions; beach land concessions; water and shelf concessions; and rock concessions.

Aquaculture licenses do not give the holder any property right to the waters or the seabed located in the areas covered by the concession or authorization.

The purpose of the aquaculture license is to carry out aquaculture activities in the designated area related to the species or group of hydrobiological species indicated in the resolution or authorization and allow to the concessionaire to carry out aquaculture activities, with no other limitations than those expressly established in the law and regulations.

Aquaculture activities shall be carried out in a sustainable manner with other activities developed in the area covered by the concession or authorization (for instance, tourism activities).

Allocation process

This section will provide an overview of how the allocation regime is designed, including the steps in the process, as well as which authorities are involved.

Authorities involved:

1. Ministry of Economy, Development and Tourism (*Ministerio de Economía, Fomento y Turismo*).
2. National Fishery and Aquaculture Service (*Servicio Nacional de Pesca y Acuicultura*).
3. Undersecretariat for Fishery and Aquaculture (*Subsecretaría de Pesca y Acuicultura*).
4. Ministry of Defense (*Ministerio de Defensa*).
5. Undersecretary for the Armed Forces (*Subsecretaría para las Fuerzas Armadas*).
6. Environmental Evaluation Service (*Servicio de Evaluación Ambiental*).
7. Borders and Boundaries Agency (*Dirección de Fronteras y Límites or Difrol*)^a.
8. Foreign Investment Promotion Agency (*InvestChile*)¹.
9. General Comptroller of the Republic of Chile (*Contraloría General de la República*).
10. Maritime Authority: means the General Director of Maritime Territory and Merchant Marine, the Maritime Governor and the Captains of Port. Sea Consul and Mayors of the Sea, if authorized by the Director.
11. The Biodiversity and Protected Areas Services, in connection with concessions (licenses) in protected areas.

Steps of the Process:

1. The request or application of an aquaculture license of any kind shall be submitted to the National Fishery and Aquaculture Service.
2. Once the application has been accepted for processing, the applicant shall submit, within five working days, a letter stating that a certificate has been requested from the competent authority indicating: a) whether or not there is an overlap with any other type of concession or destination already granted or being processed, b) whether the river (where the aquaculture concession will be) is navigable by vessels of more than 100 gross registered tons and, if not, the circumstance of being affected by tides.
3. The National Fishery and Aquaculture Service will send the submitted information to the Undersecretariat for Fishery and Aquaculture

4. The Undersecretariat of Fishery and Aquaculture will execute a technical report of the aquaculture license application.

If there are no grounds to reject the application, the Undersecretariat will request to the applicant:

- a. to comply with the respective environmental obligations,
- b. to submit a map of the requested aquaculture license zone, and
- c. to submit a general map of the zone where the aquaculture license will be located.

If the application is in a border area of Chile, the Undersecretariat for Fisheries and Aquaculture will request the corresponding authorization from the Borders and Boundaries Agency.

5. Once all legal requirements are fulfilled, the Undersecretariat for Fishery and Aquaculture will send the submitted documents and the technical project to the Undersecretariat for the Armed Forces.
6. The Undersecretariat for the Armed Forces will have a 90 day term to review the information and issue a resolution granting the aquaculture license.
7. Once the applicant has been notified of the resolution, the applicant shall
 - a. publish an excerpt of the resolution in the Official Gazette within a 45 day term,
 - b. pay the aquaculture patent, and
 - c. request the delivery to the Maritime Authority of the resolution within a 3 month period from the date of publication.
8. The Maritime Authority will report to the Undersecretariat for Fishery and Aquaculture the issuance of the resolution, which will register the aquaculture license in the Aquaculture Concession Register (public register and available for consultation on the website of the Undersecretariat for Fishery and Aquaculture).
9. The concessionaire shall start the aquaculture activities within a 1-year period from the material delivery to the Maritime Authority of the resolution granting the aquaculture license.

Note: (a) If applicable.

Types of licenses

Aquaculture license is an authorization granted by the Ministry of Defense to use and benefit from some public goods to develop aquaculture activities for a renewable 25 years period.

The types of aquaculture licenses recognized by law are:

- a. beach concessions
- b. beach land concessions
- c. water portion and shelf portion concessions in river, lake or sea
- d. rock concessions.

The aquaculture license considers a group or groups of hydrobiological species.

Sites

Aquaculture activities may be executed in sea beaches, fiscal beach land, water and bottom portions (shelf) in river, lake or sea, and rocks inside and outside bays areas, and in rivers navigable by vessels of more than 100 gross tonnage. The structure and other characteristics of the sites will depend on the technical characteristics of the project and environmental information submitted to the authority to obtain the aquaculture license.

Time limitations

Aquaculture concessions will have a term of 25 years and may be renewed for an equal period, unless: 1) a half of the environmental reports related to the aquaculture activities are negative; or 2) expiration of the aquaculture license according to law, for example:

- a. Exploiting the concession for another purpose than was granted.
- b. Do not pay the patent.
- c. Committing more than three infringements within two years of committing the first infringement against the law.



Restrictions on ownership

Only the following persons may be aquaculture concessionaires or holders of an authorization to carry out aquaculture activities:

- Chilean or foreigners who have permanent residence permit.
- Chilean legal entities incorporated according to the laws of the Republic of Chile.

If the legal entity has a foreign capital contribution, this must have been duly approved in advance by the Foreign Investment Promotion Agency to authorize the corresponding foreign investment in accordance with the laws and regulations in force.

No aquaculture concessions or authorizations will be granted in areas where there are natural stocks/banks of hydrobiological resources including natural seaweed fields.

The transfer of applications for aquaculture license and all preparatory contract related to exploitation by third parties of a no-granted aquaculture license is prohibited by law.

No person may apply for aquaculture concessions representing more than 20 % of the total concessionable area of a region (administrative division of the Republic of Chile).

Strong restrictions apply to foreigners from border countries to Chile (Perú, Bolivia and Argentina).

Withdrawal of licenses

There are several causes determined by law to cancel an aquaculture concession. Cancellation shall be declared by an Ordinary (Civil) Court of Justice.

The causes of cancellation consider the misuse of the aquaculture concession; failure to pay the aquaculture patent; unauthorized suspension of activities; damages to third parties; death of the concessionaire; provide false or incomplete information to the authority; detection of biohazard in the aquaculture facilities.

Consideration and fees

Holders of aquaculture concession must pay annually an aquaculture patent of UTM 2 (USD 156 app) per hectare, except in the case of aquaculture license whose technical project considers exotic fish (incl. salmo salar), which will pay UTM 20 (USD 1,560 app) per hectare. For aquaculture concessions and authorizations of less than one hectare, the above patent will be paid in the corresponding proportion.

In cases where the cultivation centre to which the concession refers has not been used in the previous fifty-four months and the cause of expiry for non-operation does not apply, an additional UTM 10 (USD 778 app.) per hectare will be paid for each year of non-use. The cultivation centre that does not operate will only be exempted from the additional payment for non-use when it is in any of the following circumstances:

1. Subject to compulsory following in accordance with a sanitary management plan of the respective grouping of concessions.
2. It is in a sector affected by an environmental event, natural disaster, or force majeure.
3. It is located in a sector declared by the Authority to be in a sanitary emergency.
4. The authority has ordered a mandatory suspension of operations

Initiatives

The following initiatives are being considered in Chile:

- Bill to improve the performance of protected areas in the face of aquaculture development

The Chilean government announced that is preparing a new bill related to Aquaculture to be submitted during 2023 but we have not news yet.

A new constitutional process starts in Chile. Currently, a draft of new constitution is under discussion which considers a special chapter related to environmental sustainability and protection of biodiversity as a role of the public authority.



The Faroe Islands

Description	Comment
Form of regulation (a)	Maximum Allowed Biomass (MAB) from 1 200 tons and 5 800 a year per license.
Time limitation	12 years, renewable for an additional 12-year term.
Restrictions on ownership	A Faroese company cannot hold more than 50% of the total commercial seawater licenses. Restrictions also apply for foreign ownership. Lease and rent prohibited.
Consideration/Fee	Annual fee of DKK 12 000 for each license.

Note: (a) Maximum biomass is set in each individual license, and currently varies from 1 200 to 5 800 tons per license. However, there is no absolute rule in any act or executive order that prevents the authorities from allowing a higher biomass for a license.

Introduction

The allocation of aquaculture licenses is regulated by several sectoral acts. The Fish Farming Act forms the framework for the allocation process, while the other acts specify requirements under the purpose of the Fish Farming Act. In addition to the acts mentioned above, Executive Orders with more detailed provisions covering fish farming have been issued under the provisions of the Acts. Before commencing any aquaculture activities, a company must obtain a license. It is illegal to carry on any aquaculture activity without a license. Licenses can only be granted to companies registered in the Faroese company register.

Each license has its production and stocking density limit depending on production conditions and sanitary and environmental conditions for the specific area based on an evaluation from the Faroese Food and Veterinary Authority [Heilsufrøðiliga Starvsstovan].

Maximum Allowed Biomass [MAB] for salmon farms varies between 1,200 tons and 5,800 tons a year per license, depending on site characteristics and the geographic location of the individual farm.

Allocation process

The application process

The Minister of Trade formally grants licenses, while applications for aquaculture licenses are administrated and coordinated by The Faroese Food and Veterinary Authority.

Licenses are issued in licensing rounds set by the Minister of Trade. An application for a license must describe the proposed operations, including a plan for complying with environmental and other applicable regulations.

The authorities then conduct a comprehensive assessment to determine whether the applied-for area can be approved for aquaculture farming activities. In addition, the local municipality and the nature preservation directorate must also grant necessary permissions for using the site for farming activities.

An applicant for a license must also obtain authorization from the Food and Veterinary Authority to operate, buy, build, restructure or expand an aquaculture farming facility.

Acquisition of license

Licenses are negotiable and can be traded between Faroese-registered companies. If a license is transferred, the acquirer succeeds in the rights and obligations attached to the license when it was initially granted.

Note that anti-trust regulations prevent companies from holding more than 50% of the total commercial seawater licenses. Restrictions also apply to foreign ownership.

Types of licenses

Licenses are, in general, divided into two main categories:

Commercial seawater licenses [salmonids]

Other farming licenses, including:

- Land-based farming
- Offshore farming
- Research and development [R&D]
- Broodstock production
- Farming of stocking fish

If new licenses are to be awarded, they may be awarded through auction.

Commercial seawater licenses

Commercial seawater licenses consist of a limited number of 20 licenses restricted to certain geographic areas [fjords] and species [salmon and trout].

There are no limits to the number of other farming licenses.

Land-based farming

License to conduct farming activities on land, both salmonids and other species, incl. algae, crustaceans and invertebrates.

Offshore farming

The Faroese Government is currently looking at potential areas in deeper and less sheltered waters that may serve for offshore farming purposes. An area east of the island of Nólsoy has been designated for R&D activities in offshore waters. However, currently, no offshore farming license has been awarded.

Research and development [R&D] licenses

R&D licenses are intended to motivate investment in new fish farming technologies. Currently, two geographic areas are designated for R&D activities, including land and sea-based farming of salmon and other salmonids, as well as other species, such as algae, crustaceans and invertebrates.

Currently, no one has applied for an R&D license

Broodstock production

License to conduct breeding processes in broodstock facilities and hatcheries/smolt. One fjord [Skopunarfjørður] is designated for broodstock purposes in the Faroe Islands.

Stocking fish

License to operate facilities to produce roe, brood or other early developmental stages, which are transferred to other aquaculture areas or other types of production.

Sites

Aquaculture activities are conducted across the Faroe Islands, both on land and sea, but mainly in brackish waters. As of January 1st 2021, aquaculture farming in fresh waters, i.e. rivers and dams, is no longer permitted.

Coastal areas

There are 20 commercial seawater licenses. Each license contains specific provisions about density limits, production, and sanitary and environmental conditions.

Landbased

Smolt, hatcheries. Each license contains specific provisions about production facilities and sanitary and environmental conditions.

Offshore aquaculture

No licenses have yet been granted for offshore [open water] farming.

R&D

Licenses are intended to motivate investment in new fish farming technologies, such as offshore farming.

Time limitations

Licenses are granted for up to 12 years and are renewable for an additional 12-year term. License holders must pay an annual fee of DKK 12,000 for each license.

Restrictions on ownership

There is a limit of 20 commercial seawater licenses [salmonids] in the Faroe Islands. However, there are no limits on the number of licenses for farming activities on land or farming of species other than salmonids.

Anti-trust regulations

Anti-trust regulations apply in the Fish Farming Act, which prohibits a single fish farming company from holding more than 50% of the total commercial seawater licenses [salmonids]. However, no anti-trust restriction applies to other types of farming licenses.

Limitations in foreign ownership

Limitations in foreign ownership apply to Faroese companies that hold commercial seawater licenses [salmonids].

These rules set a cap of 20% for either direct or indirect foreign ownership in Faroese fish farming companies which hold commercial seawater licenses [salmonids]. Suppose a fish farming company exceeds the limit. In that case, the company must adjust its ownership to be within the limit within a short deadline set by the authorities or face the possible loss of the right to conduct fish farming activities.

No restrictions are for foreign ownership in Faroese companies that hold other farming licenses, such as R&D licenses, offshore licenses and land-based farming.

Other restrictions

Licenses cannot be leased or rented out.

As of January 1st 2021, aquaculture farming in rivers, dams and freshwater lakes is no longer permitted.

Pledge of a license

Licenses can be pledged for financial purposes. Pledging of a license does not affect the authorities' power to take measures against the license holder, including revoking the license.

Withdrawal of licenses

Licenses may be withdrawn in cases of a material breach of conditions set out in the individual license or the aquaculture, veterinary or environmental legislation.

Possible scenarios are;

- preconditions on which the aquaculture license is based have changed,
- license conflicts with area plans and protection measures,
- bans or similar measures have been implemented, rendering the license unusable.

Licenses may also be withdrawn due to passivity; if licenses are not used or only used to a limited extent [2 years].

Consideration and fees

License holders must pay an annual fee of DKK 12,000 for each individual license.

Initiatives

New harvest tax

On 17 May 2023, the Faroese Parliament approved changes to the Harvest Tax Act in the Faroe Islands.

Previously the harvest tax was calculated using tax rates based solely on the average monthly price according to the Fish Pool Index. Depending on the average monthly price, the harvest tax could be calculated using three different tax rates of 0,5%, 2,5% or 5%.

The new method for calculating harvest tax is also based on the average monthly price according to the Fish Pool Index. However, instead of basing the tax rate solely on the average monthly price, the new method assigns the applicable tax rate according to an estimated monthly profit on gutted fish in kilos.

The authorities will publish estimated production costs twice annually to calculate the monthly profit. The estimated production costs, as published by the authorities, will be based on the annual and half-year reports from the farming companies.

Iceland

Description	Comment
Form of regulation	Maximum Allowed Biomass (MAB)
Time limitation	16 years, renewable
Restrictions on ownership	Lease or transfer not permitted without consent from Icelandic Food and veterinary Authority
Consideration/Fee	Registration fee Inspection fee, hourly rate Annual fee to fish farming environmental fund

Introduction

Operating licenses for aquaculture companies are granted by the Icelandic Food and Veterinary Authority (icel. Matvælastofnun) and the Environment Agency of Iceland (icel. Umhverfisstofnun) in accordance with:

- Act no. 71/2008 on Fish Farming and regulation no. 540/2020 (primary legislation).
- Act no. 58/2006 on Fishing Stock Growth (applies to freshwater where individual fishing takes place)

It is not permitted to engage in aquaculture in Iceland without an operating license. Before applying for an aquaculture operating license, there must be a decision made by the National Planning Agency (icel. Skipulagsstofnun), or even in some cases, by the relevant local government, that a project is not subject to an environmental assessment. If the project is subject to such assessment, the National Planning Agency then needs to produce an assessment of the project's environmental impact.

Form of regulation

The operating license must contain provisions on the size of the fish farm measured in Maximum Allowed Biomass (MAB) and whether it is juvenile farming, continuous farming, land farming, coastal farming or sea farming. The operating license shall also stipulate the permitted species on the farm and the permitted breeding stock. In cases where it is not possible to measure biomass exactly, with the authorization of the Icelandic Food and Veterinary Authority, a computational model can be used to estimate biomass so that the most accurate result is obtained.

In the operating license of fish farms on land, it must be stipulated that its validity is subject to the condition that the station is equipped with equipment that prevents fish from escaping from the rearing tank and equipment located in the drainage of the station that captures fish that escape.

In the operating license for sea-based aquaculture, the coordinates of the breeding area and the coordinates of the site within each defined breeding area must be specified. Coordinates must be longitude and latitude for layout on a nautical chart with an accuracy of at least one hundredth of a minute.

In sea farming, it must also be stated whether the farming is intergenerational or non-intergenerational. In the operating licenses for salmon farming, it must be stipulated whether fertile or sterile salmon are being farmed and the obligation to keep a record of the origin of farmed salmon, which is based on the genetic material database of the roe producer. If the license holder intends to farm both fertile and non-fertile salmon, the Icelandic Food and Veterinary Authority must issue separate operating licenses. The farming of sterile salmon must be kept separate from the farming of fertile salmon.



Allocation process

Before applying for an aquaculture operating license, there must be a decision made by the National Planning Agency (icel. Skipulagsstofnun), or even in some cases, by the relevant local government, that a project is not subject to an environmental assessment. If the project is subject to such assessment, the National Planning Agency then needs to produce an assessment of the project's environmental impact.

Operating licenses for aquaculture are granted by the Icelandic Food and Veterinary Authority (icel. Matvælastofnun) and the Environment Agency of Iceland (icel. Umhverfisstofnun). A license from both agencies must be collected.

The Icelandic Food and Veterinary Authority shall forward the application for a license for the farming of freshwater and marine organisms to the Environment Agency of Iceland for processing according to Act no. 7/1998, on hygiene and pollution prevention. Each agency shall notify the applicant whether the application is deemed satisfactory within one month of the application being received. When the Environment Agency has issued an operating license, it shall be sent to the Icelandic Food and Veterinary Authority. The Icelandic Food and Veterinary Authority shall deliver both operating licenses to the applicant simultaneously.

In the case of an application for a coastal zone license according to the Act on the Planning of Ocean and Coastal Zones where a proposal for coastal zoning plan has been advertised when the application is submitted, the license providers are permitted to postpone the processing of the license application until the coastal zoning plan has entered into force for the relevant area. However, the postponement shall not be longer than seven months unless in extraordinary situations.

Types of licenses

The types of licenses available are for juvenile farming, land farming, coastal farming or sea farming. The application process is the same for all types of licenses.

Sites

According to numbers from Statistics Iceland (icel. Hagstofa Íslands), salmon farming is the mainstay of all aquacultures in Iceland, or 90% of all aquacultures. Most of the juvenile farming takes place on land farms, while most of the salmon farmed for consumption are on sea farms.

As stated above any fish farming site needs to undergo an evaluation on whether an environmental assessment is needed. If the project is subject to such assessment, the National Planning Agency then needs to produce an assessment of the project's environmental impact

Time limitations

Normally operating licenses are granted for 16 years at a time. However, each license is subject to regular review by the Icelandic Food and Veterinary Authority.

Restrictions on ownership

Transfer, lease, and mortgaging of an operating license for fish farming without the written consent of the Icelandic Food and Veterinary Authority is not permitted. An application must be submitted to the Authority through its online platform. The cost for such a permit is based on the time incurred in processing the application (ISK 9,818 per hour). Such consent shall be registered with the relevant district magistrate office.

The Icelandic Food and Veterinary Authority shall reject the issuance of an operating licenses for sea farming that involves more production than the relevant sea farming area can withstand according to the capacity assessment. The capacity assessment shall be carried out by the Maritime Research Institute, or a party approved by the Ministry after receiving a binding opinion from the Maritime Research Institute.

Withdrawal of licenses

The licenses can be withdrawn under several circumstances:

1. If the fish farm has not begun operations in accordance with the business plan presented with the license application within 3 years from the issuing of the license.
2. If the fish farming operations are stopped for over 2 years.
3. If the license holder or his employees violate the provisions of law and regulations regarding fish farming.
4. If the license holder or his employees violate the terms of their operating license, or its conditions are otherwise not met.
5. If the license holder becomes unable to operate a legal fish farm or when farmed fish repeatedly escapes from a fish farm.
6. The Icelandic Food and Veterinary Authority is authorized to de-register a registered fish farm and refuse re-registration if a party is found to have neglected the requirements that apply to registration or otherwise violates the conditions and terms of the registration.

In most cases the licensee will be given a warning before the license is fully withdrawn.

Consideration

In order to obtain an aquaculture license, a registration fee must be paid when an application is submitted (ISK 500,693 - 1,551,165). Furthermore, a fish farm operator must regularly pay an inspection fee which is based upon an hourly rate of the inspector. Finally, each license holder must pay an annual fee to the fish farming environmental fund based on the type and amount of fish being farmed:

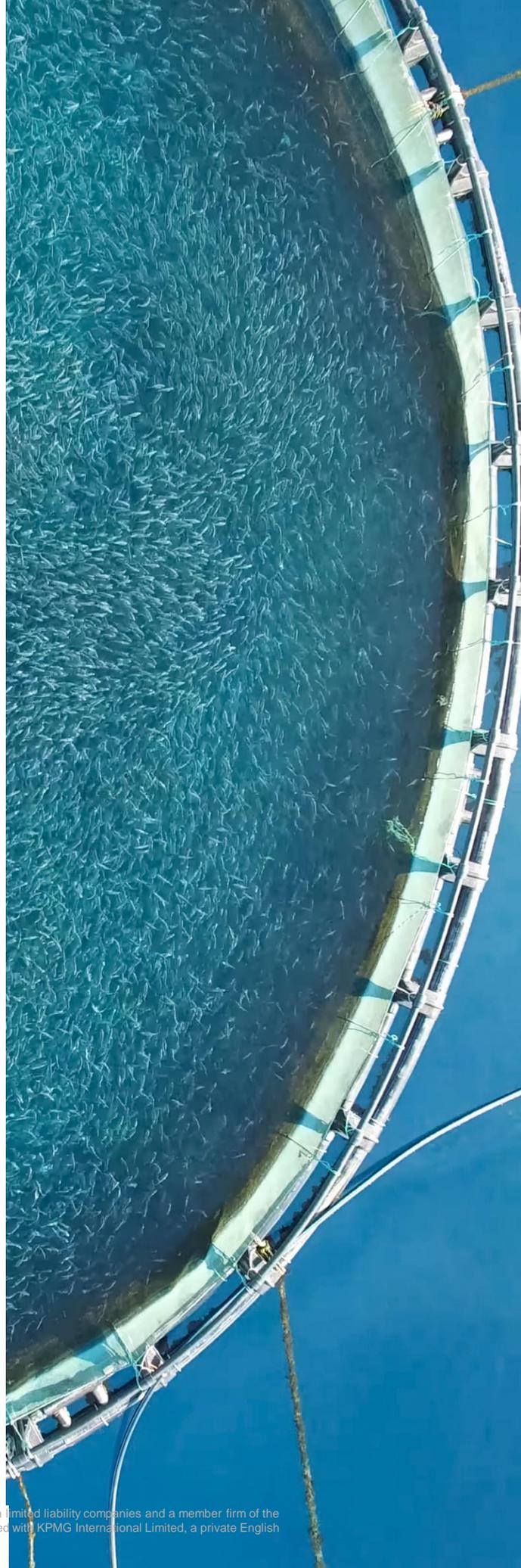
- For fertile salmon raised in sea farms the annual fee is 20 SDR (Special Drawing Rights) for each ton of Maximum Allowed Biomass (MAB).
- For sterile salmon or rainbow trout raised in sea farms the annual fee is 10 SDR for each ton of MAB.
- For fish farming in closed production (without ocean contact) the annual fee is 5 SDR for each ton of MAB.

Licenses cannot be mortgaged or pledged without written authorization (see above).

Initiatives

The Ministry of Food, Fisheries and Agriculture is responsible for the regimes surrounding fish farming. The ministry recently procured a report on the regulatory environment of fish farming around the world (specifically in the Nordic countries and Europe). The overall conclusion of the report was that aquaculture holds the potential to grow into a substantial part of the Icelandic economy, with base case scenario sales value correspond to ~6% of Icelandic GDP in 2032, jobs occupying ~3% of the Icelandic work force, and industry taxes and fees accounting for ~3% of total tax revenue.

On February 6th 2023 the Icelandic National Audit Office submitted a report on the governmental control and surveillance of fish farming in sea in Iceland. In short the report stipulates the need for the governmental control around fish farming to be strengthened with multiple suggestions to ministries and governmental institutions.





Ireland

Description	Comment
Form of regulation	<p>An Irish aquaculture license will generally set out:</p> <ol style="list-style-type: none"> 1. Exactly what species can be farmed. 2. The precise area in which aquaculture activity can be conducted. 3. The type of infrastructure allowed on the site and how it should be maintained. 4. What the Department of Agriculture Food and the Marine requires in terms of: <ul style="list-style-type: none"> • The operation of the site • Record keeping and official inspection by State authorities • Navigation and safety requirements • Fish Health, mortalities, escapes, movements & the use of pharmaceutical products
Time limitation	10 years, renewable
Restrictions on ownership	<p>An aquaculture license can only be assigned to another person/company with the consent of the Minister</p> <p>In general, aquaculture licences may not be sub-let, leased or sub-leased.</p>
Consideration/Fee	Application fee, application fee for renewal/review of existing licenses, no fee for Foreshore License application

Introduction

All aquaculture activity in Ireland requires an aquaculture license. In the case of the marine/offshore environment, a foreshore license for the area being farmed is also required. Land-based aquaculture activity requires both an aquaculture license and a valid authorization from the Local Authority (Planning Permission) to conduct the aquaculture activity.

In Ireland, the Fisheries (Amendment) Act 1997 deems it illegal to engage in aquaculture without an appropriate Aquaculture license.

Aquaculture licensing is administered through the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine («DAFM»).

Form of regulation

An Irish aquaculture license will generally set out:

1. Exactly what species can be farmed.
2. The precise area in which aquaculture activity can be conducted.
3. The type of infrastructure allowed on the site and how it should be maintained.
4. What the DAFM requires in terms of:
 - The operation of the site
 - Record keeping and official inspection by State authorities
 - Navigation and safety requirements
 - Fish Health, mortalities, escapes, movements & the use of pharmaceutical products

Allocation process

At the outset, the DAFM recommends an informal consultation with the Marine Engineering Division of the DAFM and a local Bord Iascaigh Mhara (BIM) representative. BIM is the Irish Government Body with responsibility for sea fishing and promotion of seafood. The DAFM notes that such meetings are useful and will help the identification of DAFM requirements with consequent savings in time and expense.

The DAFM has set out specific documents and drawings that must accompany an application:

- The proposed site layout, buildings and equipment will need to be designed to the DAFM's satisfaction
- The operation must comply with Local Authority requirements
- Applicants for Land based licenses must contact their Local Authority i.e. County Council to enquire if they require Planning Permission and a License to Discharge Trade Effluent.

The following must be supplied with an application for Land-based aquaculture:

- Sketch of a layout of the site in relation to the river(s), road(s), and building(s)
- Water Quality Analysis Report

The following must be supplied with an application for a Marine Finfish license:

- Integrated Pest Management Plan.
- Details of location and size of Site Structures.
- Detailed Farm Drawings including Site location map and site location chart, the farm plan layout, the proposed position, and orientation of structures within the site, nearby coastline, landmarks, features etc.
- Plan layout of the finfish farm showing the superstructure and sub-surface components of the farm relative to sea level – flotation rings or units, walkways, buoys, feed barge, top net supports, the mooring system layout, the expected anchor positions, seabed profile and relevant tidal information.

The DAFM will process the application in line with the prevailing Irish and European legislation. Briefly the process includes, assessing the application for completeness, an internal consultation process, statutory and public consultation processes including notices in national newspapers and police stations, compliance with legislation governing public access to information, production of an Environmental Impact Assessment («EIA») and finally the drafting of a recommendation to the Minister with regard to the aquaculture & foreshore license application.

Copies of the application form, the Appropriate Assessment, the DAFM's EIA screening document and Draft Conclusion Statement will be available for public viewing on the DAFM's website simultaneously.

Where an application for an aquaculture license is denied, the applicant may appeal to the Aquaculture Licenses Appeals Board.

Types of licenses

Whilst there is a similarity or common thread running between the various categories of aquaculture license, the DAFM has devised individual templates for specific aquaculture types. These include:

Marine Finfish Aquaculture Licenses.

In Ireland this effectively refers to salmon farming.

Land-based Aquaculture Licenses.

This refers to aquaculture activities conducted on land. It can include finfish such as trout or the production of smolts, shellfish or aquatic plants. A Planning consent is also required from the Local Authority.

Trial Aquaculture License.

This refers to a license that can be granted to facilitate the investigation of the suitability of a place or waters for aquaculture, or an activity forming part of an aquaculture operation. The license is granted for a maximum period of one year in the case of salmon and three years for other species. The license will only be considered in the marine environment (freshwater excluded) and cannot be renewed.

Sites

A significant proportion of aquaculture activity in Ireland occurs on the western and southern seaboard.

Many of these locations are within, or adjacent to, Natura 2000 sites which are environmentally designated areas under the EU Habitats and Birds Directives.

These sites have a special status in that the features (habitats and species) for which they are designated must not be allowed to deteriorate. Although the legislation does not exclude aquaculture activity from these designated areas, aquaculture activity is planned to ensure that any environmental risk posed can be appropriately assessed, and the scale and type of activity planned, so that the impacts if any, to the environment in the long term are mitigated.

The DAFM in conjunction with the Marine Institute has made arrangements for the production of Appropriate Assessments of the various bays as required. The function of the Appropriate Assessment is to determine if the ongoing and proposed aquaculture and fisheries activities for the area are consistent with the Conservation Objectives in place for the site or if such activities will lead to deterioration in the attributes of the habitats and species over time. The Appropriate Assessment may suggest that mitigation measures are required to protect the bay from potential adverse effects of the proposed aquaculture. It is important to note however, that an Appropriate Assessment conducted at a particular time reflects the proposed and ongoing activity in the particular bay at that time.

Applications made for aquaculture activity within an area that has already been Appropriately Assessed may require the production of an updated and revised Appropriate Assessment. This can be a time consuming and resource intensive process and may impact the timescale for determination of an Aquaculture License application.

Time limitations

An aquaculture license and the accompanying foreshore license generally last for 10 years. This is the case for all categories of aquaculture license with the exception of Trial Licenses which are granted for a maximum period of one year in the case of salmon and three years for other species.

An application for a renewal of the aquaculture license should be prepared and submitted well in advance of the expiration of the existing license. Even the most straight forward aquaculture license application will require the completion of a detailed form and up to date maps while a complex license application will take considerable time to complete and submit to the DAFM.

Where an application is made to renew an Aquaculture License the legislation currently allows for the continuation of aquaculture activity at the site pending the determination of the license but there is no guarantee that this concession will continue indefinitely.

Restrictions on ownership

In general aquaculture licenses are granted to the applicant. An aquaculture license can only be assigned to another person/company with the consent of the Aquaculture and Foreshore Management Division of the Department of Agriculture, Food and the Marine (Formally the Minister). Assignment is generally not allowed in the first three years except in exceptional circumstances.

The license holder can allow another person or company operate its aquaculture site. This scenario is generally not covered in the license conditions but regardless of who operates the site, the person to whom the license has been issued continues to be fully legally responsible for all aquaculture operations on the site as well as compliance with all conditions and payment of fees etc. to the DAFM.

There are no legal restrictions on foreign ownership of businesses in Ireland. However, it is likely that any foreign applicant for an aquaculture license in Ireland would need to demonstrate a tangible presence in Ireland which would have sufficient infrastructure and resources to manage the licensed aquaculture activity and site in compliance with the license conditions. This presence could be in the form of an Irish branch or subsidiary of a foreign entity.

In general, aquaculture licenses may not be sub-let, leased or sub-leased.

Withdrawal of licenses

Aquaculture licenses include conditions that oblige the license holder to comply with all other environmental legislation and protocols put in place by the Minister or the DAFM. Any failure to engage with and comply with this legislation may result in a withdrawal of the license.

Consideration and fees

The License holder shall pay to the Minister aquaculture license fees in accordance with the Aquaculture (License Application and License Fees) Regulations 1998.

Application Fees for an Aquaculture License or a Trial License are:

- For finfish culture, €634.87.
- Application Fees for the renewal or review of an existing Aquaculture License are:
- For finfish culture, €190.46.

This is a list of the current fees which may be subject to review. No distinction is made between land-based and marine-based sites for the above fees.

There is no fee charged for making an application for a Foreshore License.

In Ireland there are no legal restrictions on pledging or mortgaging aquaculture licenses. However, there are two reasons why this might not happen in practice:

1. The commercial value of a license may be uncertain
2. the legal enforceability of such charges would involve an assignment of the license in the event of a debt default. Such an assignment would require the consent of the Minister. This consent requirement may be a barrier to a lender in seeking to realise value from the aquaculture license.

Both these reasons mean that a lender may be reluctant to accept the pledge or mortgage of an aquaculture license as support for a credit arrangement.

Initiatives

A detailed review of the aquaculture licensing regime and application process was conducted in 2017 by an Independent Review Group commissioned by the Minister for Agriculture Food and the Marine. This Group concluded that the legislation governing aquaculture licensing was in urgent need of reform and made a number of recommendations to streamline the aquaculture licensing process as follows:

- a formalized pre-application process,
- extensive use of information technology and web-based systems,
- additional technical expertise,
- making processes more timely and effective through streamlining,
- issuing procedural guidelines for applicants, the public and staff,
- better public notification procedures and
- use of Ministerial Regulations where necessary

These recommendations are still under review by the DAFM.

The report from the Independent Review Group noted in particular the extended timeframe for processing of aquaculture licenses and compared the licensing regimes with those in Scotland, Norway and the Faroe Islands in particular.

At their Aquaculture conference in February 2023, the Irish Farmers Association launched their Aquaculture licensing guidance document "IFA Aquaculture – Best Practice Guidance & Information for Aquaculture licensing, Legislative responsibilities & Environmental objectives".



New Zealand

Description	Comment
Form of regulation	Fish-farm licenses are granted based on applications in a prescribe form with specifically requested information. There are no limitations on MAB or number of individuals.
Time limitation	14 years, with the possibility for renewal
Restrictions on ownership	N/A Can be renewed, transferred, carried on after death. No specific restrictions on foreign ownership.
Consideration/Fee	<p>Land-based and marine-based fish farm licenses are charged per hour for work done to renew, vary, or transfer a license, as well as an annual levy of NZ\$96.86 including GST.</p> <p>For new licenses, this would total to approximately NZ\$2,000. For a renewal, variation or transfer it would cost approximately NZ\$800.</p>



Introduction

There are several pieces of legislative and regulatory material collectively governing the allocation of aquaculture licenses and operation of land-based aquaculture:

- Resource Management Act 1991 (RMA);
- Freshwater Fish Farming Regulations 1983;
- Fisheries Act 1996;
- The Conservation Act 1987.

The RMA governs the water and land use consents required before obtaining a license. Its purpose is to promote the sustainable management of natural resources and outlines the involvement of local councils in granting the applicable land and water use consents.

The Fisheries Act provides governance powers to the Ministry of Primary Industries (MPI) over aquaculture in New Zealand. It also details the requirements of making aquaculture decisions, fish farming, aquaculture agreements and compensation declarations.

The Conservation Act relates more specifically to the species of fish that can be farmed and the regulations surrounding this. Adhering to these regulations is of particular importance given New Zealand's focus on maintaining conservation of its native flora and fauna.

The Freshwater Fish Farming Regulations outline everything that should be adhered to before a fish-farm license can be obtained from the Minister of Conservation. These regulations cover all aquaculture above the high tide mark.

Broadly, land-based aquaculture is managed by Ministry of Primary Industries (MPI) through the Freshwater Fish Farming Regulations 1983, under the Fisheries Act 1996. Generally, it is unlawful to engage in land-based aquaculture without a license.

Form of regulation

Fish-farm licenses in New Zealand are granted based on a variety of documents that must be submitted to the Director-General. The application must specify the following:

- The type of fish to be raised;
- The location and associated premises;
- Layout of all pond and buildings;
- Intake and outlet structures;
- Source and flow pattern of the water to be used; and
- Where applicable, where salmon are to be released and recaptured should ocean-ranching be used.

Licenses are based on satisfaction of these specifications, as well as adherence to land and water consent requirements under the RMA, and governance requirements under the Fisheries Act. Licenses are valid for 14 years and can be renewed provided all requirements under the above acts are adhered to and the proper renewal process is followed.

Licenses allow for breeding, hatching, cultivating, rearing, or on-growing. No license is required if farming is non-commercial.

Allocation process

The first step in applying for a fish-farm licensee is to ensure you have several approvals in advance of putting your application together. These are:

- Local Council Approval, i.e., Resource Consent.
- Proof of ownership or tenancy of the land.
- Registered as a Fisheries New Zealand client.
- Notice to your local Fish & Game Council (if proposing to farm a freshwater species).
- Notice to the Department of Conservation (if proposing to farm a freshwater species)

Or, in more detail, licenses for land-based aquaculture are provided after the following steps:

1. Resource consent must be obtained under the RMA for land and water use.
2. Notify fish and game council
3. Register with Fishserve
4. Apply for a fish-farm license.
5. Documents required:
 - a. Letter from council stating activity is permitted under Regional plan
 - b. Proof of ownership/tenancy of land
 - c. Registered as Fisheries NZ client
 - d. Notice to local Fish & Game Council and Department of Conservation if proposing to farm freshwater
 - e. Evidence water taken and discharged from proposed farm has local council approval
 - f. Evidence the farm is planned and will operate to principles of good farming practice
 - g. Evidence of qualifications, training and experience
 - h. Plan of farm
 - i. Evidence of other stat approvals
6. Decision and processing of applications
7. Process and decide within 3 months of receiving completed application
8. Includes assessing application, conducting pre-entry interview, FNZ or Ministry of Primary Industries (MPI) conducting site visit, seeking input from DOC and Fish & Game if freshwater.

Types of licenses

N/A to fishing of salmonids or land-based aquaculture.

Sites

- Chinook salmon are successfully farmed on a significant scale in NZ – in 2019, 64,000 metric tonnes of salmon was produced in NZ.
- Farming trout in NZ is illegal. This is for many reasons, including to protect NZ's natural biodiversity, avoid cross-breeding with NZ's native trout species, minimize the spread of diseases and parasites carried by trout, and preserve our freshwater ecosystems.

Locations:

- Sea cages in Marlborough Sounds, Akaroa Harbour and near Stewart Island. These make up the majority of salmon farming yields in NZ. For example, one of the Marlborough region's largest salmon farming companies (New Zealand King Salmon) produced around 9,500 metric tonnes of salmon in the year ending June 2020.
- Freshwater farming operations established in hydro canals and constructed raceways in Canterbury and Otago.

Time limitations

14 years, with the possibility of renewal.

Restrictions on ownership

In New Zealand licenses can be renewed, transferred and carried on after death as long as requirements for getting license granted are met.

Withdrawal of licenses

License holders can withdraw their licenses voluntarily.

Licenses are cancelled where a license holder is convicted of an offence under certain regulations of the Freshwater Fish Farming Regulations (as per regulation 36). These offences occur where a license holder breaches the conditions of one or several regulations.

Consideration and fees

Both land-based and marine-based fish farm licenses are charged per hour for work done to renew, vary, or transfer a license, as well as an annual levy of NZ\$ 96.86 including GST.

For new licenses, this would total to approximately NZ\$ 2,000. For a renewal, variation or transfer it would cost approximately NZ\$ 800.

There is no charge for cancellation of license.

Initiatives

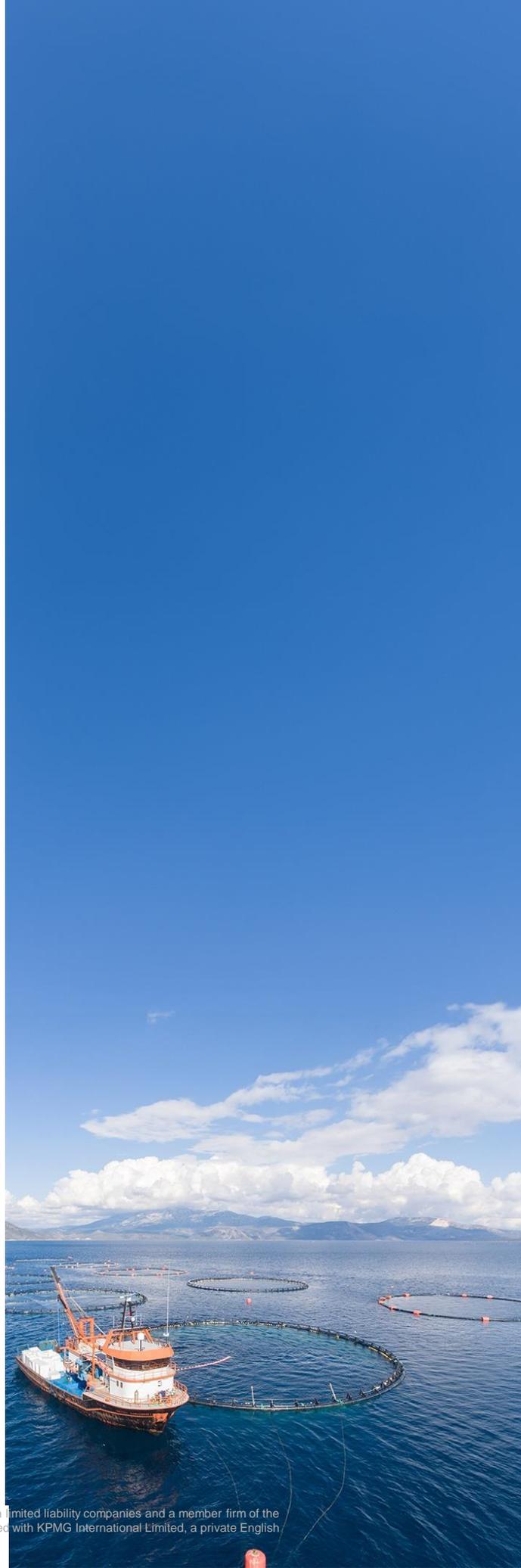
In the New Zealand Government “Aquaculture Strategy: 2022 implementation plan”, there are some key actions outlined that need to be met in order to become a sustainable, productive, resilient and inclusive \$3 billion industry by 2035.

New Zealand is going to start looking into open ocean aquaculture as a key opportunity for sustainable growth. Ministry of Primary Industries (MPI) has received independent advice which was commissioned on the investment needs required to progress this, and how the Government could support the development of this opportunity.

The “Aquaculture Strategy: 2023 implementation plan” has since been released. The plan details some key actions that have been achieved so far. Actions applicable to the aquaculture of salmonids include:

- The publication of [best management practice guidelines](#) for salmon farming in the Marlborough sounds (this is specific to the region and centers around environmental quality standards).
- Supported progress to date of an application for open ocean salmon farming in Murihiku, through the Covid 19 Recovery (Fast-track Consenting) Act process.
- Supported the consenting process for Aotearoa’s first open ocean salmon farm, in Cook Strait.
- Invested \$6.72 to develop a prototype for a land-based salmon farm including a trial of sockeye salmon farming, and \$249k to develop and test a methodology to breed more temperature resilient King salmon.

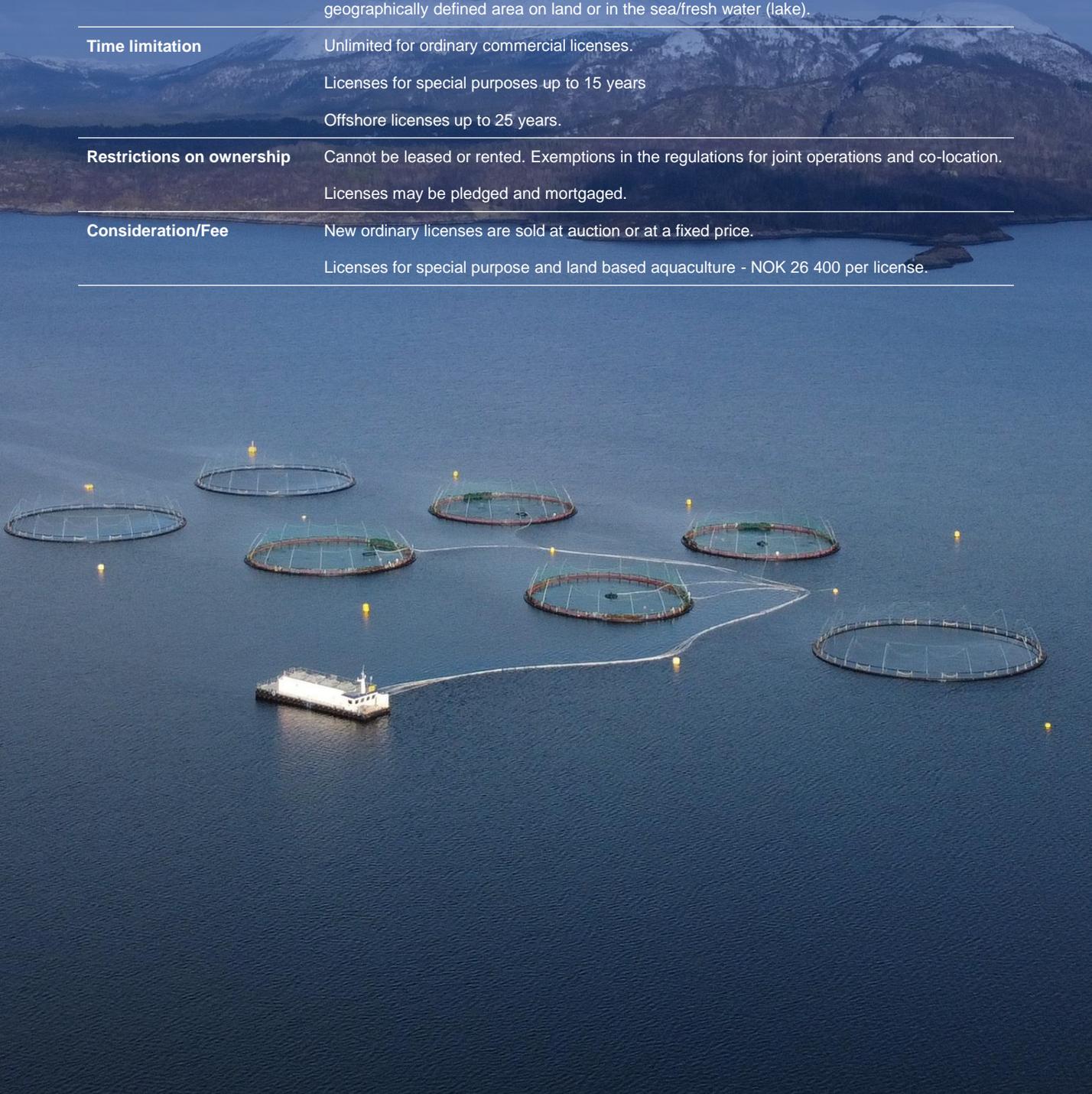
The strategy will be reviewed 2025.





Norway

Description	Comment
Form of regulation	MAB (maximum allowed biomass) of fish standing in the sea/water at all time in a geographically defined area on land or in the sea/fresh water (lake).
Time limitation	Unlimited for ordinary commercial licenses. Licenses for special purposes up to 15 years Offshore licenses up to 25 years.
Restrictions on ownership	Cannot be leased or rented. Exemptions in the regulations for joint operations and co-location. Licenses may be pledged and mortgaged.
Consideration/Fee	New ordinary licenses are sold at auction or at a fixed price. Licenses for special purpose and land based aquaculture - NOK 26 400 per license.



Introduction

Allocation of aquaculture licenses is regulated by several sectoral laws which are enforced by various government agencies. The Aquaculture Act forms the framework for the allocation process, while the sector laws specify requirements under the purpose of its law. The purpose of the Aquaculture Act is to promote the profitability and competitiveness of the aquaculture industry within the framework of a sustainable development and contribute to the creation of value along the coast.

According to the Aquaculture Act it is, as a general rule, illegal to engage in aquaculture production without a license. Aquaculture licenses are based on a Maximum Allowed Biomass (MAB) regime. This means that if you hold a license for a given number of tons MAB, you hold a right to have a given quantity (tons/kilograms) of fish in the sea.

Allocation process

Obtaining an aquaculture license is done in a two-step allocation process. Firstly, the Directorate of Fisheries grants a promise of license. A promise of license is not an operational license. Therefore, following a promise of license, the coordinating authority, currently the County Governor, processes the application for clearance of site (step 2), coordinating the application, involving necessary assessments and permissions from the following public authorities:

- The Norwegian Food Safety Authority
- The Norwegian Coastal Administration
- County Governor
- The Norwegian Water Resources and Energy Directorate
- The Directorate of Fisheries
- Municipalities

It is only after clearance of a site, that a decision granting the right to operate is made when issuing the license document. The license is, nevertheless, regarded as one license as aquaculture production may only be conducted when a promise of license is located to a specific geographical area.

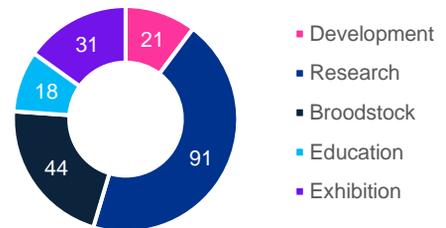
Types of licenses

About 80% of the granted MAB is allocated as “ordinary licenses”, meaning the production has to follow general regulations. However, there has been a few allocation rounds for ordinary licenses aiming to contribute to e.g. more sustainable aquaculture production and regional growth. This comprises licenses granted in 2009 aiming to increase local processing and fish health, and “green licenses” granted in 2013 aiming to reduce the risk of impact on wild salmon from sea lice and escape. Furthermore, in 2015 a 5% increase in license-biomass was granted to companies willing to undertake stricter conditions relating to sea lice. Regarding licenses for land-based aquaculture of salmon, trout, and rainbow trout, changes to the conditions for allocation has been submitted for public hearing due to an unclear demarcation line between aquaculture on land and in sea water.

A substantial part of allocated MAB is granted as different types of special purpose licenses, used for e.g., research, development and education. Additionally, some license types may only be used either only on land, or in exposed sea areas (offshore aquaculture).

Below is an overview of the distribution of licenses for special purposes:

Distribution of licenses (2022)



Application process, step 2

As the coordinating authority, the County Council processes applications for clearance of aquaculture sites. The municipality registers and publishes the application with a four-week consultation period for the public and clarifies the relationship with the municipality’s area plan. In addition, several authorities are involved to process the application according to their respective regulations. The application process is illustrated in the figure below



Development licenses

Development licenses were allocated as a risk relief to fish farmers to initiate the development of new production technology that entailed “significant innovation” and “significant investments”. After the development period, it is possible to convert the licenses to ordinary licenses.

Research

The purpose of the research licenses is to make room for research projects that can move the aquaculture industry forward. The license type is primarily reserved for universities, colleges, and research institutions at university/college level. In special cases, such license can be granted to other private or public institutions when the facility appears to be a necessary and integrated part of a research project. In such cases, it is assumed that the applicant presents a specific project with an indication of scope and duration. Binding agreement(s) entered into with external research institution(s) at university/college level that assume professional responsibility for the research in the license applied for must also be submitted.

Exhibition purposes (for the public)

In order to improve the public’s knowledge of the aquaculture industry, the Directorate of Fisheries has the option of granting exhibition licenses. The content of the viewing offer may vary, but the main point is to convey knowledge about the aquaculture industry.

Education

The education licenses must contribute to the educational institutions being able to offer attractive, realistic and qualitatively good teaching in practical aquaculture and aquaculture regulations and thereby contribute to the recruitment of personnel with relevant expertise for the aquaculture industry.

The licenses may be allocated to teaching institutions at university or college level, the County Governor for use in upper secondary schools, or private schools that have or plan to offer a teaching program that includes aquaculture. The teaching program must be approved by the Ministry of Trades, Industry and Fisheries, and lead to an offer of a diploma.

Fish park

Fish park licenses are allocated to run recreational and leisure facilities for the public.

Slaughter net cage

These licenses are only to be allocated to approved fish slaughterhouses for short-term storage of fish before harvesting.

Broodstock

When granting broodstock licenses an assessment must be made of the application where the purpose of producing roe and milk from disease-free fish with high breeding value or from special strains is central. Attention to profitable, competitive aquaculture industry and value creation along the coast must also be emphasized.

From July 1, 2021 there is a temporary stop in the allocation of licenses for fish park and exhibition, pending the aquaculture committee’s report (see “initiatives” section below).

Hatchery produced fish for stocking

Roe and fish produced with the aim of transfer for other locations or other types of production.

Sites

Most of the licenses are located on-land or in coastal areas. The sites in the coastal areas are placed in one of 13 production areas, where the so-called “traffic light system” sets the framework for the production, depending on the levels of sea lice in each production area.

Norway is currently in the process of locating the first aquaculture installations in exposed sea areas (offshore aquaculture), and a new license type for aquaculture in exposed seawaters has recently been adopted in the legislation. These licenses will be allocated in future allocation rounds, and the sites have to undergo extensive impact assessments related to suitability and environment.

Time limitations

Ordinary commercial licenses are granted for an indefinite time period (perpetual). Other licenses (special purpose licenses) are granted for a limited time period (see table below).

Type of license	Time limitation
Ordinary licenses	No time limitation
Hatchery fish	No time limitation
Exhibition	Max. 10 years
Education	Max. 10 years
Research	Max. 15 years
Broodstock	Max. 15 years
Slaughter net cage	Max. 10 years
Development	Max. 15 years, may be converted to ordinary commercial licenses.
Fish park	5 years
Offshore licenses	25 years

A committee has been appointed by the Government to review the current aquaculture license regime, and time limitation of new allocations is among the topics to be considered.

Restrictions on ownership

According to the Aquaculture Act licenses can be transferred. However, they cannot be leased. When assessing whether there is an illegal lease decisive importance is placed on whether the license holder has relinquished financial and/or administrative authority over the operation in such a way that the person in question no longer has full, real control and authority over the production. The regulations nevertheless allow co-location or joint operation with other aquaculture companies.

Withdrawal of licenses

Even though licenses normally are granted for an unlimited time, they may be withdrawn under certain circumstances.

In 2017 the so-called “traffic light system” entered into force in Norway, dividing the coastal zone into 13 production areas. Under the traffic light system, the MAB within each area is adjusted every two years based on a scientific assessment of the impact of sea lice on wild salmon. If the impact is acceptable, the MAB in the area can be increased by a maximum of 6%, and if unacceptable, the MAB is temporarily reduced by 6% until the condition in the area has improved. Licenses may also be withdrawn in the case of breach of regulations or terms, or due to passivity.

Consideration and fees

Consideration varies between the different types of licenses. Special purpose licenses and land-based licenses are allocated for a low administrative fee (NOK 26 400) based on strict criteria, and thus difficult to acquire.

In previous allocation rounds, licenses have been allocated based on a preset fixed amount or determined by the market through open or closed bidding. From 2017, ordinary licenses, have been allocated through the traffic light system giving fish farmers the opportunity to buy MAB at a fixed price or at auction. How much of the 6% growth, which is sold at fixed price or auction is decided by the Ministry of Trade, Industry and Fisheries every two years. The prices from the past two allocation-rounds follows in the table below (average weighted prices, numbers in NOK per tonnes MAB).

	2020	2022
Auction	219 760	154 158
Fixed price	156 000	100 000

The licenses are registered in the Aquaculture License Register, where also pledge may be registered.





Initiatives

There is currently an extensive investigation into the design of the Norwegian license regime. In October 2021, the government appointed a committee to review the license regime in the aquaculture industry and propose relevant changes. The Committee has a deadline to deliver its report by the end of September 2023. Important tasks for the Committee to consider are among others:

- the design of a comprehensive license regime, which considers the sustainable development of the aquaculture industry, including consideration of stocks of wild salmonids, and which facilitates value creation for society.
- whether and to what extent biosecurity considerations should be implemented in the license regime.
- evaluate the scheme for delimiting the licenses in MAB, and possibly propose changes in how licenses are delimited.
- whether future aquaculture licenses should be time-limited
- implementation and transition to a possible new system
- how a knowledge-oriented management of the aquaculture industry can take place in an efficient and coordinated manner.
- the need for, and possibly propose changes, to the Aquaculture Act, and possibly other laws that are affected by the proposals, including assessing whether simplifications can be achieved through harmonization with the Planning and Building Act, where applicable.

Environmental technology licenses

In addition to this, an initiative related to environmental technology licenses was introduced through a public hearing with a deadline in Environmental technology licenses

Further, an initiative related to environmental technology licenses was introduced through a public hearing with a deadline in January 2022. The regulations never entered into force. However, the Government has stated that a new proposal related to environmental technology will be presented by the end of 2023.



Scotland

Description	Comment
Form of regulation	Maximum Allowed Biomass
Time limitation	6 years (marine licences) Lease granted by Crown Estate generally granted for 25 years, generally automatically renewed.
Restrictions on ownership	May be transferred No restriction on foreign ownership
consideration/Fee	<ul style="list-style-type: none"> • Rent per kg amount fish harvested to Crown Estate • Planning permission applications are charged at £183 per 0.1 hectare of farm surface area and £63 per 0.1 hectare of seabed. • CAR license subject to application and annual fee. • Marine License is subject to an application fee.

Legislative framework

The legislative framework surrounding aquaculture activity in Scotland is vast and includes the below Acts and regulations:

- Marine Scotland Act 2010
- The Aquatic Animal Health (Scotland) Regulations 2009
- The Crown Estate Act 1961
- The Water Environment (Controlled activities) (Scotland) Regulations 2011
- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011
- The Conservation (Natural Habitats, &c.) Regulations 1994
- The Aquaculture and Fisheries (Scotland) Act 2013

The various Acts above regulate the different licenses and authorisations required for an operator to undertake aquaculture activities in Scotland.

As a general rule, it is illegal to engage in aquaculture production without the necessary licenses and authorisations which are outlined in a later section below.

Form of regulation

Regulation of aquaculture in Scotland is largely done in the form of self-regulation where the operators must produce reports to the various authorising bodies. The reports must illustrate that they are maintaining the standards prescribed by the body. In addition to self-regulation, inspections by the various bodies are also common.

For example, The Controlled Activity Regulations (CAR) licence issued by the Scottish Environmental Protection Agency (SEPA) can be withdrawn if you fail to meet water control standards. This will involve inspections as well as the requirement for the operator to undertake regular studies of the effect of the farm on the seabed.



Types of licences

There are several licenses and authorisations set out below that a prospective operator must obtain to operate an aquaculture business in Scotland.

- Since 1 April 2007 all new fish and shellfish farm development in Scotland has required planning permission by the relevant local authority under the Town and Country Planning (Scotland) Act 1997.
- To apply to have your fish or shellfish business authorised, you need to apply to Marine Scotland Fish Health Inspectorate (MSS-FHI) for authorisation of an Aquaculture Production Business form and the Aquatic animal holding site details form under The Aquatic Animal Health (Scotland) Regulations 2009.
- Before you install marine farm equipment, you will need a marine license from Marine Scotland Licensing Operations Team (MS-LOT) under the Marine Scotland Act 2010.
- Waste from fish farms (such as faeces and chemicals) can collect on the seabed under fish cages. To make sure this does not cause too much damage to the environment, you are legally required to apply to the Scottish Environment Protection Agency (SEPA) for a Controlled Activities Regulations (“CAR”) license under The Water Environment (Controlled activities) (Scotland) Regulations 2011.
- The Crown Estate owns and manages practically the entire seabed around the UK out to a distance of 12 nautical miles. Anyone who develops or operates in UK territorial waters is doing so on Crown Estate property. As a result of this, you have to apply for a lease from The Crown Estate and pay rent to install and operate your farm on the seabed under The Crown Estate Act 1961.
- You may be required (mainly for Finfish operations) to have an Environmental Impact Assessment conducted by the relevant local authority under the The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011.
- You may be required to have an appraisal conducted under the Habitat Regulations if it is deemed necessary. The regulations are prescribed by the The Conservation (Natural Habitats, &c.) Regulations 1994 and its amendments.

Currently there is no single body who preside over all the stages noted above, so once all the necessary licenses and authorisations have been obtained, the operator will have the green light to proceed with the relevant project.

This is perceived by some as one of the major weaknesses of the Scottish aquaculture licensing regime when compared to other countries such as Norway. A clear process of the licensing regime in Norway can be found efficiently using the relevant regulatory bodies website. This is not the case in Scotland as guidance can be inefficient to find, given the number of regulatory bodies.

Acreage structure

The Maximum Allowed Biomass (MAB) for individual sites is determined based on an assessment of environmental concerns, including the localised assimilative capacity of the benthos and water column of the local marine environment to be able to accommodate the fish farm. There are also limits on the spatial extent of the impact mixing zone around farms.

More accurate modelling techniques which were introduced following SEPA's 2019 regulation report have allowed for the approval of larger farms (>2500 tonnes per site) which previously would not have been possible. This has helped to narrow the gap between the larger sites available in Norway which are generally have a MAB of between 2,340 and 4,680 tonnes.

Each local Planning Authority has specific guidance related to applying for planning permission to develop a fish farm. Therefore, the need to consult the specific guidance relevant to the location the operator is interested in is essential. A link to the various location specific guidance has been provided in the last section of this report.

Time limitations

Marine licences granted for a marine farm are valid for up to 6 years and licensees are required to apply to MS-LOT at least two months prior to the expiry of an existing marine licence.

Authorisation may be granted for a limited period only and will be reviewed by SEPA when deemed necessary, but at least once in every four years. When an authorisation is reviewed, it may be renewed, amended or revoked.

A lease granted by the Crown Estate is generally granted for 25 years and generally are automatically renewed at the end of the lease period.

Restrictions on ownership

A CAR license can be transferred to another person or organization by submitting an application to transfer a license. Transfers do not incur a fee.

A marine license can be transferred by request through the online case management system. The fee for completing this will vary based on the complexity of the transferred required.

You can assign a lease granted by the Crown Estate to another party for example if you are selling your business by using the assignment letter template.

Withdrawal of licenses

Generally, non-compliance with the regulations that surround each license will result in it being revoked.

Scottish Ministers may revoke an authorisation by serving an operator with a written notice where it considers that an Aquaculture Production Business (APB) has not complied with a condition of its authorisation or a requirement under The Aquatic Animal Health (Scotland) Regulations 2009.

MS-LOT may vary, suspend or revoke a marine licence if it appears that there has been a breach of any of the licence provisions; or if it appears that the applicant supplied information that was false or misleading, or the applicant failed to supply information that might reasonably have been expected to be supplied.

A CAR licence issued by SEPA can be withdrawn if you fail to meet water control standards.

Consideration

The rent on a lease granted by the Crown Estate is based on the per kilo amount of fish harvested. More details can be found on Crown Estate Scotland's website.

Planning permission applications are charged at £183 per 0.1 hectare of farm surface area and £63 per 0.1 hectare of seabed.

A CAR license is subject to an application fee as well as an annual fee. The application fee is tailored to the specific application. The annual fee is based on an activity component, environmental component, and a compliance factor. Further details can be found in the Environmental Regulation (Scotland) Charging Scheme 2018.

A Marine license issued by MS-LOT is subject to an application fee based on the cost of the licensed activity. Further details can be found in the Marine Licensing (Fees) (Scotland) Regulations 2011.

Initiatives

A "Review of the Aquaculture Regulatory Process in Scotland" by Russel Griggs OBE was commissioned by the Scottish Government and published in February 2022



Comparative tables

Form of regulation

Country	License required	Form of regulation
Chile	Yes	The purpose of the aquaculture concession or authorization/license is to carry out aquaculture activities in the designated area related to the species or group of hydrobiological species indicated in the resolution or authorization and allow to the concessionaire to carry out aquaculture activities, with no other limitations than those expressly established in the law and regulations.
Faroe Island	Yes	Maximum allowed biomass (MAB) from 1 200 to 5 800 tons a year per license.
Iceland	Yes	Maximum allowed biomass (MAB)
Ireland	Yes	An Irish aquaculture license will generally set out: <ol style="list-style-type: none"> 1. Exactly what species can be farmed. 2. The precise area in which aquaculture activity can be conducted. 3. The type of infrastructure allowed on the site and how it should be maintained. 4. What the Department of Agriculture, Food and the Marine requires in terms of: <ul style="list-style-type: none"> - The operation of the site - Record keeping and official inspection by State authorities - Navigation and safety requirements - Fish Health, mortalities, escapes, movements & the use of pharmaceutical products
New Zealand	Yes	Fish Farming Licenses are granted based on applications in a prescribe form with specifically requested information. There are no limitations on MAB or number of individuals.
Norway	Yes	Maximum allowed biomass (MAB)
Scotland	Yes	Maximum allowed biomass (MAB)

Time limitation

Country	Years	Renewables
Chile	25 years	Yes
Faroe Island	12 years	Yes
Iceland	16 years	Yes
Ireland	10 years	Yes
New Zealand	14 years	Yes
Norway	No time limitation for ordinary licenses. 5- 15 years for licenses for special purposes. Offshore licenses 25 years.	Offshore licenses and licenses for special purposes may be renewed.
Scotland	6 years for Marine Licenses Lease granted by Crown Estate generally granted for 25 years	Yes, lease granted by Crown Estate generally automatically renewed.

Restrictions on ownership

Country	General restrictions	Restrictions on foreign ownership ^(a)	Lease permitted	Can be transferred
Chile	No person may apply for aquaculture concessions representing more than 20 % of the total concessionable area of a region.	Yes	N/A ^(b)	Transfer of an aquaculture license application and all contract related to exploitation by third parties of a no-granted aquaculture concession is prohibited. Aquaculture license shall be transferable and generally subject to business but only once they have been granted.
Faroe Island	A Faroese company cannot hold more than 50% of the total commercial seawater licenses.	Yes	No	Yes
Iceland	N/A ^(b)	N/A ^(b)	Lease not permitted without consent from Icelandic Food and Veterinary Authority	Transfer not permitted without consent from Icelandic Food and Veterinary Authority
Ireland	N/A ^(b)	Non	In general, aquaculture licenses may not be sub-let, leased or sub-leased.	An aquaculture license can only be assigned to another person/company with the consent of the Minister
New Zealand	Can be renewed, transferred, carried on after death.	Non	Yes	Yes
Norway		Non	No	Yes
Scotland		Non	^(c)	Yes

- Note:
- (a) In the review, we have focused on limitations in the special legislation for aquaculture. The overview therefore does not include information on restrictions that follow from the country's general corporate law
 - (b) N/A means that the column is not relevant, that we have not received information on relevant restrictions to confirm the information with certainty. For more information we refer to the information under each specific country.
 - (c) See detailed information under Scottish chapter

Consideration & Fees

Country	Annual Fee or rent	Application Fee	consideration	May be pledged or mortgaged ^(a)	Description
Chile	Yes	N/A	No	Yes	<p>Holders of aquaculture license must pay annually an aquaculture patent of UTM 20 (approx. USD 1550) per hectare.</p> <p>For aquaculture licenses of less than one hectare, the above patent will be paid in the corresponding proportion</p>
Faroe Island	Yes	No	No	Yes	DKK 12 000 per license
Iceland	Yes	Yes	No	Requires consent from the Icelandic Food and Veterinary Authority	<p>Application fee, inspection fee, annual fee.</p> <p>In order to obtain an aquaculture license, a registration fee must be paid when an application is submitted (ISK 500 693 – 1 551 165)</p> <p>Furthermore, a fish farm operator must regularly pay an inspection fee, which is based upon an hourly rate of the inspector. Finally, each license holder must pay an annual fee to the fish farming environmental fund based on the type and amount of fish being farmed, (see Icelandic chapter for more details).</p>
Ireland	N/A	Yes	No	Yes	<p>Application Fees for an Aquaculture License or a Trial License are EUR 634.87 for finfish culture, and fee for the renewal or review of an existing aquaculture license are EUR 190,46.</p> <p>There is no fee charged for making an application for a Foreshore License.</p>
New Zealand	N/A	Yes	No	N/A	<p>Land-based and marine-based fish farm licenses are charged per hour for work done to renew, vary, or transfer a license, as well as an annual levy of NZD 96,86 including GST.</p> <p>For new licenses, this would total to approximately NZD 2 000. For a renewal, variation or transfer, it would cost approximately NZD 800.</p>

Note: (a) Not a relevant issue to most of the countries due to the license value
 (b) N/A means that the column is not relevant, that we have not received information on relevant restrictions to confirm the information with certainty. For more information we refer to the information under each specific country.

Consideration & Fees (cont.)

Country	Annual Fee or rent	Application Fee	Consideration	May be pledged or mortgaged *	Description
Norway	No	Yes	Yes	Yes	<p>Auction or fixed price for ordinary commercial licenses</p> <p>Licenses for special purpose NOK 26 400 administrative fee.</p> <p>In addition, several inspection fees apply.</p>
Scotland	Yes	Yes	No	Yes	<p>Rent to Crown Estate based on per kg amount fish harvested.</p> <p>Planning permission applications are charged at GBP 183 per 0,1 hectare of farm surface area and GBP 63 per 0,1 hectare of seabed.</p> <p>CAR license subject to application and annual fee</p> <p>Marine License is subject to an application fee.</p>

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