

# PLAYERS AT PLAY



## COUNTRY PROFILE: FRANCE



This project has received funding from the European Union's EASME-EMFF funding programme under grant agreement EASME/EMFF/2017/1.2.1.12/S2/04/S12.789391.



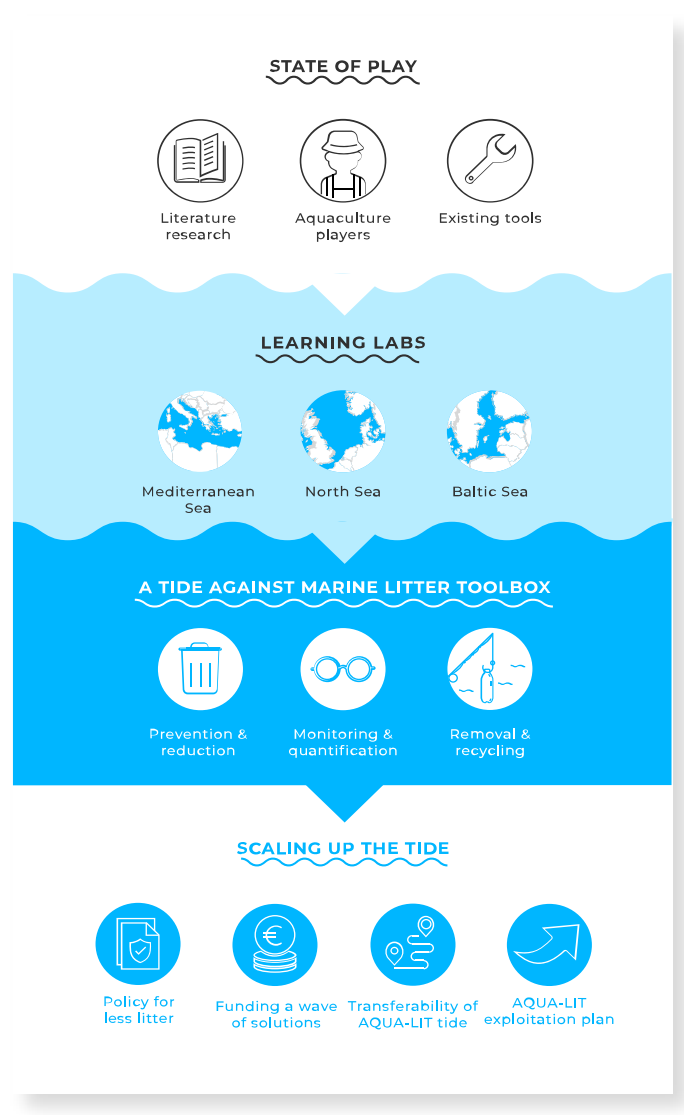
# AQUA-LIT project

**AQUA-LIT** is an EASME-EMFF funded project that aims at providing the aquaculture sector with a sustainable **toolbox** of innovative ideas and methodologies to address the 3 main components of marine littering: **prevention & reduction, monitoring & quantification, and removal & recycling.**

To fulfill this mission, we will be working face-to-face with aquaculture farmers in three **regional Learning Labs**: at the **Mediterranean basin, the North Sea and the Baltic Sea regions.** In parallel, we will identify and cluster existing, upcoming and already implemented tools on marine littering, and we will further **develop a platform and an app** for providing the **'Tide against marine litter toolbox'**.

Lastly, we will **'scale up the tide'** by developing the **'policy for less litter'** set of recommendations, by showcasing the **'funding a wave of solutions'** available for the sector and by coming up with a **transferability plan for outermost regions.**

Through this, we expect to help all stakeholders from the aquaculture chain to increase the understanding, awareness and availability of solutions, so a potential **transformation of the aquaculture sector towards a less polluting sector** can become possible.



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## Project Consortium



Geonardo Environmental Technologies  
**(GEO)**



European Centre for Information on Marine  
Science and Technology **(EurOcean)**



Vlaams Instituut voor de Zee -Flanders  
Marine Institute- **(VLIZ)**



Sustainable Projects GmbH **(s.Pro)**



Instituto Español de Oceanografía -Spanish  
Institute of Oceanography- **(IEO)**



Société d'Exploitation du Centre National  
de la Mer - French National Sea Centre in  
Boulogne-sur-Mer- **(Nausicaa)**



Fundo Regional para a Ciência e Tecnologia  
-Regional Fund for Science and Technology-  
**(FRCT)**



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## AQUA-LIT country profiles

The AQUA-LIT country profiles present a description of the different aquaculture stakeholders, categorised by the four different stages in the life cycle of an aquaculture farm: 1) Initiation, 2) Development, 3) Operation and 4) End of life.

The country profiles were compiled for the two most extensively studied countries in each of the three sea basins of the AQUA-LIT project: Italy and Spain in the Mediterranean Sea, Belgium and France in the North Sea and Denmark and Germany in the Baltic Sea.

The country profiles resulted from various stakeholder engagement processes carried out during the project: the [interactive workshops](#) as well as individual stakeholder interviews. More information on the contributions from the aquaculture stakeholders can be found in the Learning Lab reports of the [Mediterranean Sea](#), the [North Sea](#) and the [Baltic Sea](#).

The country profiles can also be consulted in the annex of the [Knowledge Wave on Marine Litter from Aquaculture Sources](#).



# FRANCE

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## Initiation

**Bodies approving the aquaculture technologies (classification and certification bodies)**

### *Regulations and standards*

In terms of installations, French operators of marine aquaculture facilities, except shellfish farms, with a producing capacity over 5 tonnes of fish per year, must comply with the regulations of Classified Installation/Facility for the Protection of the Environment ([ICPE - Installation Classée pour la Protection de l'Environnement](#)) defined by decree of 20 May 1953, Art. 44 of decree of 21 September 1977, and amended. They must request an authorisation before putting their farm into service and prove that the farm and operations meet the technical measures for prevention of environmental risks and nuisances defined in general prescriptions and regulations.

Marine finfish farms of more than 20 tonnes / year of production need two operating licenses: (i) under the Authorisation to Exploit Marine Cultures (Autorisation d'exploitation de cultures marines - AECM), aimed at ensuring that the site and the use of public maritime domain for operations respect the constraints of general interest; (ii) under the regulation of Classified Installation for the Protection of the Environment (ICPE). If the first necessitates a simple application from, the second requires a very complete dossier, which includes operating information, a full impact study, a natural hazard study and a health and safety notice.

The assessment of conformity with the ISO (International Organisation for Standardisation) international standards, standardisation and certification delivery are performed in France by accredited certification bodies and members of the International Accreditation Forum (IAF) such as Comité Français d'Accreditation. In relation to aquaculture installations and management, there exist the following ISO certifications:

- ISO TC/207 Environmental Management - Standardization in the field of environmental management systems and tools in support of sustainable development;
- ISO TC/234 Fishing and Aquaculture - Standardization in the field of fisheries and aquaculture, including terminology, technical specifications for equipment and for their operation, characterisation of aquaculture sites and maintenance of appropriate physical, chemical and biological conditions, environmental monitoring, data reporting, traceability and waste disposal;
- ISO TC/38 Textiles - Standardization of fibres, yarns, threads, cords, rope, cloth and other fabricated textile materials; and the methods of test, terminology and definitions relating thereto; textile industry raw materials, auxiliaries and chemical products required for processing and testing; specifications for textile products. In the fishing and aquaculture industry this relates to fishing and fish breeding materials such as netting, netting yarns, hanging, breaking force, mesh, etc.;

- ISO/DIS 22948 - Carbon footprint for seafood – Product category rules (CFP-PCR) for finfish;
- ISO 16488:2015 Marine finfish farms — Open net cage — Design and operation.

### *Labels and certifications*

In France, the certification is overseen by a public institution [Agence française pour le développement et la promotion de l'agriculture biologique](#) (Agence Bio). In order to market products as organic, any operator (whether producer, distributor or importer) must be audited by a certifying body approved by the National Institute of Origin and Quality (Institut National de l'Origine et de la qualité - INAO ) and have the corresponding certificates. There are several institutes that offer certification and audit services according to national standards and EU regulations. They are: Afnor, Bureau Veritas, Ecocert, CertipaqBio, CetiSud, Certis, Biotek Agriculture, Eurofins, QualiSud and others.

The certification institutes such as e.g. [Bureau Veritas](#) offer certification, auditing and testing services that support aquaculture operators in meeting the certification requirements that govern food production (according to EC Regulations No. 834/2007 and 889/2008) and propose the certification services according to the following main standards:

- [Certification “Agriculture biologique” or “AB-Agriculture biologique,” i.e. organic food label \(commonly known as « Bio » in France\)](#) for aquaculture products and marine algae according to the European regulations. The requirements involve a set of production standards for growing, storage, processing, packaging and shipping such as: avoidance of synthetic chemical additives (e.g. fertilizers, pesticides, antibiotics); avoidance of genetically modified seed and organisms, use of farmland free from prohibited chemical inputs; adhering to specific requirements for feed, housing, and breeding of livestock; separation of organic products from non-certified products; keeping production and sales records (audit traceability); and undergoing periodic on-site inspections;
- Certification GLOBALG.A.P. (G.A.P: Good Agricultural Practice) according to «Food plus » frame of reference. The certification can apply to 3 production types: crops, livestock, aquaculture; and consists of over 40 standards. The GlobalG.A.P. Aquaculture standards apply to the entire production chain of farming fish, crustaceans and molluscs, and cover food safety and traceability, animal health and welfare, workers’ health, safety and welfare, environmental and ecological stewardship, quality management, hazard analysis and social accountability;
- Ecolabel ASC (Aquaculture Stewardship Council) applies to the entire chain of custody. A product can bear the ASC ecolabel only if all companies along its supply chain (processors, traders, importers, retailers, etc.), from production to final point of sale, possess the ASC Chain of Custody certification. To be certified according to the ASC standard, operators must comply with a set of requirements covering: planning, development and operation of aquaculture production systems;
- [«Friend of the Sea»](#) accreditation and certification. The [requirements](#) are: environmental management of the company; control of monitoring systems and measurement of environmental footprint parameters every six months; control and maintenance of infrastructures every six months; readiness for environmental emergencies and capability to address them, alert systems in case of exceptional atmospheric events including yearly simulations; management of corrective measures

including the correction of nonconformities and recommendations within at least 6 months from the detection or notification of the non-conformity;

- Recommendations by [Mr.Goodfish programme](#) on feed, farming practices and environmental impact;
- [Label Rouge by Institut National de l'Origine et de la Qualité](#). The Label Rouge is a national certification which designates products which, by their conditions of production or manufacture, have a higher level of quality compared to similar products on the French market;
- Charte Qualité – Aquaculture de nos Régions® of the French Interprofessional Committee for Aquaculture Products (Comité Interprofessionnel des Produits de l'Aquaculture – CIPA). The charter brings together the commitments of fish farmers in terms of quality and conditions for raising freshwater and seawater fish with the aim to ensure freshness, traceability and well-being of fish products.

### *Other names and titles*

- Appellation d'Origine Contrôlée (AOC);
- Indication Géographique Protégée (IGP).

### **Aquaculture installations, system designing & engineering companies**

In the aquaculture equipment supply value chain, there are several system designing, engineering and equipment manufacturing companies of different sizes on the French market and the list here below is not exhaustive. Some of them sell only their own products while others also sell goods produced elsewhere. There are also distributing companies that offer equipment and accessories made in France and abroad. Some of them specialise in aquaculture and fishery equipment while others supply other industries as well. No information has been found about the origin of the composite materials and other parts used by the manufacturing companies for their products.

The installation, system designing and engineering companies can be classified by the type of products into providers of:

### *Mooring systems*

- [Aqua-Module](#), modular floating platforms, and light buoys;
- [Rotax marine](#) offers modular pontoons, floats, mooring buoys, beacon buoys and floating cages.

### *Cages, ponds, tanks, storage and transport containers*

- [EMYG Living Seafood Chain](#) is an engineering company specialising in the treatment and purification of water in closed-loop circuits (over 350 installations in France and worldwide). Based on the INNOPURE® technology and applications, EMYG Environment & Aquaculture created the Living Seafood Chain to store and ship live shellfish and crustaceans;
- [AME environnement](#) proposes eco-friendly energy options for commercial sites;

- [Maillard Industrie](#) designs and manufactures custom-made plastic equipment and installations and offers tailored services of plastic collection, sorting, transportation and processing, depending on type, state of cleanliness and volume of plastic debris. The Maillard Industry has a plastic grinding and recycling plant with capacities to process large pieces of plastic up to 3000 x 1400 x 1200 mm. The plant collects and processes articles in PEHD, PEBD, PP, ABS, ABS/PMMA, ABS/TPU and PS Choc from France and Europe;
- [SeaTech France](#) manufactures storage equipment for shellfish aquaculture, offers equipment maintenance and installation custom-design services, and trainings for users;
- [Polyway](#) manufactures standard and custom-made tanks for finfish and shellfish incubation, reproduction, hatchery, nursery and on-growing stages;
- [Bac Cousin](#) designs containers;
- [Art Pro Composite](#) manufactures containers, transport tanks and sorting tables in polyester for finfish aquaculture;
- [Aquaculture Freelance Expertise](#) provides bioreactors and culture tanks, oximeters for algae cultivation;
- [REA Plasnet](#) provides equipment for storage, arrangement, handling, preparation in plastic resin, rustproof, unalterable, rot-proof, and compliant with HACCP (Hazard Analysis Critical Control Point) standards. They are resistant to corrosion (humidity, salt, acids, etc.). Temperature resistance ranges from -40 ° C to + 80 ° C;
- Other: [DN France Solutions](#) , [a2cp14](#) , [Rototec Plastic technique](#).

### *Nets*

- [Tremail](#) produces fishing and aquaculture (seine) nets;
- [Roudier Yves](#) a leader in fishing net production in France;
- [Larrieu Frères SAS](#). manufactures nets and ropes;
- [Diatex \[www.diatex.fr\]\(http://www.diatex.fr\)](#) offers filtration nets, underwater pred-nets for fish farming, nets for oyster farming and fishing nets.

### *Feed systems*

[Teraqua](#) designs and manufactures automated feeding systems for fingerlings and fish rearing taking into account efficiency of feed management and reduction of energy consumption. Every system is designed according to the configuration of the site and the specifications of the operator and connected to a feeding management software. TERAQUA also proposes a complete range of feed storage silos in polyester and designs systems of control / management of water quality onsite and in transportation, electronic weighing and counting systems of the biomass, all types of electrical cabinets intended for aquaculture activities, from aerator cabinets to a large range of power cabinets for various aquaculture processes. It also distributes handy instruments: oximeters and ph meters.



## *Aquaculture technology*

### Analyses and measures

- [Bioceanor](#) sells AquaREAL, an underwater autonomous cloud-based system for real-time and predictive monitoring of water quality;
- [Anhydre](#) sells testers, instruments and analysers for monitoring fresh and marine waters (field devices, online monitoring devices, probes, photometers, data centralization, measuring buoys, remote transmission stations) and provides consulting services, control and regulation;
- [Allcat Instruments](#) sells portable measuring instruments for water analysis: pH meters, conductivity meters, TDS, temperature and hygrometry meters;
- [Aqualabo](#) offers digital sensors to measure water quality (pH, oxygen, temperature, REDOX, conductivity and turbidity) and to control water level and volume, remote management equipment to control water renewal, air compressors, food distributors, aerators, etc., and instrumented buoys for remote monitoring of water quality in the installations at sea;
- Other: [GEDO-Sondes](#) , [ATC Mesures](#) , [PCE Instruments France](#) , [HANNA Instruments](#) , [FEDIST](#) , [Aqua-tools](#) , [Bionis](#) , [Izitec](#) , [Moineau Instruments](#) , [Cifec](#) , [C.C.F. Technologies](#).

### *Other equipment, accessories and services*

- Faivre is a French company and one of the world leaders in the conception, manufacture and production of aquaculture machines. Faivre produces drum filters, fish graders, fish counters, fish pumps, aerators, leaf screeners and diffuser pipes for markets in Europe, North and South Americas, Australia, Asia and Middle East.
- Coopérative Française d'Aquaculture C.O.F.A. , a co-operative association specialises in the distribution of aquaculture equipment and accessories such as handling containers, fish pumps, graders, transport tanks, clothing, drilling equipment, analysis and water treatment material, filtration, feeders, weighing equipment, landing nets, boats, hydraulic systems and fish tags.
- Calitri Technology manufactures fish and fry counters.
- Mulot SAS is a world leader in producing equipment for the shellfish industry: grinders, elevators, conveyors, elevators, packing machines, washing equipment and pumps.
- Plavitex France SAS and Aquavitex sell protective clothing for professionals.
- Gantois Industries produces metallic sheets, woven mesh and wire mesh.
- Hectron , Profilter , Filtres Fournier , ERM Environnement , Polymem , Acui-T , Aqua-tools , Kaeser , Promofiltres , Gantois Industries provide filters.
- SeaToYou provides software AquaManager, OstreOn et AquaTracker.
- i@qua provides software Novafish and iShrimp, i.e. management systems for feed distributions, analysis of physicochemical parameters, treatments, mortalities, sorting and transfer, hatchery and forecast modules.
- BYS RCS produces oyster pockets and accessories, long lines, buoys, tubular nets, cotton thread, yarn, cords, knives, pliers, pallet boxes, sterilizers and pumps for shellfish farms.
- EED , Chabot SAS , RCA and SDEEC provide pumps.
- Other: Aerzen , Aqualor , AquaRhéak ,SAS Agriline , Diatex , Etang Solutions ,Fox , Frans-Bonhomme , Field and Fish , Groupe Filpack , Inter coop production , Mapro France ,

Monetang , Novair Industries , Oxyplus Technologies , SDBF Distribution , SmartAqua , Taso.

Except [Maillard Industrie](#), no information about the engagement of the above listed organisations in circular design options, the LCA approach, Systems Approach and projects related to aquaculture, prevention of marine litter and litter/waste management has been found.

Source: <https://www.aquaculteurs.com/materiels.php>

## **Authorities approving the aquaculture farm (i.e. public authorities)**

### *Institutional framework*

The main authority in charge of aquaculture in France is the Ministry of Agriculture and Food ([Ministère de l'Agriculture, de l'Alimentation](#)). The Ministry is in charge of preparing, evolving, implementing and enforcing the Government's policy on marine fisheries, fish and shellfish farming and fresh water farming.

The Directorate of Marine Fisheries and Aquaculture (Direction des Pêches Maritimes et de l'Aquaculture - DPMA) operates within the Ministry and is responsible for the management of the aquaculture sector. The DPMA is composed of 2 divisions: the division of fishing resources and the division of aquaculture and fishing economy. The DPMA governs finfish and shellfish (shellfish, mussels and oysters) farming activities. It negotiates with professional organisations of the sector, oversees interprofessional organisations and manages public funds.

The National Committee of Fisheries and Marine Farming ([Comité National des Pêches Maritimes et des Elevages Marins](#) -CNPEM) assembles professions of the sector of fisheries and marine farming and represents the general interests of fishermen before national and community authorities. It participates in the management of the marine living resources and is consulted on regulations for management of these resources (finfish, shellfish and marine plants). The CNPEM may adopt regulations for overseeing certain fisheries and impose them on all professionals concerned. It consists of 12 autonomous and independent regional committees and 13 departmental and interdepartmental committees.

The National Committee for Shellfish Farming (CNC - [Comité National de la Conchyliculture](#)) represents shellfish farmers, processors and distributors and their interests. It is an essential interlocutor of public authorities on regulations concerning shellfish farming. The Committee proposes, participates and leads actions relating to management of shellfish market, coastline protection, defence of water quality, health standards, legislation, scientific and technological research, promotion of shellfish products, education and training, information, and public relations. The Committee depends on the Ministry of Agriculture and Food (Ministère de l'Agriculture, de l'Alimentation). Membership in the Committee is mandatory for all shellfish producers.

Regional Committees for Shellfish Farming (CRC - [Comités Régionaux de la Conchyliculture](#)) represent the shellfish professionals of their territorial area. Their members are appointed by a prefectural order.

The establishment of aquaculture facilities on private land requires the granting of an authorization, whereas a concession is necessary for the use of state-owned waterbodies. Applications must be addressed to the Departmental or Inter-Departmental Directorate of Maritime Affairs (Directeur Départemental ou Interdépartemental des Affaires Maritimes) or the Departmental Directorate of Territories and the Sea (DDTM - Direction départementale des territoires et de la mer), a local authority attached to the Ministry. Depending on the cost, size or location of the aquaculture project, the procedure may involve a public enquiry, as per Annex to Decree No.85-453 implementing Law No.83-630 concerning the democratization of public enquiries and the protection of the environment. The advice of the following authorities is required: tax authority, local health service and consumer protection service, Ifremer, concerned Municipal Authorities and relevant professional organizations. The final opinion is given by the local Commission for Marine Aquaculture (Commission des cultures marines), which is vested with administrative and regulatory powers. The concession is then issued by the prefect of the relevant department. There is a Commission for Marine Aquaculture chaired by the prefect in every constituency. It is consulted on projects aiming at the extension or decrease of public domain assigned to marine farming, on projects of development or redevelopment of marine farming zones situated in the constituency, on the structure outline of marine farms, on draft decisions concerning authorisation for marine farming, water intake and floats. The opinion of [Ifremer](#) is disclosed to the commission before it adopts its final decision.

French Institute for Research and Exploitation of the Sea ([L'Institut Français de Recherche pour l'Exploitation de la Mer – Ifremer](#)), supports marine farming to optimise production and product quality in the perspective of sustainable development.

Applications for the use of marine waters to set up an aquaculture farm on a private property must be filed with the Prefect, by the landowner or tenant.

No Environment Impact Assessment (EIA) procedure is required for the setup of shellfish farms. Only marine aquaculture farms over a certain size are subject to the EIA procedure defined in the Environmental Code – Book I.

Other public institutes and agencies that may play a role in the aquaculture sector are:

- National Centre for Scientific Research ([CNRS - Centre National de la Recherche Scientifique](#));
- Executive Agency for Environment Management ([ADEME - L'Agence de l'environnement et de la maîtrise de l'énergie](#)),
- National Agency for Research Promotion ([ANVAR - L'Agence nationale de valorisation de la recherche](#));
- French National Institute for Agricultural Research ([INRA - L'Institut national de la recherche agronomique](#));
- French National Research Institute for Development ([IRD - L'Institut de Recherche pour le Développement](#)) in overseas territories);
- French agricultural research and international cooperation organization ([CIRAD - Le Centre de coopération internationale en recherche agronomique pour le développement](#)) in overseas territories;

- National Research Institute for Environment ([IRSTEA - Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture](#));
- National Institute for Agriculture and Sea Products ([FranceAgriMer - Etablissement National des Produits de l'Agriculture et de la Mer](#)).

### *Governing regulations*

The French general legal framework is based on European law and specific laws managed by individual member states of the European Union. The key European laws relevant to aquaculture are:

- Rules 1263/1999 and 2792/1999 related to financing;
- Rule 1685/2000 related to the selection of eligible projects as well as various decrees and circulars related to the processing of structural funds and specialised grants for aquaculture sector development including peripheral areas;
- Common Fisheries Policy;
- Common Agriculture Policy.

French aquaculture is ruled by two main sets of legislation separating inland and marine aquaculture. Inland fisheries legislation applies to inland aquaculture (pisciculture continentale), whereas mariculture/marine farming (élevages marins, cultures marines) is regulated by marine fisheries legislation. Specific provisions are made with regard to shellfish farming (conchyliculture), as opposed to marine fish farming (pisciculture marine).

Inland aquaculture is regulated by the Environmental Code (Code de l'Environnement), Book IV, Title III on inland fisheries and fishery resources management– sections L431-432 and R231-232).

Marine aquaculture must abide by marine fisheries legislation:

- Law No.97-1051 on Maritime Fisheries and Mariculture ([Loi 97-1051 d'Orientation sur la Pêche Maritime et sur les Cultures Marines](#)) (1997);
- Decree of January 9th, 1852 on Maritime Fisheries (and amends) explicitly extends the applicability of its provisions to the farming of marine animals and plants;
- Decree No.83-228 (1983) establishes the authorization system for marine aquaculture, defines marine farms as enterprises intended for biological production purposes, including capture, cultivation, processing, storage, conditioning and shipping of marine products.

A functional definition is found in the Environmental Code, section L431-6, where fish farming is defined as: raising of fish intended for consumption or repopulation, or for scientific, experimental or tourism-related purposes.

All types of aquaculture are included in the definition of rural activities by the Rural Code (L311-1): "Rural activities are those involving the control and exploitation of the biological cycle of a plant or animal, and consisting of one or several steps within the development of such cycle, as well as the activities deriving from production or based on such exploitation, that are carried out by a farmer. Marine farming is considered as a rural activity, despite the social status of

those performing it.” This implies the application to aquaculture of a whole set of regulations originally designed for agricultural activities, including in particular those relating to public aid, labour rights and financial benefits:

- The articles L 912-6 of the Code of Rural Development and Marine Fishing ([Code Rural et de la Pêche Maritime](#)) rule the National Committee of Marine Fisheries and Marine Farming (Comité National des Pêches Maritimes et des Elevages Marins -CNPEM);
- Law No.91-411 (1991) concerning the interprofessional organization of marine fisheries and aquaculture, and the organization of shellfish culture rules the CNC and CRCs;
- Decree No.91-1276 (1991) regulates the functioning of interprofessional shellfish farming organizations;
- Decree No.92-335 (1992) regulates the functioning of the National Committee for Fisheries and Marine Farming, as well as the Regional and Local Committees for Fisheries and Marine Farming;
- Fisheries Law of 1997 clarifies the double nature of marine farming, defining it as a rural activity on the one hand, and including aquaculture vessels in a new navigation category on the other. These provisions respectively amend the Rural Code and Law No.42-427 concerning Maritime Navigation Titles;
- Decree n°2011-1701 (2011) regulates functioning of shellfish interprofessional organisations;
- The Code of Rural Development and Marine Fishing, Book IX (Code Rural et de la Pêche Maritime, Livre IX) about marine fisheries and aquaculture regulates:
  - Commission for Marine farming (title I/chapter IV/section 2);
  - Structure of marine farms (title II/chapter III/section 1/sub-section 2);
  - Conditions for applying for marine farm concessions (title II/chapter III/section 2/sub-section 2);
  - Examination and concession grant procedures (title II/chapter III/section 2/sub-section 3),
  - Concession operating conditions (title II/chapter III/section 2/sub-section 4),
  - Renewal, substitution, exchange and transfer of concession (title II/ chapter III/section 2/sub-section 5);
  - Modification, suspension, revoking and vacancy of concessions (title II/ chapter III/section 2/sub-section 6);
  - Particular cases relating to authorisation or concession (water intake, floats, etc) (title II/ chapter III/section 2/sub-section 6).

Aspects concerning environmental impact studies are regulated by the Environmental Directive ([Code de l'Environnement](#)) which itself is mandatory for certain types of aquaculture projects (especially salmon farms, farms which produce over 2 tonnes or which have a water surface larger than 3 hectares or which hold extension requests).

Water use is regulated under Book II, Title I of the Environmental Code.

Sources:

- <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000751904>

- <https://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006071367>
- <https://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006074220>
- [http://www.fao.org/fishery/countrysector/naso\\_france/en](http://www.fao.org/fishery/countrysector/naso_france/en)
- [http://www.fao.org/fishery/legalframework/nalo\\_france/en](http://www.fao.org/fishery/legalframework/nalo_france/en)
- <https://archimer.ifremer.fr/doc/2004/rapport-2188.pdf>
- <https://aquaculture.ifremer.fr/les-Filieres/Filiere-Algues/Presentation>

### *Environmental Impact Assessment - IEA*

The Environmental Impact Assessment system is regulated by Book I of the Environmental Code and Decree No.77-1141 implementing article 2 of Law No.76-629 on the Protection of Nature ([Décret No.77-1141 pris pour l'application de l'article 2 de la loi No.76-629 du 10 juillet 1976 relative à la protection de la nature](#)) (1977, and amends). The Environmental Code (Book II) establishes a protocol for the Environmental Impact Assessment of inland aquaculture. After receiving an application for an authorisation or a concession to set up an inland aquaculture farm, the Prefect requests an Environmental Impact Study (*étude d'impact*) or the Environmental Impact Notice (*notice d'impact*). The study is mandatory for the following aquaculture projects:

- Salmon farms,
- Aquaculture farms with scientific or experimental purposes,
- Fish farms with an annual production exceeding 2 tonnes or with a water surface over 3 hectares,
- Fish farms intending to extend their production or surface to or over thresholds.

An environmental notice is required for any other type of aquaculture facility.

The public enquiry preceding the preparation of the Environmental Impact Study is led by a commission to be nominated by the President of the Administrative Court. It must include:

- An analysis of the initial state of the site and its surrounding environment;
- An analysis of the direct and indirect, temporary and permanent effects of the project on the environment;
- The reasons for the setting up of the project;
- The mitigation, elimination or compensation measures proposed by the applicant;
- An analysis of the methods used to assess the project's impact;
- A non-technical summary of the information presented in the study for public use.

The report of the public enquiry must present all counter-proposals, if any, made by interested parties during the enquiry and the response of the applicant.

The Environmental Impact Notice must identify possible impacts on the environment and determine the conditions under which the project can avoid them. No public enquiry is required.

With regard to marine aquaculture, Decree No.77-1141 implementing article 2 of Law No.76-269 concerning the protection of nature provides that an EIA is only required for farms considered as classified installations. Decree No.53-578 establishing the categories of Classified

Installations/Facilities for the Protection of the Environment ([Décret n° 53-578 du 20 mai 1953 modifié relatif à la nomenclature des installations classées pour la protection de l'environnement](#)) (1953, and amends) specifies that shellfish farms are entirely exempt from the procedure, whereas marine aquaculture facilities with a producing capacity over 5 tonnes of fish per year are subject to the classified installations regulations. Consequently, the described EIA process is only applicable to the latter.

The Classified Installations system is a procedure established to deal with environmental concerns. The construction of facilities, which may cause nuisance to the neighbourhood or affect health, security, cultural and archaeological heritage, agriculture or the environment, is subject to an authorisation or a declaration, depending on the significance of such effect. This procedure, managed by the Prefect, applies to both marine and inland aquaculture, and is regulated in Book V of the Environmental Code (L511 and L512) and Decree No.77-1133 implementing Law No.76-663 concerning classified installations for the protection of environment ([Décret No.77-1133 du 21 septembre 1977 modifié pris pour l'application de la loi No.76-663 du 19 juillet 1976 relative aux installations classées pour la protection de l'environnement](#)) (1977, and amends). [Decree No.53-578](#) establishing the categories of classified installations requires an authorisation for the following activities:

- Freshwater salmon farming, with a producing capacity over 10 tonnes/year;
- Freshwater fish farming (excluding salmon farming and extensive pond aquaculture, with little or no feeding), with a producing capacity exceeding 20 tonnes/year;
- Marine fish farming, with a producing capacity exceeding 20 tonnes/year.

A simple declaration is required for:

- Freshwater salmon farming, with a producing capacity over 500 kg/year, but below or equal to 10 tonnes/year;
- Freshwater fish farming (excluding salmon farming and extensive pond aquaculture, with little or no feeding), with a producing capacity over 5 tonnes/year, but below or equal to 20 tonnes/year;
- Marine fish farming, with a producing capacity over 5 tonnes/year, but below or equal to 20 tonnes/year.

Sources:

- <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000518520>
- [https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000497189&cat](https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000497189&categorieLien=cid)  
[egorieLien=cid](#)
- [http://www.fao.org/fishery/countrysector/naso\\_france/en](http://www.fao.org/fishery/countrysector/naso_france/en)
- [http://www.fao.org/fishery/legalframework/nalo\\_france/en](http://www.fao.org/fishery/legalframework/nalo_france/en)



## Development

### Those constructing, bringing, assembling the farm

There are several design, engineering and development offices in France. They provide services such as feasibility studies and analyses, plan development, design, engineering, construction project management, site supervision, assistance in starting up installations, audit and training. Some of them are: [CHF Aquaculture](#) , [Idée Aquaculture](#) , [AquaRhéak](#) , [LuxAqua](#) , [Aqualog](#) , [SmartAqua](#) , [Via Aqua](#) and [Cofrepeche](#) .

## Operation

### Aquaculture producers and operators

Number of aquaculture farms in metropolitan France:

- Shellfish farming - including seaweed and shrimps: 2432
- Marine fish farming and sturgeon: 35
- Continental salmonids farming: 268

Source: France AgriMer, [The Fisheries and Aquaculture Sector in France, April 2019, after](#)

There are four main production sectors: seaweed and molluscs, which take their feed directly from their natural environment (phytoplankton for molluscs; dissolved matter for seaweed), and fish and crustaceans, which require targeted feeding (pellets). On the Atlantic coast the offshore aquaculture farms, shellfish and seaweed production are concentrated in Brittany and the Bay of Biscay. Some examples are:

### Finfish

- [La Ferme Marine de Douhet](#) (FMD) is one of the biggest hatcheries in Europe for the production of juveniles of the sea-bream *Sparus aurata*. Its annual production is approximately 25 million juveniles and a billion eggs. It is located La Brée-les-Bains on the Oleron island.
- [Aquanord](#) (Gloria Maris Group) is leader of sea bass *Dicentrarchus labrax* (Label Rouge, Friend of the Sea, Certifié Agriculture Biologique) and sea bream *Sparus aurata* Aquaculture de nos Régions , Friend of the Sea, Certifie Agriculture Biologique ) production. It produces 1800 tons of fish a year in land-based ponds facing the North Sea, according to demanding quality standards. Aquanord fish were twice selected for the Bocuse d'Or in 1995 and 2001. Aquanord obtained the Origine France Garantie certification and the Aquaculture de nos régions label. It is located in Gravelines.
- [France Turbot](#) (Gloria Maris Group) specializes in turbot *Psetta maxima* hatchery, fingerling production, turbot enlargement and packaging for marketing. It produces nearly 15 million fry. Its turbot enlargement activity represents a capacity of 200 tons of annual production. Products are reared in on-land pens, harvested, packaged and commercialized based on strict standards that comply with exclusive Label Rouge (Red Label) specifications. Other certifications are Origine France Garantie, Certifié Agriculture Biologique and Globalg.A.F. France Turbot is located on the island of Noirmoutier in Vendée and has a production site in Trédarzec in Côtes d'Armor.
- [Ferme marine du Trieux](#) in Pampol is specialised in the production and smoking of rainbow trout *Oncorhynchus mykiss*, also known as *Salmo gairdneri*. It is one of the four



sea trout farms in France and the only one known for processing the fish by smoking on the premises. Every year, the offshore installations are dismantled as soon as the fish have been harvested at the end of the season and brought on land for maintenance. They are landed with the help of the current. The cages are made up of walkways and oak bows connected by galvanized steel hinges. Their buoyancy is ensured by polystyrene boxes. The entire system of three cages has been produced by the Ferme Marine du Trieux and, as of now, it has served 31 seasons at sea.

- [Symbiomer](#) in Pampol produces rainbow trout associated with seaweed farming of sea lettuce *Saccharina latissima* according to their own technology patented Symbiomer (e.g. supply of feed supplements based on algae to stimulate fish immune defence system, recycling of natural waste from fish farming in seaweed culture). Symbiomer also harvests shore algae *Laminaria digitata* and fishes scallops.

### *Shellfish*

- Les Claires de "Bonsonge", Marennes (oysters, shrimp and clams)
- SARL Huitres Courdavault Alain, Dolus D'Oléron (shrimp and oysters)
- SCEA la perle Est/Ouest de Normandie, Grandscamp-Maisy (oysters)
- BERTHELOT Frédéric, Port de la pelle, les Grottes, Marsilly (mussels – moules de bouchots)
- DURIVAUD SARL, Charron (mussels – moules de bouchots)
- [SARL Culture Marine](#), Thierry BLANC, Pointe du Chichoulet, Vendres (mussels and oysters)

### *Seaweed*

- [Biocean](#)
- C Weed Aquaculture, Saint-Méloir-des-Ondes

### *Aquaponics*

Agriloops

Source: <https://www.aquaculteurs.com/producteurs.php>

### *Pilot projects*

#### [Aquaponic management project](#)

[Epurval](#) aims at experimenting innovative systems to reduce the impact of fish farming activities and to recover waste.

### **Associations representing aquaculture producers and operators**

Professional organisations

- AAAC: Association des Astaciculteurs et Aquaculteurs de la Charente ;
- AADPPMFEDLA: Association Agréée Départementale des Pêcheurs Professionnels Maritimes et Fluviaux en Eau Douce de Loire Atlantique ;

- ADAPRA: Association pour le Développement de l'Aquaculture et de la Pêche en Rhône-Alpes ;
- AFPPE: Association Française des Professionnels de la Pisciculture d'Etangs ;
- APCA: Les Chambres d'Agricultures;
- Aquatruite du Nord: Syndicat des pisciculteurs du Nord, Nord Pas-de-Calais et Picardie ;
- AVAQ: Association française des vétérinaires aquacoles ;
- CEDEPA: Aquaculture écologique, Centre d'Etudes pour le Développement d'une Pisciculture Autonome ;
- CIPA: Comité Interprofessionnel des Produits de l'Aquaculture;
- CCSR: Club de la Charte des Salmonidés de Repeuplement;
- CNC: Comité National de Conchyliculture;
- ETANGSDEF: Étangs de France représente les structures regroupant les propriétaires et gestionnaires d'étangs;
- FAGE: Filière Aquacole du Grand Est;
- FFA: Fédération Française d'Aquaculture;
- FFPC Filière Française Poissons, Coquillages et Crustacés;
- FEAP: Fédération Européenne des Producteurs Aquacoles;
- FRAPC: Fédération Régionale de l'Aquaculture du Poitou-Charentes;
- FRGDS: Fédération Régionale des Groupements de Défense Sanitaire - Poitou-Charente - Section Piscicole ;
- FSF: Fédération des Spiruliniers de France;
- FTNF: Filière Truite du Nord de la France : Syndicat des Pisciculteurs de la Région Nord;
- GDSAA: Groupements de Défense Sanitaire Aquacole d'Aquitaine ;
- OFIMER: Office National des Produits de la Mer et de l'Aquaculture;
- SDAPF: Syndicat pour le Développement de l'Aquaculture en Polynésie Française;
- SFAM: Syndicat Français de l'Aquaculture Marine et Nouvelle;
- SPPA: Syndicat Professionnel des Producteurs d'Aliments Aquacoles;
- SPSO: Syndicat des Pisciculteurs du Sud-Ouest;
- SRC: Les Sections Régionales de la Conchyliculture ;
- SYPAGUA: Syndicat des Producteurs Aquacoles de Guadeloupe;
- SYSAAF: Syndicat des Sélectionneurs Avicoles et Aquacoles Français ;
- UNIMA Union des marais de la Charente Maritime;
- UNPF: Union Nationale pour la Pêche en France et la Protection du Milieu Aquatique.

Source : <https://www.aquaculteurs.com/professions.php>

[FranceAgrimer](#) (L'Établissement national des produits de l'agriculture et de la mer, FranceAgriMer) is a public administration body which implements technical and financial, national and European support systems and manages market regulation measures.

[CIPA - Comité Interprofessionnel des Produits de l'Aquaculture](#) (The Interprofessional Committee for Aquaculture Products) assembles three main national associations/professional groups

- Producers: fresh water and marine farmers represented by the French Federation of Aquaculture (FFA - Fédération Française d'Aquaculture);

- Feed producers represented the Professional Union of Aquaculture Feed Producers (SPPA -Syndicat Professionnel des Producteurs d'Aliments Aquacoles);
- Processing companies represented by the Association of Trout Processors (ATT- Association des Transformateurs de Truite).

The French Aquaculture Federation (FFA - Fédération Française d'Aquaculture) is the national fish farming association. FFA is a member of the [Interprofessional Committee for Aquaculture Products](#) (CIPA) that was created in 1997.

In each administrative region of the country, aquaculture is supported by specialised development agencies (for example [Smidap](#) in Pays de Loire, [Cepralmar](#) in Languedoc-Roussillon, [Arda](#) in La Réunion, etc.), these agencies provide support in several areas including: research priority selection, financial support to companies and new projects, co-financing of doctorates, etc.

In the French overseas territories, the general recommendations for mainland France have to be adapted to local conditions.

### **Aquaculture maintenance and monitoring**

The Directorate of Marine Fisheries and Aquaculture (Direction des Pêches Maritimes et de l'Aquaculture - DPMA) operating within the Ministry of Agriculture and Food monitors the economic situation of the aquaculture sector (fish, shellfish, oyster and mussel farming), ensures that the regulations are followed up, oversees interprofessional organisations and manages public funds.

The National Committee of Fisheries and Marine Farming ([Comité National des Pêches Maritimes et des Elevages Marins](#) -CNPEM) may adopt regulations for overseeing certain fisheries and impose them on all professionals concerned.

## **End of life**

### **Those dismantling the farm installation**

According to Art .34-1 of Decree No.77-1133 implementing Law No.76-663 concerning Classified Installations for the Protection of Environment ([Décret No.77-1133 du 21 septembre 1977 modifié pris pour l'application de la loi No.76-663 du 19 juillet 1976 relative aux installations classées pour la protection de l'environnement](#)) (1977, and amends), the aquaculture operator of a classified installation is under obligation to take measures of site restoration such as the evacuation or elimination of dangerous products and waste present on site and the depollution of potentially polluted soil and groundwater after the cessation of activity. They must place the installation site in such a state that it cannot harm the interests of neighbourhood, health, security, agriculture, nature conservation, environment, landscape, energy use and conservation of historical monuments and archaeological heritage and allow for the future use of the site and monitor the impact of the installation on its environment, if needed.

In their application form for an aquaculture concession, the applicant is required to describe how they will deal with drifting nets, cages of other material worn out by rough weather conditions. They are required to specify the maximum period within which they will alert

authorities about the incident, search public assistance, how they will locate the drifting wreckage, the risks that the drifting wreckage may cause to maritime transportation before it can be buoyed, and how they will tow it to the nearest coast.  
<http://repositorio.iica.int/bitstream/11324/4130/3/BVE17089189f.pdf>

### **Those managing/governing the waste management**

Waste management in France is determined by the state that sets the policy and regulatory framework in accordance with European Directive 2008/98 / EC.

The waste management including waste and litter generated by aquaculture activities is governed by:

- [EU Directive 2008/98/CE relating to waste management](#)
- Law n° 2015-992 (2015) about energetic transition towards green growth (La loi n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte (LTECV))
- [Article L. 541-1-1 of Environmental Code \(Code de l'environnement\)](#)

The [Ministry of Ecologic and Solidary Transition \(Ministère de la Transition Ecologique et Solidaire\)](#) establishes a national plan of waste prevention and management:

- [National programme of waste prevention \(Le programme national de prévention des déchets \(PNPD\) 2014-2020 \)](#) and <https://www.ecologique-solidaire.gouv.fr/politiques/prevention-des-dechets>
- [Roadmap for the circular economy \(FREC\)](#)
- [Filières de recyclage](#) – no mention of aquaculture
- [Waste management](#)
- [Circular economy](#)

Source:

<https://www.ecologique-solidaire.gouv.fr/dechets-professionnels-issus-produits-lagrofouriture>

<https://www.ecologique-solidaire.gouv.fr/politiques/economie-circulaire-et-dechets>

### **Those processing the waste/ collection/ clean-up**

The waste management is the responsibility of local authorities. Depending on the type of waste, this management may be the responsibility of the township, municipality, Public Establishment for Inter-municipal Cooperation (Établissement public de coopération intercommunale - EPCI), county, Regional Council or the state. They may subcontract companies such as e.g. [Veolia](#) for collecting, sorting and recycling the waste.