

Inshore fisheries and governance (France)

The case of the Great Atlantic scallop fishery in the Bay of Saint-Brieuc

GIFS project • Action 1



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Inshore fisheries and governance

*The case of the Great Atlantic scallop fishery
in the Bay of Saint-Brieuc (France)*

Action 1 – GIFS Project

2014

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PRESENTATION OF THE STUDY

The GIFS (Geography of Inshore Fishing and Sustainability) Project brings English, French, Belgian and Dutch partners together. It was selected under the framework of the European Programme of cross-border cooperation INTERREG IV A 2 Seas, co-financed by the European Regional Development Fund (ERDF).

The GIFS Project, which this study fits into, began in 2012 and is the successor to the Anglo-French CHARM (CHannel integrated Approach for marine Resource Management) Project (<http://www.charm-project.org>). The objective of the GIFS Project is to study the overall socio-economic and cultural importance of inshore fishing so as to integrate these dimensions in fisheries policies, maritime policy, coastal strategies of urban regeneration and, more broadly, in the sustainable development of coastal areas.

The work of the GIFS Project covers the English Channel and the southern North Sea by involving six partners. All actions are implemented jointly between these various partners so that the project takes on a true cross-border nature.



Geographical location of the project's various partners

The actions carried out within this project are split into three main themes:

- ✓ Governance of coastal areas and maritime fisheries;
- ✓ Fishing grounds and communities;
- ✓ Economy and regeneration of fishing communities.

This report is part of the GIFS Project Activity 1 "Governance of coastal zones and maritime fisheries", the objectives of which are:

- ✓ To understand the different modes of coastal governance of the study area and identify management practices.
- ✓ To inventory and understand the approaches and existing management frameworks throughout the study area, as well as to identify the place held by maritime fishing in the latter.

ACKNOWLEDGEMENTS

We would like to thank the stakeholders met for their great availability and interest in the study. The objective of this report being to conduct a study on the governance of inshore fishing along the French coastline of the English Channel and the southern North Sea, discussions were very rewarding and helped open new avenues for thought.

INTRODUCTION

Nicknamed “white gold”, the Great Atlantic scallop (*Pecten maximus*) is an emblem of the Bay of Saint-Brieuc. It is a bivalve found on loose sandy bottoms, generally between 20 and 50 meters depth, and is present in European temperate waters from the Norwegian coastline to northern Spain (Ifremer, 2010). In France, the Great Atlantic scallop (also referred to as the “scallop” in text) is the fourth commercial species in terms of value and represents a turnover of 40 million euros (France Agrimer, 2013). Its exploitation is subject to a strict regulation, the aim of which is to preserve the stock in the long term. In the Côtes d’Armor, scallop fishing is a major activity. Indeed, it is the department where the largest deposit in France is located, with about 150 000 ha (**Figure 1**). Three distinct zones are exploited in the Saint-Brieuc Bay, the main deposit called “of the Bay”, the offshore deposit and the Nerput deposit.

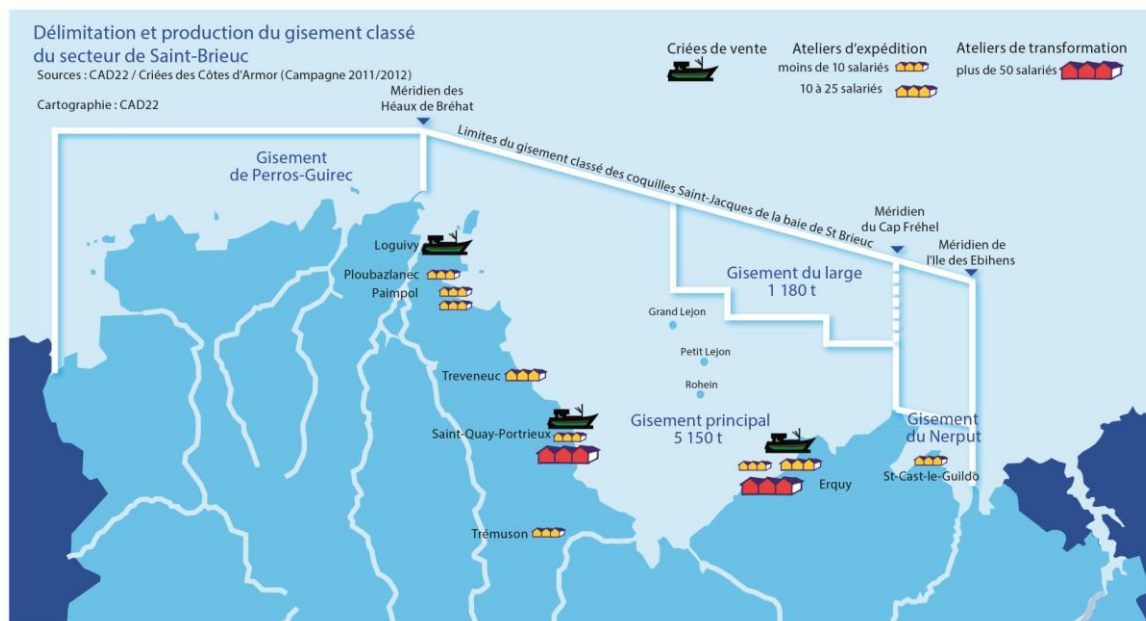


Figure 1: Great Atlantic scallop deposit in the Bay of Saint-Brieuc (source: CAD22, 2011)

The scallop deposit experiences a high interannual variability of the stock (Laubier *et al.*, 2003). Since 1973, a scientific monitoring carried out by Ifremer, at the request of the fishermen, is established each year to better understand the stock and adjust fishing effort to the available resource. In addition to this is a regulatory framework, originally established by the professionals, which among other things includes a licencing system to control access to the resource

This seasonal fishing activity is carried out from October until April approximately, so as not to disturb the reproduction of the scallops. It concerns, for this zone, 255 ships for the 2013-2014¹ season, of which 85 % come from the maritime districts of Côtes d'Armor (other vessels originating mainly from the ports of Finistère). Ships gather this shellfish using fishing dredges, the characteristics of which are determined by local regulation. A maximum of two dredges are authorised on board. Although scallops represent the bulk of the annual turnover (up to 40 %), these

¹ Proceeding 2013-059 of 11 June 2013 of the Regional Committee setting the number of fishing licences for Great Atlantic scallops in the sector of Saint-Brieuc.

ships often practise another trade (shellfish dredges, trawls, nets or longlines, crustacean pots) when the season is over (Macher *et al.*, 2011). During the 2012-2013 campaign, some 5 710 tonnes were landed mainly in the Côtes d'Armor fish markets of Erquy, Saint-Quay Portrieux and Loguivy de la Mer, generating nearly 11 million euros (CAD22, 2013).

The Great Atlantic scallop fishery in the Bay of Saint-Brieuc is based on a regulatory system that is managed collectively at the request of the fishermen since the 1970s. It is the first fishery of importance in the English Channel for which a dedicated mechanism was created in order to attempt to limit the number of ships (Meuriot *et al.*, 1987). From the onset, the fishermen have recognised the importance of managing the resource, which resulted in the creation of a system of governance based on a co-management system with involving occupational structures and the authorities, with scientific support.

1 METHODOLOGY

Under the GIFS Project, the team from AGROCAMPUS OUEST was in charge of the study of the governance of coastal areas and maritime fisheries (in France, with the analysis of the governance methods for inshore fishing activities through five case studies. The methodology used was common to all partners regardless of the country.

1.1 Selection of the five case studies

✓ The Great Atlantic scallop in the Bay of Saint-Brieuc

The first case study of the governance of inshore fishing in France was undertaken on the Great Atlantic scallop (*Pecten maximus*) in the Bay of Saint-Brieuc. Firstly, it is an iconic species of the Bay of Saint-Brieuc, caught by a fleet of versatile fishing dredgers. It has a very important role in this region, whether it be in terms of economy (5 710 tonnes landed in 2012 (CAD22, 2013) or culture (events related to fishing for this species). The species is nationally known and recognised. Moreover, it is very interesting from the point of view of the governance of coastal fishing in France. Scallop fishing in the bay of Saint-Brieuc is based on a regulatory system that is managed collectively at the request of fishermen since the 1970s. It is the first fishery of importance in the English Channel for which a specific scheme was created in order to limit the number of vessels. We therefore have some perspective on the strengths and limitations of this governance based on co-management. Finally, many projects pertain to this community of fishermen, such as the establishment of marine energies, the creation or project to create Marine Protected Areas (MPA), projects to promote the species and its fishing, etc. The Bay of Saint-Brieuc is a maritime area that is undergoing rapid change due to the proliferation of users, so it is interesting to study how a large community of fishermen can defend its interests.

1.2 Details of the method used

We will now discuss the framework of the case study, the sampling strategy, the gathering process, and the analysis of the data used for this research. A pilot case study was conducted in Hastings (England) to provide a first glimpse of the dominant themes of governance of fishing, but also to help develop and refine the methodology. The data from this pilot project was used to produce the interview guide and to identify the themes to be investigated, the participant sampling criteria, and the analytical framework. The structures involved in the governance as well as the stakeholders were identified through discussions with fisheries professionals. A reasoned sample of persons to be interviewed was chosen on the basis of the following criteria:

1. Stakeholders from various private and public sectors directly involved in each fishery, including the downstream sector (marketing, processing) to better understand the nature of their participation and interactions in the governance of fisheries
2. Stakeholders directly involved in governance at different scales. Local, regional, national and international to understand how and why the fishery is committed/participates, or not, in the decision-making system.

It should be noted that the specificity of the case studies influences the exact nature of the sample of stakeholders. Thus, the list of participants varies for each case study, especially when stakeholders “wear several hats” and can provide a perspective on governance at the local, regional and/or national level. In addition, in some cases, participants withdrew due to lack of time or interests. The table of participants for each of the five case studies is detailed in the introduction of each corresponding chapter. Not all the names of the participants were disclosed.

The method of the semi-structured interview was chosen because it enables to focus the discourse of respondents around different themes that are predefined by the surveyors. This method has the advantage of giving the opportunity to clarify certain points raised (May, 2001) during the face-to-face. A thematic interview guide consisting of open-ended questions was produced and the opportunity to expand or introduce new themes was taken into account. The interview guide was produced after discussions between all project partners and adjusted after the pilot case study at Hastings in 2012. The topics addressed in the interviews cover the following themes: the governance of the fishery (evolution, history, relationship between the various actors), the involvement of the State and of the fishermen in the governance of the fisheries; obstacles and levers of currently ongoing fishery projects; the socio-economic impact of this fishery (on tourism, local economy); the interactions between the community of fishermen and the local/regional/national or European organisms. These semi-structured interviews give the researcher the opportunity to better understand the complex processes (such as governance) with the help of a more interactive process (Dunn, 2001).

For the case of the Great Atlantic scallop fishery in the Bay of Saint-Brieuc (France) are concerned, 8 semi-structured interviews were conducted between February and October 2013 (**Table 1**). Most interviews were conducted in person in the workplace of the respondent or in a public place to ensure the convenience, comfort and privacy of the participants. Some interviews were conducted by telephone and the majority was recorded digitally to improve the accuracy of the data gathered. Notes were taken when the participant did not wish to be recorded.

Table 1: Interviewee Sample

Interviewee	Sector/Role	Date	Length
1. Participant A	Regional fisheries organisation	5 th Nov.	61mins
2. Participant B	Fish auction director	21 th Nov.	60mins
3. Participant C	General council	10th Dec.	109 mins
4. Participant D	Scientific	20 th Dec.	60 mins
5. Participant E	Local administration	12 th Nov.	74 mins
6. Participant F	Community governance	12 th Nov.	76 mins
9. Participant I	Fisherman	22 th Nov.	34 mins
8. Participant H	Organisation of fishermen	14 th Feb.	108 mins

A thematic analysis was adopted for the study of the raw data (Brewer, 2000). The minutes of the interviews were analysed using this approach to identify common themes, contradictions between different stakeholders, but also to identify problems, needs, and necessary improvements to the governance of the fishery. The reports of the five case studies are supported by quotations emanating from the interviews in order to illustrate the comments.

2 A HISTORICAL SYSTEM OF GOVERNANCE BASED ON CO-MANAGEMENT

Fishing-for Great Atlantic scallops in the Bay of Saint-Brieuc is one of the most supervised fishing activities in France. The collective management of this fishery, established for over forty years, allows a rational exploitation of the resource with the joint participation of the State and the fishermen.

2.1 A historical collective management

The exploitation of the Great Atlantic scallop has truly restarted after the decline of the stock of clams in the early 1960s, with the rediscovery of the deposit. The stock was quickly exploited intensively, starting in 1962, notably following the disappearance of the octopus, its main predator. The rapid increase in the number of ships and the significant decline in the stock then make it necessary to implement supervisory measures for the fishery. This first stage of collective awareness of the need for management, initiated by the fishermen, results in a de facto limitation of authorised fishing time (4 days per week and 6 hours per day).

In 1972, a “Shellfish” section of the Interoccupational Committee for commercially harvested shellfish² is also created at the request of the fishermen and their representatives in order to better manage this resource. The following year, this section opts for the creation of a special fishing licence for the Great Atlantic scallop in the Bay of Saint-Brieuc (Lesueur *et al.*, 2009). Assigned to the pair captain/owner, this licence allows a limitation and a modulation of the number of ships exploiting the resource. Gradually, the daily hourly schedule system established is completed by specific authorised fishing days and more restrictive technical regulations: *“In 1977, we decided to implement a draconian regulation. It limits the size of vessels to 13 meters and 250 horsepower”* (France Filière Pêche, 2013).

Today, the regulation relating to this Licence is developed by the Regional Committee for Maritime Fisheries and Marine Fish Farms (Comité Régional des Pêches Maritimes et des Élevages Marins - CRPMEM) of Brittany. It is then adopted by the region prefect.

² This committee will later become the Regional Committee for Maritime Fisheries and Marine Fish Farms (Comité Régional des Pêches Maritimes et des Elevages Marins - CRPMEM).

2.2 A governance based on co-management

There are two main players in the management of this scallop fishery in the Bay of Saint-Brieuc: the State, with a regional administrative representation, and the Regional Committee for Maritime Fisheries and Marine Fish Farms (CRPMEM).

2.2.1 The authorities and the fisheries committees, players of the governance

In this system which is predominant in the territorial waters of France (Picault *et al.*, 2014a) the resource management initiative originates mainly from these local users. The fishermen are represented here at the regional level by the Regional Committee for Maritime Fisheries and Marine Fish Farms (CRPMEM) of Brittany, and by the Departmental Committees for Maritime Fisheries and Marine Fish Farms (CDPMEM) at the departmental level. These are professional organisations. Decision-making is participatory, giving stakeholders the opportunity to voice their positions. Fishermen enjoy a degree of autonomy because they hold some control over the management of the fishery (Ferracci, 2011). However, the regulatory decision-making falls to the national or regional authorities. The fisheries authority is represented in Brittany by the Interregional Directorate for the Sea Northern Atlantic-Western English Channel (Direction InterRégionale de la Mer Nord Atlantique-Manche Ouest - DIRM NAMO) and the prefect of the region. At the local level (department) is the Departmental Directorate of the Territories and the Sea (Direction Départementale des Territoires et de la Mer - DDTM) and the prefect of the department.

The State of France has given the Regional Committees for Maritime Fisheries and Marine Fish Farms (and more globally to the National Committee for Maritime Fisheries and Marine Fish Farms), that represent the fishermen, missions of representation and defence of the interests of the trade in all areas pertaining to the sector (production, marketing, social, training, environment, ...). *"It gives the opportunity to participate in the development of regulations pertaining to fisheries management and the harvesting of marine plants for species that are not subject to TACs [Total Allowable Catches] or catch quotas in application of a European Union (EU) regulation in territorial waters, to participate in the development of regulations governing the use of gears and the coexistence of maritime trades, to participate in the implementation of economic and social actions in favour of their members, to participate in regional public policy for the protection and valuation of the environment, so as, notably, to promote the sustainable management of marine fishing and marine farming, to provide scientific and technical support to their members as well as where safety, training and promotion of marine trades are concerned"* (CRPMEM of Brittany, 5 Nov. 2013).

The community of Great Atlantic scallop fishermen thus relies on this co-management system for the development of the regulation specific to their trade and to the region, which is then validated by the State. Within this system, the fisherman is therefore a source of proposals. The governance of this fishery remains based on local and regional structures that have a crucial role in terms of representation of the fishermen, which, nevertheless, is common to a large number of inshore fisheries in France such as that of the lobster in the Bay of Granville (Picault *et al.*, 2014b).

2.2.2 The role of the fisheries committees – occupational structures – in the management of the fishery

The community of Great Atlantic scallop fishermen in the Bay of Saint-Brieuc is represented directly by the Departmental Committees for Maritime Fisheries and Marine Fish Farms (CDPMEM). The main committee, for scallop fishing, is that of the Côtes d'Armor which represents 211 ships (in 2013) and, to a lesser extent, those of Ille-et-Vilaine and Finistère. In these structures, the president who was elected by the fishermen has the role of spokesperson as well as of defending their interests. There is therefore a representation of the fishermen “at source”, close to the field. These committees enjoy a legal and financial autonomy and have the trust of their fishermen: *“I do not really have the time to get involved in the structure because I fish during the week, sell during week-ends. I trust the President of the Departmental Committee”* (Fisherman, 22 Nov. 2013).

At the regional level, the CRPMEM of Brittany remains the referent occupational structure and the preferred interlocutor for the authorities and politicians. Indeed, it represents the fishermen before the State, before its decentralised services and local authorities, and has notably the mission to defend their interests while participating to improving the sustainability of the fishery on a national and regional scale. Its president, elected by Breton professionals, is supported by permanent employees for technical issues. This professional organisation, prescribed by Law³, enables it to benefit from State prerogatives (compulsory accession, deduction of a professional contribution, ability to establish resource management rules that are enforceable by law, capacity to put in place juror-guards (gardiens jurés), etc.). Inside the areas statutorily located within territorial waters (12-mile limit), the organisation of fisheries is entrusted to the CRPMEM of Brittany, including all the deposits of the Bay of Saint-Brieuc.

2.2.3 Participation of other players

- **Scientists**

Scientists are an important link for the governance of the Great Atlantic scallop fishery. One of the management objectives is to ensure the sustainability of fishery resources; this cannot be done without scientific knowledge of the exploited stocks. It is Ifremer that is intervening in France on this aspect, and more particularly on the scallop in the Bay of Saint-Brieuc. Founded in 1984⁴, Ifremer is a public body with industrial and commercial functions (Établissement Public à caractère Industriel et Commercial - EPIC) under the joint authority of the Ministry of Higher Education and Research and that of Ecology, Sustainable Development and Energy. It indirectly intervenes in the co-management as scientists do not have the power to vote in the decision-making system. They have an advisory role.

The representatives of professionals and the fishermen themselves got organised with the support of the maritime authority and scientists from Ifremer to manage the resource as best they can. Even if the Great Atlantic scallop fishing is not supervised by European Community “Total Allowable Catch” (TAC – maximum quantities not to be exceeded), the CRPMEM of Brittany advocates an overall fishing quota since 1980. This recommendation is based on the advice of Ifremer which conducts annual campaigns since 1966 to estimate the abundance of the stock. According to the survey respondents, the knowledge that Ifremer has is essential for the management of the fishery because

³ Law n°2010-874 of 27 July 2010 on the modernisation of agriculture and fishing - LMAP – French Republic Official Journal of 28 July 2010 pages 3 to 90.

⁴ <http://www.ifremer.fr/L-institut>

“the recommended quota is not just the result of a simple cross-multiplication” (Scientist, 19 Dec. 2013). Research conducted by Ifremer is communicated to fishermen through the departmental committees to inform them on the state of the resource. Scientific knowledge is the basis of the management of this fishery. Scientists in charge of monitoring the Great Atlantic scallop have good contacts with occupational structures and send scientific observers on fishing boats when needed: *“I have permission to take Ifremer staff and trainees onboard. I've always had a good contact with the observers and it allows us to keep informed about what they are studying”* (Fisherman, 22 Nov., 2013).

- **The Producer Organisations**

Producer Organisations (POs) are associations that have “for objective to ensure the rational practice of fishing and the improvement of sale conditions of their members” (EC Regulation 104/2000). In the case of the Great Atlantic scallop in the Bay of Saint-Brieuc, the main PO is COBRENORD. The POs have two main missions (Vidie *et al.*, 2013). The first pertains to the management of the resource, in particular the allocation of quotas (for species under European quota) between their members and their monitoring. This mission does not exist in the case of the scallop because it is not a species under European quota. The second concern is the development of business strategies and the marketing of seafood (marketing standards) detailed in section 1.3.3.

2.2.4 The Great Atlantic scallop co-management decision-making system

The co-management system directly takes into consideration the fisherman or group of fishermen who will issue a request pertaining to the management of the fishery. Directly linked to the fishermen and the departmental committees, there is a “Great Atlantic scallop” Commission. It is within this commission that local representatives of the fishermen are able to provide opinions in terms of management of the fishery and propose the opening and closing dates of the scallop fishing season, the fishing days and hours, the indicative quotas as well as the date of closing of the fishery when the indicative quota is reached. This “Great Atlantic scallop” Commission therefore represents a first level of governance by which fishermen can make their voices heard and relay their requests up to the CRPMEM of Brittany: *“We can voice our opinions to the Great Atlantic scallop Commission, but not beyond, if we are not involved in, or members of the Commission, or elected representatives”* (Fisherman, 22 Nov 2013).

At the regional scale, within the CRPMEM of Brittany, the “Shellfish” Commission chaired by a professional, has for objective to give an opinion on the demands of the departmental committees (via the “Great Atlantic scallop” Commission) pertaining new elements of regulation.

This “Shellfish” Commission is thus supposed to relay this opinion up to the Board of the CRPMEM of Brittany for validation. Place of exchange between specialised fishermen, it also involves scientists who provide opinions on the issues addressed. Although it does not have any decision-making power, it has, however, a key role of proposal, such as for example the opening dates of the fishing season. In the end, this “Shellfish” Commission proposes one or several proceeding projects which are then submitted to the board (composed of elected officials) of the CRPMEM of Brittany. If the latter gives a favourable opinion, the project is forwarded to the administrative authority at the regional level (the DIRM) who may adopt it by delegated authority from the region prefect (Picault *et al.*, 2014a). After verification of the legality, the proceeding project will be translated into a prefectoral order. The scheme of adoption of the proceedings is summarised in **figure 2**. This decision-making scheme of co-management of the Great Atlantic scallop in the Bay of Saint-Brieuc is similar to other inshore fisheries albeit a few adjustments (for example, for the management of the lobster in the Bay of Granville there are no departmental committees but rather local offices of the CRPMEM BN (Picault *et al.*, 2014b).

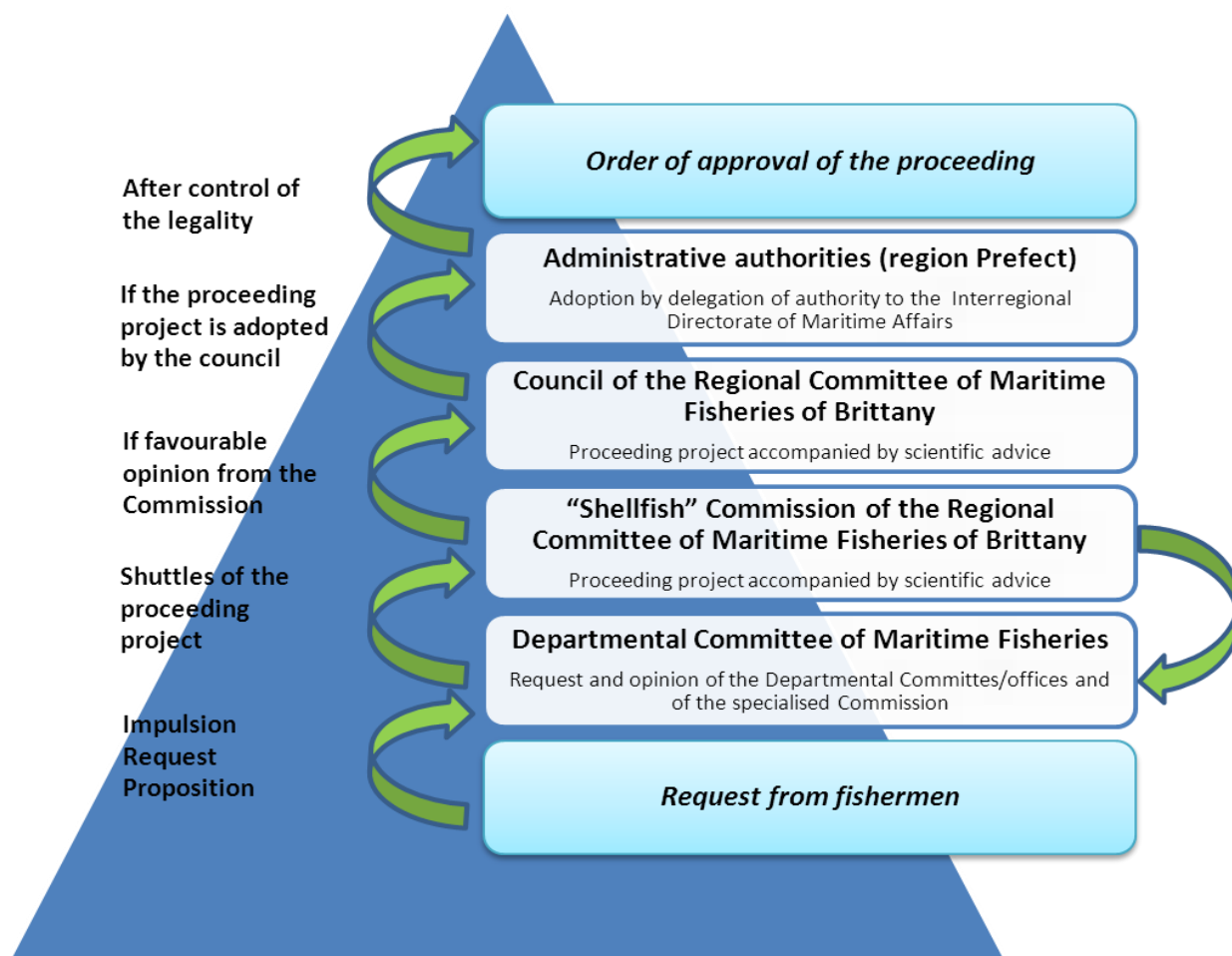


Figure 2: Decision-making system of co-management for the Great Atlantic scallop in the Bay of Saint-Brieuc (according to the CRPMEM of Brittany, 2013)

There also exists a “Commercially harvested shellfish” Commission at the national level, chaired by a professional. In the framework of participation to the balanced management of resources, it may develop and propose draft proceedings to the board of the CNPMEM pertaining to specific issues relating to the working conditions of the profession. These proceedings may be made mandatory by the Ministry of Ecology, Sustainable Development and Energy. Other national commissions, such as the “Crustacean” Commission, also exist at the French national scale and along the same mode of operation (Picault *et al.*, 2014b).

2.2.5 The establishment of a licencing system as a management measure

The management of scallop (which is not a species under European quota) fishing in the Bay of Saint-Brieuc is based on a system of national (via the CNPMEM) and regional (via the CRPMEM of Brittany) licences. *“This system aims to maintain social and economic equilibriums by the sharing of resources and a balanced resolution of cohabitation or market disputes. It differs, in this, from the Common Fisheries Policy which favours the reduction of production tools to limit fishing effort”* (CRPMEM, 5 Nov. 2013).

The Great Atlantic scallop fishing licence was established in the Bay of Saint-Brieuc in 1973 at the local level. The licence is issued by the CRPMEM of Brittany which fixes allotted shares (limitation of the number of ships), attribution criteria, and the practical arrangements for organisation of the campaign as well as the specific technical measures while ensuring compliance with national proceedings. Each year, a *numerus clausus* of licences and allotted shares by CDPMEM is defined by

the CRPMEM of Brittany. The terms of attribution are subject to necessarily strict rules and procedures. Licences have allowed the evolution of the fleet, the market and the technical characteristics of fishing gears and ships to optimise the balance between fishing effort and the resource. The various elements of regulation⁵ can be summarised this way:

- ✓ Reduction in the size of the ships authorised to fish:
 - In 1974, the maximum allowed vessel length was 16 m. Since 1990, the maximum length is 13 m for 184 kWh.
- ✓ Limitation of fishing time:
 - Fishermen benefit from a system of individual hourly fishing quotas with a fishing authorisation of 45 min for two days of the week on the deposit of the Bay.
- ✓ Technical measures:
 - Number of fishing dredges onboard limited to 2,
 - Maximum width of the dredge is 2 m,
 - Inside diameter of the metal rings: 92 mm
- ✓ Recommended annual catch quota.
- ✓ Minimum catch size of 10.2 cm.
- ✓ Obligation of sale at fish auctions.

Licences are assigned to the pair owner/ship, and are neither assignable nor transferable, and subject to the following attribution criteria:

- ✓ The fishing anteriority (proof of fishing for the concerned species/practice of concerned trade during the years preceding the request),
- ✓ market orientations (definition of the number of licences or limitation of the applicant ships according to the market so as to obtain a correlation between supply and demand),
- ✓ the socio-economic equilibriums (for example by a sharing of resources between various small units so as to increase the number of businesses and preserve jobs in a port).

According to the persons surveyed, this system allows the lobstermen community to limit access to the resource and protect it. The number of licences has thereby evolved from a maximum of 469 in 1975 to 255 in 2013. Fishermen thereby have the opportunity to act on the economic orientations of the sector by favouring, in this case, a significant number of small profitable boats (therefore jobs) instead of a limited number of large ships. This system, according to the interviewees, is effective and suitable for the sustainable preservation of the community's fishing activity with an integration of scientific knowledge.

⁵ According to the proceeding No 150 "Coquilles Saint-Jacques (Great Atlantic scallops)-sb-2012-A" of 28 September 2012 of the Regional Committee for Maritime Fisheries and Marine Fish Farms of Brittany establishing and setting the attribution conditions of the Great Atlantic scallop fishing licence in the sector of Saint-Brieuc.

2.2.6 A strong control of the fishery wanted by the fishermen

The community of fishermen and the French authorities have established a control system on the fishery to reduce fraud and prevent the collapse of the resource (Le Gallic *et al.*, 2010). Through the Delegation to the Sea and the Coastal Zone (DML) of the departments at the local level and the other decentralised services, the French State ensures the enforcement of management rules, whether at sea or ashore during the landing (control of size passing through a fish auction): *“we control the ships at sea or on land, before and after fishing hours, or very offset to detect fraud, whether it be the non-compliance with time limitations or non-compliant fishing gear. All this is organised within the Codop⁶ in order to control the fishery with the gendarmerie maritime (coastguards), customs, and veterinary services. We work together to avoid the overabundance of resources and excessive controls”* (Local authority, 12 Nov. 2013). According to persons surveyed, the fishermen are fully integrated and transmit; for example, information concerning the fishing days or catching up to the DML: *“Information pertaining to the management of the fishery is then immediately transmitted to the Maritime Affairs so that the information flows well”* (Local authority, 12 Nov. 2013).

Part of the control is even supported directly by fishermen with chartering an airplane to monitor time overruns of ships. This method is very effective. It is funded entirely by the CDPMEM of Côtes d'Armor which demonstrates the very strong desire of self-monitoring on the part of the fishermen. This is a unique case in France. *“The departmental committee pays a plane 35 000 euros/year for the monitoring; it is funded by rebuys of licence following a fraud”* (CDPMEM, 12 Nov. 2013). This funding is obtained by, among other things, the mechanism of re-acquisition of licences from the CDPMEM; in other words, when the fisherman commits an offense, he loses his licence and is obliged to buy it back.

Beyond the involvement of fishermen in the management of the resource, they also are players in various projects to make their voices heard. These projects may directly or indirectly have impacts on the management of the Great Atlantic scallop fishery in the Bay of Saint-Brieuc.

2.3 The participation of the fishermen to common projects

Various projects are carried out or directly involve the Great Atlantic scallop fishermen community of the Bay of Saint-Brieuc, and at different scales. It is the fishermen's occupational structures that will carry their voices in different meetings or negotiations during the elaboration of projects. They can be environmental or come from the industrial sector (activities related to energy: wind or water turbine installation sites). They are discussed within the CRPMEM of Brittany and at the level of CDPMEMs. The community can thereby give its opinion (and defend its trade) *via* these structures. However, the multiplication of projects in recent years is not without posing some problems: *“There are too many surveys on the Great Atlantic scallop in the Bay of Saint-Brieuc, too many projects. We are fed up as we do not have enough time any longer to represent our fishermen”* (CRPMEM, 13 Nov. 2013). Currently, the main project in the Bay of Saint-Brieuc is that of offshore wind power in which fishermen are fully involved.

⁶ CODOP: Operational departmental committees (COmités Départementaux OPérationnels) of maritime fisheries monitoring in charge of the implementation of the regional monitoring Plan.

2.3.1 Wind power projects: the role of the fishermen

Since 2006, fishermen are faced with the issue of offshore wind power, which still generates more reluctance than enthusiasm. At the time, Poweo and Nass&Wind Technologie first began to explore the Bay of Saint-Brieuc to position wind turbines. They had the desire to build wind turbines around the plateau of Grand Lejon, an area that is very rich in fish and with a lot of scallops (**Figure 3b**). During these studies, the local Committee of Saint-Quay Portrieux was consulted directly by industrialists but without any guarantee for the fishermen that their views would be taken into account, especially with regard to the implementing area and the compensations.

Concerned in the first instance by these projects, the fishermen visited a wind farm in Denmark with the CRPMEM, the Regional Council of Brittany and Ifremer. Nass&Wind organised and financed the trip. *"This study tour in Denmark with the panel of fishermen and the elected officials has made it possible to appreciate the actual scale of the wind turbines. The views of these people started to change. Fishermen realised they had bargaining power with positive benefits for the territory"* (CRPMEM, 5 Nov. 2013). After this trip, fishermen got organised and launched the creation of an information system in order to provide finer data on their fishing activity in specific areas. Supported by the Regional Council of Brittany and the General Council of Côtes d'Armor, the fishermen have got more weight in the decision of location of this wind farm area, thanks to this tool. They were able to define an implementation area that was less penalising for them than those originally proposed by various companies (**Figure 3b**). *"The wind farm is a very structuring project with great potential. We listened to the fishermen, and their arguments. The General Council of Côtes d'Armor helped the CDPMEM to develop the "fishing" Geographic Information System to show interlocutors where fishing activities take place and to define the best windfarm area"* (General Council, 10 Dec. 2013).

According to respondents, it is the local Committee of Saint-Quay Portrieux that raised the awareness of elected officials on the stakes of wind power for fishing and shared with the CRPMEM of Brittany their desire for support of this case at the national level. The CNPMEM, national level of representation of the fishermen (following requests from the CRPMEMs of the areas concerned by wind power), asked the State to take care of the wind power issue for a more structured approach. The State launched a national tender procedure⁷ with an area in the Bay of Saint Brieuc in 2011 (Anonymous, 2011). This tender notably aims to take a first step towards the objective of 6 000 MW of offshore wind and marine energies by 2020, inscribed in the Grenelle de l'Environnement (Grenelle de la Mer, 2009). At the beginning, although 5 main areas were identified – Le Tréport, Fécamp, Courseulles -sur-Mer, Saint-Brieuc and Saint-Nazaire - ultimately only four of them were assigned (**Figure 3a**).

The Spanish Iberdrola won the contract in the Bay of Saint-Brieuc. The CDPMEM of Côtes d'Armor was the strong player of the Bay of Saint-Brieuc during this tender process. All the communication and negotiation work for this project was beneficial to the fishermen. *"The result of the tender has made it possible to choose a project in which the geographic location of wind turbines has less impact on fishing [cf. desired zone of fishermen in **Figure 3b**] and with positive benefits for fishermen: signature of a convention setting the work terms on site, involvement of the industrialist in fishery studies, accompanying measures, collective projects funded by the consortium (fight against slipper shells, seeding of Great Atlantic scallops)"* (CRPMEM, 5 Nov. 2013).

⁷ Tender procedure No 2011/S 126-20887 on offshore wind power.

The fishermen have thereby been able to defend their interests to safeguard the Great Atlantic scallop fishery, and are now even recognised for their expertise: *“The CDPMEM of Côtes d'Armor is a true referent and a resource person for wind power projects because our expertise, and notably our knowledge of the sea bottom is recognised”* (CDPMEM, 12 Nov. 2013).

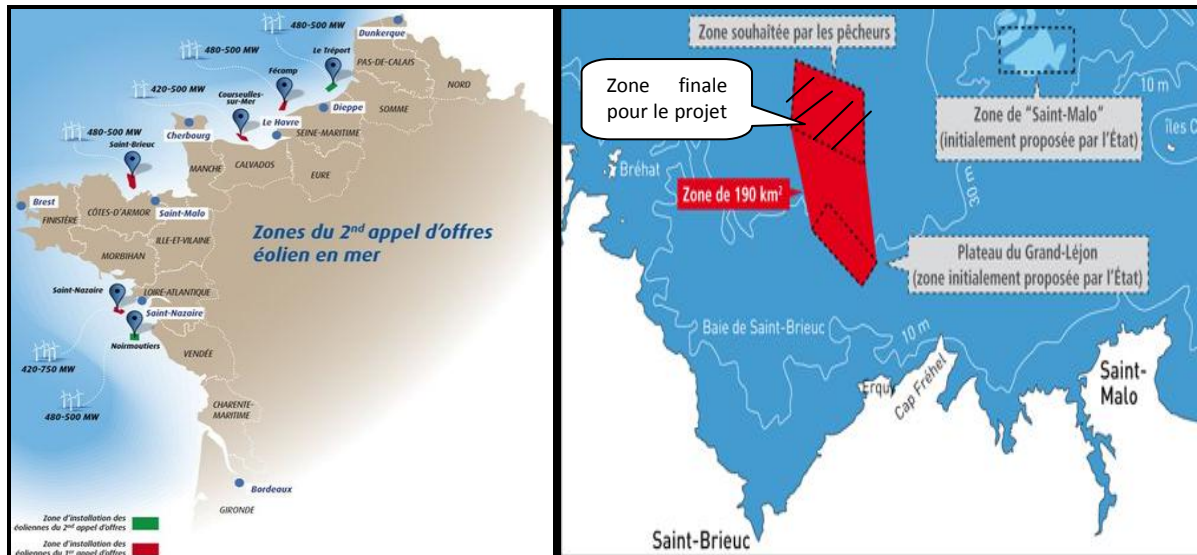


Figure 2a: Sites for wind power projects in France (source: Le Monde, 2013)

Figure 3b: Site for the wind power project in the Bay of Saint-Brieuc (source: Le Télégramme, 2010)

2.3.2 Projects pertaining to the marine environment

Other projects pertaining to the marine environment are being implemented to enable the development of a responsible and sustainable development of the fishing activity. This is the case of the establishment of a Marine Protected Area (MPA) and the reseeding program of the Bay with Great Atlantic scallops.

- **Marine protected areas: consultation and debate**

Member States of the European Union must take the necessary measures to reduce the impacts of activities on this habitat in order to achieve or maintain a good environmental status of the marine environment. To meet EU commitments, France must, by 2020, achieve the target of 20 % of marine protected areas in French waters (Grenelle de la Mer, 2009) under the Marine Strategy Framework Directive (MSFD). The establishment of marine protected areas is a mode of action and governance of marine areas which contributes to any comprehensive strategy for the management of the marine space. They target areas delineated on the basis of the value of the natural heritage, the importance of ecological functions and nature of uses. They are dedicated to the objective of protecting the habitat, often associated with an objective of sustainable usage and provide it with a governance framework and suitable means. There are mainly two types of MPAs for marine habitats that may have an impact on the management of inshore fishing:

- ✓ **The Marine Nature Parks (MNP)** have multiple objectives: healthy ecosystems, patrimonial or ordinary species and habitats, the good condition of marine waters, sustainable uses and activities and the preservation of the cultural maritime heritage (Khayati, 2011). MNPs already exist in France, including the Iroise Nature Park in which fishermen are stakeholders. Their impacts on the ecosystem are taken into account in the park's management decisions (establishment of no-take zones, monitoring of the no-take zone, limitation of certain fishing gears, ...).

- ✓ **The Natura 2000 sites** that have a marine part have objectives of conservation or restoration of natural habitats and populations of species of fauna and flora. In case of non-negligible impacts of fishing on natural resources, measures may be taken by the Natura 2000 site Committee (establishment of no-take zones, limitation of certain fishing gears, ...). There are 5 Natura 2000 sites in the Bay of Saint Brieuc.

It is in this context that consultation meetings are held in order to present and discuss the creation of a marine park⁸ in the Norman-Breton Gulf. The marine park should enable to bring together all the stakeholders of the sea, including fishermen, to work on the sustainability of the area. With regard to the fishermen, there is a debate around this park project during consultation or information meetings. Fishermen and elected officials are mostly against: *"The MPA project is impossible because it includes 2 regions, 3 departments, 2 region prefects and Jersey. It is an unmanageable project because it is too far-reaching"* (CRPMEM, 5 Nov. 2013). *"Where the MPA is concerned, we are present during meetings with all the stakeholders and there are a lot of conflicting views! The implementation was biased from the start because it is a Norman-Breton park but driven by Normandy (Maritime prefect of the Manche department). Brittany is a little excluded while much of the MPA is on its territory."*(General Council, 10 Dec. 2013). The project is not viewed as acceptable by the scallop fishing community of the Bay of Saint-Brieuc who is afraid that the MPA will not take the sustainable development of the fishery into account.

- **Reseeding of the Bay**

In addition to the Great Atlantic scallop stock assessment (conducted by Ifremer), fishermen participate in other scientific projects. Due to the ongoing decline of the stock for several years (due to the high variability of scallop recruitment), a reseedling project emerged to introduce Great Atlantic scallop spats purchased from the Tinduff hatchery (Télégramme, 2012). *"The scallop resource is very fragile and shrinking for several reasons: problem with the water quality, global warming, and proliferation of common slipper shells. The fishermen wanted to launch a program of reseedling of Great Atlantic scallops in the Bay of Saint-Brieuc. The General Council of Côtes d'Armor co-finances this project and pushed for the acceptance thereof. We follow the project with Ifremer and ask for progress reports"* (General Council, 10 Dec. 2013).

2.3.3 Projects pertaining to the marketing of the Great Atlantic scallop

The management of the scallop resource is highly supervised in the Bay of Saint-Brieuc and allows fishermen to have access to the resource each year. However, its marketing remains difficult (Le Gallic, 2013) because the Great Atlantic scallop market is very competitive in France:

- ✓ British fishermen are direct competitors of French fishermen on the domestic market. Indeed, the British population not being a major consumer of scallops, British fishermen will more easily turn towards the French market. This additional supply contributes to lower prices on the French market.
- ✓ The trade name "coquille Saint-Jacques" (Great Atlantic scallop) is reserved for the species *Pecten maximus*, sold whole. This is the species fished in the Bay of Saint Brieuc. The "nut" (adductor muscle) of the mollusc is also sold under the trade name "Saint-Jacques" that

⁸ Within the framework of Directive 2008/56/CE of the European parliament and the Council of 17 June 2008 called "Marine Strategy framework Directive".

includes other Pectinidae⁹ which are imported for much cheaper. This competition pulls prices down.

To increase its market share and be sold at a higher price, the Saint Brieuc Bay Great Atlantic scallop must set itself apart. For this, the fishermen are organising themselves and directly intervene in the marketing through the fish auctions and producer organisations.

- **An atypical marketing and sale**

Since 1978, ships are obliged to weigh and sell¹⁰ their scallops in fish auctions. This process has several benefits for fishermen and for the resource: *“This system of obligation to declare at auctions improves cash flow and reduces fraud”* (Local authority, 12 Nov. 2013). After passing through the auction, the fisherman may buy back its production to sell it directly, which is common in the Côtes d'Armor: *“Fishermen buy back a lot of their scallops. At the beginning of the season, this represents 3 % and can go up to 60 % during holiday periods. They go on to sell them to works committees, on markets, ...”* (Fish auction Director, 21 Nov. 2013). If the fisherman does not buy back its catch, wholesalers can buy the Great Atlantic scallop batches at auction, sales also taking place online, simultaneously in Erquy and Saint-Quay Portrieux.

One of the peculiarities of the Great Atlantic scallop marketing is the existence of a partnership between the producer organisation COBRENORD – not all fishermen being members - and a specialised freezing industrialist (Celtarmor). The PO COBRENORD wanted to improve the sale of scallops by acquiring tools enabling it to influence the market. If the initial goal was to find sales opportunities, it is increasingly evolving toward a goal of value enhancement of the products.

Until 2007, COBRENORD used the system of Community withdrawal price established in the framework of the common market organisation for the Great Atlantic scallop. In 2007, the price reached 1.70 euros per kilo, but was not considered to be high enough by the fishermen of the Bay, so they decided to set up another system. COBENORD also made the choice not to apply the Community scheme to switch to a system of autonomous withdrawal price. Today, the autonomous withdrawal price is 2 euros per kilo, with an average selling price of 2.14 euros¹¹. When the price of the scallop drops below this price of withdrawal, the PO intervenes by using the membership contributions. Indeed, the contributions of scallop fishermen replenish a specific fund that helps support the price of scallops.

Celtarmor, when founded, enabled the creation of a new market: the frozen scallop “nut” (adductor muscle) which comes from its shelling/freezing plants. Today, this tool makes it possible to influence prices and sell all of the scallops. Indeed, the plant can process large quantities when sales are low at auction and thus provide a buffer between supply and demand. Celtarmor customers are supermarkets and hypermarkets as well as wholesalers who buy large volumes to resell at the national level. Currently, Celtarmor means to develop the catering business. With Celtarmor, the PO has two strategies to control the market: in November, December and April, a market orientation towards the fresh product, and the rest of the time, a market orientation towards frozen products. This market organisation was enabled by a real discussion and a negotiation between producers and processors. The Great Atlantic scallop sector of North Brittany is grouped and strong in the face of

⁹ Since 1996, the WTO has authorised the trade name “Saint Jacques” for all pectinidae.

¹⁰ "Coquilles Saint-Jacques (Great Atlantic scallops)-sb-2012-A" proceeding of 29 September 2006 setting the attribution conditions of the Great Atlantic scallop fishing licence in the sector of Saint-Brieuc.

¹¹ Average price for the 2012-2013 campaign.

distribution pressure. There is an integration of the two sectors with sales mainly by mutual agreement without going through an auction. This purchase price is set in accordance with Celtarmor and COBRENORD to establish a contracting system (Vidie *et al.*, 2013).

Another method of marketing and promotion of seafood products is direct sales (market, associations, restaurant, ...). The Great Atlantic scallop is a product that is under the obligation of being sold in fish auctions but may be bought back by the fisherman who will then sell it directly. Fishermen buy-backs are more significant before the Christmas holiday season (15-20 % of auction sales in November and December). The share that is sold directly by professionals is between 10 and 12 % of the volume sold (Lesueur *et al.*, 2009).

- **“Quality” approaches: Bretagne Qualité Mer and the Red Label**

COBRENORD and Normapêche (interoccupational association of the “fishing” and “shellfish farming” sectors in Brittany and Loire Atlantique) have established a “quality” approach with the trademark “Bretagne Qualité Mer” (BQM). This is a collective mark which includes seafood products of Brittany that comply with specific terms of reference. The BQM products must be landed in Brittany and Loire Atlantique and be of the “Extra”¹² quality. A specific charter exists for the Great Atlantic scallop of the Bay of Saint-Brieuc and rests on the following criteria: a living and undamaged shell, a clean shell (slider shells removed), a size greater than or equal to 11.5 cm, in 15 kg bags identified by a nominative and dated sanitary label, a transition through cleansing pools before shipping, further identification of the fisherman by a label on the shipping container (traceability), and finally a shipping on the day of or the day after fishing if the scallops are in a cleansing pool.

To go further, the PO COBRENORD and Normapêche want to set up a Red Label on the Great Atlantic scallop of the Bay of Saint-Brieuc. The approach, in progress, has for main objective an increase in selling price in order to consolidate the fishermen’s incomes. To accompany these marketing efforts, fishermen are setting up a promotion of the products through communication.

2.3.4 Value-enhancement of products through communication

To accompany these marketing efforts, fishermen are setting up a value-enhancement of the products through communication. In a general manner, the fishing community is willing to communicate on its trade and the sustainability of its activity. They notably do this through the organisation of festivals, the best known one being that of “the Great Atlantic scallop festival”. It takes place every year in one of three fishing ports of Côtes d'Armor: Erquy, Saint-Quay Portrieux and Loguivy de la Mer. The objective of this event is to introduce the Great Atlantic scallop and its fishing trade to the general public. To answer to people demanding information on the fishing methods, the biology, the resource, etc., the community organises itself: *“For the Great Atlantic scallop festival of Saint-Quay Portrieux, the CDPMEM of Côtes d Armor organises the event from beginning to end and puts up a stall to communicate on the trade and the products. It organizes boat trips with a passenger ship to watch the boats fishing and explain the fishing method. These activities are really successful because people want to know more about fishing”* (CDPMEM, 12 Nov. 2013). On the side of Erquy, the fish auction also organises events during the Great Atlantic scallop festival: *“During the Great Atlantic scallop festival, an educational stall on fish species and scallops is set up in the fish auction in order to promote quality products. We tried to organise a voice auction as in the past but the concept was not successful”* (Fish auction Director, 21 Nov. 2013).

¹² Highest degree of quality in the grading of seafood products at fish auctions.

Other events exist outside of the festival such as visits of the Erquy fish auction: *“The visit of the auction is done by the association “des caps” which manages sea classes, schools, tourists. The association explains how the auction is run and showcases the fish and the scallops”* (Fish auction Director, 21 Nov. 2013). The auction also organises Great Atlantic scallops value-enhancement events in Paris and Belgium with the Association Réginéenne de la coquille Saint-Jacques (Great Atlantic scallop association of Erquy).

These communication initiatives are supported by local elected officials, notably in Côtes d'Armor where there is a real desire to promote the local fishery products and to create a fishing-tourism relationship beyond the Great Atlantic scallop fishery: *“The General Council has launched a turquoise economy Program in 2012 to think about the economic development of the coastal zone (terrestrial and marine environment). Fishing is a challenge because it maintains an activity and some attractiveness on the coast throughout the year. It is planned to launch actions of communication, awareness of the marine environment, to hold conferences, exhibits on maritime history while promoting the fishing world”* (General Council, 10 Dec. 2013).

3 THE LIMITATIONS TO THE GOVERNANCE OF THIS FISHERY

The co-management based governance of the Great Atlantic scallop in the Bay of Saint-Brieuc enables the strengthening of the sustainability of a fishery that contributes to the social and economic fabric of the Côtes d'Armor department. While many initiatives are established by the fishermen and the sector so as to make this activity sustainable, there are some limitations to this governance that will be detailed below.

3.1 The weak points at the scale of the fishery

The community of Great Atlantic scallop fishermen is directly involved in the management of this species at the local level. The persons surveyed have nevertheless raised some points to be improved at this scale to enable better governance

3.1.1 A dangerous fishery

The management system that was established for the Great Atlantic scallop (notably the regulation), may encourage fishermen to take more risks. This fishery is known to be especially dangerous for several reasons:

- the ships are under considerable strain, the boat and the cables are subjected to high tensions due to the resistance met by the dredge on the ground in the presence of natural obstacles,
- numerous boats share a small space, requiring a careful watch by captain,
- because of the restrictive regulation, fishing is allowed only 2 days per week for a period of 45 minutes per campaign. This pushes the crews to go as fast as possible thus increasing the risk of an accident.

The scallop fishing season always constitutes a sensitive issue in terms of risk for ships and sailors even if no significant accident has been reported in this trade in 2012 (CROSS CORSEN, 2012).

3.1.2 The issue of renewal at the level of the occupational structures

The management system of the fishery is based on elected officials, representatives of the community. However, it would appear that the number of volunteers is decreasing. Indeed, the spokespersons of the fishermen within the CDPMEM of Côtes d'Armor, in office for many years; are very familiar with the issues and know how to present them to be heard. According to respondents, the problem of renewal of these key positions is acute. At each election of the Presidents, the few registered lists limit the choice of fishermen. The concern for the future is the resignation of these people. *"I do not really have the time to get involved in the structure because I fish during the week, sell during week-ends [] There is no use getting involved and do not going to the meetings"* (Fisherman, 22 Nov. 2013). The administrative burden repels fishermen.

3.1.3 A co-management system that is not always complied with

The management of the Great Atlantic scallop is complex and the control measures are numerous but mandatory for good governance. According to respondents, the relationship between the fishermen community and the French authorities are not always good, especially with regard to the sanctions of fishermen during the fishing season. These sanctions may be of two kinds:

- ✓ administrative, with a fine and loss of the licence that must be bought back thereafter;
- ✓ penal, with heavier penalties that depend on the public prosecutor.

Fishermen complain about the double sanction that may be inflicted to them and that they deem to be unfair with regard to the sanctions inflicted "on land". However, these double sanctions are the result of many frauds of vessels during the fishing season. *"There are on average 80 reports of fraud per season on 200 boats. We set up a reflection on the implementation of a VMS [satellite Vessel Monitoring System] to facilitate the control because there are too many offenses, even if they are minor"* (Local authority, 12 Nov. 2013). At the fishery level, despite significant control costs, the level of fraud remains relatively high (Le Gallic, 2010).

3.1.4 A lack of promotion of the resource: matching supply to the demand

The governance of the scallop fishery in the bay of Saint-Brieuc is suited to the resource and to the fishing effort in this area with the establishment of several management measures. In addition, there are difficulties in marketing this species, which is sold in a very competitive market (see Part 1 of the report). Indeed, the sale price of the Saint-Brieuc Bay Great Atlantic scallop is a real problem for the community of fishermen. It lies between 1.9 and 2.2 euros per kilo and tends to approach that of the common whelk (Le Gallic *et al.*, 2013). It is a product recognised for its quality but for the past ten years, we are witnessing a stagnation of average prices that shows a lack of promotion of the product.

The chosen governance in the Bay of Saint-Brieuc can explain this low price because the way of management does not always facilitate the adjustment of supply to demand. Indeed, it is a management system that is considered to be inflexible¹³ due to the imposed fishing days. The supply of auctions is therefore not adaptable because all ships go fishing at the same time. It is very difficult to adapt supply to demand and thus achieve better selling prices.

¹³ Communication during the final meeting of the ANR COMANCHE Project, 11/12/2013 in Caen.

3.2 Make its voice heard beyond the fishery, a real difficulty

Even if the fishery is managed at the local level, it is forced to comply with certain rules of the European Union, notably through the Common Fisheries Policy (CFP). Indeed, the EU benefits from an exclusive competence in terms of the conservation of the biological marine resources by defining fishing rules to control and limit the harvesting of fishery stocks (Picault *et al.*, 2014a). Due to the small size of this fishery, fishermen are struggling to make their voices heard beyond the fishery.

3.2.1 Good listening at a local level

Brittany is a maritime region within which fishing plays an important role in the sectoral policy. The fishermen community is supported in its various projects by the local elected officials in order to maintain a socio-economic fabric in the coastal belt: *"Small scale inshore fishing is very important for the local economy! For example, in Saint-Quay Portrieux, there fish wholesalers and Celtarmor with a factory employing 70 people full time!"* (CDPMEM, 12 Nov. 2013). The General Council of Côtes d'Armor supports the economic development of the sector: *"The General Council acts as a financier of our fishing ports with concessions and subsidies to the Chamber of Commerce and Industry; and at the level of economic development of fishing with a subsidy policy subservient to the European Fisheries Fund (EFF) and to the European Maritime and Fisheries Fund (EMFF). These aids are matched to the demands of the European Union. We support the modernisation of the fleet, the installation of young fishermen, the fish wholesale, processing, producer organisations and the CDPMEM of Côtes d'Armor"* (General Council, 10 Dec. 2013).

Politicians and local elected officials also support the inshore fishery and the Great Atlantic scallop fishery by defending it while participating in debates on the CFP: *"It is the region that leads the negotiations to defend the interests of inshore fishing for the future CFP. The General Council of Côtes d'Armor is fights with the Regional Council to get their ideas through in favour of the development of the sector but we are not listened to enough. We can send notes directly to the European level but it does not carry much weight"* (General Council, 10 Dec. 2013). Relationships between elected officials and fishermen are healthy: *"We have a fairly close relationship with the fishing world and good quality discussions, there is no tension"* (General Council, 10 Dec. 2013).

With the authorities, relations can be different: *"There is a problem with the authorities because there is too much turnover. People need time to adapt to the context which wastes time and efficiency when developing our projects"* (CDPMEM, 12 Nov. 2013). Government staff, most of the time, occupy specific positions for a few years before switching to a different service or location, which may cause a loss of information. Relationships must be rebuilt each time.

3.2.2 Failure to listen at the national and European level

This fishery, as is the case with many others in Brittany, fears for the economic sustainability of its fleet with the introduction of the new CFP. Indeed, fishermen notably fear that Europe will remove the continued support to new fishing business creation or renewal of the fleet during the next EMFF¹⁴ for example. To pass messages at the European level, it is necessary that the local structure passes through all levels (regional, national and European), which is long and not always successful. In reality, fishermen ask decision makers of the European Union to protect their way of life, their

¹⁴ Le FEAMP est le nouveau fonds proposé par l'Union européenne (UE) dans le domaine des affaires maritimes et de la pêche pour 2014-2020.

communities and their heritage. For them, it is essential that the new common policy takes into account the artisanal fisheries more, as it may disappear. *“There is a reduction in the fleet, divided by 2 in 10 years! And tomorrow I do not know what is going to happen ... there will be no more boats. They do not want fishing on the coastal belt anymore”* (Fisherman, 22 Nov. 2013)” *“If there is no more public support for the modernisation of the sector and its tools then we are going toward the death of fishing”* (General Council, 10 Dec. 2013). There is, indeed, a certain breakage, a lack of connection between the inshore scallop fishery (the field) and Europe: *“There is a gap between management at the local level that is daily and management at the level of Europe. Europe is too far from the field”* (CDPMEM, 12 Nov. 2013).

The reduction of the fleet also arises as a future problem for the fishermen community. Not due to a lack of biological resources but rather a lack of means to renew its fleet. The fear of abandonment of measures aiding the renewal of the fleet in the next CFP, as well as criticism of the choices in political direction at national level, are noticeable in the following quote: *“We have completely let our fishing and our commercial fleet go. We have turned to agriculture and tourism, it is all that is left...”* (Fisherman, 22 Nov. 2013). There also are criticisms at the local level: *“I am attached to the port of Dahouët, fishing has created a certain dynamism on the port. It is one of the oldest ports of northern Brittany, it has quite a long history with Newfoundlanders. But they no longer think about fishing because they want to remove the fuel pumps following an upgrading up to standards. Only three trawlers remain and it is too little for them. [] We are thinking of going through the elected representatives to fight because there is an interest for fishermen and recreational boaters!”* (Fisherman, 22 Nov. 2013).

3.2.3 Difficult to be heard in an increasingly saturated space?

According to survey respondents, the community of fishermen suffers the brunt of the transformation of the maritime space with the arrival of new users (boaters, recreational fishermen, water sports, energy, ...). The maritime space is thus becoming saturated; inshore fishing is therefore forced to adapt to be preserved, in order to maintain a sustainable and annual activity for the preservation of the local fabric. *“Between the Natura 2000 areas, wind power, ... the coastal belt of France will be saturated. Recreational boating is also developing”* (Fisherman, 22 Nov. 2013). Cohabitation between fishermen and recreational boaters remains particularly difficult, in particular due to the fact that the latter are not constrained by fishing quotas: *“The recreational boaters fish what they want, they have no quota, ... they are numerous. Individually it is not serious, but when there are 350 boaters on the site, the fishing pressure is high. And on top of that we are seen as destructors of the environment!”* (Fisherman, 22 Nov. 2013). According to the respondents, tourism is not seen by fishermen as a financial windfall but as a competitor, as is recreational boating.

4 CONCLUSION AND KEY POINTS

The following table lists all the stakeholders involved in the governance of the Great Atlantic scallop fishery in the Bay of Saint-Brieuc and briefly summarises their respective roles. Fishermen are positioned at the heart of the local and regional governance through the “Great Atlantic scallop” Commission of the CDPMEM of Côtes d’Armor, and the “Shellfish” Commission of the CRPMEM of Brittany. These commissions are a force of proposal. In addition, professional organisations are key players in the management of the fishery with the introduction of licences for the scallop, being a system which is also used for other species such as the lobster in the Bay of Granville (Picault *et al.*, 2014b). The government plays its commanding role at the national, regional and local level by controlling the correct implementation of the fisheries policy. Therefore, this pattern of governance reflects a strong cohesion and collaboration between players but also a true willingness from fishermen to ensure the sustainable development of their trade. Scientific research plays a role within this sector, notably on management aspects of the resource. Finally, the producers organisations will manage the marketing of the Great Atlantic scallops landed by their members.

Table 2: Organisations involved in the governance of scallop fishery in the Bay of Saint-Brieuc

LEVEL	ORGANISATION	ROLE
	PROFESSIONAL ORGANISATIONS	
National	National Committee for Maritime Fisheries and Marine Fish Farms of Lower Normandy (Comité National des Pêches Maritimes et des Élevages Marins - CNPMEM) “Shellfish” Commission of the CNPMEM	Regulatory measures and recommendations for the “Commercially harvested shellfish” licences at the national level Stakeholder group that provides advice and guidance on fishing for shellfish at the national level
Régional	Regional Committee for Maritime Fisheries and Marine Fish Farms of Brittany (Comité Régional des Pêches Maritimes et des Élevages Marins de Bretagne - CRPMEM) “Shellfish” Commission of the CRPMEM of Brittany Producer organisations	Licence management at the regional level and force of proposal for the regulation and implementation of projects Stakeholder group (fishermen, fish wholesalers,...) that provides advice and guidance on fishing for shellfish at the regional level Manages the marketing of landed products. COBRENORD in Brittany is specialised in Great Atlantic scallops
local	Departmental Committees for Maritime Fisheries and Marine Fish Farms (Comités Départementaux des Pêches Maritimes et des Élevages Marins - CDPMEM) (Côtes d’Armor, Ille-et-Vilaine, Finistère and Morbihan) “Great Atlantic scallop” Commission of the CDPMEM of Côtes d’Armor	Force of proposal for regulations Stakeholder that provides advice and guidance on fishing for shellfish at the local level (Bay of Saint-Brieuc)
	AUTHORITIES	
Nationa I	Directorate for Marine Fisheries and Aquaculture (Direction des Pêches Maritimes et de l’Aquaculture - DPMA)	Translation and implementation of EU legislation at the national level
Régiona I	Interregional Directorates for the Sea Eastern English Channel–North Sea (DIRM) Manche Est-mer du Nord)	Conduct of State policies with regard to fisheries at the regional level
Local	Delegation to the Sea and the Coastal Zone of Côtes d’Armor (Délégation à la Mer et au Littoral- DML)	Law enforcement dock-side and at sea
	SCIENTISTS	
Nationa I	French Research Institute for Exploitation of the Sea (Ifremer)	Scientific research and stock assessments

The surveys conducted within the framework of this project allowed to summarise the principal means by which the existing structures contribute to the environmental, socio-cultural and economic sustainability of the fishery (**Table 3**).

Table 3: Synthesis of the key aspects of the Great Atlantic scallop fishery in the Bay of Saint-Brieuc

Sustainability of the environment
Participation to scientific works: collaboration with Ifremer for the gathering of scientific data, seeding the Bay with Great Atlantic scallops, fight against slipper shells
Establishment of an annual monitoring of the stock by Ifremer
Measures to preserve the resource, including the recommendation of an annual quota based on the stock assessment
Social sustainability
Communication works of the fishery on its trade
Implementation and participation in numerous projects
Organisation of a Great Atlantic scallop festival
Fish auction visits for tourists and children
Economic sustainability
Work with the industrial sector for the value-enhancement of the products (Celtarmor)
Work with the industrial sector for the production of sustainable energy (wind power)
Economic diversification (notably through direct sales)
Work on product quality
Governance based on co-management
Integration of the fishermen's ideas during decision-making
Organised occupational structures integrating fishermen
Regional and departmental political support to the inshore fishing sector
Establishment of a specific regulation: with notably a system of licences and a system of controls in relation with the fishermen

The environmental dimension, first item of the sustainable development triptych, is one of the pillars of this fishery and its governance. The fishermen have implemented a management on the basis of the availability of the resource, notably through the recommendation of an annual quota which is calculated from an assessment of the stock of scallops carried out prior to the start of each fishing season. Various scientific projects conducted with Ifremer help improve the knowledge of the resource. This scientific approach is an integral part of fisheries management. The socio-cultural aspect, another key element of sustainable development, is present within the fishing community and is underlined by the existence of a healthy working environment with many interactions with other sectors, other communities. There is a strong will from fishermen to develop the economy of their trade by advertising the fact that this fishery is managed in a reasoned manner and that the products are of a high quality. The means used by the fishermen community are, for example, fish market visits for tourists and schools or the staging of festivals allowing them to communicate on the trade and the species. Finally, the economic dimension is an unavoidable aspect of the sustainable development triptych for fishing businesses that exploit this resource. The management of the scallop resource is highly supervised in the Bay of Saint-Brieuc and allows fishermen to have access to the resource each year. However, its marketing is difficult (Le Gallic, 2013): the market is very competitive in France (competition with other species, foreign competition) and the selling price of the Great Atlantic scallop is quite low when compared to other deposits. Approaches to enhance the value of the scallop were implemented to increase the selling price, and thereby enable a more efficient exploitation of the resource. For example, a collective mark was created for the Great Atlantic scallop, which highlights the quality of the product. More occasional initiatives, such as direct sales, are very present within this fishermen community, which allows an increase of the selling price. A specific marketing system was also set up with the producer organisation as well as an industrialist, to produce frozen scallops so as to segment the market and provide commercial outlets when demand decreases

These different dimensions of sustainable development are an integral part of the governance of this fishery. Members of the fishermen community and various associated stakeholders are attempting to secure the future of the fleet through co-management. This governance allows fishermen to benefit from regulations that are pertinent to their needs while enabling the sustainability of the fishery. Despite all this and according to the respondents, there are some limitations to this governance.

✓ **At the fishery level**

The management system that was established for the Great Atlantic scallop, notably the regulation, may encourage fishermen to take more risks. This fishery is known to be especially dangerous because, in particular, of the limitation in fishing time and the large number of vessels on site. Although regulations arose from the fishermen, compliance is not always forthcoming. There is therefore a significant monitoring system in place emanating from the administration as well as the fishermen themselves. Another consequence of this strict management system is the non-correspondence between supply and demand. Indeed, the limitation imposed on fishing days and the prohibitions of catches during the summer create a concentration in time of the landings of scallops, thereby triggering a drop in prices at certain periods.

✓ **At the national and European level**

This coastal fishery and its representatives, despite being well up on the policies of Côtes d'Armor, are struggling to make their voice heard at the national as well as European level. They feel that inshore fishing is not sufficiently supported. Yet, even if the fishery is managed at the local level, it is forced to comply with the regulatory constraints of the European Union, in particular through the CFP. In addition, fishermen operate in a space where uses are increasingly diversified and where conflicts of use are multiplying. As a result, they fear a loss of support from political bodies in favour of other sectors.

LIST DES ACRONYMS

BQM	Brittany Sea Quality (<i>Bretagne Qualité Mer</i>)
CAD	Côtes d'Armor Développement
CDPMEM	Departmental Committee for Maritime Fisheries and Marine Fish Farms (<i>Comité Départemental des Pêches Maritimes et des Élevages Marins</i>)
CFP	Common Fisheries Policy
CG	General Council (<i>Conseil Général</i>)
CRPMEM	Regional Committee for Maritime Fisheries and Marine Fish Farms (<i>Comité Régional des Pêches Maritimes et des Élevages Marins</i>)
CNPMEM	National Committee for Maritime Fisheries and Marine Fish Farms (<i>Comité National des Pêches Maritimes et des Élevages Marins</i>)
DDTM	Departmental Directorate for the Territories and the Sea (<i>Direction Départementale des Territoires et de la Mer</i>)
DIRM-NAMO	Interregional Directorate for the Sea North Atlantic Western English Channel (<i>Direction Interrégionale de la Mer Nord-Atlantique Manche Ouest</i>)
DML	Directorate to the Sea and the Coastal Zone (<i>Direction Mer et Littoral</i>)
EFF	European Fisheries Fund
EMFF	European Maritime and Fisheries Fund
EU	European Union
Ifremer	French research Institute for the exploitation of the sea (<i>Institut français de recherche d'exploitation de la mer</i>)
MPA	Marine Protected Areas
PO	Producer Organisation
TAC	Total Allowable Catches (<i>Totaux Autorisés de Captures</i>)
SIH	Système d'Information Halieutique

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This report presents the results of the study on the governance of inshore fisheries, undertaken on the Great Atlantic scallop (*Pecten maximus*) in the Bay of Saint-Brieuc. The objective is to better understand the different modes of governance of inshore fishing and to identify the role of fishing in the selected areas. The results of the study provide an overview of the way in which fishing communities interact with sovereign bodies and the main decision makers at different levels of governance (local, national and European). AGROCAMPUS OUEST examined how, and to what extent, the fishermen are engaged in the governance structures to maintain the economic and social viability of their community. These results provide the context of governance in France, supplemented under the GIFS Project by other case studies in England, Belgium and the Netherlands, in order to better define the role of inshore fishing within the framework of the sustainable development of the coastal zone.

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