

Inshore fisheries and governance (France)

The case of professional shore-gathering fishermen in the Bay of Somme

GIFS project • Action 1



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Inshore fishing and governance

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in the Bay of Somme (France)

Action 1 – GIFS Project
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PRESENTATION OF THE PROJECT

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 (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 then 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 wish to thank the stakeholders met for their availability and interest in the study: the Regional Committee for Maritime Fisheries and Marine Fish Farms (Comité Régional des Pêches Maritimes et des Élevages Marins - CRPMEM) of Nord-Pas-de-Calais-Picardie, the Estuarine and Coastal Habitats Research Group (Groupe d'Étude des Milieux Estuariens et Littoraux - GEMEL), professional shore-gathering fishermen [from French: pêcheurs à pied], Le Crotoy town council, the Association of marsh samphire harvesters (association des ramasseurs de salicornes) and the Directorate to the Sea and the Coastal Zone (Direction Mer et Littoral - DML) of Pas-de-Calais. All showed great hospitality, understanding and provided instrumental assistance to this study. The rewarding discussions helped open new avenues for thought and opened-up the scope of the results of the study on the governance of inshore fishing to the issues of estuarine fishing trades.

INTRODUCTION

Professional shore gathering is a harvesting activity, often considered as one of the ancestral coastal trades. This professional maritime activity has only been recognised and regulated since 2001 in France, by Decree No 2001-426 of 11 May 2001, establishing for the first time the professional status of “shore-gathering fisherman” and defining the conditions and regulations related to the practise of the trade as being the activity *“whose action, in view of the sale of the marine animals caught, is practised on the maritime public domain as well as in the part of rivers, ponds or canals where the water is salty as defined by regulations in force. The action of fishing itself is carried out:*

- 1° without the fisherman ceasing to have some ground support,*
- 2° without breathing equipment allowing prolonged submersion”.*

With this recognition, professional shore gathering thus enters the general framework of regulation and co-management of French inshore fishing¹. The Decree from 2001 includes 4 main provisions: the creation of a shore-gathering licence, the requirement of social security, the development of access criteria to the occupation and the establishment of a monitoring of the activity, with the introduction of declaratory obligations (daily fishing logbook) (Loarer, 2013). The Decree from 2001 was amended by Decree No 2010-1653 of 28 December 2010 instituting a national professional shore-gathering licence. It also provides for mandatory training for first-time applicants of a fishing licence². These texts exclude shore harvesting marine plants. Fishermen harvesting marine plants therefore do not have the status of professional shore-gathering fisherman. This activity is governed by Decree No 90-719 of 9 August 1990 laying down the conditions of fishing, gathering, and harvesting marine plants. These professionals have the opportunity to declare their harvest, although it is not mandatory. Incidentally, discussions are currently underway between the National Committee for Maritime Fisheries and Marine Fish Farms (Comité National des Pêches Maritimes et des Élevages Marins - CNPMM) and the Directorate for Maritime Fisheries and Aquaculture (Direction des Pêches Maritimes et de l’Aquaculture - DPMA) of the Ministry of Ecology, Sustainable Development and Energy to reform the status of these professionals (Personal communication from the CNPMM, 2014).

Gathering marine species by shore is practised in an open environment, the maritime public domain (Domaine Public Maritime - DPM). The species caught can be shellfish, crustaceans, fish, and others (echinoderms, marine plants...), each species being subjected to a catch size limit set by local or regional regulation. On the English Channel and Atlantic seaboard, the main species caught are the cockles, tellins, mussels and oysters (Anonymous, 2013). Male-dominated independent activity, most shore-gathering businesses are of the type “very small business” (Très Petite Entreprise - TPE). The shore-gathering fisherman is usually the only employee and shore gathering constitutes its main activity (Laguerre *et al.*, 2012). Dependent on a fluctuating resource, shore gathering is subject to environmental hazards, as much climatic as sanitary. Since 2012, it has been experiencing a major crisis with high mortality due to extreme weather events becoming more common, heat waves and heavy spring rainfall (Anonymous, 2013). The main species caught are indeed very sensitive to this type of phenomenon.

¹ See the study report No 20 of the Studies and Transfer Unit “Inshore fishing and governance, the governance of fishing within French territorial waters”

² Internal memo. DPMA/SDAEP/N2011-9636 of 14 June 2011.

In France, in 2007, 1 264 shore-gathering professionals were identified. This number remains approximately stable from year to year (Laguerre *et al.*, 2011). In Europe, 10 000 professional shore-gathering fishermen were counted in 2012, according to a recent survey by the European Commission (Le Marin, 2013). Incidentally, Spain is the country with the most professional shore-gathering fishermen in Europe with 4 900 fishermen, followed by Finland (about 1 500 fishermen), Portugal, and France (between 1 200 and 1 300 fishermen). The activity is governed by stocks managed locally by each Community country. The stock of a deposit is indeed directly dependent on the characteristics of the area; there is no link between the stocks of a territory's cockle deposit with that of another territory.

This study report describes the specificities of the Bay of Somme professional shore-gathering fishermen, the supervising governance of this fishery, and then identifies the limitations to this governance.

1 METHODOLOGY

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

1.1 Selection of the study

It seemed interesting to understand how shore-gathering fishermen organise themselves around a local action group for fishing in the Bay of Somme. To carry out this work, a survey by semi-structured interviews was conducted on a panel of stakeholders that was varied, but identified as key players in the activity. The objective of the study is to understand how, and to what extent, the professional shore-gathering fishermen of the Bay of Somme are involved in the governance structures to uphold the economic and social viability of their community, to identify success factors and the limitations of this governance. In this case, surveying is the most appropriate method for this type of work. The information to be collected is indeed partly sociological and rarely identifiable in documents and reports. These are often conceptual and complex data, influenced by social and relational dynamics of institutional and private players.

1.2 Details of the method

A general interview guide was produced by the English project leaders from a pilot case study conducted in the south of England on inshore fishing and governance. A survey guide was adjusted once the literature research phase was completed. The questions of the initial interview guide were synthesised into major themes, the idea being to present the themes to be addressed in the interview without influencing the response of the respondent with questions that are too restrictive, hence the choice of the semi-directive interview. Themes addressed are: the evolution of the governance of the fishery, its history, relationships between players, the involvement of the State as well as fishermen in this evolution, ongoing projects on the fishery, control, the socio-economic impact of the fishery on the study territory and existing usage conflicts..

In order to identify key players, three exploratory interviews were conducted over the phone (Axis 4 Group of the European Fisheries Fund (EFF), local association, and the General Council), supplemented by literature research. Other players were identified during the semi-directive interviews conducted across the study area (contacts provided directly by the players themselves).

Table 1 below identifies the stakeholders who were consulted to complete the study, arranged by meeting date.

Table 1 of persons consulted during the interview survey

Participant	Sector/position	Date	Duration
1. Participant A	Joint Union (coastal spatial planning and management)	3 April	127 min
2. Participant B	Decentralised State department: Directorate to the Sea and the Coastal Zone	4 April	98 min
3. Participant C		4 April	98 min
4. Participant D	Regional Committee for Maritime Fisheries and Marine Fish Farms (CRPMEM)	22 April	119 min
5. Participant E	Professional shore-gathering fisherman 1	22 April	77 min
6. Participant F	Local authority: communal elected official	22 April	77 min
7. Participant G	Scientist	23 April	114 min
8. Participant H	Axis 4 Group of the EFF	5 May	90 min
9. Participant I	Professional shore-gathering fisherman 2	6 May	119 min
10. Participant J	Local association	6 May	120 min
11. Participant K	Agency for Marine Protected Areas (Agence des Aires Marines Protégées)	7 May	124 min
12. Participant L	National Committee for Maritime Fisheries and Marine Fish Farms (CNPMEM)	3 June	20 min
13. Participant M	Professional shore-gathering fisherman 3	16 June	20 min
14. Participant N	Sworn guard of the Bay of Somme	19 June	16 min

Almost all of the interviews were conducted face-to-face. The surveyor is equipped with an interview guide and a voice recorder (with consent of the respondent). 14 people were interviewed. Most surveys were conducted during April 2014. The last interviews in June were conducted over the phone and the last three were conducted as interviews of validation, contact, or information adjustment.

The minutes of each interview were recorded and structured by theme. The collected data were analysed using the method of thematic content, by a vertical approach. All minutes were categorised on a theme basis. In fact, Blanchet and Gotman (2001) speak of an “analysis by interview.” The various themes are then subjected to a qualitative processing of the information by comparing the various statements of stakeholders and the data gathered during literature research.

2 PROFESSIONAL SHORE GATHERING IN THE BAY OF SOMME

Combining versatility and diversity, professional shore-gathering fishermen of the Bay of Somme are strongly attached to their territory. Professional shore gathering is essential to upholding a viable economic and social fabric for this isolated territory, and this fishery features numerous distinctive characteristics.

2.1 Presentation of the fishery's characteristics

The Bay of Somme is France's the largest cockle deposit; it also features vast stretches of marine plants (marsh samphire, sea asters and seablites). The harvest of marine plants is an important part of the income of professional shore-gathering fishermen from the Bay of Somme. This is a traditional activity which is inseparable from professional shore gathering in the Bay. A mussel deposit is also present in the Bay, but closed to fishing since 2001 for resource conservation reasons. A reopening of the deposit could be possible this year, but several local elected officials are opposing it because they wish to reserve the area for recreational shore gathering. Mussel deposits of Pas-de-Calais are, however, open each year and exploited in part by shore-gathering fishermen from the Bay of Somme (Personal communication from the Regional Committee for Maritime Fisheries and Marine Fish Farms (CRPMEM), 2014). **Table 2** below provides a detailed description of professional shore gathering managed by the CRPMEM of Nord-Pas-de-Calais-Picardie.

Table 2: Description of professional shore gathering managed by the CRPMEM of Nord-Pas-de-Calais-Picardie

Targeted species	Licences ³ granted in 2013	Fishing period	Minimum catch size and quota
Cockle	345 licences	From September, through to December at the latest	3 cm, daily quota set each year depending on stock/season status
Marine plants	140 licences	From March to August	Absence of maximum quota
Mussel	45 licences	Deposit of Pas-de-Calais open all year	4 cm, 160 kg/day/fisherman
Peppery furrow shell	Other bivalves licence	All year	3 cm, 50 kg by tidal cycle

Source: Personal communication from the respondents, 2014.

Other species are also caught in the Bay, worms and shrimp. In 2014, 103 worm licences and 125 shrimp licences were granted by the CRPMEM of Nord-Pas-de-Calais-Picardie. Note that the peppery furrow shell (species close to the clam) had disappeared from the area, but is back in large quantities in the Bay since 2009. Presence of razor-clams throughout the Opal Coast (côte d'Opale), unexploited until now, but soon to be (Personal communication from a local association, 2014).

The Bay of Authie (baie d'Authie), adjacent to Pas-de-Calais and the Bay of Somme, also features a cockle deposit which is exploited by the same fishermen as those of the Bay of Somme. Among licences granted by the CRPMEM of Nord-Pas-de-Calais-Picardie, there are fishermen from Somme, Seine Maritime, Brittany, and from Noirmoutier (Personal communication from the DML, 2014).

³ Autorisation qui ouvre le droit à l'exercice de la pêche à pied pour une espèce sur un secteur littoral. Source : Délibération 27/2011 du CNPMEM.

Three different profiles of professional shore-gathering fishermen are distinguished on this territory:

- ✓ Cockle shore-gathering fishermen, the livelihoods of whom depend exclusively on this resource and who stay on the territory (dependent on the activity of cockle fishing on the territory);
- ✓ hand gathering fishermen who are versatile, but stay on the territory (fishing for cockles or mussels, shellfish farming, harvesting marine plants, worm digging, or);
- ✓ travelling fishermen, that is to say, with different licences for cockles or other species on different territories (Normandy, Brittany...).

There are local fishermen who only have a cockle licence for the Bay, they are the most fragile professionals because they are dependent on a single territory and a single resource (often youngsters) but they are a minority.

From a salubrity standpoint, the Bay of Somme is divided into two production zones. The northern Bay of Somme, classified B, and southern Bay of Somme, classified C only two years ago, since then reclassified as B, but close to C (Personal communication from the DML of Pas-de-Calais-Picardie, 2014).

2.2 A sector of socio-economic importance for the territory

The economic weight of shore gathering in the Bay of Somme encourages the involvement of local stakeholders in the governance of this activity. During favourable seasons, professional shore gathering represents several million euros in turnover. Few jobs are available in the territory so the economic stake of this activity is important. *“If mussel farming and professional shore gathering are removed tomorrow, the territory will suffer”* (Joint Union for coastal spatial planning and management, 2 April 2014). According to respondents, local elected officials seem to be aware of this. Indeed, during the opening of cockle deposits, in low tourist season, shore-gathering fishermen from outside the territory come to live in the Bay of Somme for the duration of a season, resulting in significant economic benefits (accommodation, catering, shops) (Personal communication from the joint Union for coastal spatial planning and management, 2014).

2.2.1 Marketing and economic development: the case of the cockle

The economic channel of the cockle is straightforward. Currently, 95 % of cockles harvested in the Bay of Somme are sent to Spanish canneries. There are two reasons for this. Firstly, the purchase price granted by the cannery to the wholesalers (wholesalers for the Spanish cannery) satisfies them, and secondly, the Spanish are to date the only ones with the capacity to buy the quantities of cockles harvested in the Bay. Fishermen are also happy with the situation (Personal communication from the joint Union for coastal spatial planning and management, 2014).

Figure 1 introduces the cockle’s marketing channel. Wholesalers purchase the entire cockle production from shore-gathering fishermen with a licence

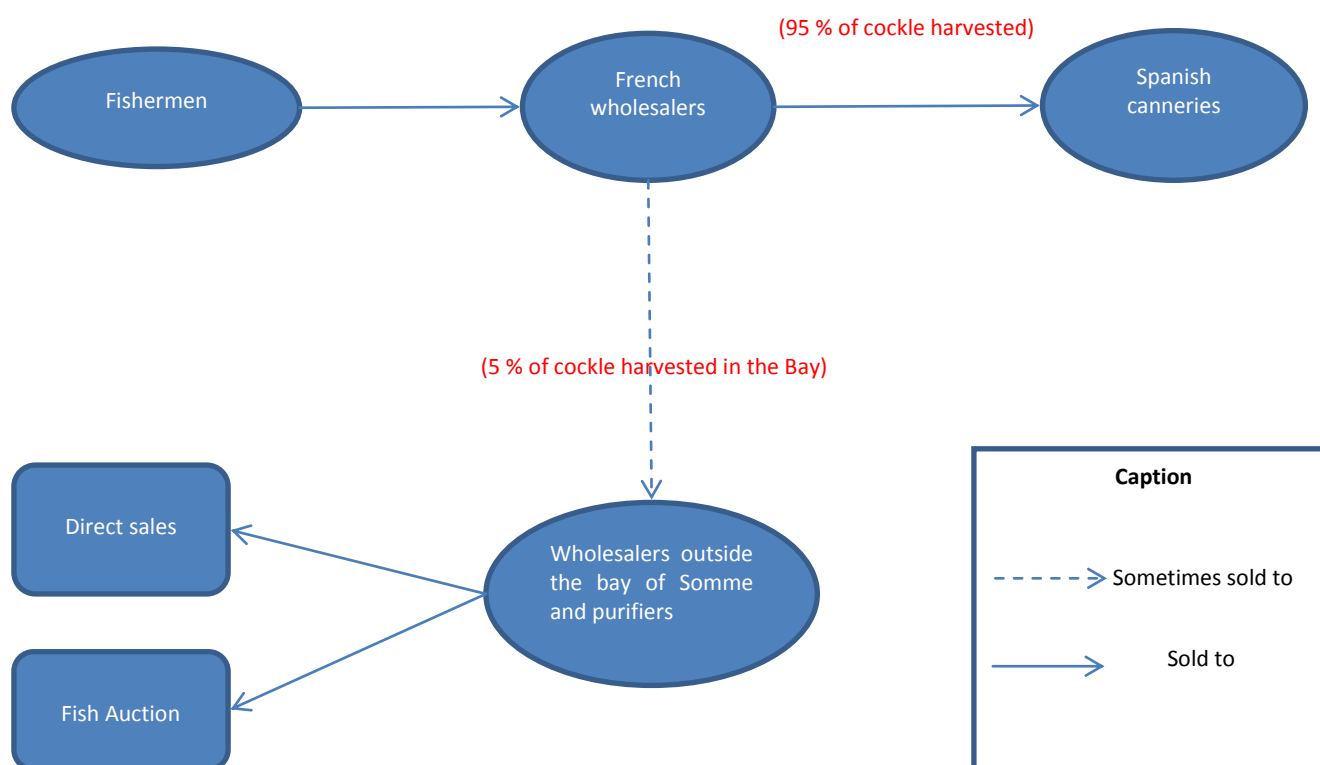


Figure 1: Marketing channel of cockles harvested in the Bay of Somme.

Source: Personal communication from the respondents, 2014.

The economic benefits of cockle fishing for the territory could yet be even greater thanks to local restaurants, tourists, and local residents. The marketing of the cockle across the territory could serve as a new local economic lever.

The economic impact of cockle shore gathering is highly variable from year to year in the Bay of Somme. In recent years, the amounts harvested ranged from 3 700 tonnes in 2003 to 305 tonnes in 2005. Including all other species, the annual turnover of shore gathering across the territory is between 1.5 and 10 million euros. The average turnover is about 5 million. The year 2012 was very bad because of the consequences of heat waves (Anonymous, 2013).

The economic consequences of a mortality episode: turnover generated by cockles in the Bay of Somme over the past three years:

- ✓ **2010/2011 season**, total production of 2 855 tonnes sold at average price of 2.80 €/kg, generating an estimated turnover of **7.99 million euros** (exceptional year);
- ✓ **2011/2012 season**, 1 658 tonnes sold, average price 2.80 €/kg, for a global turnover of **4.64 million euros (-42 % in comparison to 2010/2011)**;
- ✓ **2012/2013 season**, total production of 147 000 kg sold, average price 2.80 €/kg, for an estimated global turnover of **0.41 million euros (-92 % in comparison to 2011/2012, -95 % in comparison to 2010/2011)** (Loarer, 2013).

- **Another market: marine plants**

Marsh samphire is something of a novelty in terms of economic benefits across the territory (the market in France has been growing over the past 10-15 years and the product is increasingly valued). There is also a growing interest from fishermen for other species of marine plants present in the Bay, sea aster and seablite, the market for which is also growing. The downside is the strong dependence of these species on the habitat and the increasing exploitation competition of the Breton business Saveol. Two wholesalers buying marine plants are located in the Bay of Somme. There is another in Normandy. Orders are usually distributed among the wholesaler's entire team of shore-gathering fishermen (40 fishermen by wholesaler on average) (Personal communication of a local association, 2014). *"Marsh samphire from the Bay of Somme represents 80 % of national production. [...] The promotion of our shore-gathering fishermen's marine plants allows to uphold this threatened trade and, for youngsters, to perpetuate this iconic activity of our estuary"* (Association of marsh samphire harvesters, autumn 2013)

2.2.2 Territorial development projects

The projects of the sector are numerous and demonstrate the socio-economic importance of the produce of the Bay. Several projects have been developed and supported by various players, and others are under consideration. Among the developed projects:

- ✓ the production and dissemination of the works of the Association of marsh samphire harvesters. Its objective is to promote the area, its produce and the occupation of marine plant harvesting (project supervised by the Association for the Sustainable Development of Maritime Activities (Association de Développement Durable des Activités Maritimes - ADDAM)) and the Association of marsh samphire harvesters) (Personal communication from Axis 4 Group of the EFF, 2014);
- ✓ the marsh samphire festival, organised in the town of Le Crotoy in the Bay of Somme, by the Association of marsh samphire harvesters, with the support of the town, local elected officials and volunteers (4th edition in 2014);
- ✓ the shellfish farming centre of Le Crotoy, inaugurated in October 2010, allows the purification of "bouchot" mussels, but could also process other shellfish, such as cockles. It includes 12 single and 2 double workshops and allows professionals to market reliable produce from a sanitary stand point;
- ✓ evaluation of exploitable invertebrate resources across the three Picard estuaries (Canche, Authie, and Somme), study conducted by the Estuarine and Coastal Habitats Research Group (Groupe d'Étude des Milieux Estuariens et Littoraux - GEMEL);
- ✓ the construction of a fish market in the town of Le Crotoy which is intended to bring sales equipment up to European standards, communicate on the fishing masters' activity as well as develop sales and tourism offer (Anonymous, 2012).

Projects under consideration:

- ✓ production of fact sheets on activities present in the Bay (work carried out by the ADDAM and the CRPMEM of Nord-Pas-de-Calais);
- ✓ the creation of a website for the Association of marsh samphire harvesters, supported by the Association itself, and aided by the ADDAM after a request by the Association of marsh samphire harvesters;
- ✓ the introduction of a label for marine plants of the Bay (works carried out jointly by the ADDAM and the Association of marsh samphire harvesters);

- ✓ a project to promote land/sea produce (supported by the joint Union of the Bay of Somme and Broad Picard Coast (syndicat mixte baie de Somme - Grand Littoral Picard) and linked to Axis 5 of the union's 2012-2017 Programme "ensure the development of responsible economic tourism activities");
- ✓ discussions are underway with local restaurant owners and a mussel farmer in order to include fresh local cockles in the menus. The mussel farmer processes the cockle, the shore-gathering fisherman sells it;
- ✓ a street window display project in the town of Le Crotoy to expose and promote local produce (supported by the Association of marsh samphire harvesters and the town of Le Crotoy) (Personal communication from the town council of Le Crotoy, 2014).

However, it seems difficult to promote local produce, notably marine plants because of a general lack of knowledge about them in France and strong European competition, notably by the Netherlands (Personal communication from the Axis 4 Group of the EFF, 2014). Projects related to shore gathering make it possible to uphold a socio-economic fabric across the territory. Projects are supported and/or backed by various players that may intervene at different stages of the project.

2.3 An activity tied to the environment of the Bay

2.3.1 A protected and promoted natural area

With 72 km of coastline, of which only 15 % are urbanised, the Bay of Somme is the largest estuary of northern France (7 200 hectares of intertidal habitats). The Bay is an estuary of the coastal Somme River, and opens onto the eastern English Channel (Anonymous, 2012). It is characterised by strong marine hydrodynamic constraints (macrotidal regime⁴), weak river inputs and a large low tide slack water area which facilitated the development of shore gathering (Le Moine *et al.*, 1988).

Over an area of 17 000 hectares, the Bay of Somme features three major areas of ecological importance: an estuary, dunes and marshes. It has long been under various types of protection, inventoried in **Figure 2**, which highlights the richness of the Bay and the importance given to its preservation. The tools for the protection of species and natural areas are numerous: wetlands of international importance listed under the Ramsar Convention, Natura 2000 sites (European and community level inventories) with the Important Bird Areas in the European Community (IBA) prior to the classification of the site as a Special Protection Area (SPA) for wild birds, the biotope protection area, and the National Nature Reserve (3 000 hectares). The Nature Reserve of the Bay was created in 1994 in the northern part of the DPM (Anonymous, 2013). Professional shore-gathering fishermen were immediately integrated into it. It includes the hunting and wildlife reservation which had been created in 1968, as well as the ornithological Park of Marquenterre (property of the Conservatory of coastal areas and lake shores (Conservatoire de l'Espace Littoral et des Rivages Lacustres) since 1986⁵). Latest recognition for the territory and its players, the labelling on 3 June 2011 as a great site of France (Grand Site de France) (label attributed to landscape sites under high tourist influence, managed here by the joint Union of the Bay of Somme and Broad Picard Coast (syndicat mixte baie de Somme - Grand Littoral Picard) for a period 6 years)⁶.

⁴ High-amplitude tides with strong swells.

⁵ National Inventory of Natural Heritage (Inventaire National du Patrimoine Naturel – INPN), Natural Area of Ecological, Faunistic and Floristic Interest (Zone Naturelle d'Intérêt Écologique, Faunistique et Floristique – ZNIEFF) 220014314 – Bay of Somme, ornithological park of Marquenterre and Champ Neuf – Comments.

⁶ A great site (Grand Site) is necessarily a classified site, its related regulation applies, that is to say that a permit is required for all work that could lead to a change in the appearance or the state of the protected site.

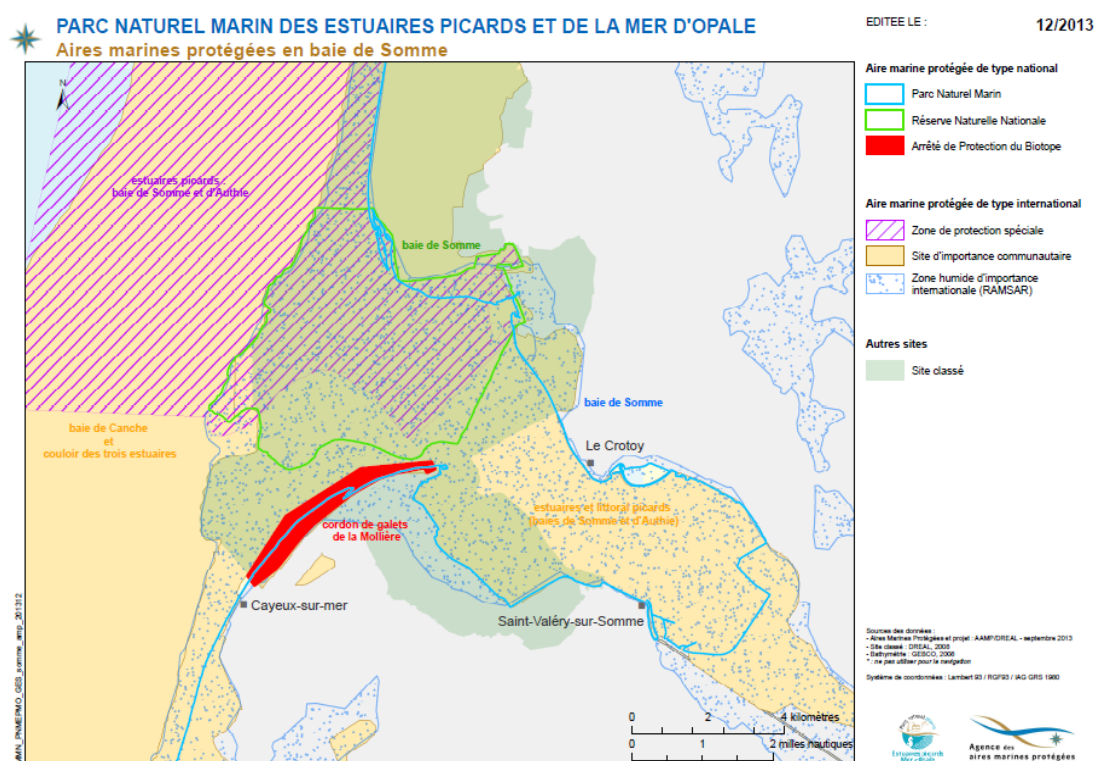


Figure 2: Map of management and protection tools of the Bay of Somme.

Source: Marine nature Park of Picard estuaries and the Opal Sea (mer d'Opale), December 2013.

2.3.2 The creation of the marine nature Park of Picard estuaries and the Opal Sea (mer d'Opale)

The marine nature Park (MNP) of Picard estuaries and the Opal Sea was created in December 2012 (Anonymous, 2012). Incidentally, the management board includes a representative of the professional shore-gathering fishermen. A professional fishing project officer and a recreational fishing project officer have been hired to deal with issues related to these activities. The marine Park is a tool for consultation and governance based on three pillars: knowledge, sustainable development and conservation. Its objective is to empower each player for the management of a given area (Personal communication from the Agency for Marine Protected Areas (MPA), 2014). There is a significant portion of fishermen involved in monitoring the creation of the management plan, their presence is even important for the MNP. "They will have to be mobilised as much as possible" (Agency for MPAs, 7 May 2014). Fishermen have also claimed a number of seats on the management board of the Park out of the 60 seats. There should be 13 representatives of professionals, with nine from the various fishing trades including shore-gathering fishermen and a representative of the CRPMEM of Nord-Pas-de-Calais-Picardie. But their difficulties to attend meetings persist, which eventually could cause problems. It is the French MNP with the greatest number of fishermen representatives (Personal communication from the MNP of Picard estuaries and the Opal Sea, 2014). The MNP should bring coherence to the territory, and even simplification. The idea is to clarify certain situations with all the players of the MNP. "*We will improve in clarity*" (GEMEL, 23 April 2014).

Jurisdiction of the Prefect or the Minister. Repression of damages, destructions or absence of authorisation. Source: technical workshop for natural areas (atelier technique des espaces naturels), 2010.

The particularity of this MNP is that it straddles three departments and three regions (Nord-Pas-de-Calais, Picardie, and Upper Normandy). It is therefore difficult to rally all concerned players. There is still work to be done, particularly sensitise the stakeholders of the territory to the role and place of the MNP. The consultation which is being implemented for drafting the management plan is based on the guidelines listed in the Decree creating the park (Personal communication from the Agency for MPAs)

4 main thematic work commissions will emerge:

- ✓ Natural areas;
- ✓ Professional uses (uses by fishing and new activities, aggregates, wind turbines....);
- ✓ Recreational uses (recreational shore gathering and recreational fishing at sea);
- ✓ Cultural heritage.

Fishermen have insisted on not having a dedicated professional fishing commission but to instead be integrated into the other uses. *“During the consultation, the importance of this management direction emerged from the perspective of the fishermen. [...] They should not be considered separately but instead included in the activities.”* (Agency for AMPs, 7 May 2014).

The MNP will be able to finance many projects and research, including with the GEMEL, but its role is currently not well identified by the players (Personal communication from the Agency for MPAs).

The governance of professional shore-gathering fishermen from the Bay of Somme has to be understood in this context. Governance, *“manner in which power is exerted to manage social and economic resources of a country for its development”*⁷, is generally connected to the coordination and regulation process of a territory, a sector, or a specific thematic.

3 DESCRIPTION OF THE GOVERNANCE OF PROFESSIONAL SHORE GATHERING IN THE BAY OF SOMME

Historically, shore gathering is a structuring activity of the Bay of Somme. As is the case for most French inshore fisheries, professional shore gathering is supervised by a system of co-management: professionals and authorities collaborate to regulate the resource and the trade (Picault and Lesueur, 2014). Beyond this co-management, the governance established around this activity has been able to successfully adjust to the specificities of the territory and the expectations of professionals.

3.1 Regulation and supervision of the activity

3.1.1 The practise of professional shore gathering

Professional shore gathering must be practised between sunrise and sunset and every professional is free to choose their working hours (depending on tidal coefficients, fishing seasons and closed seasons, specific to each territory). The trade of professional shore-gathering fisherman therefore features a great diversity, depending on the target species, fishing grounds, equipment and techniques used but is also very fragile due to the dependence on stocks of natural deposits and on the good physico-chemical condition of the environment. Catches must be declared (mandatory daily log books) and sold through the intermediary of a shipping centre with sanitary approval (Thomas, 2013).

⁷ *Governance and Development*, 1992, World Bank report, Washington DC.

The control of the activity can be achieved by three types of players:

- ✓ Sworn guards hired by fisheries committees, dedicated to the surveillance of listed shellfish deposits;
- ✓ Maritime police;
- ✓ Sworn officers of the DML (coastal units).

Sworn field technicians from the new marine nature Park of Picard estuaries and the Opal Sea will soon be stationed across the territory. They will be capable of monitoring and enforcing shore-gathering regulation. A pooling and coordination with State departments are expected (Personal communication from the Agency for MPAs, 2014).

3.1.2 General regulation

In French administration, regional and departmental Prefects are the sovereign authorities involved in the management of coastal fishing, including shore gathering. Region Prefects are responsible for the regulation of fishing effort and resource protection. They regulate fishing effort on shellfish deposits, carry out administrative classification of deposits, set opening and closing dates for fishing and define the exploitation conditions of deposits as long as they are recognised as being exploitable from a sanitary point of view. Departmental Prefects are responsible for sanitary regulations and measures to address public health threats (Roy, 1996). Obtaining a professional fishing permit (issued by the DML via the Prefect of the department), a licence for professional shore gathering and a stamp specific to the fishing ground and the deposit (issued by the CRPMEMs) are mandatory to conduct this activity in France, for proceedings of the CNPMEM or CRPMEMs. Then it is the CRPMEMs that implement this management system and they can set a quota of licences each year, which can also be done by the Departmental Committee for Maritime Fisheries and Marine Fish Farms (Comité Départemental des Pêches et des Élevages Marins - CDPMEM).

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- ✓ *Each region, and even each department, has its own characteristics with respect to the implementation of permits, to earlier systems, exploited species, the regulation and management of shore gathering (Tachaires, 2004).*

Regulations on sanitary classification of a coastal zone are subject to European legislation. European Community Directive 91/492 of 15 July 1991, and more recently, new European rules having entered into force on 1 January 2006⁸, lay down the sanitary rules governing the production and placement on the market of live bivalve molluscs. There are two separate classifications, one for shellfish (3 groups on the degrees of ability of shellfish to be contaminated, that is to say, to absorb a significant amount of toxic micro-organisms) and the other, regarding fishing grounds (Pelleau, 2006). Harvesting bivalve molluscs can then only be carried out in areas which were subjected to a salubrity classification⁹ (A, B, C; zones B and C being insalubrious areas). Shellfish caught in zone B require transit through a purification facility or they should be placed on shellfish cultivation beds in A-grade shellfish farming areas for 24 to 48 hours. Shellfish caught in zone C require a longer purification time: a placement on shellfish beds for a long period of at least two months. In the Bay of Somme, shellfish classified C went directly to canneries. Sanitary bulletins are available from the DML or fisheries committees. Once graded, production zones are regularly monitored by scientists. The detection of contamination (health warning) may result in administrative management measures such as the closure of the area by order of the Prefect of the department (Laorer, 2013).

⁸ New regulation on food hygiene emanating from the White Paper on Food Safety of the European Commission. Source: www.agriculture.gouv.fr

⁹ Except for pectinidae and non-filter feeding marine gastropods (periwinkles for example) that can be gathered outside classified areas. Source: Laorer, 2013.

3.1.3 Entry into professional organisations

Professional shore-gathering fishermen have been part of professional fisheries organisations since 2003. Representatives of shore-gathering fishermen were elected in departmental, regional and national fisheries committees. A national union was formed: the national Association of shore-gathering fishermen (Association Nationale des Pêcheurs à Pied - ANPP). At least one representative from professional shore gathering must be elected within each CDPMEM and CRPMEM, in the departments and regions where at least one professional shore-gathering fisherman (permit holder) was identified. Nationally, shore-gathering fishermen are represented at the CNPMEM in the Assembly (6 seats), the Council (2 seats), and two commissions: “coastal strip” (2 seats) and “Shellfish – Shore gathering” (2 seats). They must also pay a mandatory professional contribution (Cotisation Professionnelle Obligatoire - CPO) (Tachoures, 2004).

3.2 History of construction of the governance in the Bay of Somme

Even before the introduction of the Decree from 2001, shore gathering was already supervised in the Bay of Somme to avoid any abuse, manage the resource and uphold public order. The fishermen organisation was established gradually thanks to local players of the territory. *“The supervision of shore gathering in the Bay of Somme is quite long-standing and works pretty well”* (CRPMEM, 22 April 2014).

3.2.1 History of the shore-gathering trade in the Bay of Somme

In the 1980s, the cockle deposit of the Bay experienced heavy mortality and the industry then passed through several years of crisis. In response, Norman fishermen based in Picardie decided to setup mussels on the foreshore of the river Somme and they witnessed an amazing growth of this mollusc. It is for these reasons that the northern part of the department now features 7 km of “bouchot” mussel concessions. Initially, it was mainly an activity supplementing that of shore gathering, but over the years this resource has become very important for the territory. Around twenty shore-gathering fishermen who only practised shore gathering due to its strong productivity turned completely to mussel farming. Nevertheless, a part of the professional shore-gathering fishermen of territory that also practise this activity in parallel remains (Personal communication from the joint Union for coastal spatial planning and management, 2014).

The Bay of Somme is also experiencing increasing siltation since the beginning of the twentieth century. At-sea inshore fishing then gradually disappears since the 1980s¹⁰. Many fishermen turned to shore gathering. *“Cockles were an extra job at the time [...] To make a living, you had to harvest at least 200/300 kg of cockles per day”* (Professional shore-gathering fisherman, 22 April 2014).

Regarding the harvest of marsh samphire, few historical clues are available. Marsh samphire has long been used as a condiment, significant quantities being shipped to Paris in the early twentieth century. Nobody knows why, or when, marsh samphire “fell into oblivion”. It was the Dutch who, in the late 1970s, revived the production of marsh samphire and sea aster in the Bay of Somme. About 250 tons are harvested each year on the Bay, forming the largest national production area of marsh samphire, and there are about ten wholesalers for samphire between France and the Netherlands (Personal communication from a local association, 2014).

¹⁰ Most Picard fishing boats are currently based in the port of Le Treport, in Seine-Maritime, but they remain registered in the port of Boulogne-sur-Mer (source: Town council of Le Crotoy, 2014).

3.2.2 Towards the local partial organisation of professionals

- **Cockle shore-gathering fishermen**

For years, cockles harvested in the Bay were processed in the purification facility of Le Crotoy (Gebasomme station). It was closed in 1994 because it had become too “obsolete” (non-compliance of standards during the summer, due to the use of ozone in outdoor purification tanks, which would have caused the cockles to heat-up (Personal communication from the DML of Pas-de-Calais-Somme, 2014). Wholesalers of the territory, who buy the cockles, then sell them to French purifiers. In 2000, the area is downgraded from sanitary classification A to B. Professionals (hand gathering fishermen or wholesalers) then have two options: purge the shellfish in a purification tank or place them pre-market in a shellfish farming facility that is graded A. Simultaneously, mussel farmers located in the Bay of Somme envisage starting a study in view of opening of a collective purification facility for mussels, which can then be extended to cockles. At the time, shore-gathering fishermen were not involved in the thought process because they do not feel concerned due to the fact that they can sell all their shellfish to the Spanish, who are very present on the market at the time. 14 mussel farmers in turn create an Economic Interest Group (EIG) in order to assure the management of the shellfish farming facility workshops (Personal communication from the joint Union for coastal spatial planning and management, 2014).

Consultations have been ongoing across the territory among the various players, public and private. Despite these consultations and the willingness of some to get the professional shore-gathering fishermen organised over the past twenty years, there is no local professional shore-gathering fishermen’s association, apart from the Association of marsh samphire harvesters (Personal communication from the joint Union for coastal spatial planning and management, 2014). Two other associations have been created in the past: the national Association of professional shore-gathering fishermen (association nationale des pêcheurs à pied professionnels) and the Association of shore-gathering fishermen from the Opal Coast (association des pêcheurs à pied de la côte d’Opale) but agreement issues between professionals have hampered the work of both (Personal communication from the DML Pas-de-Calais-Somme, 2014). In both cases, the associations are not active and are not present during the consultative forums of the profession. The Association of shore-gathering fishermen from the Opal Coast was created three years ago in Pas-de-Calais, shore-gathering fishermen this territory meet regularly. The CRPMEM of Nord-Pas-de-Calais-Picardie also strongly encourages fishermen of Somme to do so, notably for projects concerning the recognition of produce from the Bay (Personal communication from the CRPMEM, 2014). All the same, the Association of marsh samphire harvesters federate the fishermen from the Bay of Somme.

- **The creation of the Association of marsh samphire harvesters**

State representatives and territorial authorities have encouraged shore-gathering fishermen working in the harvest of marine plants to form an association in view of becoming concessionaries of an entire area. Concessions¹¹ located in the area where marine plants are found were granted to compensate for issues with spartina, an invasive species threatening marsh samphire (300 hectares, renewable every 10 years, on the condition of maintenance of the area) (Personal communication from a local association). Natura 2000¹² funds were granted to them due to the invasive nature of the

¹¹ Concession: Contract by which the authorities authorise, in exchange for fees, a private person to privately make use of the public domain (which may be for life, for fifty years, thirty years, or temporary). Source: translated from www.larousse.fr

¹² Linked to the first phase LIFE-Nature of the Funding Instrument for the Environment (L’Instrument Financier pour l’Environnement - LIFE), European union fund for its environmental policy. Natura 2000 is indeed the world’s largest network of protected sites, Europe’s main policy for biodiversity. Source: translated from <http://financement.n2000.fr/>

plant on the environment. The establishment of the concessions was not easy: the status of concession being particular, the fishermen had to be trained in the regulatory framework of the concession status and it was necessary to determine which fishermen had a right of access to the concessions. An agreement was reached between the Association and the CRPME of Nord-Pas-de-Calais-Picardie, which states that the licence allocated to shore-gathering fishermen grants them the right to exploit the concessions and that 98 % of the licence fees is donated to the Association to enable it to operate, maintain the area, and pay for concession rights (Personal communication from the CRPME, 2014). The marine plants licence was in fact set up to enable the Association to fund the maintenance of concessions (plowing). It also operates with the administrative support of the CRPME of Nord-Pas-de-Calais-Picardie, which manages most of the financial resources. Moreover, it is members of the Association who requested the assistance of the CRPME of Nord-Pas-de-Calais-Picardie in order to avoid seeing its operation decline.

This type of concession for the exploitation of marine plants is unique in France. In other territories, the harvest of marine plants is free of access, or, when the area is private, permission must be requested from the owner of the salt marshes (e.g. Noirmoutier) (Personal communication from a professional shore-gathering fisherman).

Thus, the Association of marsh samphire harvesters is the only association representing shore-gathering fishermen from the Bay of Somme, where marine plants are concerned. The association is finally a member of the ADDAM planning committee (funding project of the EFF Axis 4) and is also the contact with the Agency for marine protected areas. *"We're always present to carry the voice of the fishermen and to collect information"* (Local association, 6 May 2014).

The management board of the Association is composed of a representative of the Regional Council of Picardie, the General Council of Somme and the CRPME Nord-Pas-de-Calais-Picardie, dialogue being the priority (Personal communication from a local association, 2014).

3.2.3 Evolution of the fishery's regulation

Faced with the growing enthusiasm for the trade of shore gathering, access to cockle deposits was tightly supervised in the 1980s with similar conditions to those that will be subsequently laid down in Decree No 2001-426:

- ✓ Requirement of social security;
- ✓ The fisherman is required to produce an annual contract concluded with a registered purification structure;
- ✓ Compliance with quotas set by prefectural order.

Compliance with these conditions resulted in the issuance of a fishing authorisation by the competent authorities (Loarer, 2013). *"It was implemented gradually, [...] without regulation, without constraint we will say, without Community obligation and perhaps that is why it works"* (CRPME, 22 April 2014).

A clear basis of fishing authorisation having already existed at the time of the national recognition of the occupation, the relevant authorities were able to be responsive. In 2003, shore-gathering fishermen requested the establishment of fishing licences and the hiring of permanent sworn guards from the CRPME of Nord-Pas-de-Calais-Picardie (Personal communication from the CRPME, 2014). In 2004, the CRPME of Nord-Pas-de-Calais-Picardie implemented a licence for cockle shore gathering. The number of licences is set at 290 by the authorities (equivalent to freezing the number of fishing authorisations compared to 2003) and two sworn guards are hired. They are then sworn in, that is to say, entitled to draw up statements of offences (procès-verbal) (they monitor the cockle deposit and enforce existing regulations) (Tachaires, 2004).

3.3 Tools and measures of the fishery's governance

The supervision of shore gathering in the Bay of Somme is quite long-standing; the players of the governance know each other well. The co-management system of the activity was implemented in a context of strong local interaction. The governance of the fishery is balanced by specific adjustments and a regulation of interactions between players.

3.3.1 A co-management at different scales: from national to local

- **General framework**

French inshore fishing is regulated by a system of co-management. Fishermen, or their representatives, and the authorities work together to adjust fishing effort to the resource. To this end, systems of commissions and licences are established depending on the resource and the fishing environment. The regulation and management of shore gathering are discussed in specialised commissions that include regional and local representatives of shore-gathering fishermen. A shore-gathering commission of the CNPMEM meets 3 times a year, chaired by a shore-gathering fisherman (elected by professional shore-gathering fishermen from the various regions concerned by this activity). It is composed of 22 representing members: relevant regional committees (15 seats) and union federations (7 seats). A “shellfish” Commission also meets quarterly among regional fisheries committees. At each scale, professionals are a force of proposal to improve the supervision of their activity and push through specific and appropriate management measures (Anonymous, 2014).

- **Local specificities in the Bay of Somme**

Historically, the interregional Directorate for maritime affairs (Direction interrégionale des affaires maritimes) of the Nord Department, now reassigned to the DDTM which includes the DML, concerned the regions of Nord-Pas-de-Calais and Picardie. It is the reason why there is only one DML for the department of Somme and Pas-de-Calais. There is however a DDTM for each department, knowing that the management of the Somme's DPM is under the responsibility of the DDTM of Somme but the activities of commercial fishing and marine farming are supervised by the DDTM of Pas-de-Calais for the department of Somme and Pas-de-Calais (Personal communication from the DML, 2014).

Moreover, the CRPMEM of Nord-Pas-de-Calais-Picardie operates with a long standing system of commission. So, rather than establishing a shellfish commission, shore gathering is managed through a commission of inspection of natural deposits. State representatives appoint the commission members and convene them. Professionals volunteer to be members of the commission. They are appointed on recommendation from the CRPMEM of Nord-Pas-de-Calais-Picardie, although at the time of the field inspection preceding the commission meeting, other non-convened fishermen come to participate and engage in discussions with all members of the Commission (Personal communication from the CRPMEM, 2014).

Particularity of the territory, there is no departmental fisheries Committee of Somme. Indeed, at the time of the restructuring of local fisheries committees, it was decided to focus the representation of professional fishermen from Nord-Pas-de-Calais and Picardie within the same regional Committee.

3.3.2 Role of the players of the fishery's governance

Fishermen enjoy some degree of autonomy because they hold some control over the management of the fishery (Ferracci, 2011). Although decision making is participatory and gives all stakeholders the opportunity to voice their positions, all players do not have the same role and do not intervene to the same extent.

- **Role of the administration**

The authorities are essential in the management of professional shore gathering as they are responsible for regulatory decision-making. They regulate various aspects:

- ✓ The DML of Pas-de-Calais-Somme manages national fishing permits of Somme fishermen and after the go-ahead of this DML, the CRPMEM of Nord-Pas-de-Calais-Picardie issues fishing licences;
- ✓ The Departmental Directorate for the Protection of Persons (Direction Départementale de Protection des Personnes - DDPP) of Somme carries out sanitary controls on marketed products;
- ✓ The Prefect of the department issues national fishing permits and regulates the sanitary aspect of the area;
- ✓ the region Prefect regulates fishing effort on shellfish deposits, carries out the administrative classification of the deposits, sets the opening and closing dates for fishing and defines the exploitation conditions of shellfish deposits (tools, catch sizes...) on the basis of proposals from the players of the fishery (administration and professionals), following scientific advice, in compliance with regulations and sanitary standards.

- **Role of the CRPMEM of Nord-Pas-de-Calais-Picardie**

The CRPMEM of Nord-Pas-de-Calais-Picardie is the referent occupational structure in the shore-gathering fishery of the Bay of Somme. It was officially created in 1991, along with all other regional committees in France. This structure represents fishermen before the State, its decentralised departments and local authorities in order to defend their interests and the sustainability of the fishery at the local, regional and national levels. This professional organisation is prescribed by Law¹³, enabling 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 sworn guards). Departmental fisheries committees have the management authority of deposits under the control of the administration, by regulating the uses and tools of fishermen, that power is delegated to the CRPMEM of Nord-Pas-de-Calais-Picardie in this case.

Two elected representatives of shore-gathering fishermen are present within the CRPMEM of Nord-Pas-de-Calais-Picardie, one from Somme and a second from Pas-de-Calais. The representative of Somme is a player described as being very active. He attends the inspections of natural deposits and is in direct contact with the sworn guards of the fisheries Committee. He is the intermediary between the professionals, the CRPMEM and State authorities (Personal communication from the DML, 2014). The French government has thereby given the CRPMEM of Nord-Pas-de-Calais-Picardie missions of representation and defence of the interests of the trade.

- **Role of other players:**

Scientists: Ifremer and the GEMEL, collaboration and information exchange.

Scientific expertise is essential to the co-management of shore gathering. In the decision-making system of this co-management, scientists have an advisory role. In France, it is the French research Institute for the exploitation of the sea (Institut Français de Recherche pour l'Exploitation de la Mer – Ifremer) that intervenes to advise all players on the state of marine resources and ensure their sustainability. For shore gathering, scientists have a dual role: they carry out the stock assessment of deposits and sampling in the area, that are subsequently analysed (sanitary monitoring).

¹³ 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

Another distinguishing feature of the Bay of Somme, it is not Ifremer that carries out the stock assessment of deposits but the GEMEL (for around fifteen years past). To this end, a partnership agreement was signed between Ifremer and the GEMEL. Association under the Law of 1901, founded in 1981 and funded by local authorities, the GEMEL had, among others, the objective of the diversification of uses in estuaries. Today, he is the main contact for co-management stakeholders of shore gathering in the Bay, while pursuing its original objective. *“The GEMEL does it so well that we could not do without it”* (DML of Pas-de-Calais-Picardie, 4 April 2014).

Indeed, professionals and scientists note in the early 1980s that Ifremer cannot completely address all of the issues specific to estuaries, especially as the number of Ifremer coastal stations was decreasing. In the Bay of Somme, there is no local station of Ifremer any longer. That is the reason why Ifremer entered into agreement with the CRPMEM of Nord-Pas-de-Calais-Picardie in order for the sworn guards to carry out Ifremer samplings on the environment for the sanitary monitoring of the Bay's water quality (Personal communication from the GEMEL, 2014). The GEMEL therefore has an important warning role and works hand in hand with Ifremer on sanitary aspects (Sovereign mission of Ifremer).

Note that the monitoring of deposits already existed prior to the Decree of 2001 recognising shore gathering and it was already possible to speak of management by the GEMEL and even of co-management between the authorities and the professionals.

Local authorities, an essential public support to shore gathering in the Bay of Somme.

The means implemented by local authorities contribute to the perpetuation of shore gathering across the territory and to the balance of the activity's governance. Although not directly involved in the co-management of the fishery, they closely follow the decisions made and potential conflicts existing among professionals or other users of the territory. Therefore, representatives of the various local authorities attend the commissions' field inspections of deposits: assistants to the Bay's communes are always present as well as a representative of the General Council of Somme and the Regional Council of Picardie. They notably finance the GEMEL (Personal communication from the GEMEL, 2014).

Other supporters of these structures: the Regional Council of Picardie has awarded a grant to the CRPMEM of Nord-Pas-de-Calais-Picardie to fund the executive vehicle of the sworn guards; an aid of 30 000 euros was also allocated to the ADDAM for implementing Axis 4 of the EFF in 2013/2014 (Proceeding of the Regional Council of Nord-Pas-de-Calais of 25 March 2013). This proceeding highlights that priority is given to shore gathering in the implementation of Axis 4 of the EFF, shore gathering being mentioned as a strong feature of the 3 estuaries area.

Figure 3 provides a description of existing interlinkages between the various players of the governance of professional shore gathering in the Bay.

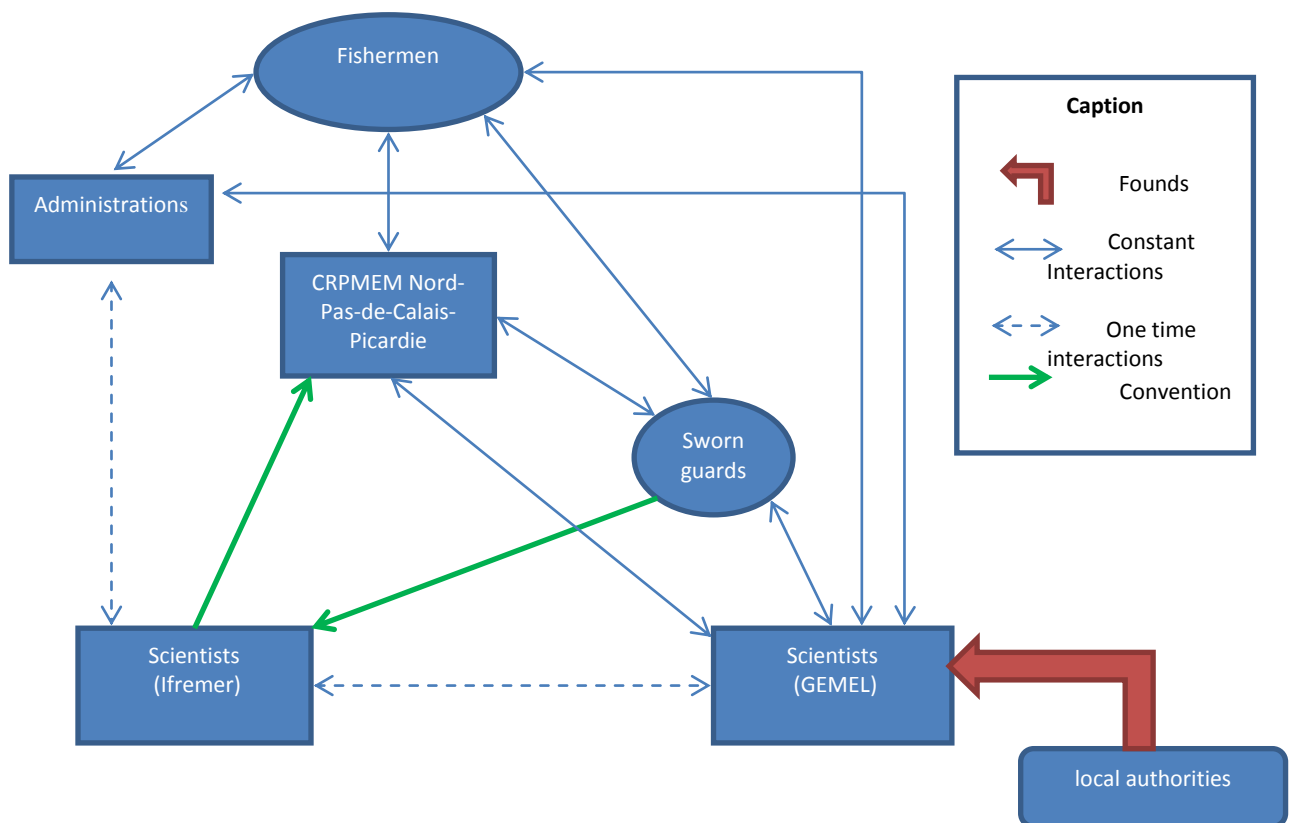


Figure 3: Interactions between the players of the governance of professional shore gathering in the Bay of Somme.

Source: Personal communication from interviewees, 2014.

This diagram shows the numerous interactions existing between the various players in the governance of professional shore gathering. Ifremer scientists are partially absent from the management of this activity. Sworn guards, employed by the CRPMEM, are permanently present on the Bay and participate in the informational watch of shore-gathering fishermen and the environment, both for the GEMEL and for the CRPMEM of Nord-Pas-de-Calais-Picardie.

3.3.3 Functioning of local co-management

During the inspections of natural deposits, all the players in the governance of shore gathering go down to the foreshore and this is an opportunity for everyone to discuss the management of the area, to resolve conflicts. The meeting at the CRPMEM of Nord Pas-de-Calais-Picardie is held subsequently. Mayors are invited to voice their opinions. Commissions are joint, between the authorities, representatives of professionals (the cockle fishermen representative and 9 professional shore-gathering fishermen), town halls and scientists. They are held on a need basis or to review the state of the deposit during the course of a fishing season (Personal communication from the DML, 2014). The stakeholders convened to the commissions are: the DML, the DDPP, the Regional and General Councils, Ifremer and the GEMEL, professionals and their representatives, local elected officials.

For example, discussions pertaining to the Bay of Somme can be focused on the catch size limit for cockles. It is 3 cm in the Bay, while it is 2.7 cm in most other deposits in France. This management measure was implemented by the authorities after advice from the GEMEL to preserve the resource and locally ensure the sustainability of the shore-gathering trade (Personal communication from a professional shore-gathering fisherman).

Figure 4 illustrates the steps of the commissions for the inspection of deposits supporting professional shore gathering in the Bay of Somme.

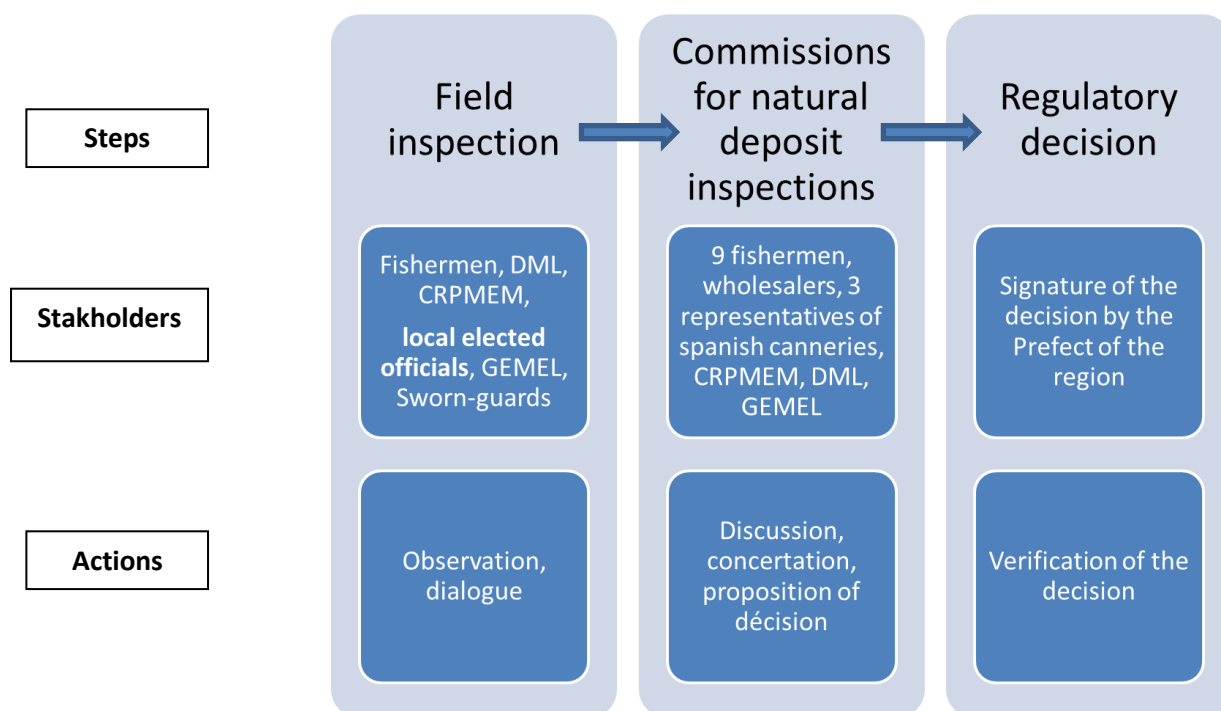


Figure 4: Diagramme of the steps of the commission for the inspection of natural deposits of the CRPMEM of Nord-Pas-de-Calais-Picardie (Case of the cockle deposit).

Source: Personal communication from interviewees.

The first step of the field inspection is important because it provides an opportunity to all the players in the co-management to share what they consider as being important for the management of shore gathering or for the environment. It is also the time for passing messages. *"Commissions are the places where we exchange and fishermen are in the majority."* (GEMEL, 22 April 2014).

The second step is when the maximum catch quota of shells allowed per day and per fisherman for the upcoming season will be set; this quota is set based on the recommendations of the GEMEL who was able to estimate from field inspections an amount of cockles to be gathered per day. The region prefect will then control the decisions passed in commissions and subsequently sign the order which defines the conditions of shore gathering on the deposit for the new season. A final meeting is held at the time of closing of the deposit to carry out an assessment of the fishing season on the deposit.

During these commissions, three professional shore-gathering fishermen are present for every one wholesaler, that is to say, who work with the wholesaler. Wholesalers, although logically absent since they do not sit in the commissions, are still invited, along with representatives of the Spanish cannery who purchase the local cockles. *"Care is taken to have a balance of fishermen, in order to ensure that it will not provide an advantage to wholesalers."* (CRPMEM, 2014).

Figure 4 also applies to the commission for the inspection of marine plant deposits, although no quota for these species is present at the request of the Association of marsh samphire harvesters. The number of licences, and thus of fishermen, was limited anyway to 140 in order to limit the pressure on the resource (Personal communication from a local association, 2014).

Beyond the recommendations of scientists and professionals, the authorities make sure they do not open different deposits at the same time so as to allow fishermen to spread their income and their activity over the year and to avoid weakening their position.

3.3.4 Regulation by a system of licences

Fishing licences were gradually established for shore gathering in France since the recognition of the occupation in 2001. In the Bay of Somme, the cockle licence is introduced as early as 2004 (Personal communication from the CNPMEM, 2014).

The CRPMEM of Nord-Pas-de-Calais-Picardie, after the introduction of the 2001 Decree, took over the existing number of authorisations to set the number of licences to be granted for mussels and cockles, these numbers are frozen¹⁴. The number of 345 cockle licences for the Bay has not changed since 2007/2008. However, in 2013, 10 additional licences became available but after proceedings between the authorities and representatives of professionals at the CRPMEM of Nord-Pas-de-Calais-Picardie, the decision was made to freeze these licences in order to limit the pressure on the deposit while maintaining the quota of 345 cockle fishing licenses (waiting list of 250 people). A person who already has a shore-gathering licence on the territory cannot be denied the same licence the following year at the time of its renewal. Quotas can however be reduced to limit the pressure on the resource (Personal communication from the CRPMEM, 2014). Faced with the recent crisis that hit the cockle in the Bay of Somme, the temporary strategy of the fisheries Committee is to prevent the installation of new fishermen who would not have any other source of income. It attempts to aid already active shore-gathering fishermen with other shore-gathering stamps.

The numbers of licences for mussels, cockles and marine plants are subject to limitations in the Bay of Somme. This is not the case for licences for worms or certain fish, qualified during the interviews as activities being “incidental” for the environment. The mussel licences of fishermen from Somme and Pas-de-Calais are limited together. They should be separated from 2015, since the mussel deposit of the Bay of Somme should be reopened to professional shore gathering (Personal communication from the CRPMEM, 2014).

More than half of the cockle licences are granted to shore-gathering fishermen from the Bay. Many were born and live in the town of Le Crotoy or its surroundings. 45 mussel stamps were also issued by the fisheries Committee in 2013 against 51 in 2014 (deposit open only in Pas-de-Calais) (Personal communication from the CRPMEM, 2014).

Finally, the fishing regulation for peppery furrow shells in the Bay is currently undergoing changes. A specific peppery furrow shell licence is to be created, separate from other bivalve licences. The number of these licences will be capped to limit the influx of the species on the market (Personal communication from the DML, 2014). In general, each shore-gathering fisherman of the Bay possesses 3 fishing licences.

3.3.5 Management of the environment for the economic sustainability of shore gathering

Beyond the field inspection commission, a tool of shore-gathering co-management, special attention is paid to the Bay of Somme, to its condition, physico-chemical changes, to prevent any disturbance or any change that could impact shore gathering and/or its upholding. Permanent exchanges take place between three categories of players: scientists from the GEMEL, sworn guards, and professional shore-gathering fishermen.

These three groups of players who are constantly present in the environment know the Bay of Somme perfectly and they inform each other daily on any information deemed relevant to shellfish species present in the estuarine environment or to marine plants.

¹⁴ Except for one year when 20 additional cockle licences were granted due to the good yield of the deposit.

3.3.6 Locally organised controls

Two sworn guards are present all year round in the Bay of Somme. Recruited by the profession, they are a real advantage for the CRPMEM of Nord-Pas-de-Calais-Picardie. They have a preventive role for the profession, of leadership and dissuasion. They can control the fishermen but repression remains the responsibility of the State and not the CRPMEM of Nord-Pas-de-Calais-Picardie. They are more of an intermediary with maritime affairs.

The mobile unit of the maritime affairs can then carry out controls on the foreshore, as is the case for the nautical police based in Saint-Valery-sur-Somme (in the heart of the Bay). The customs can also intervene if necessary. Everyone has limited resources to do so. Finally, there is a guard of the nature reserve of the Bay who mainly provides educational information in the north of the Bay of Somme, where the reserve is located. Controls of professional shore-gathering fishermen can be done on the deposit, on the way back from the deposit, during the loading of trucks directly on the road (Personal communication from the DML, 2014). Each year, a unique path to go come back from the deposit is determined between the players the co-management, which is the place where officers of the DML wait for the fishermen in order to check the catch. Marine plants are less controlled but less prone to illegal harvesting. Meetings are held between the various controllers in Saint-Valery-sur-Mer so as to harmonise the work of each (Personal communication from a professional shore-gathering fisherman, 2014).

The work of the sworn guards was thereby facilitated with a single place of passage, bags of identical volume for all fishermen, and professional labels on the bags. Sworn guards are present every day when cockle fishing is open. Controls are also carried out by them on recreational fishermen.

3.4 Other aspect of the governance: consultation, dialogue and regulation of player interactions

3.4.1 Players who are essential and are the drivers of the smooth functioning of the activity

People of the DML have held their positions for a long time and know the history of the activity and the territory well, which strongly facilitates in the smooth functioning of the management of this fishery (Personal communication from the CRPMEM, 2014). They enforce measures adjusted to the needs of professionals. Cockles are gathered in winter in the Bay to fit the needs of professionals and the state of the resource. Here, the sustainability of the resource is valued. For about twenty years, cockle deposits are closed from June to September, especially as professional fishermen harvest marsh samphire at this time of the year. Most local fishermen have a cockle licence (open from September to March) and marine plants licence. Beyond the recommendations of scientists and professionals, the authorities ensure they do not open different fields at the same time to allow the fishermen who have several stamps for different deposits to average their income and their activity over the year and avoid weakening their situation (Personal communication from the DML, 2014).

There are also a few fishermen who are very active in the defence of their activity and its upholding, including two women, having driven the development of shore gathering for many years in the Bay of Somme. Whether it be for cockle gathering or harvesting marine plants, these professionals are essential to the authorities, the CRPMEM of Nord-Pas-de-Calais-Picardie, the GEMEL or the sworn guards. They disseminate information to other professional fishermen, in the same way as the representatives of professionals and the Association of marsh samphire harvesters (Personal communication from a professional shore-gathering fisherman, 2014).

3.4.2 Dialog and regulation of player interactions: factors of the success of the governance

The CRPMEM of Nord-Pas-de-Calais-Picardie has been trying for several years to educate fishermen on the fragility of their dependence on Spain, by offering to sell some produce in fish auctions or to develop a fresh market. In this context, two mussel farmers have recently applied for accreditation to be able to also purify cockles in the tank of their shellfish farming facility in Le Crotoy. Two mussel shore-gathering fishermen of Pas-de-Calais also have personnel purification tanks. Discussions have been ongoing for 6 months to find out whether a development of the fresh market can be envisaged with the help of mussel farmers.

More generally, to facilitate the acceptability of decisions made and their effective dissemination, dialogue stands out as a key tool for all the players of co-management. *“Fishermen are people who are so familiar with their territory and who know the resource so well that in my opinion they have good common sense and knowledge of things.”* (CRPMEM, 22 April 2014).

During the deposit commissions, wholesalers are invited but do not decide in the place of the fishermen even though the CRPMEM of Nord-Pas-de-Calais-Picardie is aware of the influence they have on the decisions made by fishermen.

The presence of wholesalers at meetings is essential for the CRPMEM of Nord-Pas-de-Calais-Picardie. This allows for more openness when they go “too far” in their influence. Moreover, the new administrators who are likely to arrive in the territory must be warned in advance of the territorial context in order to avoid making promises that cannot be kept and disturb the balance of the dialogue established by all the players of co-management.

Each in its own way and with the time available to them, local players try to interact with professional shore-gathering fishermen of the Bay. *“We tried to convey messages, to raise awareness as to the usefulness of embarking part of the year, especially for young people, who focus heavily on shore gathering”* (Axis 4 Group of the EFF, 5 May 2014).

Figure 5 provides the system of player interactions in place in the Bay of Somme for the management of cockle shore gathering. It is possible to adjust this scheme to the shore gathering of other bivalves or marine plants, or other species caught in the Bay.

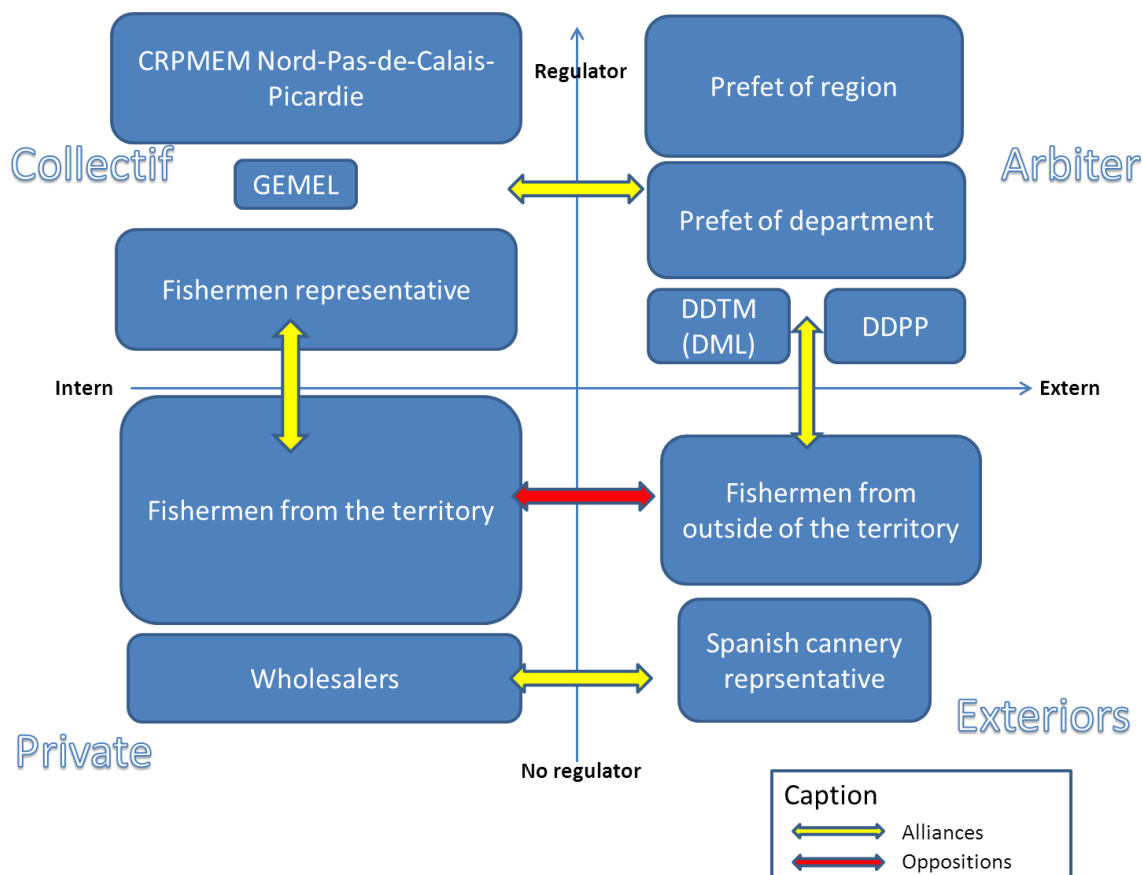


Figure 5: CAPE Matrix¹⁵, interactions of players of commissions for natural deposit inspections.

Source: Personal communication from interviewees, 2014.

The area of reference of internal players is the Bay of Somme, unlike external actors. Regulatory players take into account the global stakes of professional shore gathering in the Bay. Non-regulatory players develop a more personal approach, with a less comprehensive view of the stakes involved.

Collective players have stakes related to the spatial planning and development of the activity across the territory. Arbitrating players will seek to locally regulate the rules while remaining external to the area. External players can change territory if necessary to maintain their activity. Finally, private players are acting for themselves (Figure 5).

To be remembered...

Although in the presence of a system of co-management and participation of the profession in the decision-making of shore gathering in the Bay of Somme, the “arbitrating” players (Figure 5) are the only ones with the right to make decisions by themselves that may affect the shore-gathering trade, always in the spirit of public service and common good. However, professionals remain a force of proposals to regulate, supervise and adjust their trade to their specificity and that of their environment.

¹⁵ Tool designed by Vincent Piveteau. Grid enabling to understand the system of player interactions in place around a management issue.

The governance of professional shore gathering in the Bay of Somme, although based on an effective co-management system, features multiple limitations that undermine its balance due to its specificities and adjustments being so numerous.

4.1 Local governance with a fragile balance

4.1.1 A very individual and isolated occupation

Overall, all respondents deplore a lack of federation from professional shore-gathering fishermen, especially from cockle fishermen. There is a lack of association. Fishermen, although communicating regularly with all the co-management players, do not have a collective discourse. Jealousy is present, both among professional shore-gathering fishermen and between wholesalers (Personal communication from a professional shore-gathering fisherman). Meetings between shore-gathering fishermen are also difficult to organise. Dualities between fishermen are inevitable, turf wars or family feuds (Personal communication from the CRPMEM, 2014).

This is indeed a very individual profession, as is the case with many fishing trades. Indeed, the Association of marsh samphire harvesters is present on the territory of but, according to some players, it works mainly due to the allocation of 3 concessions for the harvest of marine plants. *“If there were no concessions, there would be no association anymore”* (DML, 2014). Some local players of the territory blame the shore-gathering fishermen for never having tried to set up projects to adjust themselves to the deteriorating economic context.

Finally, the situation of the shore-gathering fishermen is as diverse as their practices. Those who are sedentary, tied to a deposit, work alongside those who are nomadic, who work on several deposits, or sometimes even several regions. Fishermen from the outside (nearly half the shore-gathering fishermen are licensed in the territory) are less concerned with local issues and therefore are less involved in local projects and local dynamics of shore-gathering fishermen. Gathering marine species by shore features a mosaic of uses and actors who appear to be individualistic. With the crisis that has been affecting them more and more for 3-4 years, individualism is increasing (Personal communication from a professional shore-gathering fisherman, 2014).

4.1.2 The determining central role of local players

What worries several of the players questioned, is a scenario where people from outside of the territory, from the marine park for example, who would come and explain to them how to manage the territory, without taking the history or the specificities of each into account. The departure of agents from the DML, the CRPMEM of Nord-Pas-de-Calais-Picardie or the GEMEL is a real concern expressed by local players. *“We are resting on a delicate balance of people who know each other well. People talk with each other, know each other for so long that everyone knows the interactions between players [...] then it is true that if you change two or three people, the equilibrium can quickly change”* (CRPMEM, 22 April 2014).

Furthermore, only three players regularly offer to participate in projects within the Association of marsh samphire harvesters: the President of the Association, one of its members, and the coordinator of the Association, qualified as a driver by several players consulted. Another shore-gathering fisherwoman also contributed much to the success of the Association. The projects would probably not have been possible without them (Personal communication from the Axis 4 Group of the EFF, 2014).

Similarly, the cockle fishermen representative, active and the intermediary with other professionals, should he leave his position, would weaken the equilibrium of governance of the cockle fishermen of the Bay. To find another charismatic and rational leader with a collective discourse would be difficult (Personal communication from the GEMEL).

4.1.3 Influence of buyers (wholesalers/canneries) on fishermen and their activity

“There are no direct representations of shore-gathering fishermen on the coast. So far, they lived on the comfort of the presence of Spanish buyers” (Joint Union of the Bay of Somme and Broad Picard Coast, 2 April 2014).

The inspections of deposits are a key moment for exchanges and discussions. Despite discussions, wholesalers supplant the degree of influence that they have on the decisions of shore-gathering fishermen during the meetings that follow the field inspection. Spanish buyers also exert pressure on fishermen, knowing that there is only one remaining cannery in Europe that purchases cockles (Personal communication from the GEMEL, 2014). According to several players questioned, if the cannery tells fishermen that it will need 90 kg of cockles/day/fisherman, then fishermen will vote for these 90 kg despite the advice and recommendations of the GEMEL and of administrators for 60 kg, and that regardless of the impact this may have had on the stock and the following difficulties to reach the quotas due to low densities of cockles. Yet, shore-gathering fishermen are independent. However, attitudes are currently changing (Personal communication from the GEMEL, 2014).

4.1.4 A breach in controls

Two sworn guards intervene when the fishing season is open (the second sworn guard arrived in the Bay of Somme during the summer 2013). They do not have sufficient resources to be effective. They only one vehicle for the both of them, one of the sworn guards is employed part time, and the two agents have a perimeter of intervention that spreads from Pas-de-Calais to the town of Le Treport (being two different departments).

The stakes for them and for the profession in general are education and controls. The ideal could be a sworn guard who can operate and travel nationally (Personal communication from the GEMEL, 2014). The controls of the maritime police and maritime affairs are also not always easy to implement due to the unique geography of the Bay. In fact, some persons may warn fishermen and wholesalers of the position of controllers (Personal communication from the GEMEL, 2014).

Last year, maritime affairs have also refused to carry out a control operation on the parking sites where the trucks of wholesalers are stationed (trucks are well identified, knowing that in addition these wholesalers pay a fee to the town council of Le Crotoy). The maritime affairs consider that in doing so, they do not sanction the fishermen when it is them who do not comply with the catch size limit. Scientists consider that if we refuse to buy under sized produce from fishermen, they will have no choice but to comply with regulations in order to sell their products. Some fishermen even state that they are being pushed by wholesalers to disregard catch size limits in order to sell more, *“controls are essential [...] and there is no control on trucks”* (GEMEL, 23 April 2014).

Thus, many persons surveyed would like more control of wholesalers rather than of fishermen. All illegal catches are necessarily purchased by a wholesaler in the absence of a fresh market and the monopoly of 3 or 4 wholesalers for the purchase of cockles in the Bay of Somme. Therefore, if the State wants to stop illegal catches, it must control the wholesalers (Personal communication from the CRPMEM, 2014). Especially since the influence of wholesalers on professional shore-gathering fishermen is considerable: *“wholesalers act as a bank with fishermen”* (GEMEL, 23 April 2014).

Finally, the significance of recreational fishing has not been estimated despite attempts at counting it by the CRPMEM of Nord-Pas-de-Calais-Picardie and even the new MNP. One remark, however, was made several times by various players: although shore gathering is closed in July/August, recreational fishermen are still harvesting cockles from the deposits: *“people come to the Bay of Somme in the summer precisely to harvest cockles”* (DML, 4 April 2014).

4.2 The hindered potential of diversification of professionals

The Natura 2000 area of the Bay is challenging with regards to the reseedling of the deposit¹⁶ because the introduction of animals in the zone is prohibited: *“we have been talking about it for a few years. The fisheries Committee has fought for the issue [...] the fishing community is a little edgy with the marine parks and Natura 2000”* (A professional shore-gathering fisherman, 6 May 2014).

The tellin is also making a comeback on the territory but the problem is that the deposit is not graded sanitarily, and therefore unexploitable, which is the same problem with the razor-clam originating from America. It would be necessary for Ifremer to carry out on-site observations and propose the grading of the deposit. *“It's a shame to have produce in your bay that you cannot, at present, exploit because they are not graded”* (A professional shore-gathering fisherman, 6 May 2014). Finally, the peppery furrow shell has been exploited again for 5 years now. But having been out of the market for 20 years, it is very difficult to sell it today.

4.3 A fragile and very consequential economic channel for the profession

The problem that is on the rise is the declining number of fishing boats on the territory and the decrease in port usage (due in part to the siltation of the Bay) and the absence of fish auctions in the department Somme; fishermen having to go to Boulogne or Le Treport or even Fecamp to unload their catch. Current sales therefore cannot structure the territory, especially in comparison with the territory of Boulogne-sur-Mer, which is still the leading European centre for processing of seafood products. **This acknowledgement does not imply that there are no resources anymore around the Bay, on the contrary, but buyers in the territory are increasingly rare:** *“the sector needs to be entirely restructured”* (Joint Union for coastal spatial planning and management, 3 April 2014).

4.3.1 Limited presence of purification tanks across the territory

If Spanish canneries are to be absent tomorrow for the purchase of cockles of the Bay from wholesalers, sales will no longer be possible for them since they do not have access to purification tanks. Only possibility, sell to French wholesalers equipped with a tank but they would not be able to sell the entire quantity harvested in the Bay. Creating purification tanks is very costly and cannot be supported by a single fisherman or a single wholesaler (Personal communication from a wholesaler).

The shellfish farming facility of Le Crotoy was originally intended to carry out the purification of cockles but health standards and the orientation of the cockle market towards Spanish canneries have led shore-gathering fishermen that had diversified to mussel farming to revive the idea of a mussel purification facility. Several shore-gathering fishermen are coming back to this idea following recent closures of canneries in Spain: *“some are now wondering, if the Spanish let us down, what are we to do.”*(DML, 4 April 2014).

¹⁶ Seeding of juvenile cockles in order for them to grow and reproduce on site.

What is conceivable...

Two shore-gathering fishermen from Pas-de-Calais possess purification tanks pending approval. These tanks could host process the catches of other fishermen (lay it out for 5-10 people, depending on the quantity harvested per fisherman). Contracts could be signed between professionals (fishermen as well as wholesalers) to purify cockles locally, which would play a part in local dynamics of promotion of land/sea produce from Somme. Other possibility: enter into contract with the mussel farmers of the shellfish farming facility in Le Crotoy.

4.3.2 Marsh samphire, under increasing competition

Wild marsh samphire is under increasing pressure from competition with farmed samphire. The biggest competitor being a Breton industrialist, the Saveol cooperative, who marketed its product for the first time in 2012/2013. The company website advertises a natural product when it is in fact an industrial culture. *“Advertising is distorted, the information is misleading”* (A professional shore-gathering fisherman, 6 May 2014). However, when professionals taste the product for the first time, they are very surprised because the industrial product is very similar to the marsh samphire of the Bay, unlike other samphires from Spain or Israel. Foreign competition has in fact existed for 10 years (pink, red samphire, etc.) but the products remained different to that of the Bay of Somme: *“I was appalled because the product very much resembles ours and a real fear indeed [...] For the consumer for whom it is the first time tasting it, he will not notice a difference [...] Our own customers are lost”* (A professional shore-gathering fisherman, 6 May 2014).

The industrialist has begun to produce other marine plants, including sea aster. Professional shore-gathering fishermen even mention unlawful competition due to the fact that industrialist does not bear the same constraints as shore-gathering fishermen (environmental hazards, buying a license, compliance with opening and closing periods or even the aspect of seasonality).

4.3.3 The monopoly of Spanish canneries, a threat to the marketing of cockles from the Bay of Somme

The loss of the fresh cockle market (that is to say, sold as is) a few years back first profited to the Dutch and then the Spanish. The cockle is a festive meal in Spain. This new mass demand has changed the cockle market, which is since sold in large quantities, changing attitudes. Cockles are sold today at 2.50 euros per kg on average. With the shellfish facility, some would like to win back the fresh cockle market but there isn't one anymore. Farmed cockles can also compete (mainly from Le Croisic, in Brittany).

The number of Spanish buyers is decreasing due to Spain today being in crisis. A few years ago still, there were 5 canneries purchasing cockles, but most were converted. In the 80s, discussions had emerged for the creation of a cannery on the territory (the report concluded that it was impossible because of the differences in labour between France and Spain). It is then difficult to control these canneries, being located abroad (Personal Communication from the joint Union for coastal spatial planning and management, 2014).

Most fishermen want to wait for the next season to see how much the Spanish canneries will buy the cockles for. However, to be interested, fishermen state that the cockles should be bought at a higher price than what is currently offered by the canneries. Costs of purification and transportation, as well as auction fees hinder the fishermen. It would seem that as long as the Spanish market will present, a local enhancement project will be difficult. Furthermore, the cockle from Desveys Bay in Normandy, until now lower quality than that of the Bay of Somme, is said to be better this year. However, the

Spanish canneries share their order between the cockles of La Baule, Normandy and Somme, the 3 largest French cockle deposits. A transfer towards cockles of other territories will be problematic for the wholesalers of the Bay as much as it will be for the professionals.

4.4 An insufficient organisation of professionals

In general, professional shore-gathering fishermen lack representation, whether in the CNPMEM or at European level (they are completely non-existent in the latter) (Personal communication from a professional shore-gathering fisherman). It is therefore difficult to develop the collective and particularly in the Bay of Somme.

4.4.1 Unorganised and unidentifiable cockle fishermen on the territory

Prior to 2001, professional shore-gathering fishermen already had professional representation. A national association of professional shore-gathering fishermen existed but was never really present in the Bay of Somme while it was very present in Normandy (Personal communication from the GEMEL). Indeed, in the Desveys Bay, the President of the Association was regarded as an interlocutor of the profession. At the time, the Association worked well. In the face of recent mortality events, a second association of the same name was created in the Bay of Somme but no effects to date have been observed on the territory: *"There is no agreement between them so the associations do not work well."*(DML, 4 April 2014). *"Once the cockles stop dying, the effects of cohesion disappear"* (GEMEL, 23 April 2014).

Being unorganised and unidentifiable on the territory (no address for the office of the Association of shellfish gatherers, no building identifying them on the territory), it is sometimes difficult for political players to find interlocutors to understand their problems or their needs. A single representative of cockle fishermen for all institutional players cannot suffice: *"For us to help them, we need a grouping"* (Town council of Le Crotoy, 22 April 2014).

What is conceivable...

The CNPMEM produced the EMFF fact sheets with the help of the various CRPMEs. A request was made for professional shore-gathering fishermen to have access to certain aids, including mutual funds.

4.4.2 A lack of organisation which hinders the organisation of local projects linked to the profession

The cockle, historically consumed in the territory until the 80s because very present and exploited at that time, is still struggling to make a comeback culturally, notably because of the preponderance of mussel farmers and "bouchot" mussels but also due to the lack of communication made with restaurateurs to include it in their menus and due to a lack of thoughtful work in this sector of activity (Personal communication from the joint Union of the Bay of Somme and Broad Picard Coast, 2014).

"They organise themselves (professional shore-gathering fishermen) and they have good ideas but what is always hard with them is to have cohesion, serious people in the long run and after that it's the paperwork, seeking funding" (CRPME, 22 April 2014).

The Joint Union of the Bay of Somme and Broad Picard Coast also planned to create a processing facility. The lack of collective from shore-gathering fishermen poses problems. The last possibility open to them: produce their cans themselves to sustain their activity. *"I do not even see another possibility (cans). The real question is not whether they will do this but the question is when? And who will drive this?"* (GEMEL, 23 April 2014).

Investors have already been to identify potential managers of a cannery but this was not followed through. According to the survey, the problem of shore-gathering fishermen is that they live in immediacy.

Finally, the proposed project for the promotion of land/sea products developed by the joint Union of the Bay of Somme and Broad Picard Coast has to date still not made any progress due to lack of project leadership, as much from professionals as from other players of the territory. Potential project leaders, mainly local authorities, do not appear willing to commit to this action, mainly for financial reasons. Without motivation or commitment from them, such an operation needs to mature further as a unique support from local authorities is not a guarantee of dynamism from professionals. Thus, it was requested that the project be supported by professional bodies but so far no potential leader has manifested itself (Personal communication from the joint Union of the Bay of Somme and Broad Picard Coast).

4.5 An evolving maritime space: mistrust towards the introduction of a new player in the local and regional governance process

Uncertainties vis-à-vis the MNP are expressed by the respondents on the objectives for the improvement of the area's management, for the establishment of new governance with consultations. Indeed, local players consider regularly and satisfactorily communicating and exchanging. The Bay of Somme being already listed as a Natura 2000 area and nature reserve, the role of the marine park is still not identified. According to the players surveyed, the marine nature Park should not disrupt the governance in place in the Bay of Somme: *"local authorities know the territory well, therefore we end-up, I find, in a good management. [...] We found it hard when came the new bodies, Natura 2000, the marine park, when we were told, we're here to do governance, and there is no governance. We all looked at each other, thinking that they were absent but not needed"* (CRPMEM, 22 April 2014).

Globally, relations between the marine park and the players in the co-management of shore gathering are difficult, even non-existent, whether with the CRPMEM of Nord-Pas-de-Calais-Picardie, the joint Union of the Bay of Somme and Broad Picard Coast, and the DML of Pas-de-Calais-Somme (Personal communication from the marine nature Park of Picard estuaries and the Opal Sea).

Beyond doubts, fishermen nevertheless have expectations from the marine park, notably on the resource management. Shore-gathering fishermen are mostly hoping for actions in favour of improving water quality and promoting products, which should be developed by the MNP. *"Ensuring that shore-gathering fishermen also have access to the facility (shellfish farming) is clearly our responsibility because in the background it there is a full promotion, a channel that can be established, a market"* (AMP, 7 May 2014).

The challenge for the MNP is to manage to clarify the prerogatives of each and that all players agree. Soon, a law shall be passed to award the management of nature reserves to the PMAs *"another issue to be managed"*. Indeed, the park managers had promised players that the management of the nature reserve will remain as is (Personal communication from the marine nature Park of Picard estuaries and the Opal Sea).

CONCLUSION

The co-management of professional shore gathering in the Bay of Somme is based on a balance between the various stakeholders, the administration and the representatives of professionals or the professionals themselves. They collaborate to develop better management directions in order to ensure the sustainability of the activity and develop it across the territory. The shore-gathering trade may still experience changes on the regulatory, social and economic level. Shore-gathering fishermen from the Bay of Somme must evolve to adjust to new conditions and diversify the methods of promotion and communication of products from the Bay to overcome their dependence and ensure the sustainability of their activity. Moreover, the diversification potential of this activity in the Bay can be extended.

The main obstacles to the governance of this fishery are mainly located today at the level of the promotion of products and the diversification of professionals. It is often experienced by the profession when, in order to be successful, it should not be. More generally, it would seem that the economic potential of the sector is under-exploited, both on the part of professionals and public players. The two main problems to be solved by all the players of the governance are the filtering of cockles in the territory and the market problem of the cockle, the peppery furrow shells and marine plants. The shellfish facility is a great and unique tool of which the profession must take ownership. The potential it represents for a local purification would also facilitate the organisation of the shore-gathering fishermen in the Bay.

The governance of an activity may be more or less effective depending on the economic weight of the sector in the territory as it will influence the degree of stakeholder involvement in the management of the activity. The higher the stakes, the greater the involvement. In the Bay of Somme, professional shore gathering has a significant economic importance and its social influence is clearly present. Despite a landlocked geography, the governance of shore-gathering fishermen from the Bay was developed with all the players of the territory who were involved in the management of the activity but its balance remains fragile due to the predominance of certain key players in this system of governance and especially due to the lack of an organisation of cockle professionals in the territory. The main challenge of the governance of shore-gathering fishermen from the Bay of Somme therefore rests in the organisation itself of the professionals. A federating association or the creation of a cooperative in Somme could be the solutions to enable the sustainability of the activity and ensure the success of territorial and maritime development projects. Increased political and economic weight would favour the upholding of the activity, the consideration of its stakes in local territorial projects and perhaps would provide more financial investment.

Shore-gathering fishermen manage micro-businesses, which must respond and adjust daily to all sanitary and regulatory constraints, both of the fishing trade, but also of the DPM. Their survival depends on their ability to react and that of the administration and its representatives. The governance of shore gathering must therefore be in the capacity of being reactive.

LIST OF ACRONYMS

ADDAM	Association for the Sustainable Development of Maritime Activities (<i>Association de Développement Durable des Activités Maritimes</i>)
ASMER	Association for the Conservation of Estuarine Trades and the Coast (<i>Association de Sauvegarde des Métiers Estuariens et du Rivage</i>)
CDPMEM	Departmental Committee for Maritime Fisheries and Marine Fish Farms (<i>Comité Départemental des Pêches Maritimes et des Élevages Marins</i>)
CPO	Mandatory Professional Contribution (<i>Cotisation Professionnelle Obligatoire</i>)
CNPMEM	National Committee for Maritime Fisheries and Marine Fish Farms (<i>Comité National des Pêches Maritimes et des Élevages Marins</i>)
CRPMEM	Regional Committee for Maritime Fisheries and Marine Fish Farms (<i>Comité Régional des Pêches Maritimes et des Élevages Marins</i>)
DDPP	Departmental Directorate for the Protection of Persons (<i>Direction Départementale de Protection des Personnes</i>)
DDTM	Departmental Directorate for the Territories and the Sea (<i>Direction Départementale des Territoires et de la Mer</i>)
DML	Directorate to the Sea and the Coastal Zone (<i>Direction Mer et Littoral</i>)
DPM	Maritime Public Domain (<i>Domaine Public Maritime</i>)
DPMA	Directorate for Maritime Fisheries and Aquaculture (<i>Direction des Pêches Maritimes et Aquacoles</i>)
EFF	European Fisheries Fund
EIG	Economic Interest Group
EMFF	European Maritime and Fisheries Fund
ENIM	National Institution for Disabled Mariners (<i>Établissement National des Invalides de la Marine</i>)
GEMEL	Estuarine and Coastal Habitats Research Group (<i>Groupe d'Étude des Milieux Estuariens et Littoraux</i>)
GTPPP	Professional Shore-Gathering Workgroup (<i>Groupe de Travail Pêche à Pied Professionnelle</i>)
IBA	Important Bird Areas in the European Community
Ifremer	French research institute for the exploitation of the sea (<i>Institut français de recherche d'exploitation de la mer</i>)
MNP	Marine Nature Park
MSA	Agricultural Social Mutual (<i>Mutuelle Sociale Agricole</i>)
SPA	Special Protection Area
TPE	Very Small Business (<i>Très Petite Entreprise</i>)

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This report presents the results of the study on the governance of professional shore-gathering fishermen in the Bay of Somme (baie de Somme), carried out as part of the GIFS Project. Professional shore gathering is known to be a relatively closed fishery, which has been experiencing increasing difficulties over the past fifteen years; yet, in the Bay of Somme these difficulties have only been felt over the past two or three years. 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, these fishermen are involved in the governance structures in order to uphold the economic and social viability of their community. These results provide the context of governance across the Bay of Somme to add to the overall results of inshore fishing governance, completed as part of the GIFS Project by other case studies (in France, England, Belgium and the Netherlands) so as to better define the role of inshore fishing under the framework of the sustainable development of the coastal zone .

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