



Diversification of fisheries activities in the Channel

Synthesis of Action 9.2
CHARM 3 Programme

COMMON REPORT



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Diversification of fisheries activities in the English Channel

Action 9: Economic context
Synthesis of ACTION 9.2
CHARM3 Programme

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Presentation of the project

This study on diversification of fisheries activities in the English Channel is framed within the French-British project – CHARM 3 (Channel integrated Approach for marine Resource Management, phase 3). It was selected within the scope of the INTERREG IV A France (Channel) – England cross-border European cooperation programme, co-financed by the ERDF (European Regional Development Fund).

The project started in 2003 in the Dover Strait, and was then extended to cover the eastern English Channel (2006-2008). Since 2009, the study area has been extended to the whole of the English Channel and the south of the North Sea. The expertise involved ranges from marine sciences to economy, maritime law, geography, statistics, conservation and information technology.

A deeper understanding of the Channel basin as a whole is necessary if we are to use its resources whilst protecting the health and sustainability of its ecosystems. This will enable the pressure of multiple user groups to be managed in harmony with the capacity of the various habitats. The multidisciplinary integrated approach of the CHARM project provides decision makers with a status report of the English Channel ecosystem and a range of tools based on scientific knowledge for the sustainable management of living marine resources. An integrated and coordinated view on each side of the Channel is therefore vital.



Location of CHARM project partners



Presentation of the action 9.2

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Abstract

The European fishing industry is characterised by a range of administrative, socioeconomic, environmental, and biological challenges that fishers must overcome in order to make a living from their occupation. The increasing impact of these challenges in recent years means that many fishers are finding the viability of their businesses threatened. Furthermore, the shifting focus of maritime policy towards minimizing pressures on marine ecosystems and managing conflicting uses, means that traditional responses such as increasing fishing effort are no longer effective. Instead, fishers must seek to adopt alternative and innovative strategies to cope with these challenges. One such approach is the development of multifunctionality in fisheries, where fishers have responded to increasing constraints and uncertainty by diversifying into complementary activities to production. The benefit of this approach is that it allows fishers to apply existing physical and human capital to related activities, while remaining within the fishing industry.

Despite its potential contribution to the sustainability of fishing businesses and communities, our understanding of fisheries diversification in Europe is largely limited to anecdotal accounts. In order to address this gap in knowledge, a research study was funded as part of the EU INTERREG IV A project: CHARM 3 (CHannel integrated Approach to marine Resource Management) to investigate diversification strategies and determinants among French and English fishers in the Channel. This report details the main findings of this study, which consisted of three distinct stages: an inventory of existing diversification activities; a survey of fisheries stakeholders; and a survey of fishers – including both diversifiers and non-diversifiers.

The results show that diversification is practised by a range of French and English fishers throughout the Channel, although it is notably more prevalent among those with vessels under 12m in length. Activities take a multitude of forms, but may be categorised into four main types: market-based activities; leisure and tourism; non-fishing contract work; and environmental activities. The majority of these activities are practised for financial gain, although examples are found where fishers participate voluntarily (e.g. maritime festivals). While respondents identified the potential contribution of diversification to sustainability, the viability of this strategy is found to be subject to both internal and external factors of influence. These include vessel characteristics, fishers' attitudes and beliefs, participation of family members, market forces, and geographical location. Furthermore, in situations where clear demand exists for diversification activities, fishers may encounter a range of regulatory obstacles that restrict their development. The outcome of these findings is that diversification is unlikely to provide a solution in itself to the challenges facing the European fishing industry; although it may still make a valuable contribution to the livelihoods of individual fishers.



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Introduction

As in many fisheries, the Channel context is characterised by multiple challenges, including a decrease in natural resources; an economic environment in crisis; changes of marine biodiversity probably linked to climate change; fluctuating consumer demands; and unexpected evolution of regulatory systems, among others. Fishers face new constraints as a result of these challenges, and turnovers are falling or maintained in difficult conditions that threaten many businesses. An increase in fishing effort is no longer an effective response to these constraints. In the future, European and national maritime public policies will increasingly focus on minimizing pressures on marine ecosystems and managing conflicting uses (fisheries activities, aquaculture, tourism, leisure, raw material extraction, etc.). Consequently, the wide range of current and potential uses will make the management of living marine resources more complex. Hence, fisheries businesses have to be reactive by adopting alternative and innovative strategies to cope with these new challenges.

The concept of multifunctionality

The multifunctionality of agriculture and the role of farmers is recognised within agricultural policy at national and European levels. French and English policy also fosters farmers to diversify their activities. These multifunctional activities are developed under the normative approach to contribute to the general welfare of society. Then, on the basis of our observations in agriculture; we assume that multifunctionality could apply to the fisheries sector.

As in agriculture, the multifunctionality issue can be applied to many sectors. Indeed, fishing activities also include social, economic and environmental components. By considering the crisis that affects all fishing activities, we find that the future of this sector has to be anchored in a sustainable logic and a multifunctionality perspective. Progressive transitions and changes in practices are known to take place in small-scale fisheries as a response to cope with new constraints and greater uncertainty.

Diversification and multifunctionality represent two important adaptation strategies recently developed by European fishers to react to the crisis of the fishing sector. These strategies have been recently encouraged by the European Fisheries Fund (EFF - Axis 4), as a means of creating additional incomes and promoting coastal zone development.

Pluriactivity (where individuals combine fishing with unrelated employment) can also be an adaptation strategy to cope with new constraints, but this approach is not studied here.

Diversification of fisheries activities

Fisheries diversification activities can be defined as “*complementary activities to production (that represent less than 50% of the total turnover), in link with the product, the profession or the business that fishers practise to have an additional income but also / or to promote products, profession or land*”. One of the key incentives of fisheries diversification is that it enables fishers to exploit the skills, knowledge and social networks gained from fishing, without leaving the industry. The development of complementary activities can allow fishers to increase/stabilise incomes and reduce the risk associated with their primary role of harvesting. In an era where this primary role is subject to a multitude of administrative, environmental and socioeconomic challenges, the potential contribution of fisheries diversification to the sustainability of both individual fishing enterprises and fishing communities should not be overlooked. Indeed, diversification represents a rational choice made by fishers to create value from the multiple functions of fisheries; either through the market, or through participation in territorial programmes.

Despite the explicit recognition that fisheries diversification has received through the EFF, our understanding of the nature and extent to which Channel fishers have diversified into related activities is largely limited to anecdotal accounts. Furthermore, little is known of the attitudes of fishers or the constraints they face in adopting this approach.



To this end, there is a need to better understand diversification strategies and determinants in order to design fisheries policies that enhance fisheries diversification as well as economic, social and environmental sustainability.

The aim of this report is to develop an understanding of fisheries diversification activities in the English Channel. An inventory and a survey were conducted to examine the nature and extent of existing activities. Survey data was then analysed to identify the characteristics of diversified fisheries; and to evaluate the opinions of fishers and fisheries stakeholders with respect to the opportunities, motives, and the likelihood of diversification among fishers. Finally, the constraints faced by fishers when diversifying their activities were also identified.

This report presents a common analysis based on the results of a survey administered in France and England to fishers and stakeholders in the Channel. Two other reports present detailed analysis of results from each country (French and English surveys).



1. Method of analysis of diversification strategies

The focus of this study is upon activities that fishers undertake in addition to fishing, and which maintain a link with the commercial fishing industry. In the absence of an existing data resource on diversification activities in the English Channel, a multi-method approach was adopted to ensure that data collection was both comprehensive and accurate.

The study consists of two phases, commencing with an inventory of activities to establish the nature and extent of diversification among English and French fishers. This first stage involved the examination of secondary data sources – obtained primarily from the internet, but including print media, non-academic publications, and television/radio coverage; and completed by interviews of key informers. This is followed by a survey of fishers and stakeholders to explore opinions regarding opportunities and motives for diversification; the likelihood of fishers diversifying into different activities; and the relative influence of different constraints that fishers face when diversifying. The fishers' survey incorporates more specific questions on diversification behaviour.

1.1. Study areas and synthesis of fleet activities

The study area of this research comprised the English Channel fishery, which is defined by the International Council for the Exploration of the Seas (ICES) management areas VIId (the eastern English Channel) and VIIe (the western English Channel), and included Channel ports on the periphery of these areas. Covering an area of approximately 75 000 km², the Channel contains approximately eighty commercially caught species of fish, shellfish (crustaceans and molluscs), and seaweed. However, the majority of landings are dominated by a smaller number of higher-value fish and shellfish species (Boncoeur *et al.*, 2000).

The number of active vessels operating in the Channel has remained fairly stable during 2000-2011. Three size categories of vessel by length, i.e., < 10 m, 10-15 m and 15 m and above, have been distinguished during the period. The category of 10-15 m has not changed over the years, however the 15 m and above category has slightly decreased. The geographical origin of active vessels per country was 1 840 from France and 1 429 from the UK (in 2010). The most popular gear type used in the Channel is “nets” which were utilised by about 24% of vessels in 2010. The other popular gear types are pots, demersal, otter trawls, dredgers, handlines and longlines which accounted for another 60% (Portail CHARM III - Interreg IV, 2012, Phélippe *et al.*, 2011).

To define our area of study, we used a “terrestrial approach” because diversification activities are terrestrially anchored (regardless of where the vessel goes fishing). This assumption comes from previous studies on diversification (Merrien *et al.*, 2008), which demonstrated that the diversification of fisheries was mainly influenced by the availability of fishers on land. The study therefore focuses upon fishers who operate from ports located in the Channel.

The following figure (Figure 1), presents the distribution of Channel registered vessels by district and demonstrates the diversity of the French and English fleets in terms of gear and size.

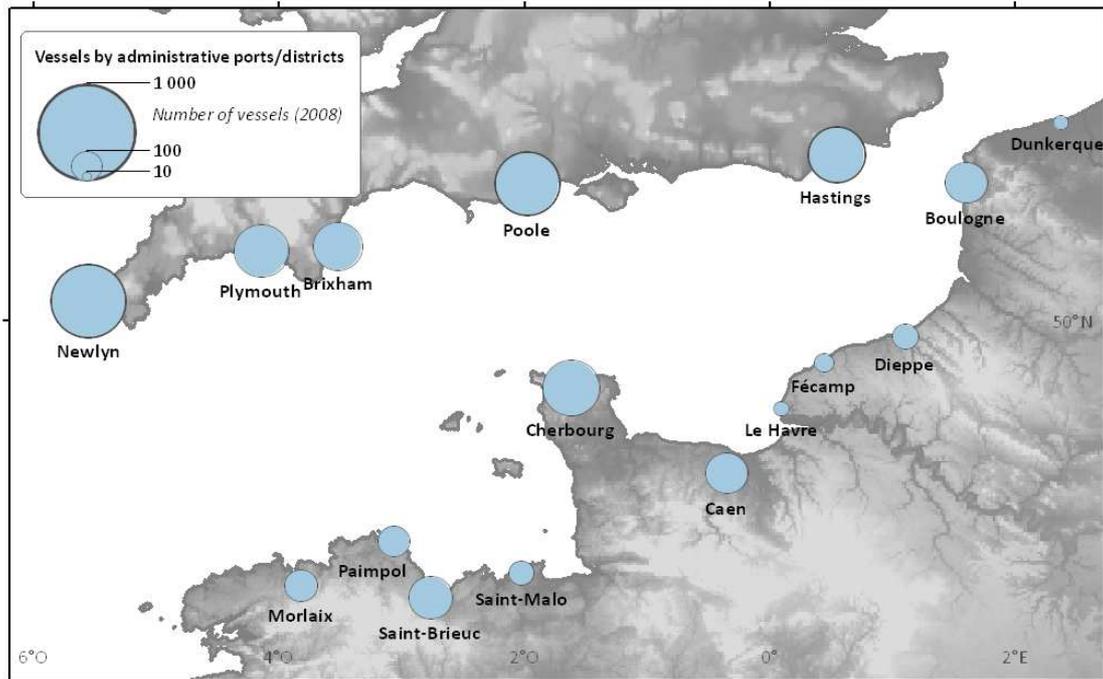


Figure 1: Distribution of registered vessels by district (2008)

Source of data: European fleet file, 2008

1.2. Inventory of diversification activities of the fleet

The aim of the inventory was to develop an extensive overview of existing diversification activities in the Channel. From this inventory, a selection of activities was identified for further investigation. This selection focused on fishing activities that have a direct link with fishers (direct participation of fishers). The other activities (no direct link) may inform action 6.2 of CHARM 3 project, presented by Timothy Acott and Julie Urquhart (University of Greenwich).

A common framework has been designed to collect data. Appendix 1 explains the structure of data collection. Two main forms of data collection were used: internet searches and a subsequent phase of qualitative interviews with stakeholders. From the interviews and meetings, we identified the social factors belonging to the system under study and gained an understanding of the economic, social and legislative contexts.

1.3. Survey of stakeholders and fishers

To adequately capture the range of opinions and experiences concerning diversification, the survey was conducted with both fishers and stakeholders involved in fisheries management and related occupations. To gather their perceptions of diversification, we designed two different questionnaires with common questions.

Questionnaires were designed in cooperation with the action partners. The fishers' questionnaire included common questions (between French and English partners), questions from the economic survey realised by Ifremer, and specific questions on chosen focus themes (one common focus between France and England on direct selling). Similarly, the stakeholders' questionnaire contained common questions (between French and English questionnaires) and specific questions on key focus points.

The objective of the survey was to analyse the development opportunities of diversification activities, as well as the economic and social consequences of this development. To analyse constraints upon the development of diversification activities, a specific methodology using the Analytic Hierarchy Process (AHP) was developed (methodology detailed in Appendix 2).



This report will present only the results from common questions. Results on focus themes are presented in specific reports by country.

1.4. Sampling and data collection

Stakeholders' sampling

In both England and France, a sample of stakeholders was identified from those working within the Channel fishing industry and related sectors.

In England, stakeholders were drawn from the following four categories: (1) organisations responsible for the management/regulation of the fishing industry; (2) organisations that represent the interests of the fishing industry; (3) organisations that directly represent the interests of fishers; and (4) related organisations e.g. harbour authorities, environmental organisations.

In France, stakeholders were identified from (1) professional organisations; (2) administrative organisations; (3) local authorities; (4) the tourism industry and other organisations linked to the sector.

Fishers' sampling

For fishers, a sample was identified from those that fish within the Channel and whose administrative ports are within the study area.

In England, the zones of jurisdiction of the five regional Inshore Fisheries and Conservation Authorities (IFCAs) covering the Channel coastline were used as broad sampling areas, namely: Kent and Essex; Sussex; Southern; Devon and Severn; and Cornwall. Sampling was designed to ensure that equal numbers of fishers were interviewed from ICES areas VIId and VIIe. Given that a number of the English stakeholders were also active fishers (i.e. fishers' representatives), these results were aggregated into the fishers' dataset where appropriate.

In France, sampling was undertaken within the seven maritime districts of Boulogne-sur-Mer (Nord-Pas-de-Calais), Dieppe, Fécamp and Le Havre (Haute-Normandie), Cherbourg (Basse-Normandie), Paimpol and Morlaix (Bretagne). A sampling plan was designed to obtain a representative sample of the French fleet using the same sampling rate, which was applied to each category of vessels. Vessel categories were based on the maritime district, the size of vessels (over and under 12 m) and the type of fleet¹ (combination of métiers practised during one year). Within each category, each surveyed vessel was selected randomly and a sampling rate, which was around 15%, was used to obtain a statically pertinent sample.

A sampling plan was designed to establish a pertinent (statistically pertinent and representative of the English Channel coast) and achievable number of interviews (given the fact that the fieldwork period was limited in time) (Table 1).

¹ According to the study lead by Ifremer on Channel fleets – within CHARM 3 project (Phélippé *et al.*, 2011).



Table 1: Sampling plan per country

Maritime district	Surveyed population – number of fishers	Surveyed population – number of stakeholders
Nord Pas de Calais	26	19
Haute Normandie	19	21
Basse Normandie	52	15
Bretagne	32	28
Total in France	129	83
Western Channel	11	26
Eastern Channel	11	12
Total in England	22	38
Total	151	121

Source: survey 2010

All respondents were interviewed face-to-face, and interviews lasted between 15-30 minutes.

The results of this multi-method approach depict a general view of existing diversification activities in the English Channel, which include practices, logics and constraints.

Although fewer interviews have been realised in England, a comparison of results from England and France (even if not statistically pertinent) allows us an overview of tendencies in the two countries (similarities and major differences).



2. Diversification activities practised in the Channel

The inventory of fisheries diversification activities reveals that a range of activities are practised on the Channel coastlines (Figure 2). For the purpose of analysis, the activities identified in the inventory are categorised by type under the following headings: market-based activities, leisure and tourism, environmental activities (or eco-activities), and non-fishing contract work.

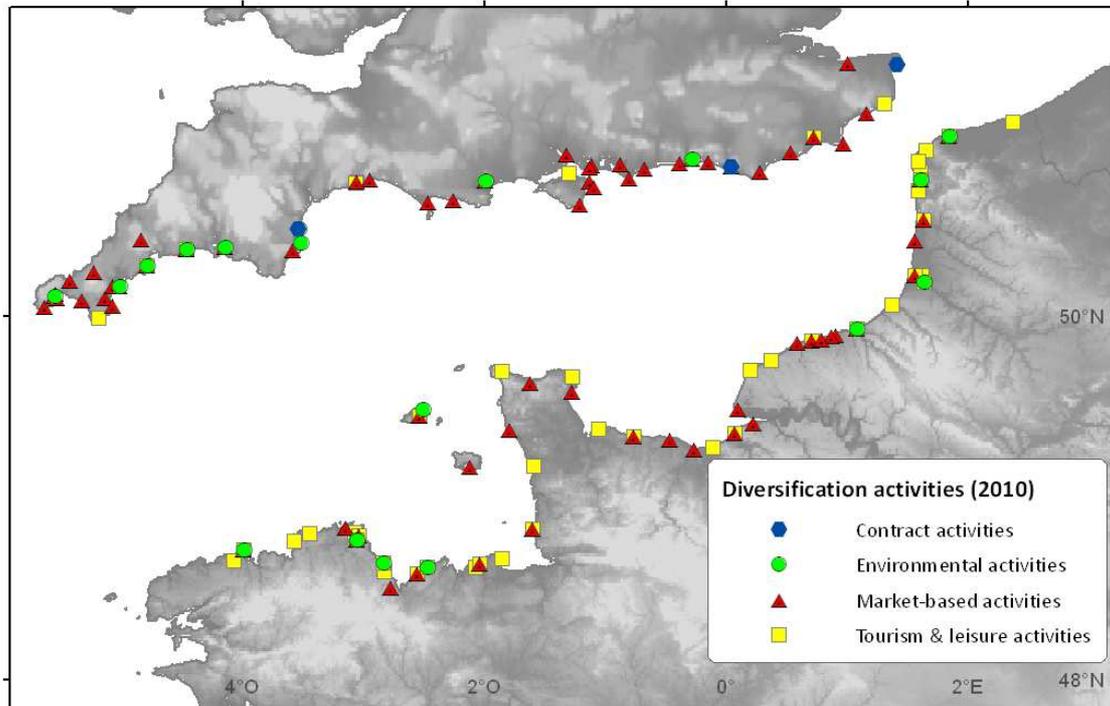


Figure 2: Distribution of diversification-based activities in the English Channel

Source: inventory, 2010 - NB: Signs are not proportional to the number of activities

Due to the difficulty in some cases of establishing the number of fishers engaged in a specific activity, a decision was taken to define each activity by its type and location – rather than by its individual practitioners.

2.1. Market-based activities

Market-based activities are defined as those where fishers have diversified within the existing market structure for seafood products, and may occur in a horizontal or vertical direction in relation to principal fishing activities. On both coastlines, market-based diversification constitutes the most prevalent type of activity – accounting for nearly three-quarters of the activities identified in England and around two-thirds in France. The majority of these activities follow one of two themes: horizontal diversification into marketing initiatives; and downstream vertical integration from fishing to retail.

In the case of the former, fishers have sought to add value to their product through the use of tagging or ‘ecolabelling’ schemes that promote provenance, traceability or sustainability. In England, the most widely known of these initiatives is the ecolabel introduced by the Marine Stewardship Council (MSC), of which seven fisheries were certified at the time of writing, with a further two undergoing assessment. In France, two saithe fisheries concerning the Channel fleet were certified (Euronor and Scapêche and Compagnie de Pêche de St. Malo saithe) but the location of fishing activity is not within the Channel. Additionally, lobster fishers from Normandy, members of the “Comité Régional des Pêches Maritimes de Basse Normandie” and the Jersey Fishermen's Association achieved MSC certification for the Normandy and Jersey lobster fishery in June 2011.



In addition to the MSC scheme, tagging schemes have also been introduced in England by regional seafood bodies including Seafood Cornwall and South East Seafood. In France, several tagging schemes exist along the coastline (Roussel et al., 2011). These include schemes that are specific to regions (Filière Opale, Normandie Fraîcheur Mer, Bretagne Qualité mer), and associations that have created specific schemes (e.g. Association des ligneurs de la pointe Bretagne).

The location of tagging and labelling schemes to promote products on the French and English coasts of the Channel is displayed in the following map (Figure 3).



Figure 3 : Tagging or labelling schemes present on the Channel

Source: inventory 2010

With respect to vertical integration, fishing firms may integrate upstream into the supply and maintenance of fishing vessels and equipment, bait, and to a lesser extent the provision of training/information services; or downstream into seafood processing, wholesale and retail. Examples of upstream integration were relatively limited in the Channel, and included examples of diversifying into vessel building and repairs, and the supply of fishing equipment. In contrast, downstream integration was more common with a number of fishers selling their catch through mobile and fixed retail units – including stalls and shop premises, and to a lesser extent restaurants. Typically this involves the selling of fresh fish, although examples were also found of processing/preparing seafood for consumption – particularly shellfish.

2.2. Leisure and tourism

The practice of fishers using their vessels for leisure and tourism activities is well established in parts of the Channel.

On the English coastline, the main examples identified were the provision of sightseeing trips and recreational angling charters. Only one example was found of a fisher offering tourists the opportunity to observe the actual practice of commercial fishing – in this case pot fishing for crab and lobster.

In France, examples of diversification into leisure and tourism were also identified, although their development has been restricted by regulations. In both cases, the practice of taking paying visitors aboard the fishing vessel was a summer season activity – generally undertaken by inshore fishers with smaller vessels, operating from ports which are popular destinations for tourists.



In addition to undertaking leisure/tourism activities for financial gain, examples were found of English and French fishers participating in local maritime and fishing festivals; including demonstrations of net making, answering questions from the public, and allowing tourists onto moored fishing vessels. Festivals may be held to promote the sea fishing industry, (e.g. shellfish festival in Granville) and individual species of fish or shellfish (e.g. scallop festival in the Côtes d'Armor and herring festival in Boulogne-sur-Mer). For each of the cases identified, fishers participate voluntarily – often to raise money for charitable causes.

2.3. Environmental activities

On the English coastline, a number of examples were found of diversification into activities related to the marine environment. This typically involves fishers chartering their vessels to environmental organisations for research purposes. The source of much of this work is the UK Centre for Environment, Fisheries and Aquaculture Science (Cefas) which employ fishers for surveying through the Fisheries Science Partnership (FSP). Such contracts are open to tender and advertised in the trade press. As with other types of contract work, environmental activities can be lucrative, particularly during quiet fishing periods or where fishing activity is constrained by lack of quota. However, this work is generally sporadic and can be selective with respect to the types of vessel required and the duration of contracts. There was widespread agreement among English respondents that opportunities for environmental work were likely to increase with the proposed network of Marine Conservation Zones (MCZs) in 2012 under the Marine and Coastal Access Act 2009. However the administrative process of tendering for such work was identified as a possible constraint upon fishers applying.

Other examples of diversification into environmental activities include participation in the 'Fishing for Litter' project, part of a wider international initiative which aims to reduce marine litter through the involvement of the fishing industry. At the time of writing, 86 vessels from 7 ports in the western Channel were participating in this project. Participation is voluntary; fishers are not paid to collect litter although the costs of administration are covered by the project.

On the French coastline, fishers participate in local and national research programmes including initiatives with Ifremer and national authority work. Activities identified through the inventory include participation in scientific work and surveying; allowing observers onboard vessels; and various forms of data collection. Other examples of environmental contract work, particularly the collection of waste at sea, are practised within the framework of "Contrat bleu". This is a contract between fishers and the French state which develops the environment involvement of fishers beyond regulation and previous practices. In compensation, participants receive indemnity against loss of turnover and created costs. The collection of waste at sea is a flagship measure of this contract.

2.4. Non-fishing contract work

The practice of using fishing vessels for non-fishing contract work is not uncommon in the UK, particularly on the east coast of Scotland where fishers undertake guardship duties for the North Sea oil and gas industries. Fishers can be well suited to these activities, having the vessels and skills to operate in unfavourable sea conditions, together with experience of towing equipment. On the English coastline, a number of examples were found of diversification into contract work for the utilities sector, including telecommunications and renewable energy. Roles include fishers using their vessels for attendant/guardship duties and working in an advisory capacity; for example, by liaising with other fishers to inform them of the work being undertaken and its potential impact upon their fishing activity. In France, examples of diversification into non-fishing contract work were less prevalent, although fishers have undertaken work for the utilities sector in recent years.



While non-fishing contract work is often financially lucrative, opportunities to diversify into such activities are supply-led and invariably sporadic. For example, respondents reported that opportunities within the telecommunications industry have become less frequent following the installation of underwater fibre-optic cables for broadband internet services. In contrast, it is possible that new opportunities will arise on both sides of the Channel with the development of proposed offshore wind farm zones at Hastings, the Isle of Wight, Le Tréport, Fécamp, Courseulles-sur-Mer, and Saint-Brieuc.

2.5. Synthesis and activities practised by interviewed fishers

The inventory revealed that diversification is practised by fishers throughout the English Channel.

The survey confirms these results. However, an analysis of fishers' and stakeholders' perceptions of these activities is required to complete the study, and to better understand the determinants and strategies of development of these activities.

The survey of fishers shows that diversification of fisheries activities, which is seen as an opportunity for the fishing sector, is not a new concept. Less than 20% of surveyed fishers are not involved in a diversification activity. The main activities in the Channel are (Figure 4):

- ✓ direct selling – the first activity developed on the coastline of the Channel;
- ✓ marketing initiatives - participation in marketing initiatives such as Marine Stewardship Council eco-labelling scheme, product tagging scheme, other sustainability or traceability scheme, etc.;
- ✓ collection of waste at sea, within the framework of “contrats bleus” in France, and ‘Fishing for Litter’ in England;
- ✓ allowing observers onboard vessels and participating in local and national research programmes.

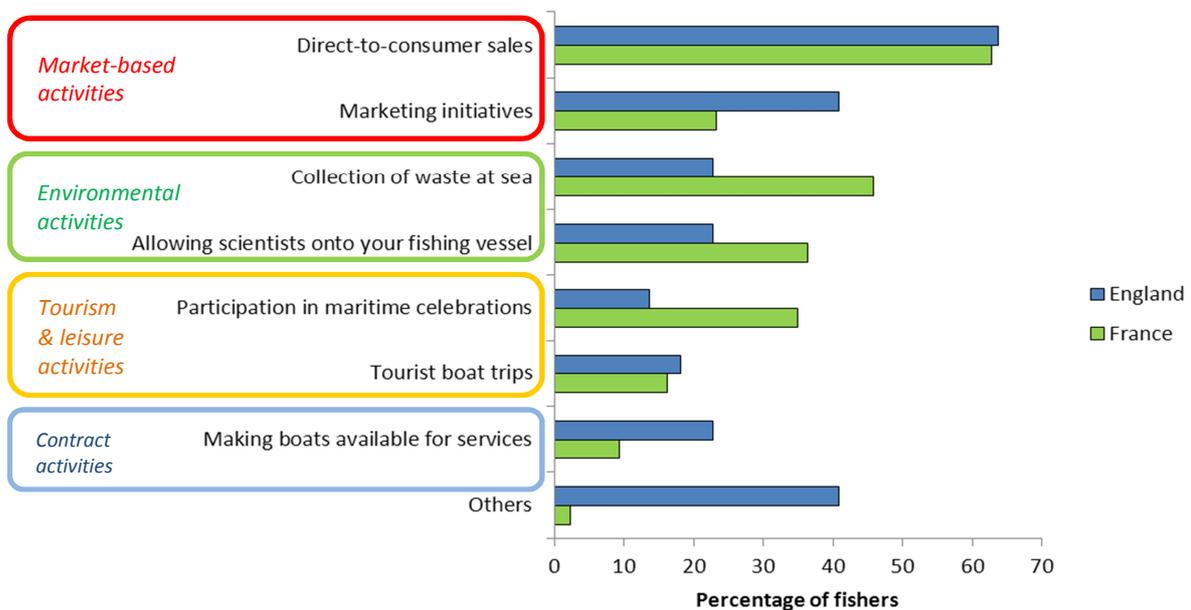


Figure 4: Practice of diversification activities per country (% of fishers, sample of 151 fishers)

Source: survey 2010



It is important to highlight here that the definition of diversification, used in our study, includes a large number of activities - some of which are classified in other studies as part of standard fishing activity. We have chosen to adopt a broad definition of diversification, in order to identify and analyse the strategies of implementation most effectively. Thus, if the present study reveals that many fishers are diversifying their fishing activity, this does not contradict the results of the study of the action 9.1 CHARM 3 on “diversification and fisheries in the Channel” which found that 3.5 % of interviewed fishers in the Channel are diversified (their definition is more restrictive and includes less activities).



3. Determinants of fisheries diversification

Having established a general understanding of the different forms of fisheries diversification and their distribution throughout the Channel, a number of key findings emerged with respect to the characteristics of diversification. Firstly, it is clear that the strategy of fishers diversifying into activities that complement their existing fishing practices is not a new phenomenon. Anecdotal evidence collected through the inventory process confirms that the decision of Channel fishers to develop or engage in complementary activities to production is historically well-established.

However, further examination of the activities currently practised throughout the Channel reveals that the majority have not been inherited, nor practised by individuals from the start of their career; but instead developed more recently in response to changing market conditions.

A number of trends are discernible with respect to internal and external factors of influence (e.g. vessel characteristics; fishers' behaviour; participation of family members; market influence; and geographical location) in the development of diversification activities. These are explored in greater detail in the following sections.

3.1. Internal factors

3.1.1. Vessel characteristics

Diversification is not practised by all vessels. Instead, vessel characteristics are found to facilitate the practice of specific diversification activities. For example, direct selling is mainly practised by vessels under 12 m in length, as these vessels return to port more frequently and thus enable fishers to sell fresh products directly to customers. Moreover, given that the quantities of landings are quite low, direct selling represents an appropriate way for fishers to promote their products.

The participation of vessels under 12 m in length in maritime festivals is quite numerous. These festivals are mainly centred on coastal traditional fisheries to promote the fishers' work and community. Moreover the link between artisanal fisheries and territory and tradition is found to be strong.

Conversely, some vessel characteristics are found to inhibit certain types of activity. An example of this is found with respect to the collection of waste at sea. This activity cannot be practised by all types of vessels, because it directly depends upon the length of vessels and on the type of gear. Our survey showed that vessels involved in this activity are trawl vessels (because they can easily bring waste up in their nets) and are more than 12 m in length (hence, they have more storage space on board). On larger vessels, the risk of product contamination is reduced, and similarly the risk for fishers is reduced because waste can be stored in a specific place without occupying the work-station.

A limited number of vessels allow tourists on board, but this activity is mainly practised by vessels of more than 12 m for regulation and safety reasons.

3.1.2. Fishers' characteristics

Analysis of the survey data revealed no discernable trend between diversification activities and fishers' characteristics such as age, status, educational level, etc. However, other non-quantifiable determinants were found to influence fishers' attitudes toward change and therefore the likelihood of them adopting diversification strategies.

These determinants were identified by stakeholders during interviewing. A number of stakeholders believed that fishers would be reluctant to pursue alternative activities because they were likely to impact upon fishing – their principal and preferred activity. This opinion is particularly relevant to activities such as processing and direct selling which have to be undertaken upon returning from a day at sea, as typified by this eastern Channel fisher:



“Selling directly to the public: it's too challenging. Because if you're out 16 or 18 hours a day, the public have gone to bed, generally, by the time you get home. And if you're out at four o'clock in the morning, it lacks the opportunity to get to the public to sell to them.”

In addition to the impact that diversification may have upon fishing activity, stakeholders expressed an opinion that fishers may be deterred from diversifying into other activities due to a perceived loss of identity and social status. Despite these activities being directly related with fishing, diversification requires fishers to adopt roles outside their traditional sphere of catching fish. Such roles may require skills and experience that some fishers lack. However, fishers may also be resistant to adopting new roles because of a perceived loss of independence – as demonstrated by this western Channel fisher:

“They don't want to be told what to do by someone who's running a wind farm or building a wind farm. They don't want to be on call to somebody else even if the money is good. A lot of them, they want freedom, that's why they're fishermen. “

3.1.3. Participation of family members

Family plays a considerable role in fishing businesses. Family members can participate in fishing activities on the water and activities on land (material preparation, transport, administrative activities, management, etc.). Surveyed fishers stressed the importance of this work, which is not always recognised (administratively and financially).

Concerning diversification, the survey revealed that family participation contributed in making diversification activities easier to establish. Family involvement facilitates the development of certain types of diversification activity that a fisher alone would be unable to put in place; and thus represents a determining factor in the implementation of diversification strategies.

In France, half of the surveyed fishers are supported by a family member in their work. For 60% of diversified businesses, a family member is involved in this activity, whereas in non-diversified businesses this rate is around 10%. The spouse of the fishing business owner is the main family member involved in diversification activities (for 78% of the businesses that involve a family member). In the case of diversified businesses, family members are commonly involved in commercialisation activities such as retail, product preparation and management.

In England, the involvement of family members is also found to make an important contribution to diversification. Just under half (45%) of the fishers interviewed reported that a family member worked with them in their fishing business. Consistent with the French survey, the involvement of family members is greater among fishers with diversified businesses (50%). Similarly, the fishers' spouse is typically the main family member involved in supporting diversification activities, and undertakes administrative, retail and marketing roles.

3.2. External factors

3.2.1. Market forces

The observation that many fishers have diversified more recently in response to changing market demand is particularly evident among activities associated with the marine environment and non-fishing contract work. Opportunities for environmental work reflect an increased focus upon the management and conservation of marine resources (exemplified in England, by the recent introduction of the Marine and Coastal Access Act 2009). Similarly, opportunities for fishers to diversify into non-fishing contract work are largely reflective of technological developments – particularly within the telecommunication and energy sectors. Both of these activity types share a number of common characteristics: they can represent a lucrative source of income with a relatively



low level of associated risk; but may be both limited in duration and sporadic in occurrence. As such, fishers are less likely to rely upon such activities for the longer-term survival of their fishing business.

Leisure and tourism activities also depend upon demand from tourists. Moreover, the increasing demand from consumers for local and fresh products influences the development of direct selling.

3.2.2. Fisheries location and influence of the territory

In line with the finding that the majority of diversification activities have developed in response to market demand, the type of activity practised is found to be heavily influenced by geographical location. While similar levels of engagement are observed within the eastern and western Channel and different French Regions (Figure 2), further examination identifies a number of notable differences. According to the survey results, the type of diversification activities practised appear to be strongly dependent on the region considered (Figure 5).

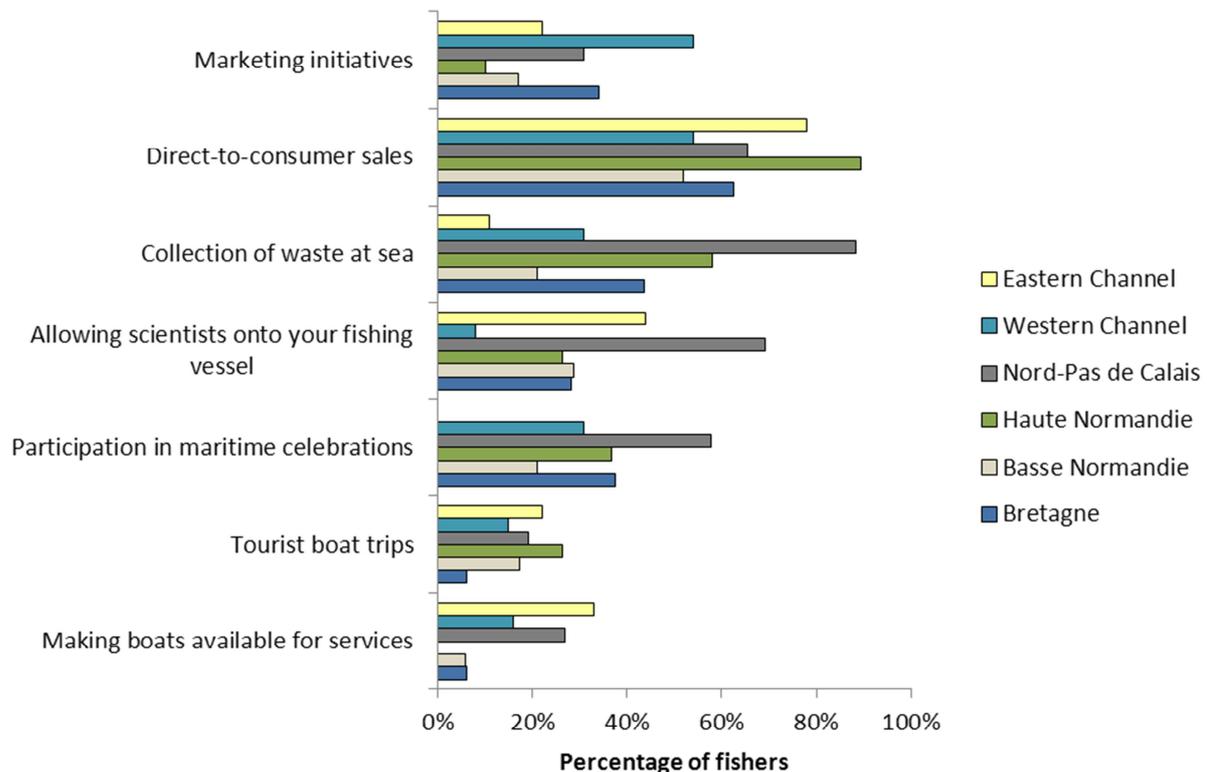


Figure 5: Practice of diversification activities per region (% of fishers, sample of 164 fishers)
 Source: survey 2010

The finding that market-based activities are present throughout the Channel is reflective of the opportunities that exist to develop these types of activity. While labelling schemes are defined by their geographical focus, opportunities exist for any distinct fishery throughout the Channel to develop their own product label. However, given that these schemes are co-ordinated by collective organisations their distribution reflects the presence of these collectives.



The opportunities must be present for fishers to diversify. For example, diversification into contract working, while potentially lucrative, is often highly localised which makes it an infeasible option for many fishers. Similarly, diversification into tourism activities is more prominent among Channel ports that receive large numbers of tourists during the summer months. Furthermore, fishers may be deterred from diversifying into these activities due to the presence of competitors.

The type and prevalence of diversification activities practised is strongly influenced by internal factors, but also by a combination of factors related to the territory and markets.

This work demonstrates the existence of multiple constraints and their potential influence upon the decision of fishers to diversify. Fisheries diversification is found to be subject to a range of constraints operating both externally and internally to the fishing business.



4. Motivation for developing diversification activities

The survey findings show that the practice of diversification activities depends upon internal and external factors of influence. This analysis of factors of influence can be completed by an analysis of diversified fisher's motives in order to better understand diversification strategies.

4.1. A search for sustainability of their activity

According to the survey, the main reason that fishers developed diversification was to increase their profit (for 64% of the interviewees) (Figure 6). In almost all of these cases, fishers developed direct selling.

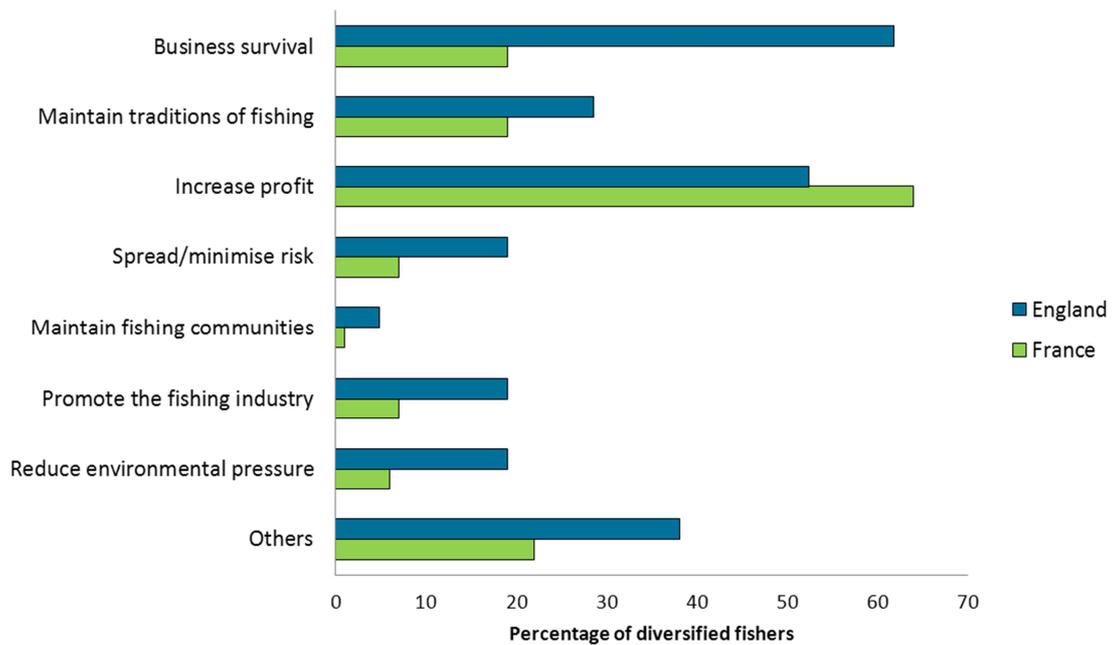


Figure 6: Reasons for diversification activity development (% of fishers, sample of 105 fishers)

Source: survey 2010



Stakeholders shared similar opinions to fishers when asked to identify the main motives for diversification (Figure 7). In both France and England, the financial motives of business survival and increased profit were perceived to be more influential upon the decision to diversify than social or environmental motives.

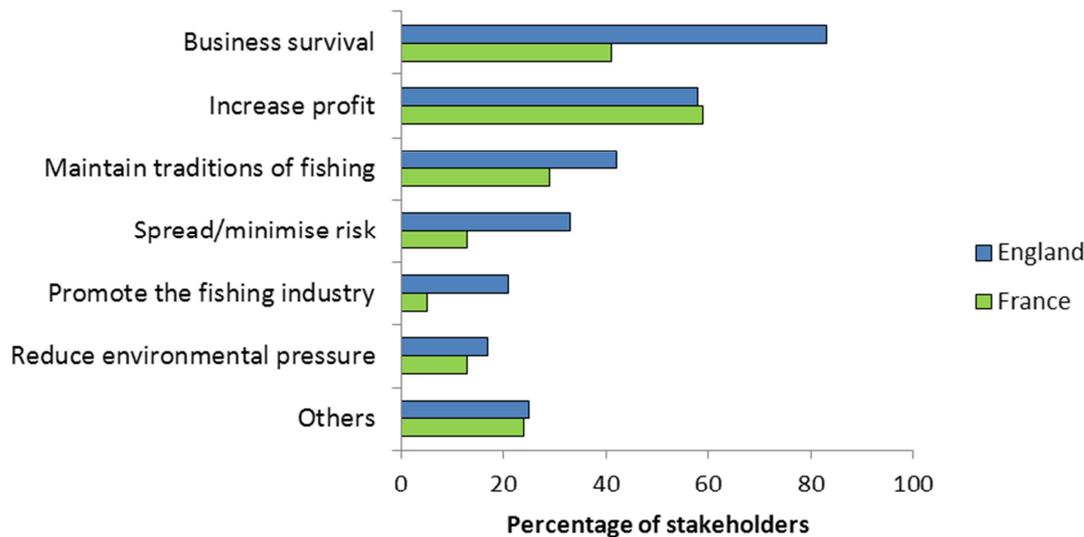


Figure 7: Reasons for diversification activity development (% of stakeholders, sample of 107 stakeholders)

Source: survey 2010

However, among diversification activities, only direct selling is a stable source of complementary revenue for fishers. It represents on average in France, 20% of turnover (2009) for fishers that sell their products directly. In England, three fishers indicated that 100% of their income came from direct selling activity (no case in France).

Other activities may be profitable but many fishers do not take them into account when considering the share of their income associated with diversification activities. For example, some fishers do not consider isolated activities (e.g. tourists' boat trips) as a source of revenue because these activities are temporary or perceived as insignificant.

4.2.A logic of socio-cultural opening

The world of fisheries, such as in agriculture, is characterised by a sense of socio-professional geographical isolation; as fishing is conducted at sea, it makes this activity invisible on land. Fishers are a socio-professional group which is relatively homogeneous, and the vessel is not a suitable place to meet and exchange with other socio-professional worlds (De Myttenaere, 2005). Thus, the establishment of diversification activities promotes openness and exchange with other actors: tourists, tourism professionals, consumers, scientists, etc. Diversification is both motivated by economics but also by the logic of socio-cultural opening and integration.

Diversification is also justified by the desire of fishers to share their profession and knowledge around an unknown universe.

Moreover, even if most diversification efforts are individual (one fisher), diversification can help to implement new partnerships through the implementation of collective projects (a group of fishers) which strengthen these links.

The motives given by some diversified fishers, conversely, can represent a constraint of development for others who do not want to misrepresent the fishing trade (cf. section on constraints).



Diversification is motivated by economics reasons, and also by the logic of socio-cultural opening and the sharing of knowledge and know-how.

Despite its potential contribution to the sustainability of fishing businesses, diversification is not a stable source of revenue for the majority of fishers. This can be explained by the fact that surveyed fishers do not define diversification as we define it, and identify some of the diversification activities presented in the study (e.g. visit of vessels, participation in scientific programmes, etc.) as part of their fishing activity. Therefore, fishers do not make distinctions between these activities and other aspects of the fishing business, and consequently do not clearly identify the proportion of their revenue coming from these diversification activities.

In other cases, it is difficult to identify the share of turnover associated with the establishment of a diversification activity when the benefits of this activity are indirect. For example, participation into festivals leads to the promotion of products, however it is difficult to estimate the share of future sales resulting from this promotion.



5. Opportunities and constraints for development

Through the analysis of existing diversification strategies, this study has shown that diversification is perceived as a viable strategy for fishers to cope with crisis and to maintain their fishing activity. It is therefore useful, beyond existing activities, to study the perspective of fishers and stakeholders with respect to the opportunities for fishers to develop diversification activities in the future, and the constraints they may face in doing so.

5.1. Opportunities for development

In this section, we analysed fishers' propensity to develop diversification activities by asking them what they would do if their activity was no longer profitable (Figure 8). In a situation of crisis, the majority of fishers (68% of French fishers and 90% of English ones) reported that they would maintain their fishing activity and chose to diversify their captures or methods of fishing. In France, a total of 25% reported that they would choose to stop fishing; however, this choice is strongly dependent upon age. Primarily, older fishers were more likely to select this response – especially those who are approaching retirement age.

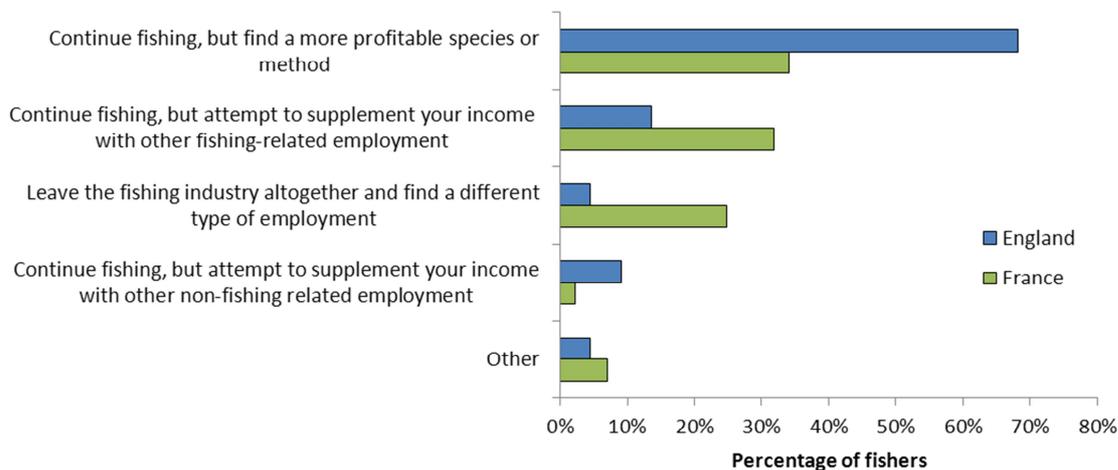


Figure 8: Future scenario planned by fishers in case of declining profitability of their fishing business (% of fishers, sample of 164 fishers)

Source: survey 2010

A total of 32% of the interviewed fishers in France and 14% in England reported that they would choose to diversify into complementary activity to cope with the crisis. For many of these individuals, the present system of fishing is no longer sustainable and new solutions need to be identified. This decision to diversify is not related to age, region or vessel type. The findings also reveal that fishers want to keep a link with their fishing activity and refuse to develop pluriactivity (only 2% of French fishers and 9% of English fishers would choose pluriactivity).

Stakeholders were asked to express their opinions regarding the likelihood of fishers diversifying into activities in the future. These results may be used to indicate future prospects for diversification within different Channel regions, although it should be noted that these results may not necessary reflect the opinion of all fishers in the English Channel.

Combining responses for 'Very likely' and 'Likely' reveals the greatest likelihood of French fishers in the Channel diversifying into taking scientists on board (more than 90%); direct selling on docks (80%); and participating in festivals and collecting waste at sea (70%).

In England, stakeholders identified the greatest likelihood for fishers participating on scientific programs and taking scientists onboard (more than 60%), participation in festivals and contract work for environmental organisations (more than 50%) and collecting waste at sea (more than 40%).



For other activities, stakeholders identified a lower likelihood of development. In France, the potential to develop activities in link with delivering products exists, but lack of demand would rapidly limit this development. Concerning contract work, the perception of French and English respondents depends on their knowledge of the sector and many interviewed stakeholders have no opinion on these specific domains of activity (energy companies, environmental organisations, etc.).

5.2. Constraints of development

Fishers are not opposed to diversification development and revealed notable interest during the interviews. However, it can be difficult for them to develop these activities. This section analyses the different constraints and obstacles of diversification. The methodology used to analyse these constraints is presented in appendix 2.

To prioritise constraints, we have to classify them. The preliminary study allowed us to establish 5 categories of constraints:

- ✓ *Economic factors*: fishers may decide not to diversify into new activities because they may be less profitable than what they do currently. New activities may also involve more risk or require capital that fishers are unable or unwilling to invest;
- ✓ *Social factors*: fishers may be reluctant to diversify into new activities because they detract from the tradition of fishing or their role and identity as fishers. Diversification activities may also require new skills that fishers are unable or unwilling to provide;
- ✓ *Lack of information*: fishers require information about the viability of different types of diversification activities, what they involve, and how profitable they may be in order to decide whether to diversify;
- ✓ *Lack of opportunities*: there may be a lack of viable opportunities to diversify into other activities in the area in which the fisher is located;
- ✓ *Regulation – administrative constraints*: there may be some difficulties due to laws for fishers to diversify their activity (impossibility, security constraints, etc.).

The hierarchy of constraints is presented in Figure 9. Administrative constraints are seen by both fishers and stakeholders as the main constraints upon diversification.

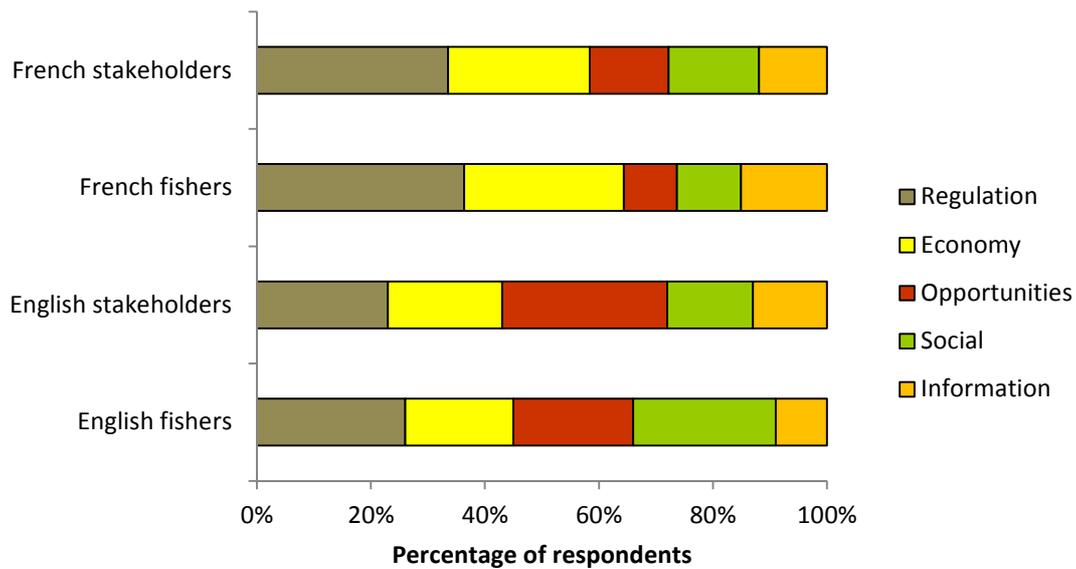


Figure 9: Importance of each constraint identified by English fishers and stakeholders (sample of 35 fishers and 23 stakeholders) and by French fishers and stakeholders (sample of 114 fishers and 77 stakeholders)

Source: survey 2010

Through further discussion with respondents, it was possible to explore how these key types of constraint influenced the ability and decision of fishers to diversify – most notably regulation and social factors. Regulatory constraints take a number of forms depending upon the type of diversification activity. Fishers who use their vessels for activities such as contract work, surveying, and tourist boat trips, identified regulatory requirements relating to carrying passengers onboard as a particular constraint. In contrast, fishers who had diversified into market-based activities such as processing and direct selling, encountered a different form of regulatory constraint. This relates to the legislative requirements of developing and operating food-related enterprises e.g., obtaining planning permission, and satisfying health and safety requirements. While the fishers interviewed had overcome these different forms of regulatory constraint to develop their respective activities, they did identify them as being potentially restrictive upon the development of future activities – due to the financial cost and time commitment that is required.

Understanding the influence of social factors as a constraint upon diversification is inherently more complex because they relate to the attitudes and beliefs of individual fishers. Two key themes emerge from interview-based discussions with fishers. Firstly, the majority of fishers gain considerable satisfaction from their work, irrespective of the financial benefits that they receive. Secondly, a strong sense of identity and social status exists among many fishers – who view fishing as a lifestyle choice rather than just an occupation. The influence of these factors upon the decision to diversify is potentially significant; because some activities will conflict with these notions of identity and status more than others.



In conclusion, there are opportunities for the development of diversification activities in the future: strengthening existing activities and developing new activities in response to changing demand and new possibilities.

The main obstacles to the development of diversification are: administrative – which is mainly due to restrictive regulations; and economic – which is related to excessive risk taking during the implementation of these activities.

Finally, it is possible to identify two categories of constraints.

- External constraints are imposed upon fishers by forces over which they have limited or no control. These include demand for specific diversification activities (opportunities); the economic viability of these activities (economy); and the administrative requirements that must be satisfied (regulation).

- Internal constraints (social) are specific to individual fishing households and encompass social aspects such as preferences, attitudes and aspirations. Moreover, the influence of internal constraints upon the decision to diversify can be significant; fishing has a rich heritage with strong social roles and sense of identity. For these reasons, some fishers will be resistant to the idea of diversifying – even where viable opportunities exist for them to develop profitable activities.

Conclusion

This research study has identified and analysed the choices and motivations of diversified fishers (economic, social and identity strategies) but also the opportunities and constraints for the future development of these activities.

Defining the diversification of fisheries activities is complicated and depends on the context in which they are embedded, including motivation and logic. Some activities constitute the support of operating businesses (direct selling, promotion of sea products, etc.), whereas others are more anecdotal and correspond to new socio-cultural dynamics.

In the Channel, the contribution made by diversification activities to fishers' incomes was found to be highly variable. For example, three of the diversifiers interviewed in England (no case in France) reported that 100% of their income came from their diversified activity. This was explained by the fact that these fishers had diversified into downstream processing and retail activities which accounted for all of their catches. As a result of diversification, these fishers no longer received income through the traditional routes of selling their catch to third-party wholesalers or processors. Of the remaining diversifiers interviewed in the Channel, the income contribution of diversified activities ranged from 10% to 90%. A number of respondents stressed that the contribution of these activities was not constant throughout the year, but varied according to season. This is particularly relevant for leisure/tourism activities which are practised predominantly during the summer months.

The extent to which diversification represents an effective strategy in contributing to the livelihoods of fishers is subject to a range of different factors of influence. These factors may be grouped into two main categories: external and internal. External factors of influence include conditions which must be present for specific diversification activities to be successfully developed. The findings of the inventory revealed that while diversification is practised throughout the Channel, the geographic location of many activity types (e.g. contract work, surveying, tourism) is determined by localised demand-side factors. While the development of market-based activities such as direct selling and ecolabelling appear to be less constrained geographically, their success remains determined by consumer demand. Furthermore, fishers must possess the required experience, skills, and capital (e.g. vessel type) in order to exploit these opportunities.



In situations where clear demand exists for diversification activities, fishers may encounter a range of regulatory obstacles that they must overcome. The survey findings indicate that regulation represents a significant constraint for fishers on both sides of the Channel, which is further supported by discussion with interview respondents. Although the regulatory constraints faced by fishers are highly dependent upon activity type, they can impose both financial and time demands upon fishers – which they may be unable or unwilling to meet.

In contrast, internal factors of influence relate to the attitudes and motives of individual fishers. Although these ‘social’ characteristics are highly subjective, a number of key themes have emerged from this research study. As noted previously in section 5.2, a number of the fishers interviewed discussed the strong sense of identity and social status that they derived from fishing. Consequently, the decision to diversify into complementary activities represents a potential challenge to these social values. While fishers with this viewpoint may not be wholly opposed to diversification, it is possible that they are more likely to favour activities with a stronger link to fishing. For example, activities such as labelling schemes may be favoured because they have minimal impact upon actual fishing activity. However, these activities are also conducted in addition to fishing, rather than instead of it. In contrast, activities such as contract work have a direct impact upon fishing activity because fishers are required to commit their vessels and/or skills to an alternative occupation.

Diversification therefore represents a solution for fishers to cope with new constraints by introducing innovation. It is not a solution in itself, but it can represent a response to a real or perceived degradation of the economic and environmental context, which is directly influenced by a complex combination of external and internal factors of influence.



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Glossary

AHP	Analytic Hierarchy Process
CHARM	Channel Integrated Approach for marine Resource Management
EFF	European Fisheries Fund
ERDF	European Regional Development Fund
ICES	International Council for Exploration of the Seas
MSC	Marine Stewardship Council



Appendix 1: structure of the inventory of diversification activities in the English Channel

Organisation	Organisation type	Activity type/s	Action type	Geographical scope		Description of activities	Link with fishers			Impact on fishing businesses	Starting point	Stakeholders involved	Source		Contact
				NUTS-2 level	ICES division		Yes/No	Type of Link with fishers	Number of fishers				Type	Description	
Name of the organisation - programme-project - restaurant - etc.	G = Governmental	B = Blue Tourism	Collective	Town	VIle	Description in few words	Y = Yes there is a direct link with fishers	Description of fishers participation in the activity (if YES)	(if YES) Number of fishers involved	Promotion of their production , promotion of the activity, etc.	How does this activity was launched	Who is involved in the development of this activity	NP = News papers	Name of the News Papers	If we have a contact person : Name
	NG = Non-Governmental	E = Eco-activities					Individual						N = No direct link with fishers	Personal = Own Website	
P = Private business	M = Market activities	Indirect = Indirect Promotion on	Name of the Organisation that promote the activity												
H = Heritage activities	T = Training	Field = Due to field contacts	Type of contact (fishers, insitutions)												



Appendix 2: a specific methodology = Analytic Hierarchy Process (AHP)

Developed by Saaty (1977), the AHP technique is a form of multi-criteria decision analysis that works by presenting respondents with a series of paired objectives presented at opposing ends of a numerical scale. In each case, the respondent is asked to select the position on the scale that best represents the importance/preference of one objective relative to the other. Typically a 9-point scale is used, where 9 represents the extreme importance of one variable over the other and 1 represents equal importance between the two variables (cf. figure).

One of the key advantages of AHP is that the use of pair-wise comparisons converts a potentially complex exercise into a series of simple judgements, and therefore, reduces the cognitive burden of prioritising decision-making (Himes, 2007). Moreover, AHP has been applied to a variety of topics within the fisheries sector, which includes establishing stakeholder objectives in fisheries management (Mardle *et al.*, 2004; Soma, 2003) and exploring user preferences for recreational angling sites (Kangas, 1995).

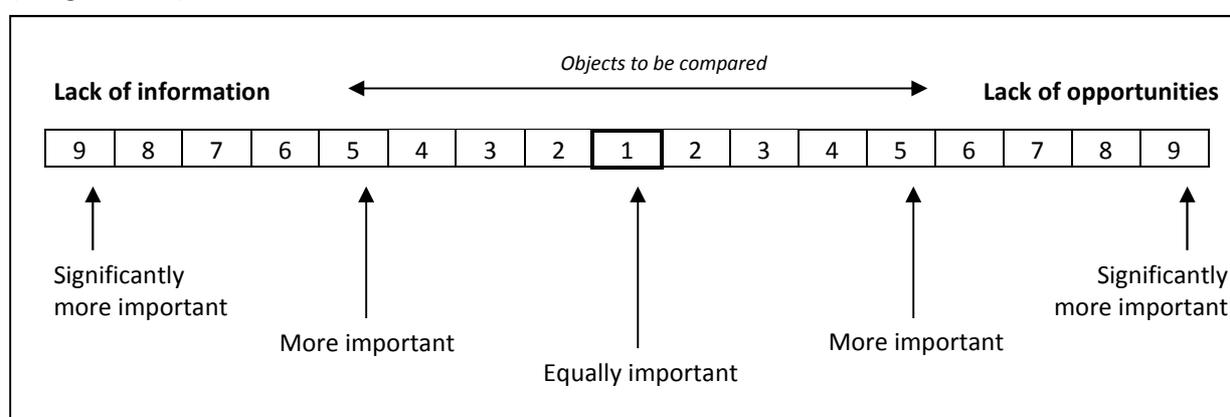


Figure: Example of a 9-point pair-wise comparison scale

This report presents the main findings of the study conducted by the Fisheries and Aquatic Sciences Center AGROCAMPUS OUEST and the University of Portsmouth in the framework of the action 9.2 of CHARM3 program (CHannel integrated Approach for marine Resource Management - Phase 3) - INTERREG IV A France (Channel) - England. This study consisted of three distinct stages: an inventory of existing diversification activities; a survey of fisheries stakeholders; and a survey of fishers – including both diversifiers and non-diversifiers. The results show that diversification is practised by a range of French and English fishers throughout the Channel. While respondents identified the potential contribution of diversification to sustainability, the viability of this strategy is found to be subject to both internal and external factors of influence. Furthermore, in situations where clear demand exists for diversification activities, fishers may encounter a range of regulatory obstacles that restrict their development. The outcome of these findings is that diversification is unlikely to provide a solution in itself to the challenges facing the European fishing industry; although it may still make a valuable contribution to the livelihoods of individual fishers.

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