



CENTRE FOR THE LAW AND ECONOMICS OF THE SEA

AMURE PUBLICATIONS



REPORT SERIES

N° R-34-2014

Interreg IVa project – GIFS



SYNTHESIS

Action 3 – Economy and regeneration of the coast fishing communities

3.1.1 – Directs economics impacts of inshore fisheries

Bertrand LE GALLIC**, Myriam ROBERT*, Guirec VANNIER*

*Research Engineer, UMR-AMURE

** Lecturer and researcher, UMR-AMURE

R
E
P
O
R
T

Ifremer



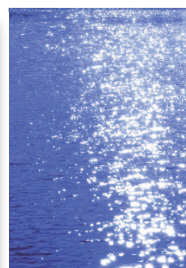
INSTITUT
UNIVERSITAIRE
EUROPÉEN
DE LA MER

www.umar-amure.fr

ISSN 1951-6428

Amure Publications. Report series

Online publication : www.umr-amure.fr



To quote this document :

Le Gallic B., Robert M., Vannier G. (2014) [on-ligne] « Projet Interreg IVa – GIFS. SYNTHESIS. Action 3, Economy and regeneration of the coast fishing communities. 3.1.1, Directs economics impacts of inshore fisheries », Amure Publications, Report Series R-34-2014, 20p. Available : http://www.umr-amure.fr/electro_rapports_amure/R_34_2014.pdf (consulted the yyyy/mm/dd*).

* The date of the last on-line consultation

SYNTHESIS

Action 3 – Economy and regeneration of the coast fishing communities

3.1.1 – Directs economics impacts of inshore fisheries

Economic performances of inshore fisheries in
south of English Channel and South of North Sea.
Comparisons France / England / Belgium /
Netherlands
Interreg Iva project – GIFS

Bertrand LE GALLIC**, Myriam ROBERT*, Guirec VANNIER*

*Research Engineer, UMR-AMURE

** Lecturer and researcher, UMR-AMURE

July 2014

FOREWORD

This study of economic performances of the coastal commercial fisheries in the English Channel and the Southern North Sea is conducted within the framework of works “direct economic impacts of fishing” from the action 3 of GIFS’s (Geography of inshore Fishing and Sustainability) project. This project was selected as part of the cross-border cooperation of European program INTERREG IVa, cofinanced by the European Regional Development Fund (ERDF).

GIFS project began in 2012 and will be end in September, 2014. This work refers from English Channel to Southern North Sea and it implies varied disciplines as economy, geography, statistics and sociology. This project includes English, French and Flemish scientific partners.

Seas of English Channel and North Sea shelter an important fishing activity which gradually faces new evolutions and new stakes. The objective of GIFS project is to consider global socioeconomic and cultural importance of inshore fishing in order to integrate these dimensions more explicitly into fishing policies and maritime policy, into coastal strategies of urban regeneration and widely in the sustainable development of communities.

INTRODUCTION

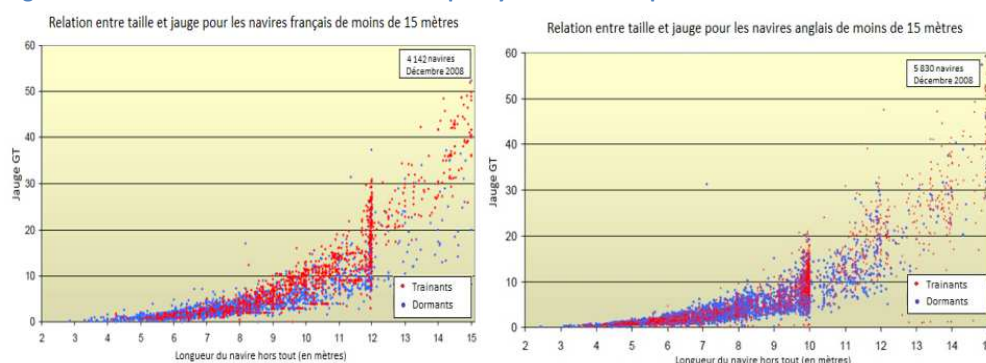
The objective of this reports synthesis of “Directs economics impacts of inshore fisheries” is to establish an overview of the economic importance of inshore fishing in the English Channel and in the Southern North Sea. It will concern French, English, Belgian and Dutch fisheries based in this zone. In this analysis, vessels concerned are determined according to their place of registration and not to their fishing zones.

The first part aims to determinate limits of this study and to characterize the concerned fishing fleet. The second part consists in a comparison of economic performances of some fleets selected in various areas of the study zone and some average economic indicators of these fleets. In the third part, values of landings and sales will be approached as well as average prices charged. Finally, economic weight of each country in GIFS territory will be analyzed for all fleets in this study area.

1. CONTEXT

Depending on countries of GIFS area, inshore fishing is defined differently. The coastline is clearly defined as waters below 12 nautical miles from the coast, but the differentiation between coastal and deep-sea vessels is ambiguous. So, the registration of fishing ships and issuing fishing licenses are regulated by the member state (of European Union) concerned and administrative burdens are often relieved for fishing ships below a certain limit size, which will impact on fleet structuring in terms of class of length. From figures 1 to 3 it notes a concentration of ships depending to their size which is doing below a maximum length which is 10 meters in United Kingdom, 12 meters in France and 24 meters in Belgium.

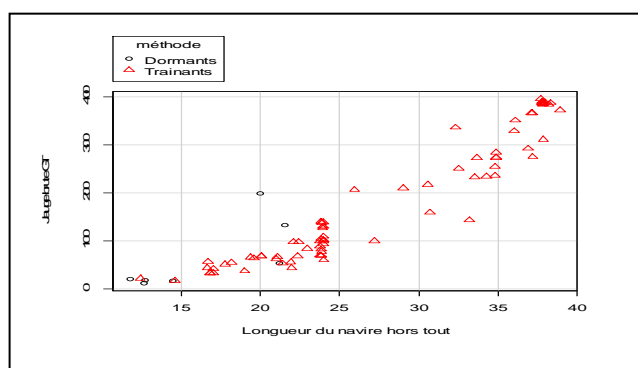
Figure 1 and 2: Relation between size and capacity for French ships at least and more than 15 meters



Source: Presentation on Small scale coastal fisheries under the CFP reform, Casto López pez Ben Benítez tez, Directorate General for Fisheries and Maritime Affairs. Brussels, 25 February 2010.
 (« Trainants » = actives gears, « dormants » = passives gears)

In Belgium, the bound is not a size of vessel but a power of engine (expressed in kW). Belgian ships of less than 221 kW are mainly distributed between both types of fishing fleets: "eurokkoteurs" (multi-purpose beam trawlers built after 1981) and "kustvisers" (vessels operating in the coastline and there are realizing fish trip don't exceed 24 hours).

Figure 3: Relation between size and capacity for the belgian vessels



S

Source: Liste officielle des navires de pêche belges en 2011 - VLIZ

European Union hasn't common definition but some clarifications were supplied in the legal framework of European Fisheries Fund (EFF). The Regulation (EC) n° 1198/2006 concerning the article 26 of EFF defines "small-scale inshore fishing feet" as "fishing practiced by fishing fleet of a length off everything is lower than 12 meters and it doesn't using actives gears".

BOX 1: Exception

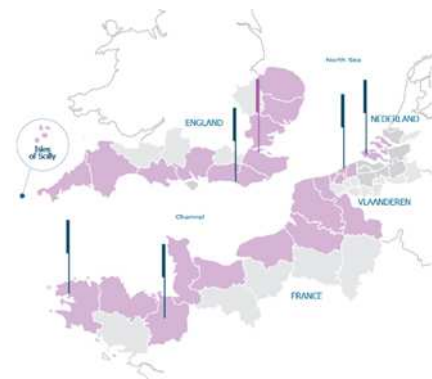
Except Belgium and Netherlands, where big vessels are predominant, for the others countries concerned, fleets are mainly constituted by vessels measuring less than 12 meters.

1.1 Study area

The eligible area of GIFS program includes following territories:

- 7 departments possessing an English Channel facade for the French part;
- 20 "counties" lining English Channel or the North Sea for the English part (from Norfolk to Cornwall);
- 7 districts along Flanders's coast;
- 5 districts along the coast in South of Netherlands (from Zeeuwsch-Vlaanderen to Delft in Westland).

Figure 4: Map of GIFS area



Designation of "Fisheries of English Channel / Southern of North Sea" may lead to confusion. There is a delimitation problem on the fact that neither fishing companies, nor the fish stocks confine themselves to the administrative limits of the study area. Knowing that these analysis concerns economic performances of the fishing companies from the English Channel and the Southern of North Sea, all the elements of costs and revenues must be taken into account, that they contain activities realized in GIFS area or outside.

1.2 Fishing fleets features

The objective is to have an overview of the evolution of various fishing fleets at national level, at English Channel and Southern of North Sea levels, and to notice their importance in terms of vessel number, jobs creation and the total fishing power. Data come from *Data Collection Framework* (DCF) and they are published by *Scientific, Technical and Economic Committee for Fisheries (STECF)* in annual reports on the economic situation of fishing fleets of member states (Annual Economic Report (AER)).

In 2011, at the European scale of fishing fleet, vessels lower than 12 meters represent 56 % of vessels, 6 % of the gross tonnage and 25 % of the fishing power (in kilowatts) (AER, 2013).

→ Belgium

Belgian fleet is made up mainly of beam trawlers working in North Sea, English Channel, and other North Atlantic's zones. Early in 2013, the fleet consists of 83 vessels for a total power of 47 554 kW and the average length is 21,6 meters.

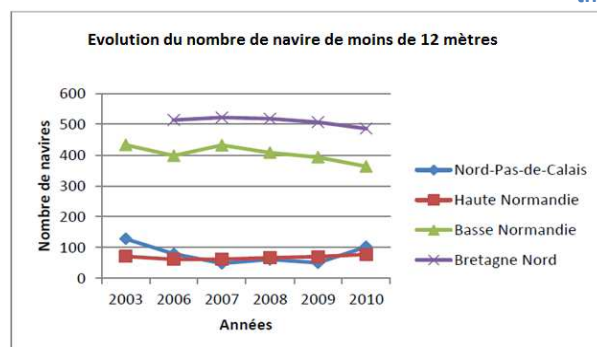
BOX 2: Fleets are different between the countries concerned

It doesn't exist in Belgium a fishing fleet less than 12 meters, so there is not according to the European Commission, "coastal fishing at small-scale" although, most of fishing companies have only a boat and that several vessels are working in the strip of 12 nautical miles.

→ France

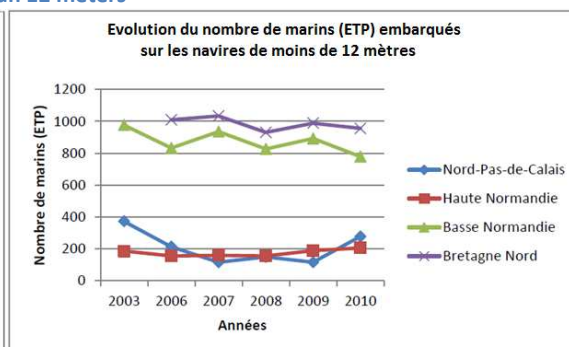
Vessels less than 12 meters represent approximately 70 % of the active national fleet (they consume 9 % of total fuel consumption). In 2011, the French facade of English Channel has 1 429 professional fishing vessels (which 1348 are active) with 3871 fishermen full-time equivalent (FTE) (SIH¹, 2011). The maritime district of Dunkerque mainly consists of large units who practice offshore fishing, contrary to Brittany, which includes mainly small units practicing a coastal fishing.

Figure 5: Evolution of vessels less than 12 meters



Source: SIH

Figure 6: Evolution of fishermen involved in vessels less than 12 meters



Source: SIH

→ United Kingdom (UK)

In 2012, there are 6414 fishing boats in UK. On the study zone, British fishing vessels lower than 12 meters represent 90 % of the active fleet in terms of number, 63 % of the fishing power and 30 % of the gross tonnage. For the landing, vessels more than 12 meters are contributing for 60 % in quantity and 65% in value.

Table 1: Evolution of characteristic of fishing fleet in UK

	2008	2009	2010	2011	2012
Number of vessels	6 796	6 616	6 544	6 467	6 414
Number of fishermen	12 614	12 212	12 703	12 405	
Employment (ETP)	7 983	7 519	7 589	7 192	
Power (kW)	860 104	839 598	834 688	825 914	807 134
Tonnage	212 242	207 156	207 555	207 168	201 509
Gas oil consumption (liters)	298 162 001	287 989 853	283 315 063	268 136 946	
Days of fishing	369 487	341 511	336 120	332 960	326 248
Days at sea	446 271	424 678	420 443	414 488	397 319
Companies between 2 and 5 vessels	174	182	175	184	188
Companies more than 5 vessels	2	1	1	1	1
Companies with only one vessel	4 314	4 258	4 196	4 242	4 147

Source: AER

¹ "Système d'Information Halieutique" From Ifremer (= Fisheries Information System)

→ Netherlands

In 2011, Netherlands vessel less than 12 meters represent 27% of the national fleet, but only 1.5% of total employments (in full-time equivalent) in fishing sector (AER, 2013). Otherwise, the main conclusion from a report about economic importance of small-scale and non-commercial fishing in Netherlands shows that it is very limited. This fleet would contribute only to 1 % of the income and total costs of the national fishing fleet (Bartelings & Oostenbrugge, 2007).

The increase of vessels number observed in the table 2 is caused by the recording in the national file of the small-sized vessels which are often inactive. In this country, industrial fishing is important and 26% of fishing companies have at least two vessels.

Table 2 : Evolution of characteristics of fishing fleet in Netherlands (including inactive vessels)

	2008	2009	2010	2011	2012
Number of vessels	726	712	725	738	740
Number of fishermen	3 265	3 220	3 358	2 763	
Employment (ETP)	2 200	2 207	2 205	1 768	
Power (kW)	332 213	288 572	293 784	290 121	286 483
Tonnage	145 859	129 403	137 195	130 522	133 698
Gasoil consumption (liters)	246 875 743	223 244 753	212 747 894	193 816 246	
Days of fishing	44 268	43 086	44 606	36 312	43 973
Days at sea	50 486	49 164	50 845	46 102	49 926
Companies between 2 and 5 vessels	121	120	111	109	110
Companies more than 5 vessels	11	10	14	11	11
Companies with only one vessel	341	325	342	350	350

Source : AER

1.3 Jobs practiced and targeted species

Both, in France and in England, a large diversity of fishing gears are used. In Netherlands and in Belgium, the size of ships is relatively more important and the actives gears dominate the fishing practices.

Table 3

Landed species	Volume (in tonnes)
Scallop	20 012
Whelk	8 702
Sardines	8 146
seaweed	7 240
cuttlefish	3 546
mackerels	3 430

Table 4

Landed species	Value (K€)
Scallop	47 251 (17.5%)
Sole	19 372
Whelk	13 248
seabass	10 471
cuttlefish	7 090
Squids	6 401

France: There is a large diversity of fishing gears, fishing activities are varied and differ according to the season. In 2008, main species fished and landed in English Channel by the French vessels are indicated in volume on the table 3 and in value on the table 4.

Belgium: Majority of the Belgian fleet uses the beam trawl to catch the flatfish (as sole, flounder, turbot and dab). Big and small beam trawlers are active throughout the year and the seasonality is high for vessels which are targeting the brown shrimp from August till October.

2. Economic performance of fishing fleet

2.1 Data and Methods

2.1.1 Data

As part of the Common Fisheries Policy (CFP), fisheries economic data have been collected from member's countries to know the economic situation of their own fleet. They were harmonized by the Join Research Centre (JRC), and then published by the Scientific, Technical and Economic Committee for Fisheries (STECF) in the Annual Economic Report (AER).

The segmentation DCF (Data Collection Framework) is a current segmentation at European scale but sometimes unrepresentative of realities at country level (Daurès *et al.*, 2013). In France, this segmentation can include in a same fleet, vessels with a heterogeneous behavior.

Note: Unfortunately, it's not possible to disaggregate these national data from the AER in the specific area English Channel - Southern of North Sea².

In addition, the scope of analysis considered for the AER doesn't coincide with the GIFS ones, both geographically (national vs. local/regional fleets needed) and technically (total fleet vs. inshore focus needed). In order to be able to make relevant comparisons, some further homogeneity in fleets' definitions was required in the GIFS context.

As a result, firstly, it was necessary to use national and regional sources, when they were available.

The following sources have been in particular used:

- **“Synthèse des flottilles de pêche” (France)** (Système d'Informations Halieutiques³ (SIH) de l'Ifremer): in the framework of the SIH managed by Ifremer, a specific segmentation of the fleet is proposed for each French maritime entity. One of these entities (“Manche-Mer du Nord”) covers all the fishing vessels located between Camaret (Finistère) and Dunkerque. In addition, the SIH also takes into account the technical characteristics of vessels, by splitting vessels under and above 12 meters into different fleets. Therefore, the data published can have direct interest for the GIFS project, although it may to be manually reprocessed.

- **“Observatoire économique régional des pêches de Bretagne” (France):** in Brittany, a quite unique collaborative scheme has been implemented between fishing industry and the University of Brest to compile and analyse the accountancy information of fishing companies. Such observatory allows for some further analysis of regional performances, although here again the data has to be manually reprocessed.

- **Economic fleet report (England).** In United Kingdom, the economic analysis of fishing firms is conducted every year by the Seafish. However, as for the AER, the scope issue arises, as data are available at national level and not at GIFS level. In order to get geographically disaggregated data, and also to refine some fleets' definitions to allow for accurate comparisons, the Seafish and the British

² Limits concern France and UK, where there are several varied maritime facades.

³ Fisheries Information System from ifremer

authorities accepted that a Seafish accredited external consultant proceeds and retreats data at Edinburgh Seafish office.

- **Uitkomsten Belgische Zeevisserij (Belgium).** Economic performances of the Belgium fleet are presented in further details in annual national reports. In the context of GIFS, such publication is attractive as it allows to get further information on three sub-categories of vessels under 221 kW, and subsequently to make some accurate comparisons.

BOX 3: Processing data

To recap, data used are mixed between the Annual Economic Report data (Netherlands / Belgium), data published into national and regional reports (Belgium / France) and retreated Seafish data (England). It must be clarified that data access represents a major challenge when the analysis concerns specific areas such as the GIFS one and it can generate some limitations as well as time and money implications.

Some comparisons limits of the economic data appear because there are various criteria in the segmentation for each fleet (per country). Sometimes, data per fleet aren't complete and it is impossible to have this data per vessel for privacy purposes.

Note: An overvaluation of remuneration for the owner was noticed. It was represented by the gross operating surplus (GOS) with accountancy data as compared to data by survey (Le Corre, 2010). This is due by the way of salaries are allocated to fishermen, based on the sharing system of the added value which is not systematically applied for smallest boats, consisted by one or two fishermen (Boncoeur *et al.* 2000).

2.1.2 Methods

→ Intermediate operating totals of fishing firms

To get the economic activity of companies, it led to define, from products and charges of the general chart of accounts, a series of intermediate operating totals such as the added value, the GOS, the operating incomes and the current result before tax (CRBT). All economic results presented have as relevant period 2011.

Table 5: Intermediate operating totals available per fleet in 2011, for the following economics data

Data	IFREMER - Système d'Information Halieutique (SIH)	Observatoire économique régional des pêches de Bretagne	Seafish Industry	Departement Landbouw en Visserij	Annual Economic Report
Areas covered	French facade, English channel-North sea	Britanny	English facade, English Channel- South of North Sea	Belgium	Netherlands
Added value	X	X	X	X	X
GOS		X	X	X	X
Operating incomes			X	X	X
current result before tax			X	X	X

2.2 Results

Table 6: Economic efficiency of fleets in GIFS area

	Countries	Fishing area	Fleet	% of GVA in the turnover
Passives gears	France	Manche	Netters < 12m	63,0
		Manche	Netters, Pot and trap < 12m	65,0
		Bretagne	Passives gears <12m	60,3
		Bretagne	Passives gears >12m	58,4
	UK	Sud-Est	Pot and trap <10m	57,5
		Sud-Ouest	Pot and trap <10m	59,0
		Sud-Est	Pot and trap [10-12m[49,1
		Sud-Ouest	Pot and trap [10-12m[52,7
		Sud-Est	Netters < 12m	66,6
		Sud-Ouest	Netters < 12m	64,4
Actives gears	France	Bretagne	Dredgers < 12m	59,4
		Manche	Dredgers < 12m	63,0
	UK	Sud-Est	Dredgers < 10m	46,7
		Sud-Ouest	Dredgers < 10m	38,5
		Sud-Est et Sud-Ouest	Dredgers [10m-12m[42,0
		Sud-Est	Trawlers <12m	57,5
		Sud-Ouest	Trawlers <12m	58,8
	France	Bretagne	Trawlers [12m-16m[49,3
	UK	Sud-Est	Beam Trawlers <221kW	27,7
		Sud-Ouest	Beam Trawlers <221kW	58,2
	Belgium		Beam Trawlers <221kW	43,1
	Netherlands		Beam Trawlers 12-18m	42,9
			Beam Trawlers 18-24m	35,2

Table 6 shows that the most effective vessels and their capacity to generate added value are vessels less than 12 meters which use passive gears, except the Breton fleet. Conversely, vessels using big trawler and mostly the biggest have a relatively low efficiency ratio. It can explain this fact that trawlers board more staffs, consume more fuel and big vessels can't use "marketing strategies" similar than inshore fisheries.

2.2.1 Fleets comparison

→ Actives gears fleets (trawlers between 12 to 24 meters)

According to average characteristics of vessels, differences are significant. For instance, for English beam trawlers (power less than 221kW), beam trawlers from southeast England have a low average turnover by vessel which covers hardly the total charges while those based in West England reach an average GOS representing 31,6 % of the turnover. Dutch beam trawlers between 12 and 18 meters target mainly the brown shrimp which has a high value-added. Despite an important turnover, these beam trawlers have had fuel costs so high that they didn't release a strong added value in percentage of the turnover. For one euro collected by the sale of seafood, 0,57 euro were used in the process of

production and only 0,43 euro are really concerned by the creation of wealth. The average age of these fleet is about 43 years.

Note: Belgian Kustvissers, Dutch beam trawlers between 18 and 24 meters and small beam trawlers from southeast England have in general a negative operating profit.

→ *Small trawlers fleets (trawlers less than 12 meters + others capture gears)*

At equal characteristics, French trawlers have an annual average turnover clearly upper than English trawlers. But, variable loads from English trawlers are lower than those of their French counterparts in particular the "staff expenses". That's result a GOS in percentage of the turnover more than 29 % for English trawlers and about 17 % for French trawlers.

→ *Dredgers fleet (less than 12 meters)*

French vessels are equipped with a dredge has a mean age higher than English dredgers. The structure of operating costs is very different between French and English dredgers. The part of fuel expenses in the turnover is clearly superior for English dredgers.

After analyse of the added value/turnover ratio, it notice that the surplus of the created value has a higher level for French fishing vessels than English (~ 60 % against 40 %), considering a less important expenses of fuel.

→ *Netters and pots and traps fleets (English and French fleet less than 12 meters)*

These French and English fleets have rather similar economic performances with a ratio added value/turnover between 49 and 61 %. Whether, there is a higher ratio for French fleet, because of a lower energetic consumption and the fleet is more recent.

BOX 4: ANALYSIS

As a result of a confrontation between data of the study and those of "economic Survey on the French professional fishing in English Channel" (Boncoeur & Le Gallic, 1998), the gross value added (GVA)/turnover ratio is clearly deteriorated. In 1996, fleets less than 16 meters and those from 16 to 25 meters in English Channel had on average ratio (GVA/turnover) respectively 75 % and 70 %. In 2011, dredgers fleets, netters and "pots and traps" less than 12 meters release a GVA between 60 and 65 % of the turnover. For trawlers from 12 to 16 meters is above 50 % of GVA compared with the sale of their production.

3. Wealth creation on GIFS area

On GIFS area, so as to estimate the part of every fleet in fish market, added values were analyzed. This added value benefits for all fishing business which participated in the creation of wealth (staff remuneration, capital providers, administrations, and companies themselves).

Every fleet contributing to the VAB creation by national area was analyzed, before explaining the weight of each territory in the total VAB created by vessels (except for most than 40 meters) registered in English Channel and South of the North Sea areas.

3.1 Results

Total of the added value generate by the fishing sector in GIFS area shows approximately 350 million euros (10 % of European fishing sector).

French fleet is the biggest contributor in wealth creation (about 52.8 % of the total and it represents 185 million euros in French economy.). As half of the French added value is created by coastal fleets, it means that the coastal area in France contributes to 25 % of total wealth creation in GIFS area. The Dutch fleet of pelagic trawlers (more than 40 meters) met difficulties with decreases of quotas allocated by means of fishing agreements in waters of foreign countries. It explains partially the collapse of gross value added (GVA) of this fleet which reached less than 29,5 million euros in 2011 (Le Gallic, B. & Robert, M. 2014).

Table 7: Relative contribution of each country in GIFS area to wealth creation

	GVA (en K €)	% of GVA contributions generated on GIFS area
Belgium	37 816	10,8%
Netherlands	59 057	16,8%
France	185 379	52,8%
UK	68 919	19,6%
GIFS area	351 171	100%

To go further and to notice the efficiency of fishing fleets who working in GIFS area, a classic efficiency indicator was used: the GVA/ Turnover ratio. This ratio indicates the wealth level produced for 1 euro of seafood who was sold. More it is going up, more the fleet is efficient.

Table 8: Wealth creation of all fleets localised in English Channel and southern North Sea areas*.

		Belgium	Netherland	France	UK	Total " GIFS area"
Passives gears	vessels <12m	0%	0,9%	14,4%	5,9%	21,2%
	vessels >12m	0%	0%	6,7%	2,7%	9,4%
Actives gears	vessels <12m	0%	3,3%	12,2%	3%	18,4%
	vessels >12m	11,3%	8,5%	22,1%	9,1%	51%
Total		11,3%	12,7%	55,4%	20,6%	100%

*Vessels less than 40 meters.

4. Landings

4.1 Evolution of landing value

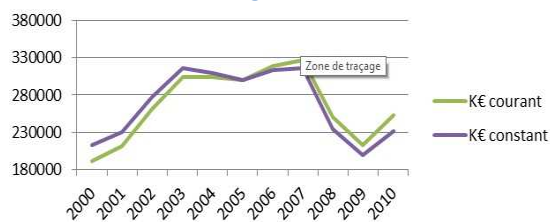
Between 2000 and 2011, the annual value of landings in GIFS region had decrease. It reaches its minimum at the beginning of economic crisis (2008-2009) and an evolution of fleet over the 2009-2010 periods. This reveals these difficulties of the fishing sector.

Table 9: Evolution of sales values (in thousands of euros) declared in fish market in France between 2002 and 2012).

		2002	2012	% Δ
Nord-Pas-de-Calais	Boulogne	104 773	51 933	-50,4%
	Dunkerque	7 394	6101	-17,5%
Haute Normandie	Dieppe	12 024	8205	-31,8%
	Fecamp	16 896	6156	-63,6%
Basse Normandie	Grandcamp	6 437	4692	-27,1%
	Cancale	1 054	1161	10,2%
	Cherbourg	19 515	13875	-28,9%
	Granville	25 855	17623	-31,8%
	Port en Bessin	20 805	18838	-9,5%
Bretagne Nord	Brest	6 532	8060	23,4%
	Erquy	24 129	32094	33,0%
	Loguivy	2 916	1025	-64,8%
	Roscoff	13 530	23950	77,0%
	St Malo	5 261	3467	-34,1%
	St Quay Portrieux	24 042	24231	0,8%

Source : Réseau Inter Criées (RIC)/ FranceAgriMer

Figure 7: Evolution of the Value of landings by French vessels in English Channel area

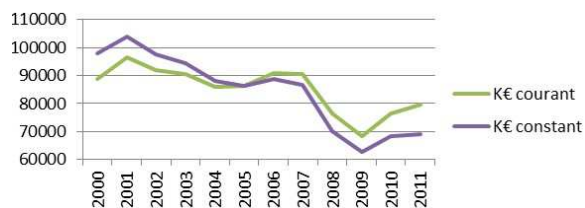


Source : Atlas des pêcheries de la Manche

In France, all ports are strongly impacted by the decrease in value of landings (Boulogne - 50%), except some Breton ports (closer from the fishing areas and with strong added values products).

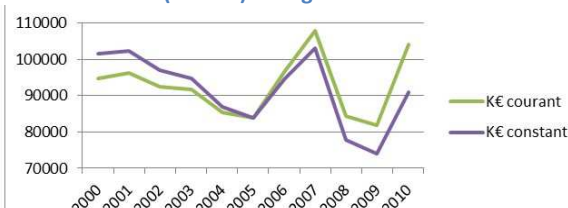
Between 2000 and 2011, values of landings by fish market have fallen off. This fall is partially due to a decrease of the number of vessel as well as catch restriction.

Figure 8: Evolution of the value of landings by Belgian vessels



Source : Departement Landbouw en Visserij

Figure 9: Evolution of the value of landings by British vessels (actives) in English Channel area



Source : Atlas des pêcheries de la Manche

Note: In United Kingdom, landings value increased about 22 % from 2008 to 2012 match a higher of 23 % of consumer price index for fish and seafood. It represents a real growth rate of 7 % during this period and it's caused by an increase of landings in quantity (+ 9%) (AER, 2013).

4.2 Sale organisation

4.2.1 Fish market sales

France: French facade of English Channel-North Sea has 15 fish's auctions (from Dunkerque to Brest). In 2011, 91715 tons were sold in these fish auctions for a 22,5 million euro value. The average price amounts to 2.45€ / kg.

England: There are 12 fish auctions in England⁴. In 2009, approximately 15438 tons of fish were landed for an amount estimated at 34,2 millions of pounds. The average price all species combined is about 2,218£ / kg (that is 2,49 € / kg at the annual rate of conversion in 2009 of 1,122 (source: ECB)). There are four fishes market located in English Channel's coast.

Belgium: Fish auctions of Ostend and Zeebrugge merged in a single company in 2010: Flemish Visveiling (VLV). It represents 90 % of landings. But there are auctions in these 2 ports.

BOX 5: Role and function of fish market

Fish market insures an effective and coherent marketing. On one hand quantities are launched on the market in sanitary conditions complying with rules of hygiene and protecting the products quality. On the other hand, to determine a "fair price"⁵. Fish markets thus allow the first seafood's market (from landing to putting on sale, and to wholesaler's delivery). The fisherman can improve his fish trip's valuation by forwarding it to the auction. Similarly, fishes markets organized shared forms (equipment, sales, fishermen's installation, etc.).

4.2.2 Sales without fish market

This type of sale meets without auctioning in modest quantity landings, focus on specific species, to expect a better valuation of product or if the landing area is too far from the fish market (they can't bring their products until the fish market).

France: 33 % of vessels registered on English Channel and Atlantic facades declare to land exclusively under auction, whereas 24 % of them (vessels less than 12 meters) land exclusively without auction (Daurès *et al.* , 2013) but 63 % of fishermen⁶ declared to practice direct sales in a regular way or occasionally. However, in this type of sale there are differences between regions: about 90 % of direct sales for fishermen in Haute-Normandie while they are less than a half in Basse-Normandie (Henichart, 2011). Species landed without auction are sold in average at a higher price compared to the price observed in auction (table 10).

⁴ Marine Management Organisation (MMO)

⁵ Plan régional de développement des ports de pêche bretons 2007-2013, Région Bretagne.

⁶ From Halieutic department of Agrocampus Ouest which implement a survey in 2010 about diversification of fishermen's activities (sample of 129 fishermen).

Table 10: Average prices in fish market and without (in euros per Kg) perceived by French fishermen in English Channel in 2010.

	Average price in fish market	Average price out fish market
Seabass	13.4	14.7
Sole	12.7	13.9
Pollack	5.2	7
Spiders crabs	2.2	3.1
European lobster	17.2	19.4
Scallops	3	3.5

Source : Economic survey (SIH, 2011)

UK: Fishermen are usually dissatisfied to sell their production by means of the auction through the weakness of received prices. Without fish market, fishermen from oriental and western English Channel make sales by mutual agreement toward fish merchants (ie "wholesalers" or "merchants") or to agri-food industries. This pattern is understandable because the small coastal fishing fleet hasn't got any sufficient landed quantities to sell by auction, they estimate to obtain higher price by direct sales and they are guaranteed to sell their production, including species with low-value (Morgan, 2013).

4.2.3 Vessels landing in foreign port

Belgium: Landings take place mainly in Netherlands and they constitute approximately 92 % of the value of landings abroad in 2011, around 11 million euro value. The rest is made in Great Britain and in France (Lara, 2008).

UK: in 2012, British vessels had unloaded 234 000 tons of fishes abroad, for a half in Norway (pelagic species), a quarter in Netherlands (because a small sector of fishing fleets registered in U-K is managed under Dutch capital (MMO, 2012)) and the rest in Belgium, in France and in Spain.

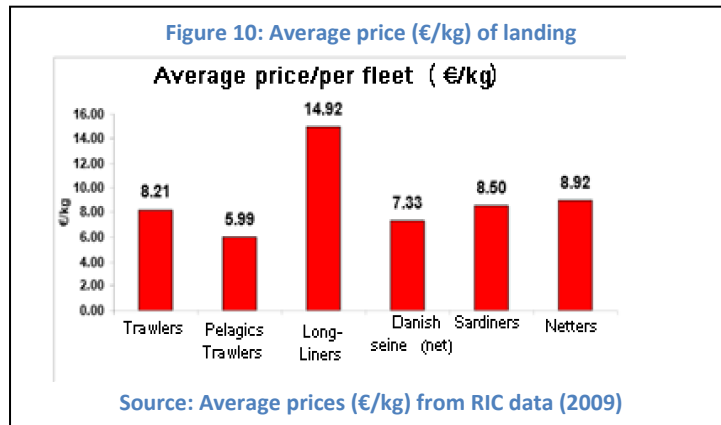
4.3 Various landing prices for same species

Differences according to species:

For some species as the burbot, the Cuttlefish or the Saint-Peter, the average annual price differs only slightly from an auction to another one. In contrast, the Scallop or the Sea Bass have their average price varying a lot between auctions (sea bass: average price is 15,1€ / kg in Brest against 8€ / kg in Boulogne or Roscoff (prices in 2011)).

Differences according to the type of catch:

This difference in price for the sea bass is explained by the type of fishing gear used for the capture: it influence fish quality. The line-caught sea bass is generally better valued than the sea bass caught with a net or a trawler (Figure 11). Additionally, the labelling allows to value it better by marking down it among all other products of the market (better quality, traceability, technical catch, geographical origin).



Example: the naming “line-caught sea bass” by “Ligneurs de la pointe de la Bretagne” association and the “red label” from the scallop of Seine Bay let a better valuation.

BOX 6: Fishing fleets complementarity

The study of GIFS area includes numerous types of fishing who are complementary, and who contribute to the economic, tourist and cultural valuation of this area. Coastal fisheries are inescapable in the economic activity and they are stakeholders for direct jobs preservation (fishermen, wholesale fish merchants, "merchants" and retailers) and for indirect jobs (tourism, restaurants, gastronomy, ships building and ships maintenance, etc.).

ANNEX 1: Comparison of Economic performance indicator

To analyze similarities and differences between the economic performances of the fishing fleets based in the English Channel – North Sea area, several indicators were established to facilitate these comparisons.

➔ Daily productivity of the work (simple or daily)

It's the average wealth creation obtained per fishing day and by fisherman: it's the daily productivity of the work for fleets of the English Channel facade in 2011.

Table 1a: Average data per French fleet less than 12 meters from English Channel facade in 2011

	Mixed-uses trawlers	Netters-Pots and traps	Netters	Pots and traps	Netters - trollers	Pots and traps - trollers	Dredgers
Number of vessel	180	129	122	172	31	42	209
Turnover	224 214	147 929	213 371	124 655	43 305	61 490	118 345
GVA	125 560	96 154	134 424	78 533	26 416	41 813	74 557
FTE	2,5	2,1	2,9	2	1,5	1,3	2,1
Days at sea per year	155	186	161	152	151	54	138
Turnover/FTE	50224	45788	46353	39267	17611	32164	35503
GVA/FTE/day	327	246	293	260	119	596	258

Source: SIH

Table 1b: Average data per British (south-west) fleet in 2011

	demersal trawlers <12m	Beam trawlers <221kW	Netters <12m	Pots and traps [10-12]m	Pots and traps <10m	trollers	Dredgers <10m
Number of vessel	47	8	75	21	109	70	13
Turnover	96 933	760 760	65 242	173 363	57 634	31 912	100 604
GVA	57 015	443 123	42 048	91 429	34 003	14 085	38 717
FTE	2,2	8,3	1,0	2,5	0,8	1,0	1,1
Days at sea per year	115	232	79	141	92	76	81
Turnover/FTE	25859	53598	43200	36092	43601	13677	35464
GVA/FTE/day	225	231	547	256	474	180	438

Source: Seafish

Table 1c Average data per British (south-east) fleet in 2011

	demersal trawlers <12m	Beam trawlers <221kW	Netters <12m	Pots and traps [10-12]m	Pots and traps <10m	Ligneurs	Dredgers <10m
Number of vessel	60	8	165	21	120	17	36
Turnover	68 925	147 906	54 986	98 779	61 954	61 177	51 128
GVA	39 660	40 916	36 647	48 509	35 614	27 155	23 901
FTE	1,7	2,9	1,1	2,2	1,0	1,6	0,7
Days at sea per year	94	129	99	122	109	81	61
Turnover/FTE (P simple)	22942	14100	33215	21936	36061	17401	33970
GVA/FTE/day	244	109	336	180	331	215	557

Source: Seafish

Table 1d: Average data per British (south-east) fleet in 2011 from English Channel and south of the North-sea)

	demersal trawlers ≥20m	Beam trawlers ≥221 kW	Dredgers ≥12m	Dredgers [10-12[m	Pots and traps ≥12m	Netters ≥12m
Number of vessel	7	28	26	13	28	30
Turnover	1 569 873	902 918	578 864	215 668	902 918	451 102
GVA	820 885	462 179	316 747	90 630	462 179	245 456
FTE	22,7	8,5	7,6	2,4	9,4	2,0
Days at sea per year	284	236	179	142	236	195
Turnover/FTE (P simple)	36213	54374	41806	38436	49126	121822
GVA/FTE/day	128	230	234	271	208	625

Source: Seafish

When the “shared-wage” system is applied, the key of distribution of the added value varies according to owners and varies between 30 and 50 % for the part crew. For vessels less than 12 meters, the part crew is on average about 46 %. It is 42 % on average for most than 12 meters (Daurès *et al.* , 2013).

→ Daily productivity of the capital

Pots and traps and netters have the strongest daily productivity of capital and they made a good profitability of their vessel (respectively 0.86 and 0.74).

Table 1e: Daily productivity of the capital of French fleet less than 12 meters in English Channel in 2011

	Mixed-uses trawlers	Netters-Pots and traps	Netters	Pots and traps	Netters-Trollers	Dredgers
Value insured by the vessel	268 783	129 955	198 947	91 038	85 600	139 500
Turnover/ Value insured by the vessel	0,83	1,14	1,07	1,37	0,51	0,85
Turnover/ Value insured by the vessel /d (x 1000)	5,38	6,12	6,66	9,01	3,35	6,15
GVA/ Value insured by the vessel	0,47	0,74	0,68	0,86	0,31	0,53

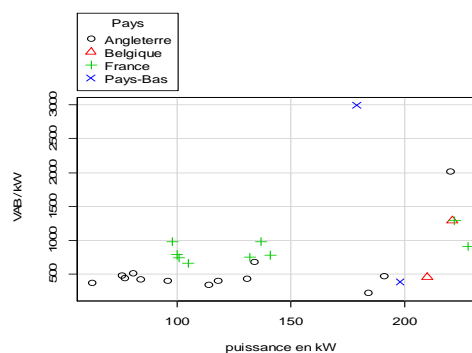
Source : SIH

→ Added value by kW (€/Kw)

So as to calculate the return capital, apparent productivity may be estimated. This method allows knowing which types of vessels have the best efficiency in value by kW⁷.

The statement is the same. Coastal fleets from the French facade have a better apparent productivity of capital than English fleets. Only beam trawlers less than 221kW of southwest of England escape this trend. Dutch beam trawlers between 12 and

Figure 1a: Apparent productivity of capital



Source : SIH, Seafish, AER, Departement Landbouw en Visserij

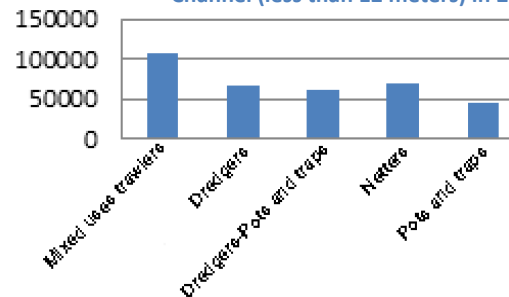
⁷ It's very important in the context where European commission is doing specific controls and wishes to reduce the number of certain flotillas.

18 meters reach on average about 3000 euros of added value by kW.

→ *Capital intensity*

The capital intensity of the production indicates a ratio between capital and labor. It's linked with the productive activity. The capital intensity of each fleet is calculated by bringing back the value insured by ships, among men employed on these ships (boss included).

Figure 2b: Capital intensity of French fleet from English Channel (less than 12 meters) in 2011



ABBREVIATIONS AND ACRONYMS

AER	Annual Economic Report
BCE	Banque Centrale Européenne
CA	Chiffre d’Affaire
CSTEP	Comité Scientifique, Technique et Economique de la Pêche
DCF	Data Collection Framework
DEFRA	Department for Environment, Food and Rural Affairs
DPMA	Direction des Pêches Maritimes et de l’Aquaculture
EBE	Excédent Brut d’Exploitation
ETP	Equivalent Temps Plein
FTE	Full-Time Equivalent
FEP	Fond Européen pour la Pêche
GIFS	Geography of Inshore Fishing and Sustainability
HAM	Halles à Marée
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
IPCH	Indice des Prix à la Consommation Harmonisé
JRC	Joint Research Center
MMO	Marine Management Organisation
PIB	Produit Intérieur Brut
RCAI	Résultat Courant Avant Impôt
RIC	Réseau Inter-Criées
SIH	Système d’Information Halieutique
TBB	Trawl and Beam Trawlers
UE	Union Européenne
VAB	Valeur Ajoutée Brute

BIBLIOGRAPHY

Bartelings H., Van Oostenbrugge H. (2007). « Economic importance of the Dutch non-commercial small-scale fleet The Hague ». Agricultural Economics Research Institute (LEI), Hague (Netherlands).

Berthou P., Talidec C., Jezequel M., Lespagnol P. (1999). « La flotte de pêche commerciale bretonne : Description des métiers et des flottilles ». Rapport Ifremer.

Daurès F. et al. (2013). « Caractéristiques socio-économiques de la pêche professionnelle française. Synthèse des enquêtes réalisées auprès des pêcheurs professionnels en 2011 dans le cadre du Système d'Informations Halieutiques (SIH) de l'Ifremer -Façade Mer du Nord Manche Atlantique ». Rapport Ifremer.

Delaney A., De Smet S., Verhaeghe D. (2010). “Assessment of the status, development and diversification of fisheries-dependent communities”, Oostende Case Study Report, Oostende.

Departement Landbouw en Visserij (2012). « De Belgische Zeevisserij 2011, Economische situatie van de Belgische rederijen ». Visserij.

DG Mare (2010). “Presentation Facts and Figures on the Small-Scale Coastal Fleet”, “Stakeholder Seminar on the Small-Scale Coastal Fleet under the CFP reform”. Brussels.
http://ec.europa.eu/fisheries/news_and_events/events/workshop_250210/session01_en.pdf.

FAO (2014). “United Nations Fisheries Glossary”. <http://www.fao.org/fi/glossary>

Henichart L.M., Lesueur M. (2011). « La vente directe au consommateur sur le littoral français de la Manche - stratégies et facteurs de développement dans le secteur de la pêche ». Programme Interreg Manche - CHARM 3. Les publications du Pôle halieutique AGROCAMPUS OUEST.

Le Corre L., Daurès F., Le Floch P., Guyader O., Brigaudeau C., Van Iseghem S. (2010). « Les indicateurs économiques dans le secteur des pêches maritimes. Analyse comparative des données comptables et d'enquête ». Les publications AMURE, N° R-17-2010, version provisoire.

Marine Management Organisation (MMO) (2012). « UK Vessel Lists 2012 ». <http://www.marinemanagement.org.uk/fisheries/statistics/vessel.htm>

Morgan R. (2013). “Exploring how fishermen respond to the challenges facing the fishing industry: a study of diversification and multiple-job holding in the English Channel fishery”. PhD thesis, University of Portsmouth.

Phélippe D., Daurès, F., et Le Gallic B. (2011). « Panorama des caractéristiques d'exploitation des ressources halieutiques par la flotte de pêche française en manche ». Les publications AMURE, N° R-19-2011.

Symes D. (2001). « Inshore Fisheries in Europe at the Turn of the Century », “Methods and Technologies in Fish Biology and Fisheries”, Kluwer Academic Publishers, Dordrecht, pp. 3-23.

Taal, C., H. Bartelings, R. Beukers, A.J. Klok en W.J. Strietman. (2010). « Visserij in cijfers 2010 ». LEI report n°2010.057.

Tegen-Mor Fisheries Consultants (2011). «A review of English fish markets ». Final report on the Work Package 5, 'Fishing for the Markets' program (Market led Sustainability). Defra R & D project code: MF1219.

Talidec C., Boncœur J., Boude J. (2010). « Les Pêches côtières bretonnes. Méthodes d'analyse et aménagement ». Edition Quae.

A large, bright orange sphere, resembling a planet or a large object, dominates the upper half of the image. In the foreground, a dark, textured surface, possibly a hand or a piece of equipment, is visible on the right side. The background is a pale, hazy sky.

ISSN 1951-6428

Amure Publications. Report series

Online publication : www.umar-amure.fr