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Accompanying the document

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

Consultation on the fishing opportunities for 2017 under the Common Fisheries Policy

{COM(2016) 396 final}

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Part 1

Report on the progress on achieving maximum sustainable yield and on the situation of fish stocks

This part provides a detailed explanation of the methodology used to assess the situation of fish stocks, and its outcomes.

Assessment of the state of stocks in the North-East Atlantic and adjacent waters

The stock sample assessed by the Scientific, Technical and Economic Committee on Fisheries (STECF) under the methodology developed since 2013 is larger than the sample used for the time series 2007-2014 in earlier Communications[1]. It includes stocks with estimates of both the fishing mortality corresponding to maximum sustainable yield (F_{MSY}) and estimates of current fishing mortality (F). This results in a sample of 59 stocks in 2014.

Changes in the coverage of the analysis since the previous edition of this report are documented in detail in the *51st Plenary Meeting Report* of the STECF[2]. The coverage is based on stocks which are managed under TACs in EU and contiguous waters, excluding stocks shared with third countries outside EU waters. The STECF is developing the method to cover those stocks in the future. For stocks assessed biennially, stocks are assumed to be in 'known' state in years between assessments.

Stock assessments are under constant review. Changes in the stocks list in the analysis arise because some assessments (used up to last year) were rejected (poor quality), while other stock assessments were improved and are now considered acceptable. Some stocks (e.g. deep-sea stocks and some *Nephrops* stocks) are assessed every other year. Stock units are sometimes updated and may be merged or subdivided according to improved biological information. The *51st Plenary Meeting Report* documents these changes.

Indicators of performance with respect to maximum sustainable yield.

The numbers of stocks fished sustainably and overfished compared to F_{MSY} or otherwise by year are given in Figure 1, with the relative proportion in Figure 2. Figure 1 lists the number of stocks for which fishing mortality has been calculated compared to F_{MSY} under the STECF

[1] Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF) – Monitoring the performance of the Common Fisheries Policy (STECF-16-05) – CORRIGENDUM to STECF-16-03. 2016. Publications Office of the European Union, Luxembourg, EUR 27758 EN, JRC 100945, 60 pp.

[2] Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF) – 51st Plenary Meeting Report (PLEN-16-01). 2016. Publications Office of the European Union, Luxembourg, EUR 27758 EN, JRC 101442, 89 pp.

analysis. This total shows a slight increase since 2003, indicating an improvement in the knowledge about the stocks.

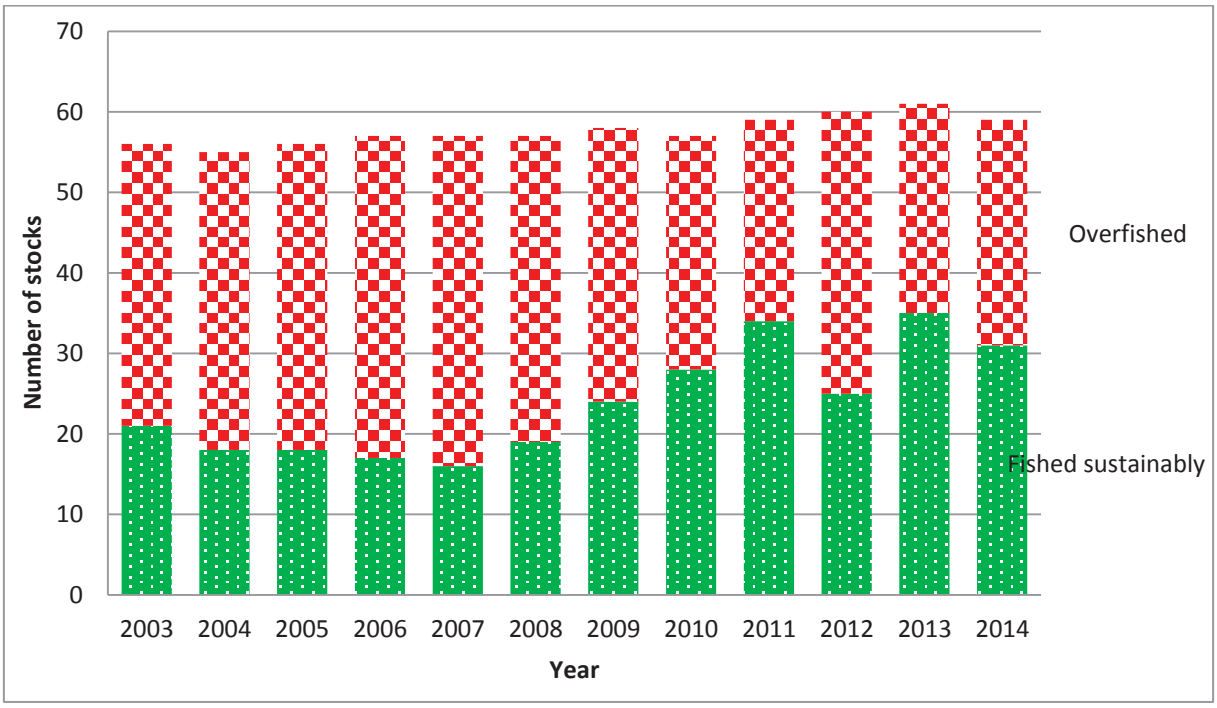


Figure 1. Numbers of assessed stocks in the Northeast Atlantic, North Sea and Baltic Sea in EU waters and contiguous shared stocks, showing numbers of stocks fished sustainably (current fishing mortality is at or below F_{MSY}) or overfished (current fishing mortality is above F_{MSY})

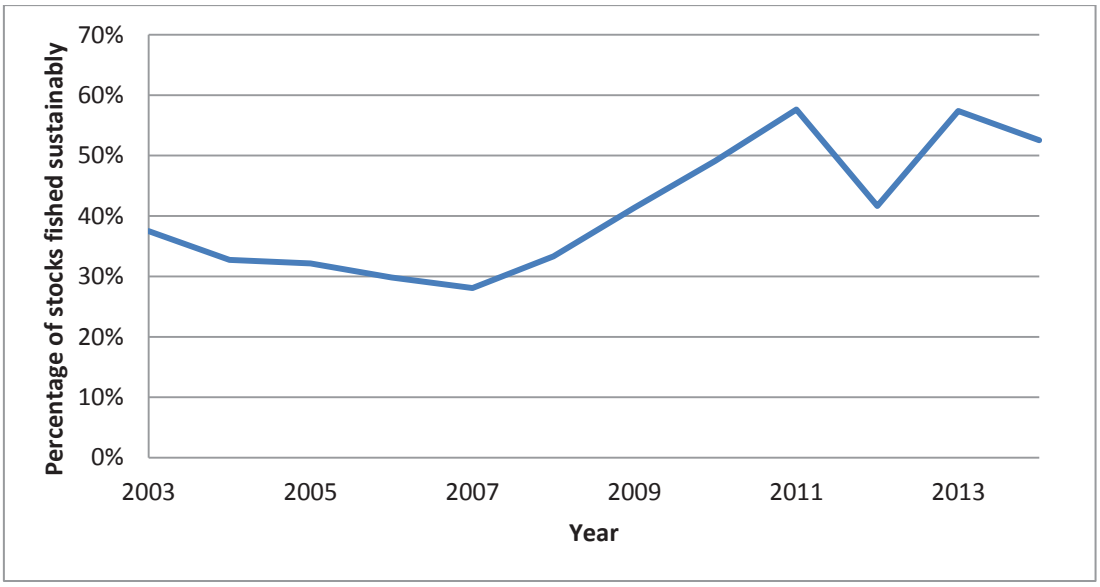


Figure 2. Proportion of stocks in the Northeast Atlantic, North Sea and Baltic Sea in EU waters and contiguous shared stocks assessed as fished sustainably (current fishing mortality is lower than or equal to F_{MSY}). Source: Tables 3 and 4 of STECF-16-05.

The STECF has also assessed the average extent of overfishing. Figure 3 shows the trend in the value of fishing mortality compared to the F_{MSY} values across all assessed stocks, and the distribution of these values.

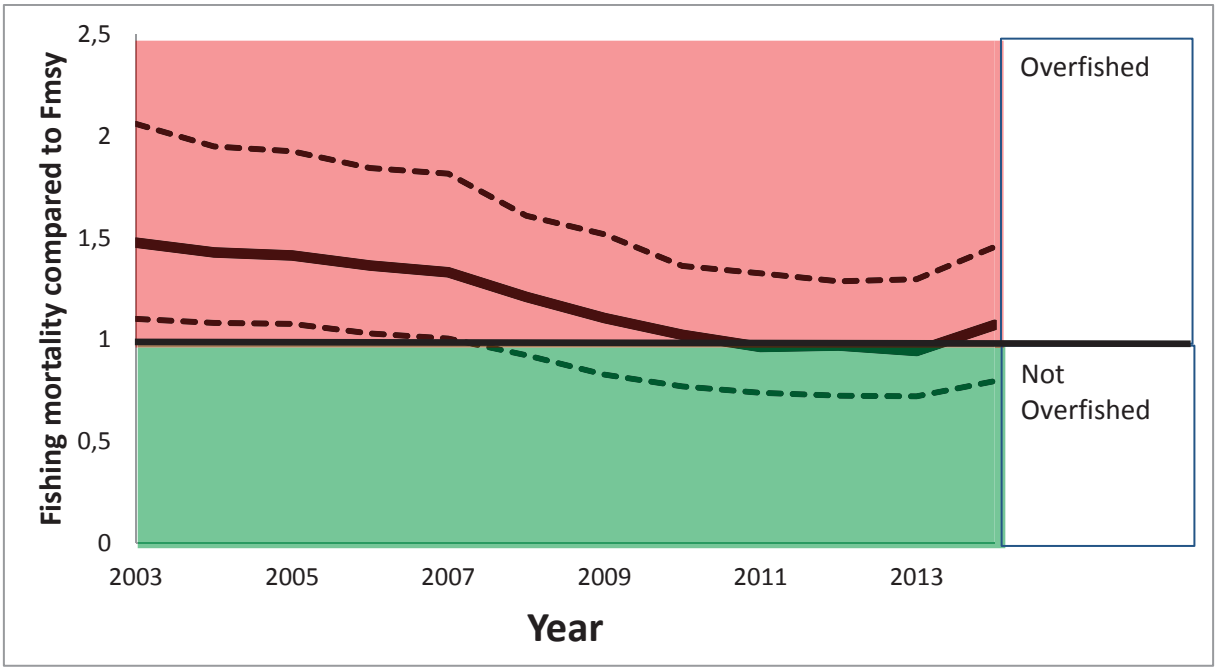


Figure 3. Average fishing mortality compared to F_{MSY} values (=1 for F= F_{MSY}) for stocks in the northeast Atlantic, including the Celtic Seas, North Sea and Baltic Sea. Based on Figure 13 of STECF-16-05 report as updated by the 51st Plenary Meeting Report. The broad line represents the average (median of model fit), the dashed line shows the range of uncertainty in the estimate (95% confidence interval).

Performance with respect to safe biological limits

Figure 4 shows changes in relation to safe biological limits. As changes in fishing mortality may take several years to show results in fish stocks biomass, improvements with respect to safe biological limits from reduced fishing mortality may only appear later.

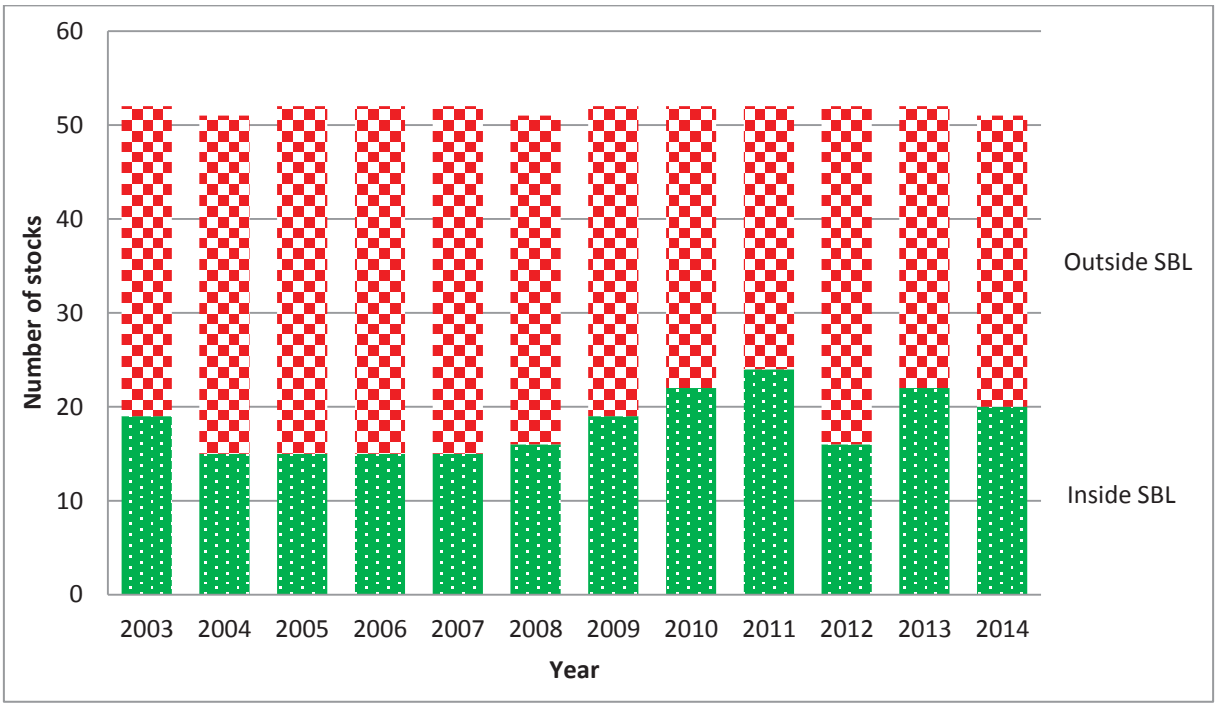


Figure 4. Numbers of assessed stocks in the Northeast Atlantic, North Sea and Baltic Sea in EU waters and contiguous shared stocks, showing numbers of stocks inside and outside safe biological limits (SBL). A stock is within SBL when the fishing mortality is lower than the precautionary fishing mortality (F_{pa}) (where this is defined) and the stock size is higher than the biomass reference value (where this is defined). A stock is outside SBL when the fishing mortality is higher than F_{pa} (where this is defined) or the stock size is lower than the biomass reference value (where this is defined).

Assessment of the state of stocks in the Mediterranean Sea

Changes in the coverage of the analysis for stocks in the Mediterranean are documented in detail in the STECF *51st Plenary Meeting Report*. The STECF assessment is based on 15 assessed stocks, as opposed to previous years' assessments which were based on 44 stocks assessed. This year's coverage counts stocks as being in 'known state' up to three years after the latest assessment. The numbers of stocks assessed increased up to 2012, but decreased in 2013 when a decision was taken to improve the quality of assessments at the expense of assessing fewer stocks each year. Due to several reasons, including the inability of one of the Member States concerned to provide the necessary data, we are facing a reduction in the coverage of assessments.

The stocks fished principally by the EU are mainly located in the north-western Mediterranean (*i.e.* northern Spain, Balearic Islands, Gulf of Lion, Corsica and Sardinia, Ligurian and Tyrrhenian Seas) and in the Central Mediterranean (*i.e.* northern Adriatic). Stocks shared with third countries are mainly located in the western (*i.e.* Alboran Sea and Algerian coast), central (*i.e.* Strait of Sicily, Malta Island, southern Adriatic, and Ionian Sea) and eastern Mediterranean Sea (*i.e.* Aegean Sea, Crete and Cyprus Islands, and the Levantine Sea), and in the Black Sea.

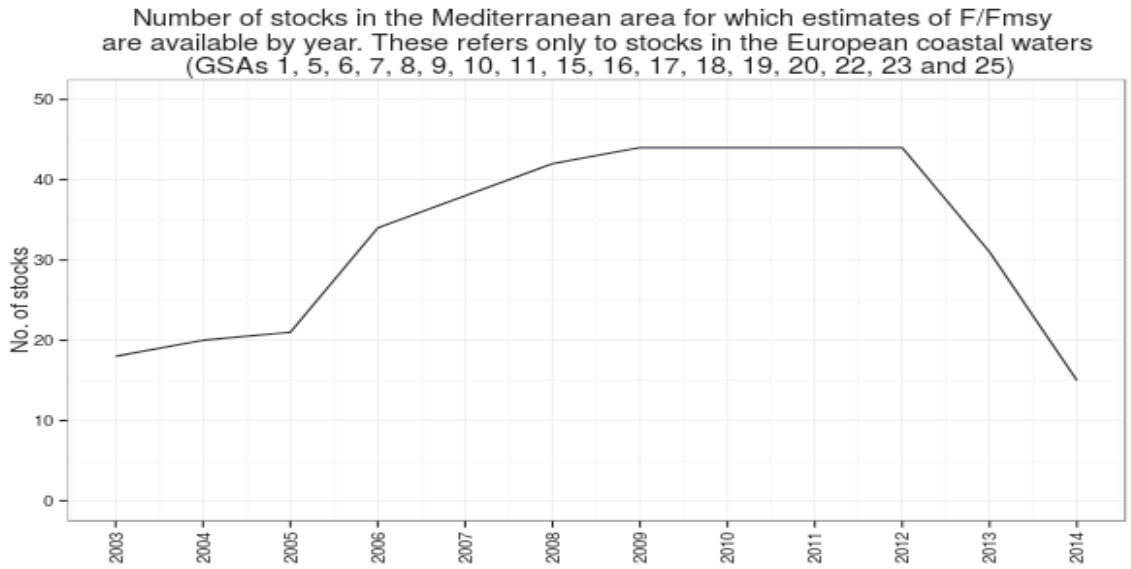


Figure 5. Availability of stock assessment information for the Mediterranean Sea, by year[3].

Developing a consistent indicator of the state of fish stocks in the Mediterranean is technically complex, however from the available analysis it is apparent that the great majority of stocks is overfished, with overfishing at a very high level for some stocks. STECF work at this stage concentrates on the stocks and areas fished mostly by the EU[4], with further results on including the remaining areas being expected during 2016.

Preliminary results are shown in Figure 6. The overall level of overfishing is broadly between 2 and 3 times F_{MSY}.

[3] Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF) – 51st Plenary Meeting Report (PLEN-16-01). 2016. Publications Office of the European Union, Luxembourg, EUR 27758 EN, JRC 101442, 89 pp.
[4] (Geographical Sub-Areas 1,5,6,7,8,9,10,11,15,16,17,18,19,20,22,23,25)

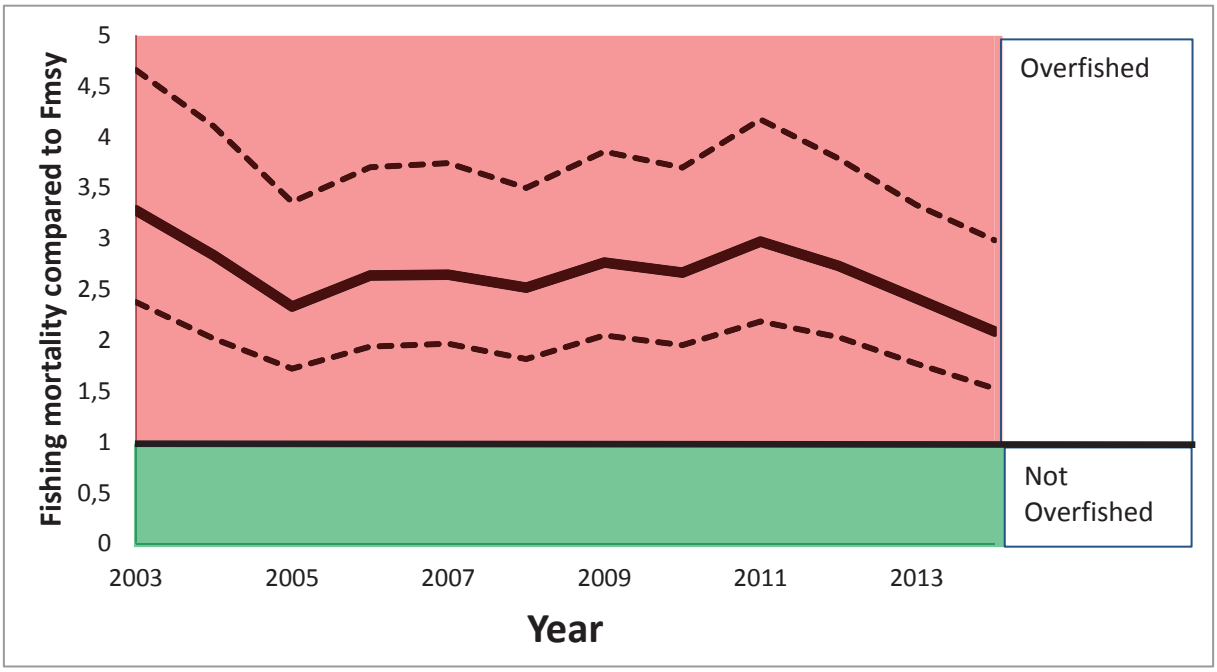


Figure 6. Average fishing mortality compared to MSY values (=1 for $F=F_{MSY}$), for stocks in the Mediterranean Sea, GSAs 1,5-11, 15-20, 22, 23 and 25. Redrawn from Figure 15 of the STECF-16-05 report, as updated by STECF *51st Plenary Meeting Report*. The broad line shows the average (median of model fit), the dashed line shows the range of uncertainty in the estimate (95% confidence interval).

Assessment of stocks in the Black Sea:

The Black Sea has a very low biodiversity in terms of number of commercial species (20% if compared to the Mediterranean Sea). A main concern in the Black Sea is the small number of stocks assessed (see Table 1 below), which is partially due to considerable shortcomings in control measures resulting in unreliable catch/landing data. This is valid both for Member States and for third countries concerned. The geopolitical complexity of the area (including two geopolitical conflicts in the last decade and a significant redefinition of jurisdiction) seems to influence negatively the solution to these problems.

Pelagic catches are basically of anchovy and sprat. Demersal catches are dominated by Rapana whelk (an invasive species of gastropod that has colonized the environment 50 years ago and has modified the structure of the ecosystem) turbot, red mullet, bluefish and Atlantic bonito. Scientists from the two latter countries participate in the scientific working group on the Black Sea stocks. The European Union has set autonomous quotas for turbot and sprat.

Table 1

	Scientific advice for 2013	
	demersal	pelagic
Black Sea		
No of stocks assessed as overfished	4	2
No of stocks assessed as sustainable	0	1

TOTAL of known stocks[5]	4	3

[5] Source: GFCM-SAC

Part 2

Implementation of the landing obligation in 2015

Introduction

Based on the obligation to report on the implementation of the landing obligation (in Regulation 1380/2013), the Commission obtained from Member States and Advisory Councils information on the following elements:

- steps taken by Member States and producer organisations to comply with the landing obligation;
- steps taken by Member States regarding control of compliance with the landing obligation;
- information on the socioeconomic impact of the landing obligation;
- information on the effect of the landing obligation on safety on board fishing vessels;
- information on the use and outlets of catches below the minimum conservation reference size of a species subject to the landing obligation;
- information on port infrastructures and of vessels' fitting with regard to the landing obligation;
- for each fishery concerned, information on the difficulties encountered in the implementation of the landing obligation and recommendations to address them.

Reports were received from all coastal Member States, four Advisory Councils (Pelagic AC, South-western AC, North Sea AC and Mediterranean AC), one regional Member States group (Scheveningen group) and one group of industry representatives (Europeche).The information in this part is based on the Member States and Advisory Councils contributions on their early experiences in the implementation of the landing obligation in 2015.

Percentage of catches reported as discarded

Accurate and illustrative data on the percentage of discards is scarce primarily related to the fact that the revision of the implementing rules on logbook declarations detailing and differentiating discards by type (below minimum conservation reference size, prohibited species or other) could only adopted in October 2015, following the agreement on the Omnibus Regulation in May 2015. The transition to incorporate new requirements of logbook declarations in the day-to-day operations of the industry as well as the changes required by control authorities take time. In the meantime, the Commission and administrations are relying on estimates of catches reported as discarded, provided through data on effort management and the Data Collection Framework. Figure 7 shows the estimated percentage of catches discarded by management area, in 2014. Each area contains data collected from various ICES areas grouped for the purpose of monitoring under the various management plans.

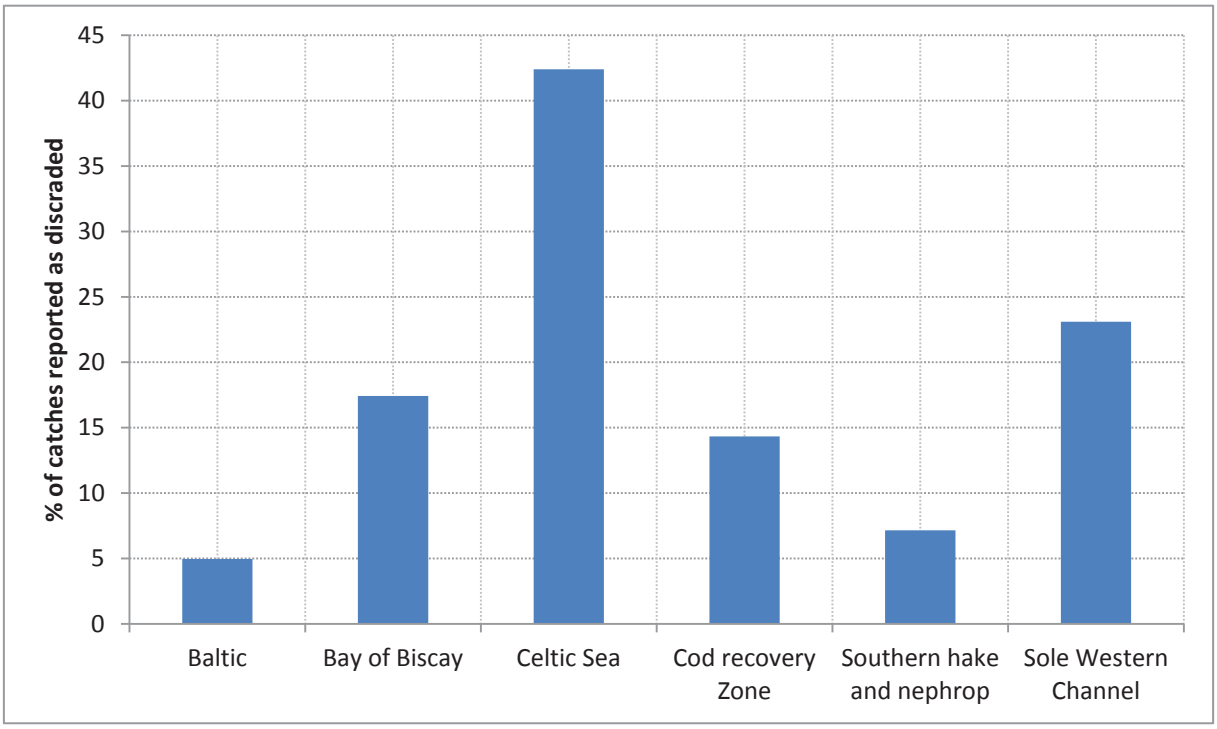


Figure 7: Estimated percentage of catches reported as discarded in 2014 by management effort management areas under recovery plans[6]

The issue of choke species and quota swaps

One of the main challenges in the implementation of the landing obligation is the issue of choke species. Among others, potential choke species problems can be mitigated by a national redistribution of quotas or by quota swaps both within and between Member States, especially if the overall availability of TAC for a stock is sufficient. Although quota swaps are a frequently used tool in the practice of fisheries management, stakeholders are suggesting that the tool is being used ineffectively as Member States seem to retain quotas rather than increase swapping under the newly introduced landing obligation.

Member States are actively working together with the sector and scientists on a tool box that would provide guidance to national administrations and producer organisations.

Innovative projects to improve selectivity in fishing

This section outlines examples of how Member States, industry and other stakeholders have developed innovative ways of improving selectivity in different fisheries. These projects have been financed by the European Fisheries Fund 2007-2013 (EFF) and or by industry and other national funding sources. Currently the EFF is being evaluated, including the uptake of funding for selectivity projects.

Discard reduction in the Bay of Biscay and Iberian waters (France)
The EU funded project 'Discard reduction in the Bay of Biscay and Iberian waters' aims at understanding discarding practices and at identifying measures to reduce discards in mixed

[6] https://datacollection.jrc.ec.europa.eu/dd/effort/dqi

demersal fisheries in the Bay of Biscay and Iberian waters. The results of this science-industry partnership project are expected shortly.
Another project to improve selectivity in the trawl fishery for hake in the Bay of Biscay is ongoing (since 2015). This project aims at testing selectivity improvements on trawls targeting hake, by placing a selective square mesh panel in the upper part of the gear. It counts with the participation of the fishing industry and all trials are carried out on board commercial fishing vessels.

Technical adaptation to trawl nets to reduce discards of Sole (Belgium)
Belgium has introduced an increase in the mesh size in the tail of the net (of 120 mm up from 80 mm, from the cod end attachment up to 3 meters to the front). The mesh sizes of the cod end remain constant at 80mm at least. This has contributed to better escaping possibilities of small sole. The catch comparison experiment conducted by the Belgian Institute for Agricultural and Fisheries Research (ILVO) and validated by STECF has demonstrated that the capture of sole, particularly undersized sole, was reduced significantly. The introduction of a large mesh trawl reduced total sole catch by 19,7%, and reduced undersized sole (<24 cm) by 40,3% (including a reduction with 16% of marketable sole). The measure was introduced from 1 April 2015 for areas VIIa, VIId and VIIfg, and applies since 1 January 2016 for the North Sea and entire Western Waters.

Project CELSELEC on selectivity in the Celtic Sea (France)
Fishermen and scientists have worked for a number of years to enhance selectivity of the fishing gears and "sort fish in the sea rather than on the deck". The producer organisation 'Pêcheurs de Bretagne' has launched a programme to enhance the selectivity of trawlers in the Celtic Sea in 2013, and a similar project was undertaken by the *nephrops* fishermen in the Bay of Biscay. They applied an innovative net which substantially reduces the catch of undersized hake in their *nephrops* fishery. This has made the fishery generally much more selective.

Selectivity improvements in different Fisheries (UK)
The UK have been developing a number of potential technical solutions to address anticipated discarding issues (i.e. haddock in the Celtic Sea, whitefish and unwanted catches in the Irish Sea, West of Scotland and North Sea). The aim is to provide a tool box of assessed gear configurations which can be used as part of a results-based management system. This has included testing a number of innovative gears (SELTRA trawl, NETGRID,) and developing existing gears further (i.e the eliminator trawl and the 'Orkney Trawl' or 600mm belly panel).

Selectivity of the rhomboid and square mesh cod-end in trawl fisheries (UK)
The project evaluated the selectivity in the rhomboid and in the square mesh of the cod end of a bottom trawl in specialised trawler fisheries, as well as the biological and economic effects of the use of each mesh type, including comparative advantages. To study the behaviour and state of fish stocks during the transit through the trawl the project uses underwater cameras inside and between the cod end and the sheet.

In Scotland the Gear Innovation and Technology Advisory Group, a industry-based platform set up with the Scottish Fishermen's Federation and funded via Marine Scotland in support of skipper-designed innovative gears, is currently appraising 4 projects for 2016 including two in the West of Scotland looking at reducing whitefish catch in *nephrops* gear.

Technical improvement of the trawl to reduce energy consumption (UK)

This project developed and tested a special design and computer modelling of trawl nets that takes into account the technical characteristics of the vessel and the deep-sea fishing grounds where they operate. The following parameters were tested: optimum speed tow, tensions and power losses and fuel consumption per time unit. The trawl concerned is easy to install and will allow for non-targeted fish to escape.

CCTV project (Denmark and The Netherlands)
Starting its first pilot in 2008, Denmark was the first country in Europe to test the effectiveness CCTV to monitor catches. This pilot has demonstrated improved reporting of discards in logbooks. This study was complemented by subsequent studies in the Netherlands whereby an on-board CCTV system which records all fishing activity including the discarding of undersized catches (cod in particular) confirmed that CCTV can replace expensive monitoring and control programmes. When combined with catch quotas this may have a positive effect in changing fishing patterns. In return for participation in the project fishermen benefit from additional quota.

Modification of existing fishing gear to improve selectivity (Sweden)
In conjunction with the Swedish University of Agricultural Sciences, vessels in Sweden have modified and adapted exiting fishing gear to improve selectivity (target size) for cod and to minimise unwanted catches. The results of the most selective adaptions are being disseminated online to stakeholders whilst the second phase of the project is being rolled out to vessels in the Baltic Sea.

Adding value to discards from fisheries in the Atlantic and in the Mediterranean (Spain)
This project (which is not on selectivity innovation or improvements) studied how to manage and make the best use of formerly discarded fish in the Atlantic and Mediterranean fisheries within the conditions set out in the legislation. The aim of the project was to improve knowledge on the nature and origin of discards both on-board vessels and on land, and to propose solutions for storage and preservation of unwanted catches including possible adaptation of the fishing vessels. The economic value of the different components of formerly discarded species were analysed under lab conditions.

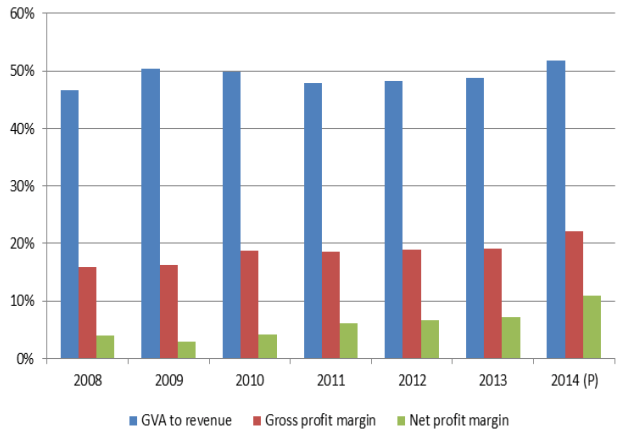
External waters dimension of the landing obligation
The landing obligation applies to Union vessels regardless of the location of their activities. All fisheries including in non-EU waters will be subjected to this rule as of January 2019 at the latest, unless internationally agreed rules deviate from this obligation. To ensure compliance of EU vessels with the rules from 2015 on, the Commission has carried out a thorough analysis of Regional Fisheries Management Organisations' rules, and in November 2014 has adopted a delegated act (as amended in 2016) to ensure that for the relevant RFMOs (mainly ICCAT) the international rules prevail over the landing obligations that entered into force on January 2015. The Commission strives to promote a level playing field for the EU fleet by promoting the objectives of the CFP in various international forums with the aim to encourage the reduction and elimination of discards at the international level.

Part 3

Economic performance of EU fleets and MSY

The economic performance of the EU fleets was positive and significantly improved over the period 2008-2014. The main economic indicators for the EU fleet increased, registering high profits in 2014 (based on preliminary data) with around €700 million in net profits and 10% in net profit margin *(figures 8 and 9)*. This means significant progress taking into account that the EU fleet moved from a loss making position in 2008 to a position where its net profits have doubled in recent years[7]. In parallel, fuel consumption and fuel use intensity decreased significantly in recent years, as a result mainly of efficiency gains in the way many EU fleets operate.

This general economic improvement coincides with the efforts of Member States to match fishing capacity to the available fishing opportunities, but also with relatively low fuel prices and with the overall reduction of fishing mortality and the increased numbers of fish stocks fished at MSY. Profit projections are positive for many of the large-scale EU fleets (forecasts for 2016, provided that fuel prices continue at low or moderate levels). However, this overall positive trend does not apply to all EU fleets, with a significant number of segments, notably in the small scale coastal fisheries struggling to achieve a solid economic performance.



Figures 8 and 9: Trends in main economic indicators of the EU fleet. *Source: data submitted by MS under the Data Collection Framework, 2014 is preliminary data.*

Experiences with moving to MSY fishing

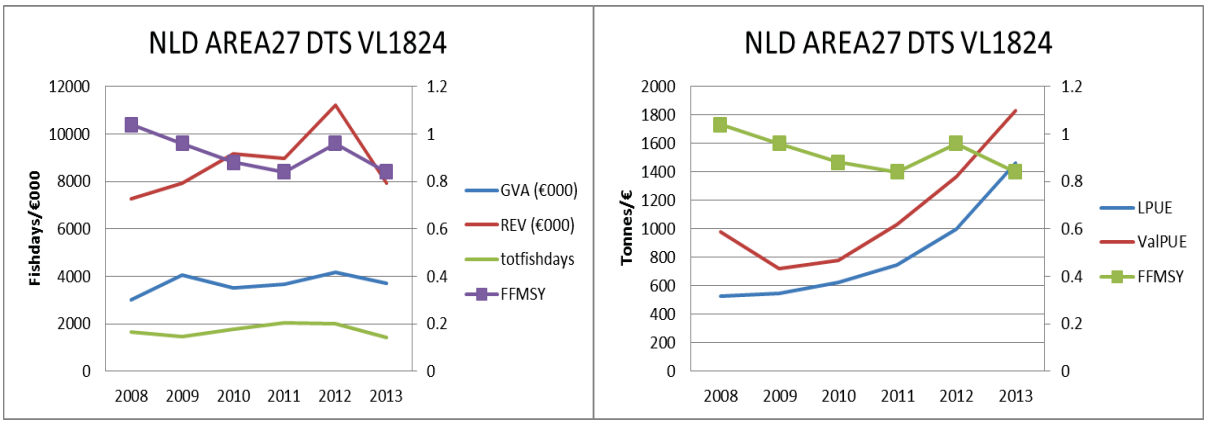
Fishing at levels that correspond to MSY creates the prospect of stock recovery to levels that have the potential to deliver high yields. A forthcoming study[8] estimates that if all Northeast Atlantic fish stocks were exploited at MSY an additional €4.6 billion per year in profits could potentially be generated compared to current exploitation rates. If MSY were achieved in 2016 for the EU North Atlantic fleet, the profit's net present value on a 20 year timeline is estimated to be more than 30% higher than postponing MSY until 2020. Waiting until 2020 would consequently result in a significant decrease in this potential economic gain.

[7] While net profits were €330 million in 2010, they went up to €700 million in 2014.

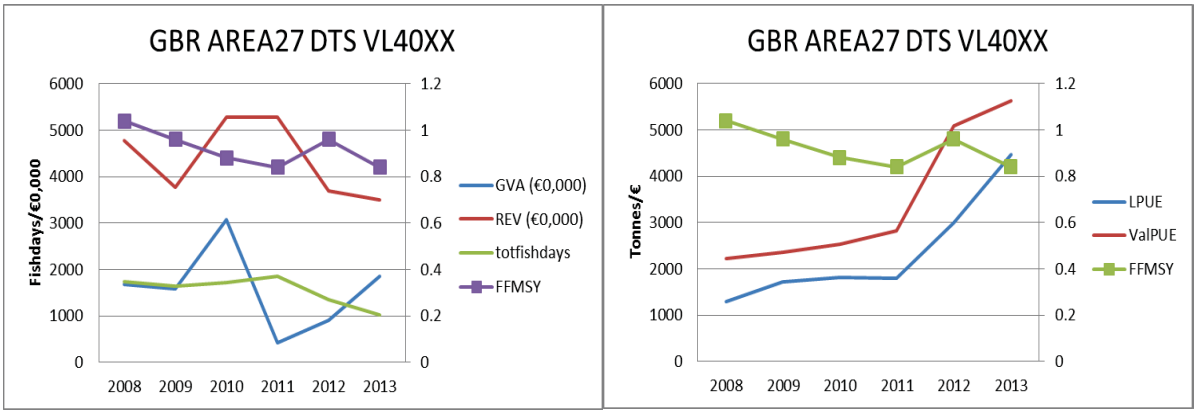
[8] "Sustainability now or later? Estimating the benefits of pathways to Maximum Sustainable Yield for EU Northeast Atlantic Fisheries", Jordi Guillen, Angel Calvo Santos, Griffin Carpenter, Natacha Carvalho, John Casey, Jordi Lleonart, Francesc Maynou, Gorka Merino, Anton Paulrud, submitted to Marine Policy for review.

There are notable examples of EU fisheries showing increased economic returns from sustainable fishing. For the North Sea sole and plaice fishery the economic performance of plaice-dependent fleets improved significantly under the implementation of the management plan that brought the fishery to an MSY situation. Landings and value per unit of effort have increased since the stock has been exploited at F_{MSY} for all segments, and particularly for the British and Dutch demersal trawlers *(figures 9 a & b, 10 a & b)*. For the Northeast Atlantic mackerel fisheries there has been a positive trend in most of the segments targeting mackerel between 2008 and 2013 *(figures 11 a & b)*, but the biological situation has deteriorated in recent years, thus highlighting that benefits achieved in the past by moving towards MSY can be lost due to external factors such as absence of an agreed overall total allowable catch as well. A positive economic trend is also observed in some fleets involved in the haddock fisheries.

Anecdotal evidence suggests that improved stability in fisheries exploited sustainably may have improved the investment opportunities in the fleets, contributing to the social and economic sustainability.

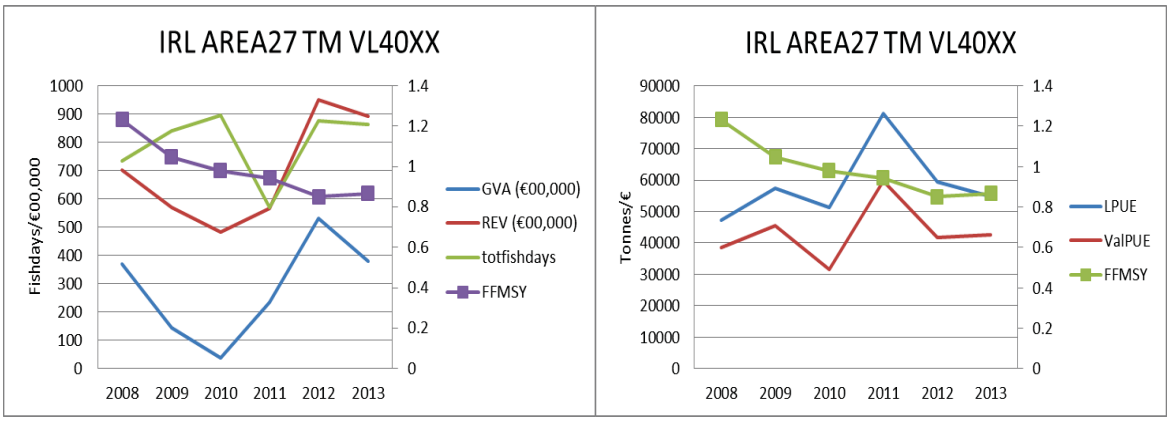


Figures 9a & 9b[9]: Economic performance of the Dutch demersal trawlers with length between 18 and 24 meter in the North Sea plaice fishery. *Source: data submitted by MS under the Data Collection Framework.*



[9] For graphs 9a, 10a and 11a, the values on the left side of the graph relate to the number of total fishing days, whereas the values on the right side of the graph relate to the monetary value for GVA and Revenues (times thousand). For graphs 9b, 10b and 11b, the values on the left side of the graph relate to the tonnes of fish landed per unit of effort, and the values on the right side of the graph relate to the monetary value per unit of effort.

Figures 10a & 10b: Economic performance of the British demersal trawlers with length over 40 meter in the North Sea plaice fishery. *Source: data submitted by MS under the Data Collection Framework.*



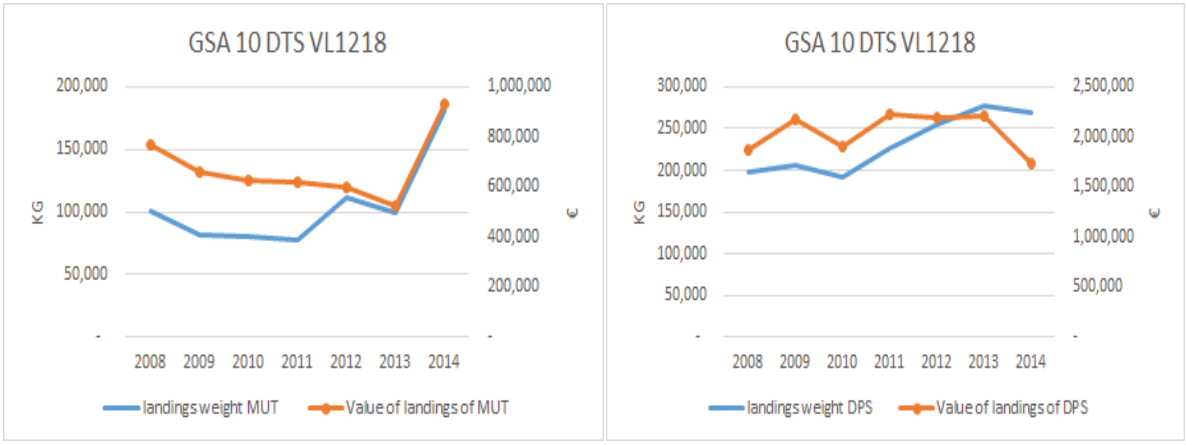
Figures 11a & 11b: Economic performance of the Irish pelagic trawlers with length over 40 meter in the mackerel fishery. *Source: data submitted by MS under the Data Collection Framework.*

Experiences with moving to MSY fishing in the Mediterranean Sea

The potential gains from sustainable fishing identified in the North Sea and Atlantic can be also be identified in other EU waters, notably for the Mediterranean fisheries where stocks are particularly depleted and where fishing mortality must be significantly reduced to achieve MSY. There are examples of Mediterranean fisheries where stocks are being exploited at rates consistent with achieving MSY, and fleets are showing positive trends, particularly in landings.

Given the highly mixed nature of Mediterranean fisheries the effects of stock recovery are not immediately visible in terms of profitability and employment for a variety of reasons including market conditions and price fluctuations. For example, in the demersal trawlers fishery (length between 12 and 18 meters) targeting deep sea pink shrimp and red mullet in the Southern and Central Tyrrhenian Sea (GSA 10), data show a positive trend in the volume of landings *(figures 12 a & b)* going hand in hand with the reduction in fishing mortality, particularly for red mullet. This is an important fleet segment in terms of size, accounting for 60% (139 vessels) of the trawling fleet in the area, and it is the only trawl segment with a positive economic performance in this area.

Another example is the small-scale coastal fishery in the Southern Adriatic Sea (GSA 18). In this fishery, where red mullet (the important species in economic terms) is exploited at levels close to sustainability, the value of landings per unit of effort shows a stable trend in the period 2008-2012 followed by a strong increase in 2013 *(figure 13).* In parallel, net profits have increased over the period of analysis (albeit with a reduction of the number of jobs, *figures 14 a & b).* This fleet segment accounts for 46% of the total fleet in GSA 18 (area of stocks shared with third countries) and develops a multi-species and multi-gear activity *(figure 15).* The most important species are common octopus, cuttlefish and red mullet which together account for an important share of the total value of landing of the segment.



Figures 12a & 12b: trends in landings weight and value in red mullet (MUT) and deep sea pink shrimp (DPS) targeted by demersal trawlers (Length 12-18 meters) of the Southern and Central Tyrrhenian Sea (GSA 10). *Source: Italian Data Collection Framework.*

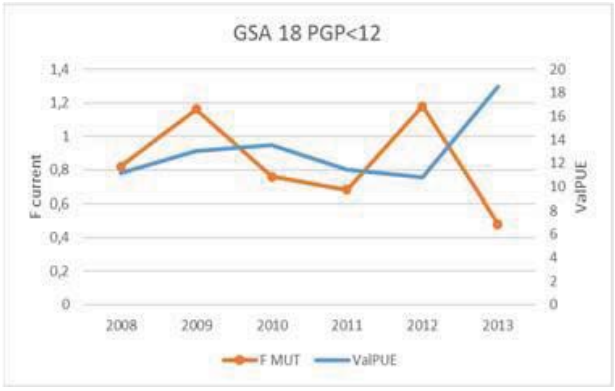
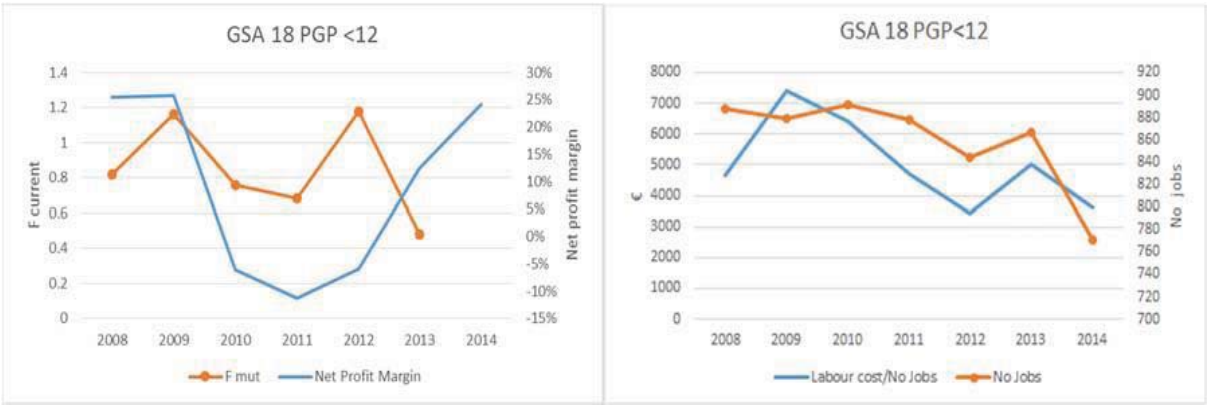


Figure 13: trends in value of landing per unit of effort for the small scale coastal fishery in the Southern Adriatic Sea (GSA 18). *Source: Italian Data Collection Framework.*



Figures 14a & 14b: socio-economic performance indicators for the small scale coastal fishery in the Southern Adriatic Sea (GSA 18). *Source: Italian Data Collection Framework.*

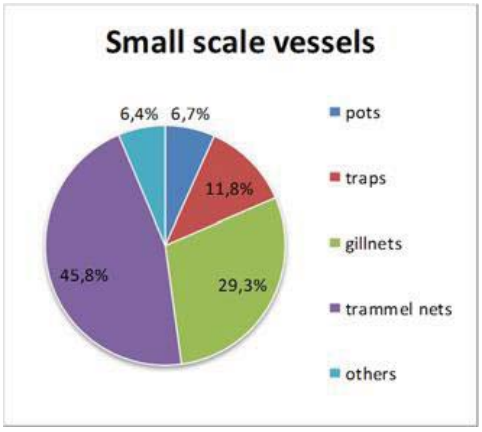


Figure 15: fishing effort by main gears of the vessels classified in the segment of the small scale coastal fishery in the Southern Adriatic Sea (GSA 18). *Source: DCF, 2014.*