SOCIOEC

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Abstract

The SOCIOEC project includes stakeholder involvement in several different ways, from analyzing the incentives created by management measures to returning to participants the impact analysis of measures suggested by them. In order to gather the first inputs needed to undertake an impact analysis that includes socioeconomic aspects both the objectives of the policy and the management measures are consulted upon, asking for an EU wide as well as a regional perspective and collecting specific qualitative inputs from stakeholders and in this way contributing to improve the database of social and economic qualitative data for these European fisheries.

While co-management, certification and long term management plans are seen as having a positive impact, other management measures as decommissioning subsidies and the discard ban lead to more diverse qualitative results depending on the type of stakeholder asked. For example, while environmental stakeholders agree with the discard ban and disagree with decommissioning schemes, the opposite result is not surprisingly gathered when asking fishermen. The effect of overlapping of management measures has arisen when considering various technical measures and closed areas (in conjunction with other closed areas or effort restrictions). Finally, the effect of co-management and ITQs are different across fisheries, depending among others on external effects (as prices) and governance.
1. Introduction
The present deliverable aims at summarizing the qualitative evidence that has been collected inside the six SOCIOEC case studies with the aim of either performing a future qualitative impact assessment per se (mainly in those cases where a quantitative impact assessment is not possible due to lack of data) or complementing quantitative data in the context of a quantitative impact assessment. In some of the cases this has been the first time that qualitative data has been collected with the aim of impact assessment.

The contacts with stakeholders have been characterized by two issues that were identified each at one of the first two project-wide meetings. The first issue came across in the project kick-off meeting, where during conversations in plenary about the objectives of the project and the resources available, it was pointed out how it could be difficult to access some stakeholders, especially those that had already been contacted by (many) other research projects. It was agreed that a key to success would be to remain flexible and adapt to the stakeholder needs, which in our project would lead to the use of already organized stakeholder gatherings (like RAC meetings, combined meetings with other projects etc...) and an attempt to widen the spectrum of potential stakeholders to include fishermen, PO representatives, local and regional managers, government and university scientists etc.

The second issue that characterized the contacts with stakeholders was the acquisition of a deeper insight on the different methods available to gather qualitative data for the work packages in the project, which was highlighted during the project methodology workshop held in The Hague in September 2012. This further analysis of the project requirement showed, for example, that the technique of focus groups that was foreseen in the project proposal was not the ideal tool for some project tasks in certain case studies. As an example, it was discussed that certain fishermen could feel inhibited to talk about their particular incentives in a group setting. Following this, and the need to avoid repetitive contacts especially with overloaded stakeholders, a compromise was found between the methods to be used (including focus groups but also semi structured interviews, more detailed interviews etc...) and the information to be gathered in each stakeholder contact (including data on objectives, incentives, impacts, etc.).

The content of the current deliverable is organized by case studies, some of which contain more than one fishery. Inside each case study a common structure has been followed, where first the methodology for the collection of the data is presented, then the qualitative results obtained are highlighted with respect to each management measure considered and finally the relevant inputs for the simulations that will conduce to the impact assessment are presented.

2. Baltic Sea demersal fisheries case study [Germany]

Organization of contact with stakeholders
The work on impact assessment in the German Baltic Sea demersal fisheries case study involved individual consultation by means of semi structured interviews with different kinds of actors. This qualitative data collection technique was selected because of the depth of information that it allows and the possibility of the interviewed person to influence the interview and thus come up with new answers that could be both aggregated and specific. In this way, five semi-structured interviews were
performed, with two fishermen representatives, two environmental NGOs and one manager. Further stakeholder contact is planned with fishermen, both small and larger scale, which will take place in the summer season when they are more readily available.

With respect to the management measures the emphasis of the interview was on the interviewee conveying those that were more suitable following her/his opinion, and only after no more management measures where mentioned did the interviewer ask specifically for the remaining management measures that were of interest to the case study. A selection of these specific questions dealt for example with the effect of spatial closures due to different causes (as this is the only case study that analyses this topic) or the effectiveness of long term management plans.

Contacting German stakeholders was found to be useful because of its covering two seas (Baltic and North Seas), its complex governance structure (due to federalism) and the significant role of the three chosen types of actors, especially the environmental NGOs given the high environmental awareness in Germany.

### Qualitative results from stakeholder contacts

The consultation with the stakeholders was left as open as possible in order to collect the widest spectrum of inputs. The following management measures where mentioned spontaneously by the stakeholders, or as an answer when questioned on what management measure they thought would be effective to manage the fishery they were familiar with. The most mentioned management measures were subsidies and technical measures, followed by spatial closures, co-management and certification.

**Subsidies** are seen to have an unequal effect depending on how they are targeted (e.g. decommissioning schemes). From the side of the environmental organizations consulted, one considers that the impact of subsidies is only limited to the large scale fleets, while the other one considers them effective when they are correctly targeted. The fishermen representatives had also divided opinions with respect to subsidies, with one representative expressing his concern for the unequal distribution of subsidies across regions (for the processing industry) and countries (for capacity reduction) and another representative highlighting their effectiveness to improve relative competitiveness with other countries when they are employed as social security bonuses or incentives to compensate for the higher social costs.

The impact of **technical measures** is mentioned several times during the interview with environmental actors. As an example, the technical measures for cod applied in Sweden are seen as very effective by one environmental representative, while the current gears are not seen to be enough to minimize bycatch. According to another environmental association representative, in line with the previous opinion, nets with escape windows are “not perfect but better than what we have now”. While the fisheries manager consulted judged the impact of gillnets on bycatch as “difficult to weight” he also considered that lighter gear or electric trawling would reduce impact on the seabed habitat.

The richest contribution on the impact of technical measures was obtained from the interview with a producer organization (PO) representative. According to this fishermen’s delegate certain technical
measures do not have the desired impact or not clearly, as for example the fact that cod cannot escape from the flunder and sole nets through gates. In social and economic terms the effect of a two year long study on technical measures that requires to close the gillnet fishery for that time would be that after those two years there would be no fishermen anymore. Additionally, a change to a more sustainable gear (traps or long lines) would also have a bad strong effect on the small scale fishermen as they are “already at subsistence level” and the needed investment would amount at 40000€ pro vessel. In a more theoretical way, the effect of fisheries on seabirds is compared by the PO representatives with other sources of mortality for those same birds (hunting in Denmark and Sweden) and for other sources of mortality for wildlife, as road traffic.

Closed areas with a complete ban for fisheries are considered by environmental representatives to have an impact that is deemed necessary to protect the stock and ecosystem resilience. From the point of view of another environmental NGO representative, the impact of closures for fisheries (as for example Natura 2000 sites) would be more positive, in the sense that it would take less time to take effect if the decision process would be shorter. Closed areas are seen as technical measures by a PO representative, not effective if fishing activity is not monitored (“no matter how big the protected area is”) the cod spawning Baltic Sea area is given as an example.

Co-management is seen differently by an environmental NGO depending on whether it is normal audiences (yielding less transparency) or a RAC meeting, which is deemed as maybe less “populistic”. A PO representative sees the cooperatives as “an important measure to meet the needs of the market”

Certification alone is deemed by an environmental NGO representative not to have enough impact to reach economic sustainability under ecological and social constraints, if other measures are kept as usual, but nevertheless they are viewed as setting the right incentives to reach that objective. PO representatives see it respectively as having a motivating effect with fishermen and being a good instrument towards other conservation measures as they already require, for example, larger mesh sizes

The effect of quotas was associated with the degree of control by both an environmental representative and a manager of a producer organization, the difference in perception being that the environmentalist saw the effect in the future and the fishermen representative as already taking place. The same fishermen representative thought that the quotas have resulted in a considerable progress in the management of the fishery.

Long term management plans are seen as having a positive effect also by an environmental NGO and fishermen representatives, the latter considering that the effect can already be perceived in the last five to seven years.

With respect to the impact of a hypothetical discard ban, one environmental actor declared that the foreseen 7% threshold is not controllable and “would only make things more difficult”.

Finally, the evaluation of the management measures is also seen by an interviewed environmentalist to depend on the evaluation method, which sends a signal of how stakeholders perceive impact assessment methods as important. Additional aspects to the management measures that are seen as having an impact on the stocks are better control and enforcement, and better consumer education.
**Inputs for simulations**

A simulation that has been judged suitable after the contact with stakeholders is the removal of the quota limitation for the small scale fishermen. It was a common comment from various interviews that policy should be at the same time more targeted and simplified, and this option seems to encompass both aspects. This scenario would have repercussions not only on the small scale fisheries but also on the larger vessels, as in a context of quota species possible increases in catch from the former will certainly affect the latter. Institutional aspects also will need to be considered with regard to the quota allocation mechanism between both segments.

Closed areas, both permanent and seasonal are also a common demand from different stakeholders that could be analyzed through simulations and/or a game table, with a partial or total ban on some segments or all of them. Another interesting input for the game table would be the possibility of comparing the reaction of players (fishermen, simulated fishermen or consumers) having different degrees of information on the consequences of certain fishing behaviour on the stock.

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**3. North Sea demersal fisheries case study**

**Organization of contact with stakeholders**

Only limited focus groups with stakeholders have been held with the sole remit of the SOCIOEC project for the North Sea, although some additional interviews were planned during the general assembly meeting in Hamburg, June 2013.

On the other hand, over the last couple of years, the lead SOCIOEC participants for this case study have participated in several similar “stakeholders events” in the broad sense, where objectives, constraints and management measures for the North Sea demersal fisheries were addressed. Participation to such events have occurred on behalf of the SOCIOEC project and/or as part of the general advisory work. These events include such focus groups organized by other related EU projects (e.g. MYFISH, GAP, ECOFISHMAN etc), by stakeholders themselves (e.g. NSRAC) or by other international initiatives (ICES, STECF, Nordic Council of Ministers etc).

Therefore, it was felt that organizing another round of workshop or interviews for the North Sea demersal fisheries, albeit useful, could potentially play against the purpose of trust building and inclusive governance sought by these clusters of initiatives, by creating a feeling of confusion, “deja-vu” and meeting fatigue among the key stakeholders. Additionally, it was felt that the experience from these previous events already suggested that results and perceptions vary often from person to person and from meeting to meeting, depending on the scope, timing and representativeness of the participants. Therefore none of these various workshops taken in isolation can steer the future direction of North Sea fisheries management; However, all together, they allow the emergence of a common understanding of the key challenges among the many and diverse players, and this contributes in turn to creating a favourable governance environment for achieving some consensus and acceptance around future policies. With this aim in mind, a synthesis of this existing knowledge is necessary, in order to identify the common traits across these various recent qualitative analyses.
On this basis, it was therefore decided to formulate this deliverable 5.3 not as a simple report of a SOCIOEC-only focus group, but rather as an overall summary of the known experience from the leading authors. Other workshops in the recent years not known to the authors may have been omitted, but the authors believe that the material gathered here represents an important and significant part of the current moves around North Sea mixed fisheries.

**German SOCIOEC interviews**

As described in the previous section for the Baltic Sea, the Thünen Institut for Sea Fisheries conducted five semi-structured interviews of key players, covering both Baltic Sea and the North Sea German fisheries (two fishermen representatives, two environmental NGOs and one manager). The results described above are therefore valid for that case study as well.

**Workshops/seminars organized within other EU projects**

A large part of the text below is copied from the corresponding project deliverables and public communications, and references to this are given in footnote.

*MYFISH Vigo workshop and follow-ups meetings*1

The EU FP7 MYFISH (http://www.myfishproject.eu) project was launched together with SOCIOEC, and started by a major stakeholders event conducted on April 24th to 26th 2012 in Vigo, Spain. 60 participants attended, including representatives from 12 universities, 14 fisheries research institutes, 8 industry organisations, 3 NGOs and 3 management organisations. A subsequent smaller workshop was held to investigate the priorities of constraints in two regions, the Baltic and the North Sea. This workshop was organised in cooperation with ICES (ICES WKMTRADE) and was dominated by stakeholders and managers to investigate if this would lead to different results. The 18 participants included representatives from 6 management organisations, 5 fisheries research institutes, 5 industry organisations and 2 NGOs.

The objective of this study was to, in discussion among the stakeholders and scientists, suggest acceptable and feasible management strategies aiming at MSY in European fisheries. To achieve this purpose, management strategies aiming at MSY were decomposed into three aspects: What to maximize (MSY variants, implicitly requiring a selection of ‘exchange rates’ between yield of different species), what to sustain (constraints to sustainability) and how to manage (fisheries management measures). The answers to these questions is likely to depend on both geographical area and the compositions of the groups discussing them and parallel group sessions were therefore used in discussions. The groups were first tasked with identifying a generic list of possible candidates under each sub-heading. The groups were then redefined and regional groups tasked with identifying region specific acceptable and feasible MSY variants, constraints to sustainability and management measures.

To facilitate the discussions and the documentation of conclusions, the project partners from Imperial College London prepared a specially designed graphical tool. The tool is programmed in Excel and lists the various conceivable MSY variants, tradeoffs/constraints, and management measures identified in the open discussion on the previous day. Workshop participants were asked

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1 From MYFISH D2.2: Regionally relevant and acceptable MSY variants, constraints and management measures
to provide ratings (R) for each of the option and to document the degree of uncertainty or disagreement in the group (U) after deliberation of each option. For MSY variants and constraints, ratings and uncertainty where queried separately with respect to three aspects (does necessary information exist, does the measure react to management and how preferable is it as an MSY variant or constraint). For management measures, only two aspects were queried (will it aid in attaining MSY variants and constraints and how preferable is it as an MSY variant or constraint).

**ECOFISHMAN Edinburgh workshop**
EU FP7 ECOFISHMAN ([http://www.ecofishman.com](http://www.ecofishman.com)) is another EU project, which deals with Results-based management as a contribution to the CFP. This project is by definition heavily based on interactions with stakeholders. One of the case studies is the North Sea mixed demersal bottom trawl fishery, and as part of that a stakeholders workshop was held in Edinburgh on 4-6 September 2012, together with a more generic Seminar on Responsive Fisheries Management System (RFMS).

The meeting was attended by 38 people, including 15 stakeholders from diverse affiliations, and made use of a variety of qualitative methods, including brainstorming, focus groups, questionnaires, discussions rounds, ranking exercises and wrap-up sessions in a well-organized and efficient way. This allowed and encouraged the active involvement of all participants, balancing between personal opinions and groups interaction. As for the MYFISH workshop, the ECOFISHMAN workshop addressed both the objectives and the means of fisheries management for this case study, with a specific focus on management measures addressing the **discards** issue. For this particular aspect, ten options were presented, which had to be ranked by all participants with regards to both ease of implementation and efficiency in achieving objectives.

**COMFISH seminar**
COMFISH ([http://www.eusem.com/main/ComFish/comfish](http://www.eusem.com/main/ComFish/comfish)) is an EU project focusing on dissemination of scientific knowledge on fisheries research. The initiative explores innovative mechanisms to improve communication between scientists, policy makers, fisheries stakeholders and society at large. The project is also articulated around a number of Regional Participatory Stakeholder Events (RPSE). One of these dealt with the “**mixed-fisheries** issues in the North Sea”, and was held onboard the Norwegian Hurtigruten Nordlys ferry as a meeting location, travelling from Bergen to Trondheim during 25-27 February 2013. 29 participants attended from the US and eight European countries, representing the European Commission, the North Sea Regional Advisory Council, research institutions, fishers associations, government and other key stakeholders in the fisheries sector.

The workshop methodology for qualitative analyses followed the COMFISH guidelines, and ensured that the participants’ wide fields of expertise were spread equally throughout three working groups. With the help of facilitators, the participants of each group identified and described challenges related to mixed fisheries. After grouping challenges from four different perspectives (expert knowledge, management, economic and social), experts prioritised challenges and, most difficultly,
suggested possible solutions. Being onboard a ferry facilitated also the exchange of ideas and networking among participants.

**Stakeholder contacts under other international initiatives**

*STECF 12-13: management plans part 2 – changes to cod plans*\(^5\)

STECF carried out an evaluation of multi-annual plans for cod in the North Sea (together with Kattegat, Irish Sea and West of Scotland) in July 2011, which indicated that current management measures were unlikely to deliver the objectives of the plans over the next few years. Subsequently, another STECF group convened in December 2011 scoped options for the European Commission for the future (STECF EWG 12-15), and defined a range of plausible management options for future plans. Five of these were explored from the perspective of enforcement through an evaluation of different control measures, and through asking a small sample of active fishers for their views on how a small range of alternative management options might impact on their fishing activities and their businesses.

Enforcement analysis was performed by judging each of the five management options along the following criteria: *Controllability* (is the management measure possible to control?), *Enforcement tools* (how will the management measure be controlled in practice?), *Cost-effectiveness* (Is the control measure cost effective?), *Compliance* (What are the requirements for compliance?), *Infringements* (What are the types of infringements that can occur in relation to the management measure?), *Obstacles* (Are there any obstacles for the fisherman to comply with the management measure?), *Incentives* (Can incentives for compliance be created?).

Independently from this, an on-line questionnaire was developed to explore views of vessel owners/operators on the different management options. Only 19 useable responses were received. Of these all respondents operate in the North Sea, 4 also operate in the West of Scotland, 2 also operate in Eastern Channel, and 4 also operate in other areas. A total of 12 respondents were targeting cod, and other key species including haddock, saithe, whiting, and monkfish. The same set of questions was asked about each management approach in turn to obtain respondents’ views on whether the approach would be more difficult, no different, or easier than the current situation for the following activities: i) Managing my fishing effort, ii) Controlling costs, iii) Managing my cod quota, iv) Managing my quota for other species, v) Reducing discards of cod, vi) Reducing discards of other species, vii) Using my knowledge and judgement about when and where to fish, viii) Fish safely, ix) Adapting my effort to the weather and other environmental conditions.

Respondents were also asked to indicate potential financial impacts (i.e. changes in annual income, profit, input costs (fuel, supplies, new gear, repairs), and number and type of crew employed), and provide an indication of how difficult they felt it would be to enforce the approach.

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Scottish 2011 Fully Documented Fisheries (FDF) trial

As part of the FDF trial, the UK quasi-government organisation Seafish conducted two surveys of the fishing sector enquiring about experiences and perceptions of the FDF trial and analysed the impact of the trial on the activity and financial performance of participating vessels. For the second survey, telephone interviews were conducted with i) Participants in the 2011 FDF trial: 19 skipper/owner interviews (representing 20 vessels) out of 25 participants; ii) Non-participating skippers (seven interviews); iii) Producer Organisations and quota agents (POs and vessel agents survey – five interviews)

Feedback on the Danish experience with FDF

Denmark has been testing FDF since 2008, on two very different issues: 1) the monitoring of cod discarding in the North Sea and Skagerrak trawler fleet (Kindt-Larsen et al., 2011) and 2) the monitoring of harbour porpoises bycatch in the inshore gillnet fishery (Kindt-Larsen et al., 2012). As a major actor in the implementation and follow-up of both trials, the DTU Aqua scientist L. Kindt-Larsen been in close and regular contact with many fishermen, both participants and non-participants of the trials, and she has therefore a broad and informal knowledge on the issues and benefits of FDF and catch quota management. This informal knowledge about feedbacks and perceptions from the range of Danish fishermen was summarized as a direct contribution to SOCIOEC.

Qualitative results from stakeholder contacts

These variety of workshops and stakeholders surveys addressed broader aspects than only the management measures which are the purpose of the present Deliverable. Therefore, only this topic – management measures - is related below. Other analyses relating to management objectives are dealt with in D2.2, while analyses relating to incentives are dealt with in D3.2-4.

German SOCIOEC interviews

(See also results described in the Baltic Case Study for the German fisheries in general)

The impact of technical measures is mentioned several times during the interview with environmental actors. As an example, technical measures are considered important as the current gears are not seen to be enough to minimize bycatch. The impact of certain projects as for example the smart nets in the brown shrimp fisheries is seen as uncertain.

Certification is seen as having a positive effect for the fishery, where, apart from the positive effect of the reduction bycatch, a regional manager mentioned that it could include a local logo in relationship with the natural park and, furthermore, to the lower carbon footprint of the fishery. This, in the case of the shrimp fishery, would imply reducing the carbon footprint by, for example, avoiding the current shelling of the shrimp in distant places such as Morocco.

6 http://www.scotland.gov.uk/Publications/2012/12/5717
With respect to the impact of a hypothetical **discard ban**, a regional manager observed that a good example would be the shrimp fishery, where there is a high survival rate, while a low impact is expected in the Pollock fishery because in the process of MSC certification the fishers have already made the mesh size larger. Workshops/seminars organized within other EU projects

**MYFISH workshop**

Time was too short during the regional workshop in Vigo to discuss management measures. The ranking exercise was therefore performed afterwards through a questionnaire that was sent to participants in the workshop. Management measures were rated according to the potential impact of the measure on the success of achieving objectives assuming full implementation and according to the chances of a full implementation of the management measure given constraints (technical, knowledge base, labour costs).

Participants often found it difficult to rate management measures as the preferred measures depend on the objectives for management. There are also differences between fisheries and regions. In general, there was a wide variety of opinions on most management measures and often ratings ranged from very good to very poor. This led to similar expected utilities for many management measures (Table 1). For example, the scores for a bycatch ban were relatively high from the NGO, but very low from the participant of the fishing industry, while it was the other way round for decommissioning.

As a main point, it is however noticeable that the currently implemented measure of effort restriction and the now agreed discards ban were globally ranked low.

Table 1. MYFISH workshop, ranking the utility of management measures based on combined stakeholder views (lowest utility value is ranked best).

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<th>Exp. Util</th>
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<td>1</td>
<td>Fishing licenses</td>
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<td>ITQs</td>
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<td>TAC</td>
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<td></td>
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<tr>
<td></td>
<td>Season closure</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>Decommissioning</td>
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</tr>
<tr>
<td></td>
<td>Area closure</td>
<td>2.87</td>
</tr>
<tr>
<td>3</td>
<td>Effort transfer scheme between vessels</td>
<td>3.06</td>
</tr>
<tr>
<td>4</td>
<td>Minimum landing size</td>
<td>3.31</td>
</tr>
<tr>
<td></td>
<td>In-season management</td>
<td>3.40</td>
</tr>
<tr>
<td>5</td>
<td>Maximum landing size</td>
<td>3.79</td>
</tr>
<tr>
<td></td>
<td>Bycatch ban</td>
<td>3.81</td>
</tr>
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On the basis of the diversity of opinions and the current landscape of EU fisheries management, MYFISH concluded that none of the proposed management measures can be excluded completely from the list of potential management measures at this stage of the project.
**ECOFISHMAN workshop**

During the EcoFishMan workshop, ten management options for reducing discards were ranked with regards to ease of implementation and efficiency.

Here again, the results showed a great diversity of responses and perceptions (figures 1-3). It was perceived that international measures (such as changing the relative stability or opening new markets) are more difficult to implement than national or regional ones (such as banking/borrowing a share of the TAC, ITQs or spatial avoidance).

**Figure 1.** EcoFishMan Workshop, Easiness of proposed measures for discarding minimization.

However, the scope for implementing the measures does not have an impact in the assessment of the effectiveness, and no single management measure scored an overall high score (Figure 2).

**Figure 2.** EcoFishMan workshop, Effectiveness of proposed measures for discarding minimization.

Ultimately, the data analysis shows a wide range of responses for all the suggested discards avoiding
measures (Figure 3), illustrating the diversity of personal opinions and perceptions.

**Figure 3.** EcoFishMan workshop, Standard deviation in responses for discarding minimization.

**COMFISH Seminar**

The COMFISH seminar was also a day-and-a-half of intensive exchange of opinions and reflection upon problems. Participants acknowledged that the issues surrounding mixed fisheries are complex and notwithstanding the identification and ranking of challenges, feasible solutions are not necessarily easy to find. A consensus was reached around the need for good data to allow good science, as agreement on facts and on scientific results is a key step towards consensus on action needed.

**STECF 12-13**

The candidate management measures suggested by the STECF for the North Sea included the following: i) *The current plan:* Continued use of the basis of the current plan (landings TACs, effort control with derogations) but with simplified and more consistent derogations for fleets reducing cod catch, ii) *Mixed fishery landings quotas:* Mixed fishery landings quotas matched across species, iii) *Mixed fishery catch quotas:* Mixed fishery catch quotas matched across species with in year increases if catches of cod kept below limits, iv) *Individual vessel/business catch quotas:* A system of individual vessel/business catch quotas set at single species level but vessel must not fish in North Sea once any quota is exhausted, v) *Real time effort incentives:* Effort based real time incentives (RTI) based on spatial effort allocations where effort is expended at higher tariffs for more critical areas.

The results of the enforcement analysis pointed out that the individual vessel/business catch quotas management option, i.e. ITQs implemented within a catch quota management (CQM) frame would be the preferred option from an enforcement perspective.

CQM and FDF can be regulated in combination with either a full discard ban, a partial discard ban with exempted species, and without a discard ban but where catches and discards are reported in
the logbook. All options are difficult to enforce but a full discard ban was judged easier to enforce than the other alternatives. In addition to achieving the greatest confidence in catch levels it is also the least difficult as well as the most cost-effective option to enforce. Controlling a CQM/FDF system in combination with any of the other options allowing some discarding requires additional monitoring of the fishing activity at sea where the discarding takes place.

It is interesting to note that the options selected as the most favourable for enforcement were the ones least favoured by the fishermen responding to the questionnaire. In this survey, the Individual vessel/business catch quota option was viewed as the least favourable approach, and more than half of respondents indicated that under this option it would be potentially more difficult to manage quotas and reduce discards.

There appeared though to be general support for activities such as banking and borrowing from one year to the next, and for CCTV.

**Summary of main outcomes**

Most of the workshops presented above were globally well attended by key players from the North Sea mixed fisheries area. They were also well organised, making efficient use of a great panel of qualitative tools stimulating interactions and reflections. It is therefore acknowledged that this material is sufficiently legitimate and representative of main streams of opinions to be used for framing future scenarios analyses.

However, these sources have evidenced a quite diverse picture of perceptions and knowledge around the demersal mixed fisheries in the North Sea (see detailed results below). In all these workshops and surveys, different participants ranked the possible management measures in opposite directions, with regards to perceived ease of implementation, efficiency and legitimacy of the measures proposed, making it difficult to draw firm conclusions.

A non-negligible factor is that the timing of these various initiatives may be important, since all of these workshops have taken place after the Commission’s original CFP proposal in July 2011, and thus over the same period as the intense rounds of negotiations around the reform. Stakeholders’ meanings have been strongly influenced by the most recent developments at the time of the surveys. For example, the MYFISH Vigo workshop and the STECF surveys took place in early 2012, when the possibility of a future discards ban was the subject of a heated debate and most fishery stakeholders opposed it, ranking it therefore low in both surveys. On the opposite, the COMFISH seminar took place in spring 2013, where there was already at that time very strong indication that the discards ban would be adopted as part of the reform, and the discussions took then a more fatalist turn (“it’s there, we cannot avoid it”) but also a more proactive tone (“how to get the most out of it and reduce impact for the industry”) turn. In this regards, the results of the EcoFishMan workshop, which addressed the possibilities to reduce discards, but did not address a full ban, can inform on the possible management tools for the actual implementation of the discards ban.

The perception of stakeholders with regards to Fully Documented Fishery has also evolved with time, as could be expected with the introduction of a new concept. While at the early time of the trials, a number of fishers were poorly informed and uncertain about these new approaches, the surveys of the Scottish and Danish trials revealed that opinions tended to be more polarized with time, with those participating in the trials being globally positive about FDF while non-participants were largely
negative. The Scottish survey noted overwhelming negative views of nonparticipants, with respondents labeling the trial divisive and unfair. It is therefore unclear if the non-participants will become more positive to FDF systems when it becomes compulsory (thus less divisive).

Noticeably, banking and borrowing, where a part of the TAC can be saved for or borrowed from next year’s TAC, was considered positively in a number of surveys, but was not mentioned in others, illustrating as well that the methods used for the various qualitative analysis (open brainstorming where participants must name solutions themselves vs. ranking of options suggested by the workshop’s facilitator) can also influence the outcomes of the interaction with stakeholders.

**Input for simulations**
The analysis above has revealed the dynamism of the stakeholders exchanges and interactions around the North Sea mixed fisheries over the recent years. It is evident that the key players within the fishing industry, NGOs, managers and scientists have had numerous occasions to meet and discuss, and it can be considered that the desired objectives of improved inclusive governance and involvement of stakeholders are at least translated into these many open forums.

But this has also revealed a great difficulty to agree a definitive and exhaustive list of management measures that could form the backbone of the Impact Assessments to be performed as part of SOCIOEC and other projects. It is important to consider however that the processes followed at the various workshops did not actually aim to achieve agreement on how to move forward but merely to investigate people’s views on the management options. The MYFISH project decided to maintain all options open so far, and steps have already been taken to translate the range of qualitative objectives, constraints and management measures into quantitative indicators and scenarios that can be implemented in the various bioeconomic models involved.

The SOCIOEC North Sea case study had included a plan to conduct impact assessments of both ITQs and CQM, mainly using the FishRent and Fcube models. The present analysis, as well as the most recent developments of the CFP reform and the agreement on the discards ban, show that these choices are certainly pertinent and timely, and they will have high priority. Integrated mixed-fisheries management plans based on single-stock targets with some degrees of flexibility around appear to be an appealing option.

Additionally, the NSRAC is now suggesting a number of approaches for the near future, as summarized in the suite of documents from the Demersal Working Group, including for example TACs only for *economic driver species* (as already implemented in Norwegian waters through a “Norway others” quota).

In conclusion, it appears that focus groups and stakeholders interactions are playing a very important role in achieving common knowledge around the understanding of the challenges. Even if no obvious

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consensus emerges on the preferred management options as such, there is increasing consensus around the perception of the issues. Interactions with stakeholders, in which ever form they take place, certainly contribute helping stakeholders to understand the potentials and limits in the scientific impact assessment tools, and helping scientists to formulate salient, legitimate and timely model hypotheses and quantitative scenarios.

But the current dynamism of the political process, driven by the reform of the CFP, means that the strategic scientific decisions regarding the future set-up of scenarios and impact assessments cannot be fully established and agreed upon through single stakeholder events. Scientists must acknowledge the need for models to be flexible enough to be able to address new ideas and requirements whenever they become relevant, as the regional solutions for the future are probably not fully established and formulated yet.

4. Western Waters fisheries

4.1 Basque trawler fisheries

Organization of contact with stakeholders
The work on impact assessment in the Basque trawl fisheries case study involved individual consultation by means of semi structured interviews with different kinds of actors. In this way, one semi-structured interview was carried out with the fishermen’s representative. Further one more stakeholder focus group is planned with fishermen, which will take place in the summer season (in July), during the fishing activity break. Finally, an additional focus group is planned with scientists.

The main general objective coming from the organized focus groups is to identify which fishermen’s behaviour is derived as a direct consequence of applying a management measure (both instrumental factors and/or non-instrumental factors). Incentives can come from: (i) external factors (such as the application by the Administrations (Regional, Local or European)) of different management measures, (ii) internal factors (such as the internal organization issues), and finally, (iii) other market factors (prices, …). With this general objective in mind a four part questionnaire has been prepared to be used as a guideline for the interviewers.

It is worth pointing out that in Basque fisheries the local producer organizations (POs) play an important role in establishing conservation and management measures (CMMs) in relation to the fisheries where their fishing fleets operate. The CMMs are proposed and agreed within a given fleet and, then, endorsed by the State’s fisheries administration and then applied officially to other POs. Having these issues in mind, we propose some additional questions related to the role of fishermen’s organizations in order to identify incentives provided for these organizations that may influence compliance, among other issues.

Qualitative results from stakeholder contacts
The following external and internal CMMs, organisational issues and market factors where pointed
out during the development of the interview:

In the particular case of **management based on TACs**, the EU sets up a TAC and Spain can decide how to administrate its national allocation. The national allocation is distributed among the licensed boats. Most fishing boats belong to a given PO. The POs in turn play a key role in **co-management** by proposing their own rules through a mechanism devised by the EU, called **extension norms**. Access and withdrawal regulations in force in the Basque fisheries comprise licenses and authorizations. In general, the traditional Relative Stability Principle is not accepted by the Basque demersal fleet, and its application represents the main problem of this fleet.

Fishing rights in the form **transferable days at sea** and **individual transferable quotas (ITQs)** are being used in the demersal fleet to manage all the allocated resources. The ITQ systems currently used in the EU cannot in a sense be considered market tools insofar as Member States control quota exchange among the different Member States (for instance, between France and Spain) in order not to break down the Principle of Relative Stability. The ITQ system in force in the Basque fleet, which is based on the current allocation system, is eventually jeopardized by quota overshooting. Fishermen claim that a European market for individual quotas could solve the constraints and may solve the problem of ITQ overshooting. Symptomatically, the Basque trawling fleet has acquired French vessels which allow the fleet to get more quotas. This is supposed to reduce the gap between fleet needs and fishing possibilities.

**Discards** are expected to be reduced within the new Reform of the Common Fishery Policy (CFP) to be in force from the end of 2013. The fishermen’s representative agrees with this measure but he considered that this discard issue is not been addressed in sufficient detail and reliability by the Commission. There exist an obligatory discard due to the principle of relative stability, and fish size, among others. Moreover, the ban on discards will be applied to all the fleets in spite of the many differences among fleets. For example, Northern and Southern European trawlers show substantial differences.

Imports of fish at a lower price from other countries push a strategy of the demersal fleet to increase catches. The problem of ITQ overshooting is reinforced due to this external factor.

**Decommissioning schemes** are considered to be a good tool which is necessary to try to solve the above mentioned overshooting problem. It is expected to reduce a maximum number of 5 trawl vessels in the following years to accommodate the fleet to the available natural resources.

**A seasonal stop**, a summer fishing break (July and August) is yearly adopted by the trawlers due to (i) market reasons, given that the summer months demand is low in relation to the rest of the year, and (ii) not to over-exploit natural resources. (however, it is uncertain if seasonal closures reduce overexploitation, if they take place without reduction of catch they simply displace fishing pressure over the remaining time)

The use of **institutional structures** to allow for better management of the resources can be observed in the Basque trawlers. POs, manage the fishing rights of their associates, establish fishing plans and facilitate group decisions. POs also represent the interests of the associates in the Regional Advisory Councils (RACs) although their role is merely consultative.
Inputs for simulations
The Fishrent model will be used to implement different simulations taking into account the qualitative inputs presented in the following table.

Table 2. Inputs for simulations for the Basque trawler fleets

<table>
<thead>
<tr>
<th>Management measures, Government factors, external factors</th>
<th>Fishermen’s behaviour – input for Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>External management measures</td>
<td></td>
</tr>
<tr>
<td>• TAC: Established for the Northern hake, megrim and angler fish at the Council of Ministers</td>
<td>Quota overshooting</td>
</tr>
<tr>
<td>• Recovery plan: Restrictions on catches, mesh size</td>
<td></td>
</tr>
<tr>
<td>• Allocation of Spanish quota: Based on size of the vessel (80% &gt; 100 GRT, 20% &lt; 100 GRT, VI, VII, 60 t for pole &amp; line in Bay of Biscay (VIII abde).</td>
<td>Quota overshooting</td>
</tr>
<tr>
<td>• ITQs: Established since 2006, transferable among fishing vessels in the register, permanent or seasonal transfers</td>
<td></td>
</tr>
<tr>
<td>• Discards</td>
<td>Discards will be reduced under the new CFP</td>
</tr>
<tr>
<td>• Decommissioning schemes</td>
<td>Reduction capacity, 5 vessels</td>
</tr>
<tr>
<td>Internal management measures</td>
<td></td>
</tr>
<tr>
<td>• Pooling of individual rights: Under the umbrella of the PO, rights owners are able to pool their individual quotas</td>
<td>Group decisions (self-management)</td>
</tr>
<tr>
<td>• Seasonal stop: Two months in summer (July, August) for holidays and market reasons</td>
<td></td>
</tr>
<tr>
<td>Governance factors</td>
<td></td>
</tr>
<tr>
<td>• Producer Organizations, POs</td>
<td>Group decisions (self-management)</td>
</tr>
<tr>
<td>• Participation in RACs</td>
<td>Extension norms</td>
</tr>
<tr>
<td>Other factors</td>
<td>Quota overshooting</td>
</tr>
<tr>
<td>• High level of Imports</td>
<td></td>
</tr>
<tr>
<td>• Low first-sale prices</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Basque purse seine fisheries

Organization of contact with stakeholders
The work on impact assessment in the Basque purse seine fisheries case study involved individual consultation by means of semi structured interviews with different kinds of actors. In this way, one semi-structured interview was carried out with the inshore organizations (cofradiás) representative of Gipuzkoa. Further one more stakeholder’s focus group was organized with fishermen in Pasaia (Gipuzkoa). Finally, an additional focus group is planned with scientists.

The main general objective coming from the organized focus groups is to identify which fishermen’s behaviour is derived as a direct consequence of applying a management measure (both instrumental factors and/or non-instrumental factors). Incentives can come from: (i) external factors (such as the
application by the Administrations (Regional, Local or European)) of different management measures, (ii) internal factors (such as the internal organization issues), and finally, (iii) other market factors (prices, ...). With this general objective in mind a four-part questionnaire has been prepared to be used as a guideline for the interviewers.

It is worth pointing out that in Basque fisheries the fishing activity rests on an institutional basement which includes the ancient cofradías of fishermen, now gathered under the umbrella of the Producer Organization (POs). Having these issues in mind, we propose some additional questions related to the role of fishermen’s organizations in order to identify incentives provided for these organizations that may influence compliance, among other issues.

Qualitative results from stakeholder contacts
The following external and internal conservation management measures, organisational issues and market factors where pointed during the development of the interview and focus group with fishermen:

Fishing rights in the form transferable days at sea and individual transferable quotas (ITQS) are being used to manage bluefin tuna in the purse seiner fleet. The ITQ system used in the bluefin tuna has demonstrated that incentives are in place to allow fishermen to obtain profits by leasing their rights to operators outside the Basque country. In 2012, 70% of the catch allocation was transferred to tuna farms in the Mediterranean. Currently, 100% of the Basque purse seiner fleet’s quota was transferred to Mediterranean operators. These transferences have been decided within the PO of Gipuzkoa.

The allocation of the Spanish TAC share as a lump sum for all purse seiners takes place only in the case of anchovy.

Individual limits are internally agreed within POs for the anchovy fishery. This group’s decision represents the main market strategy to get better first-sale prices for this species.

The use of institutional structures to allow for better management of the resources can be observed in the Basque country. The role of the traditional cofradías as a provider of technical advice has been improved by their adaptation to the modern EU governance framework, where POs play a key role. In fact, now cofradías gather under the umbrella of POs and can propose conservation and management measures that may be adopted by the Spanish government and imposed at national level.

Inputs for simulations
FishRent model will be used to implement different simulations taking into account the qualitative inputs presented in the following table.

Table 3. Inputs for simulations for the Basque purse seine fleets

<table>
<thead>
<tr>
<th>Management measures, Government factors, external factors</th>
<th>Fishermen’s behaviour – input for Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAC: Established for mackerel, anchovy, Bluefin tuna,...</td>
<td>Low TAC for mackerel which implies high incentive to quota overshooting.</td>
</tr>
</tbody>
</table>
4.3 French demersal fleets operating in the Bay of Biscay

Organization of contact with stakeholders
The work conducted in SOCIOEC on the Bay of Biscay sole fishery focuses (i) on the description of the French governance system for fisheries quota management implemented by Producers Organizations in the case of the sole in the Bay of Biscay and (ii) on the bio-economic impacts of various possible governance systems. Questions of the impact of quotas constraints on the fishermen’s behaviors are of great interest for the analysis of bio-economic impacts of quota management options. Ifremer and UBO, associated in a joint research unit since 2008 – UMR AMURE, have a partnership in SOCIOEC with PMA (Pêcheurs Manche Atlantique), the main French producer organization in fisheries who helps in the project for stakeholders’ consultation.

Qualitative data on possible effort reallocation by fleets and on the impacts of the implementation of quota constraints by producers’ organizations on producers’ behaviors have been collected within the project. Two recent stakeholder consultations have been thus organized by Ifremer in 2012.

1. Qualitative data on possible effort reallocation
Primarily, Ifremer has organised a general meeting on the 23rd February in Nantes with four POs (PMA, Arcacoop, From Sud Ouest, OPPAN), two representatives from the Southern Western Waters RAC, one fisherman and three organizations (Ifremer, Aglia and IMA) to identify possible effort reallocation by fleet in case of higher constraints on the sole quota.

The methodology adopted to identify effort reallocation options was to identify constraints existing on main optional species of the Bay of Biscay: Seabass (*Dicentrarchus labrax*), Anglerfish (*Lophius*...
piscatorius), Hake (Merluccius merluccius), Whiting (Merlangius merlangus), Meagre (Argyrosomus regius), Nephrops (Nephrops norvegicus), Goatfish (Mullus surmuletus), Pollack (Pollachius pollachius), Sargo (Diplodus sargus), Turbot (Scophthalmus maximus), Crustacean. The following table summarizes results.

2. Qualitative data on impacts of individual quota constraints

The second event was a set of semi-directive face to face interviews with the nine Producers Organization concerned with the stock of sole in the Bay of Biscay. Semi-structured interviews, face-to-face, were organized with official representatives of all POs in June and July 2012. Figure 1 indicates names and localization of interviewed POs (see deliverable D 6.9).

Figure 2 – List of POs interviewed for the French demersal fleets in the Bay of Biscay case study

Qualitative results from stakeholder contacts

1. Qualitative data on impacts of individual quota constraints

Results of this consultation have shown that in case of higher quota constraints on the stock of sole (as can be expected to reach MSY):

- trawler fleets would have very little opportunities of reallocation of effort to respect the sole quota that they fish all along the year. A decrease in the sole quota would thus imply a decrease in the number of days at sea.
- Small gillnetters fleets could have small possibilities to reallocate their fishing effort on hook métiers targeting Pollack, seabass, megrim or whiting
- Larger gillnetter fleets could have small possibilities to reallocate their fishing effort on monkfish and lower possibility on hake or whiting that have low valorizations.

Results show that possibility to reallocate effort in the Bay of Biscay remains limited because of low abundances of stocks, access regulation or market or quota constraints of other species.

2. Qualitative data on impacts of individual quota constraints

One of the major trends for several years has been the increasing role of the French POs in quota management. The central administration has gradually transferred the allocation procedures of quotas between fishermen to local level. In view of quota over-consumption situations, POs have had to introduce new rules within their organisation to impose limitations in the individual consumption by species. POs were interviewed on the management system for quotas and on the impacts of their management decision on the producers’ behaviors.
The stakeholders interviewed declared that fishing effort reallocation has occurred as a result of individualization of landings, and/or the fact that sole production is more frequently spread over the year. Other changes observed are a reduction of days at sea for the most specialized gillnetters.

**Inputs for simulations**

Preliminary conclusions from stakeholders consultations in 2012 are of great interest for building of alternatives management measures. Qualitative results are listed in the following table based on two criteria, the transfer of fishing effort and constraints associated to optional species. Two fishing fleets targeting Sole in the Bay of Biscay have been discussed during the stakeholder consultation, netters <10 meters and netters >10 meters. Netters could transfer fishing effort from the Sole Fishery to one or several of optional species subject to potential constraints (resource, market, quota, access regulation, conflict, experience).

Table 4 – Qualitative results for the Sole fishery simulations in the Bay of Biscay

<table>
<thead>
<tr>
<th>Species</th>
<th>Resource</th>
<th>Market</th>
<th>Quota</th>
<th>Access regulation</th>
<th>Conflict</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seabass</td>
<td></td>
<td>Low price for netters/market</td>
<td>Low price if netters/market</td>
<td>Licence for liners / limitations for trawlers</td>
<td>Concentration on specific areas / Danish seine during the springtime season</td>
<td></td>
</tr>
<tr>
<td>Goatfish</td>
<td>High seasonal fluctuations (April-June in high sea, July-August on the shore line)</td>
<td>Narrow market, low price if not a fresh fish today</td>
<td>Under quota in area VII / over quota in area VIII</td>
<td>Licence for netters (without limitation)</td>
<td>Potential conflict between Spanish and French fishermen</td>
<td>Required specific skill</td>
</tr>
<tr>
<td>Pollack</td>
<td>Stock with no assessment / north fishery, south on wreck</td>
<td>Low price if not a fresh fish today</td>
<td>Under quota in area VII / over quota in area VIII</td>
<td>Licence in Gironde region, only for boats under 12 meters</td>
<td></td>
<td>Required specific skill</td>
</tr>
<tr>
<td>Megrim</td>
<td>Fragile, preservation of spawning adults, seasonal fishery</td>
<td>Best ex vessel prices at the beginning of the year</td>
<td>Quota not totally used but restricted in the South of the BB</td>
<td>Licence for netters (without limitation)</td>
<td>Potential conflict between Spanish and French fishermen</td>
<td>Required specific skill with catch in high depths</td>
</tr>
<tr>
<td>Anglerfish</td>
<td>Benchmark</td>
<td>Overconsumption in Spain, flexibility for French fishermen</td>
<td>Overconsumption in Spain, flexibility for French fishermen</td>
<td>Licence for netters (without limitation)</td>
<td>Potential conflict between Spanish and French fishermen</td>
<td>Required specific skill with catch in high depths</td>
</tr>
<tr>
<td>Hake</td>
<td>Available</td>
<td>Enhanced value for high quality</td>
<td>Small quota for area VIII / concerns about the precautionary approach</td>
<td>Licence for netters (without limitation)</td>
<td>Potential conflict between Spanish and French fishermen</td>
<td></td>
</tr>
<tr>
<td>Whiting</td>
<td>Stock with no assessment</td>
<td></td>
<td></td>
<td>Licence for netters (without limitation)</td>
<td>Potential conflict between Spanish and French fishermen</td>
<td>Danish seine</td>
</tr>
</tbody>
</table>
Turbot | Hard competition for small fish due to aquaculture
---|---
Nephrops | Licence for trawlers | Conflicts between trawling and passive gears | Price too expensive for pots
Crustacean | Too small size for the market | | Live tank too expensive

These qualitative data can be used as inputs for simulations by formulating various assumptions of reallocation of effort according to fleet and to discuss bio-economic impacts of management scenarios on sole.

5. Mediterranean and Black Sea case study

5.1 The demersal fishery in Greece

Organization of contact with stakeholders

The SOCIOEC project includes stakeholder involvement in several different ways, from analyzing the incentives created by management measures to returning to participants the impact analysis of measures suggested by them. Both the objectives of the policy and the management measures are consulted upon, asking for an EU wide as well as a regional perspective and giving the stakeholders the chance to participate in an exercise which has not, to our knowledge, been done in this way for the North Aegean Sea demersal fisheries.

In the Greek Case Study the work was initiated by contacting the Panhellenic Association of Medium-sized owners in Nea Michaniona, northern Greece. Then individual consultation was carried out by means of semi-structured interviews with different players and stakeholders. This approach was deemed appropriate as they can convey additional information not initially asked.

Qualitative results from stakeholder contacts

Interviewing fishers yielded important information, especially towards their concern on fisheries management, the reform of the CFP and the enforcement of EU regulations into the Greek reality. The main management measures that were mentioned by the Greek trawling sector representatives were the unequal treatment of the various fleets and fisheries against the law, the imbalanced enforcement of the legislation, the technical measures, the closed areas and the discard ban.

The most important issue that all interviewed fishers referred to was the non-equal treatment of the various fleets and fisheries by the various regulations and legislation. They consider that the Greek demersal trawling fleet is under a very strict legislation framework, the stricter among all other EU countries. Additionally, they consider that the national legislation is focused on trawling, leaving the small-scale fisheries sector without restrictions and control. This fact, along with the poor law enforcement and control by the authorities, lead to over-exploitation of economically important...
stocks, as those of hake and red mullets.

**Technical measures** are of great concern for the Greek trawlers. The cod-end mesh size in Greek trawlers changed in 2008, in compliance with the Mediterranean regulation (EC 1967/2006), from 24mm to 40mm. Yet, according to fishers it does not seem to be as effective as expected, as they did not see a great improvement in the by-catch, whereas they see the commercial species reducing both in quality (i.e. size) and quantity. Additionally, their major concern is the minimum landing sizes that are set in the Regulation, since they believe that they do not correspond with the Greek reality (e.g. for *Pagellus bogaraveo*, a species widely caught by trawlers in the northern parts of the Aegean sea, minimum landing size is set to 18cm total length. Yet, in Greece, such large individuals are rarely caught. It is scientifically proven (Massuti et al. 2004) that fish tend to have smaller sizes in the Mediterranean, a phenomenon called “Mediterranean nanism” that is more intense in the eastern parts of the basin). All of the fishers participating in the interviews opposed to an increase of effort by means of new licenses. At this point the issue of **subsidies** was raised by those interviewed. The majority of fishers would consider withdrawing their fishing boats/licenses, should the amount of money paid be reasonable and well-compensated.

A major issue for the Greek trawling industry are **closed areas**. Apart from the restrictions imposed by the EU Mediterranean regulation (EC 1967/2006), there is a plethora of national laws, decrees and ministerial decisions. These result in the closure of major areas, and especially closed or semi-close gulfs. The fishers acknowledge the contribution of a closed spawning and/or nursery ground, yet they believe that the majority of the closures, based on national legislation, are made from reasons other than the conservation of fish stocks, rather for political reasons and for the ‘convenience’ of other sectors, such as aquacultures. For this reason they are very reluctant towards the establishment of Marine Protected Areas (MPA). They consider that ‘we have too many of them’ and the only way that they would accept an MPA would be through strong scientific evidence of its purpose, and the re-evaluation of the remaining closed areas.

As far as the upcoming **discard ban**, the fishers unanimously agreed that would only cause problems. Their major concern is “**how can our small sized vessels transport all discards back to the port**” and “**Where will those discards be collected (gathering points), when in Greece we have several small ports that we can unload our fish. Who will pay for the transport of discards to the gathering points? And what will be the fate of the discards?**”

**Co-management** is a concept that is not very clearly defined, and the fishers seem to be rather confused on how and to which extent they can contribute. They are very keen on participating in co-managing the stocks, as well as decision making, and this is obviously seen by the fact that their union financed 100% of the management plan regarding trawling in Hellenic waters. They also strongly support long term management plans, in order to have good stock monitoring that may lead to recovery of exploited stocks.

During the interviews, the strong ecological sensitivity of the fishers was evident. They seemed very eager to participate in the management and realise that monitoring and assessment are crucial towards the direction of sustainable management. They also pin-pointed the need for better control and enforcement of management measures; the latter, should take into consideration the peculiarities (both environmental and socio-economic) of the area to be enforced.
Inputs for simulations
Having discussed with the trawl fishermen, the simulation that is considered suitable is the shifts in spatiotemporal distribution of fishing effort to reduce the discards of unwanted catches of undersized specimens and species. As the timeframe for the complete ban of discards could easily reach 2020, it is considered essential to reduce the amount of discards in certain areas and periods of fishing season sooner than 2020. Such scenario will benefit both the target and non-target stocks and species and will also contribute to improved management of the resources and biodiversity goals. The possibility of introducing or reopening closed areas either permanently or seasonally could also be examined and this has also been requested by the fishermen. The above could also be interesting to examine in comparison with other main players in the area, e.g. coastal fishermen.

5.2 Black Sea fisheries case study (Turkey)

Organization of contact with stakeholders
The work on impact assessment in the purse seine pelagic fisheries in the Black Sea case study involved focus group consultation by means of evaluating the answers on same questions from different perspectives which were answered by different stakeholders of the purse seine fisheries such as NGO’s, environmentalists and consumers, fishermen, a fisheries association, state research institute, universities, fisheries administration and processing industry.

This method was selected since there are almost no qualitative data available in the current data collection system in Turkey. So all answers were evaluated on subjective basis rather than specific objectives. This report contains basic information on the administrative measures, incentives and behavioural responses of the stakeholders in relation with economic, social and biological issues. For some reasons some stakeholders were not able to participate to the case study meeting. So, a second stakeholder meeting has been considered just prior the opening of fishing season in autumn in order to provide more stakeholder participation. Meeting location may be in Istanbul where majority of the stakeholders concentrated in this city due to give the advantage to the participants whom will be joined for next meeting.

Consultation process was preferred as much as longer as to receive the answers of the each of the stakeholders’ opinion on specific questions regarding purse seine fisheries in the Black Sea. Following inputs were derived from the answers of the group from different perspectives.

Qualitative results from stakeholder contacts
Questions to the stakeholders can be grouped as;

- Degree of satisfaction, problems and impacts about/on current purse seine fisheries carried out in the Black Sea,
- Quality and quantity of discards in purse seine fisheries,
- Harmonization process to EU CFP, IUU fisheries,
- Daily quota application as co-management measure oriented by fishermen association,
- Management measures; decision making process, technical measures,
- Governance, subsidies, role of fisheries association, MSC services,
- Sustainability of pelagic fish stocks.
Subsidies are evaluated from different point of views. As a nature of purse seine fisheries, fishing fleet are composed by biggest sized vessels i.e. from 24 to 64 m OAL and most of the companies have carrier vessels accompanying active fishing vessels. The majority of fuel subsidies have been used by these vessels followed by trawlers in the Black Sea. Artisanal fishermen have also started to use this subsidies but small vessels have not been fully able to get subsidised fuel due to procedures applied by the Ministry of Communication, Transportation and Maritime as the high cost of fuel registry journal, limited size of fuel tanks and similar bureaucratic procedures applied to the big sized vessels. Artisanal fishers want a more simple system to make use this opportunity to reduce their costs. Fishers are happy to use subsidised fuel but the raising of the fuel prices is one of the main problematic issues as fuel os the main item in their costs. On the other hand universities, research institute and NGO representatives believe that fuel subsidies have no effect on fish prices but encourage overfishing due to staying longer at sea, spending longer hours to search fish schools, and high by-catch rates.

The impact of technical measures is rather complicated issue for the understandings of different stakeholders from the existing management measures applied in current purse seine fisheries. The main measure was the depth limitation which was implemented last year. It is 24 m depth and above allowed for the purse seiners to catch pelagic fish along the Black Sea coast. Purse seiners are unhappy due to the implementation of these measure when they are waiting lesser depths to be fished in to catch migratory large pelagic. Environmentalists, scientists and artisanal fishermen are happy and urged to increase this limit beyond 50 m depth to save coastal waters which are the nursery areas for small fish. In fact the majority of the stakeholders are intending to implement EU CFP rules as 50 m depth as limit for industrial fisheries for the sustainable use of exploited fish stocks. Moreover 0-50 m depth range is very critical for all species whether considering pelagic or demersal due to current depths of purse seine nets which are varied between 90 to 140 fathoms. On the other hand purse seine nets are not selective and may collect all demersal and pelagic species under the coverage area of the nets which is more than 1000 m.

There are several no fishing zones for purse seine fisheries along the Black Sea coast. But purse seine fishermen want all coastal zones to be opened for purse seines in order to increase their catch. But the other stakeholders want to increase the no fishing zones in order to prevent overfishing in spawning and nursery areas till the implementation of marine protected areas along the Black Sea coast, where there is none at present.

Minimum catch size measure for pelagic (9 cm for anchovy, 13 cm for horse mackerel) is not an efficient conservation measure on sustainability of the purse seine fisheries due to lack of selectivity of the nets. All stakeholders accepted this issue. Purse seine fishermen want complete freedom to use their nets to catch fish in all size due to mixed migrating pattern of small, medium and large sized fish altogether. According to their opinion there is no way to differentiate them before operation and small ones may go to the processing industry for fish meal and oil. On the other hand the migrating stocks may go outside of the Turkish EEZ zone as it was observed since the last 10 years and fishermen in the Georgian waters may catch the migrating stocks before they do. By giving the example of the some 20 Turkish purse seine vessels operating in Georgian waters are heavily exploited anchovy stocks there by implementation of lesser official minimum catch size as 7 cm. But
other stakeholders agreed on the implementation of minimum catch size as 9 cm in all the Black Sea countries including as an obligatory measure to the vessels applied to the Ministry of Food, Agriculture and Livestock (MFAL) for permission to go fishing in Georgian waters.

Environmentalists, scientists and the fishermen association agreed on the existence of high bycatch rates in purse seine nets. The nets are made of the smallest mesh sized nets produced in the factories (1.3 cm). Their demand is the encouragement of the research activities to increase selectivity of purse seine nets by the support of MFAL. It was known that some effort has already been spent to prepare more selective purse seine nets not to catch undersized blue fish which there was high administrative and public pressure towards catching/consuming legal sized blue fish in the sea of Marmara and main markets around this sea. On the other hand, according to their opinion there is a strong need for more efficient surveillance services at sea, which is currently carried out only by coast guards, MFAL should be more efficient on market and fish processing plants controls.

There is only one example of **co-management** in purse seine fisheries in the Black Sea. In order to stabilise market prices the fishermen association agreed to implement daily catch quotas determined according to the size of the 7 vessels. At the beginning optimistic results were observed. Fishermen earned more money from less fish compared to supply 3 times more fish to the market. But later, processing plants encouraged fishermen to catch more fish to process especially undersized fish. Although MFAL has supported this initiative at the beginning, when the portion going for processing plants was over the supply for human consumption, the support was taken back and quota application was completely ended.

One of the main problems is the number of licensed fishermen and membership to fishery cooperatives. According to the current Fisheries Law (waiting for amendment) there is no definition for fisherman. Every Turkish citizen can have a license just by applying to the provincial offices of MFAL for themselves and their (even leisure) boats. This is one of the reasons that the number of licensed vessels seems too high comparing with the EU fleet size and abundance of exploited stocks. All stakeholders agreed on the need for the implementation of such a system functioning as aboard of fishermen certification expert board. When a person has fisherman and fishing vessel license, he is free to catch fish and trade though he has other professions, he can occupy place in the fishing ports and can use some rights given by Law to the fishermen as to use tax free scheme for fuel, import fishing gear and engine by custom tax exemption. These issues create base for unfair competition especially among artisanal fishermen. It is of common interest to create a specific definition on who is the fisherman for the better motivation of real fishermen by social, economic and ecological means. Then, the need for a new **certification** system was expressed by universities, fisheries union and NGO’s.

As governance, all stakeholders agreed on the existent infrastructure/organisational body of the MFAL is not sufficient to solve the problems of the fisheries management. The quality and quantity of the staff is not covering the needs of modern fisheries. Provincial directorates are very weak in fisheries field due to limited number of staff working as fisheries expert and lack of awareness/interest to fisheries among wide agricultural and animal health areas not only in provincial directorates but also in central administration.

Fishery statistics contains information on landings, but data collected by Turkish Statistical Association via questionnaires sent to each of the purse seine vessels
owners over 25 m and random samples less than 25 m collected after one year from the fishing season is not an efficient system resulting in underestimated landings, limited effort data, no biological, bycatch data permitting stock assessments, limited economic and social data. There are fishing port offices to receive landings data and inspection, VMS system and FIS, but they are not fully working due to manning problems at present. All stakeholders have commented the need for real and reliable data and fully working systems mentioned above for the better management of the fisheries.

Despite 5 years of development plans and annual programs prepared by the government, all stakeholders agreed that there are very limited considerations/remarks about fisheries in these official documents and they expressed the need for urgent short or mid-term fisheries management plans on regional basis or specific fisheries like purse seine fisheries across country. All parties in the focus group also pointed out the need for wider consultation not only in the preparation of fisheries management plans but also for any technical measure decision making process.

Representative from the MFAL mentioned the new regulation on decommissioning scheme as a new tool to reduce fishing effort in industrial fisheries. A fisheries union representative expressed their opinion about this tool as very useful decision to solve overfishing problem in purse seine and trawl fisheries in the Black Sea. NGO’s and scientists also supported this view. Fishermen in the group explained that the amount of support is not at the satisfactory level and this initiative may encourage fishermen to sell their secondary vessels which are not effectively used in fishing operations.

**Inputs for simulations**

Only limited qualitative inputs can be used for simulations where necessary for purse seine fisheries in the Black Sea.

Table 5. Inputs for simulations for the Black Sea fisherie

<table>
<thead>
<tr>
<th>Management measures, Government factors, external factors</th>
<th>Fishermen`s behaviour – input for Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External management measures</strong></td>
<td>Overfishing -loss net earnings,</td>
</tr>
<tr>
<td></td>
<td>-loss of job, -quota allocations,</td>
</tr>
<tr>
<td></td>
<td>-loss of fishing sites</td>
</tr>
<tr>
<td></td>
<td>Reduction in number of vessels,</td>
</tr>
<tr>
<td></td>
<td>Reduced fishing zones,</td>
</tr>
<tr>
<td></td>
<td>Reduced fuel costs</td>
</tr>
</tbody>
</table>

- Data collection: Imposed by GFCM due to membership of Turkey
- Combating IUU fisheries. GFCM
- Protection of biodiversity: Black Sea Commission
- Conservation of small cetaceans: Bern Convention
- Protection of the Black Sea from Pollution: Black Sea Commission and Bucharest Convention fisheries
- Impose for possible fisheries agreement in the Black Sea-GFCM
- Biodiversity Convention and implementation of marine protected areas
6. Pelagics case study

6.1 Danish pelagic fisheries

Organization of contact with stakeholders

The contact with stakeholders of the Danish pelagic fisheries is organized in two different approaches. There have been interviews with individual fishermen and there will expectedly be participation in the pelagic RAC meeting in August 2013.

Individual fishermen in Denmark

An industry survey was conducted with the Danish fishermen involved in pelagic fisheries in the North Atlantic, North Sea and Baltic Sea. The questionnaire survey aimed at clarifying differences in preference structures across vessels of various sizes, catches and turnovers and 18 vessel-owners were interviewed about their management preferences. In the questionnaire-interviews, fisheries management policies were characterised by five attributes designed both to cover the main issues relevant to CFP reform proposals and to integrate ecological, economic and institutional factors. These attributes were: i) the long-term biological outlook of the fishery; ii) the management scale; iii) fishing community viability; iv) management measures (e.g. spatial management approaches); and v) access and quota allocation options (e.g. individual transferable quotas). Additionally an economic attribute was included which indicates respondent’s willingness to pay for management changes and welfare impacts arising from moving from one suite of management policies to another. Currently the interview data are being analysed using a Random Utility Modelling framework to reveal the preferences of the fishermen for the alternative policy attributes and to analyse how respondents make trade-offs. The analyses will be finalized end June and the outcomes will form the basis for simulation inputs. In addition to specific questionnaire requests on pre-defined management measures the industry interviews also contained open questions on preferred measures in order to collect the widest spectrum of inputs.
The pelagic Regional Advisory Council

Besides individual fishermen, the second approach is to interview other stakeholders around the pelagic fishery, including non-industry stakeholders. The obvious way to handle this is through the pelagic regional advisory council. The pelagic RAC consists of a wide range of stakeholders. Besides fishermen organisations, there are also processors and marketing organisations, trade associations, and various non-industry stakeholders such as environmental organisations and recreational fishery organisations. Having their thoughts on the current management as well as the possible future management components will provide valuable insights, which can then be used when setting up the bioeconomic models used to evaluate various management options.

Qualitative results from contact to stakeholders

Contact to fishermen in Denmark

In Danish industry survey, the respondents were asked to rank the following 10 management measures according to their performance potential: 1) Reduction of fleet overcapacity, 2) More clear management objectives, 3) Focus decision-making on long-term goals, 4) Increase industry input, role and responsibilities, 5) Improve compliance with rules, 6) Ban discards, 7) Make quotas individual and transferable, 8) Fish at levels guaranteeing Maximum Sustainable Yield (MSY), 9) Improve the regional decision making structure of CFP, and 10) Increase the focus on socio-economic aspects of management. The management measure ranked highest in terms of performance potential was the introduction of individual transferable quotas (ITQs), followed by increased industry input, role and responsibilities in management. An increased focus on socio-economic aspects of management came in third.

In addition to the 10 pre-defined management measures the respondents were asked to suggest additional measure that would improve current management, the following measures - all more or less directly focused on industry involvement in assessment and management - came up:

- More surveys and more industry involvement in surveys
- Improve assessment quality
- More industry involvement
- Making science and fisheries speak the same language

Contact to the pelagic RAC

The SOCIOEC team expect to participate in the pelagic RAC meeting in August 2013 with the purpose of conducting interviews with the stakeholders represented in the RAC, and getting their views on the current and future management options related to the fishery they represent. However, informal talks have identified some issues, which are expected to be highlighted in the August meeting. These include the discard ban and the implications thereof. The challenges around shared stocks, primarily mackerel, have also been mentioned during the informal interviews, including how to deal with such
migrations of fish into other areas. Also the stock assessment principles seem to be up for discussion.

**Inputs for simulations**

Given that the pelagic RAC meets in August, the current inputs for simulations are related to the interviews with fishermen.

Based on a qualitative assessment of the stakeholder responses to performance potential of management measures, it seems most relevant to simulate a development where the existing management regime for the wide ranging fish stocks is replaced with one of internationally tradeable quotas. International ITQs was the measure that was ranked highest by the industry stakeholders, but industry involvement in management and assessment also came in high on both the pre-defined ranking and in the open questions about additional measures with performance potential. Consequently, it will also be investigated whether it is feasible to include this aspect in the simulations.

### 6.2 Basque mackerel fisheries case study

**Organization of contact with stakeholders**

The work on impact assessment in the Basque artisanal, purse seine and trawl fleets exploiting mackerel fisheries involved individual consultation by means of semi structured interviews with different kinds of actors. In this way, two semi-structured interviews were carried out with the inshore organizations (cofradías) representative of Gipuzkoa and with the trawler organization representative on Ondarroa (Gipuzkoa). Furthermore two more stakeholders’ focus groups were organized with both purse seine fishermen and artisanal fishermen in Pasaia (Gipuzkoa). Finally, two additional focus groups are planned with scientists and with trawler fishermen of Ondarroa.

The main general objective coming from the organized focus groups is to identify which fishermen´s behaviour is derived as a direct consequence of applying a management measure (both instrumental factors and/or non-instrumental factors). Incentives can come from: (i) external factors (such as the application by the Administrations (Regional, Local or European)) of different management measures, (ii) internal factors (such as the internal organization issues), and finally, (iii) other market factors (prices, ...). With this general objective in mind a four-part questionnaire has been prepared to be used as a guideline for the interviewers.

It is worth pointing out that the Basque artisanal and purse seine fisheries rest on an institutional foundation which includes the ancient cofradías of fishermen, now gathered under the umbrella of the Producer Organization (POs). In addition, in the case of Basque trawl fisheries the POs also play an important role in establishing conservation and management measures in relation to the fisheries where their fishing fleets operate. Having these issues in mind, we propose some additional questions related to the role of fishermen´s organizations in order to identify incentives provided for
these organizations that may influence compliance, among other issues.

**Qualitative results from stakeholder contacts**

The mackerel stock is managed annually via **area-based TACs**. However, fishermen consider the TAC to be very low, which difficult the compliance with that regulation.

In addition, the TAC is distributed by gear, semester and area. 90.6% of the Spanish national quota should be caught in ICES Div., IXa N and VIIIIC. Besides, a Spanish national regulation has been implemented in 2010 with the aim of distributing the Spanish catch quota by gear, being 30.5% for trawlers, 27.7% for purse seiners and 34.6% for artisanal fisheries. For all of them, a 7% of the catches should be kept for the second half of the year. Purse seine and artisanal fishermen consider that trawlers surpass their allocation.

In general, the existence of purse seine, artisanal and trawlers devoted to the mackerel fishery, leads these various fleets to engage in a race to catch the resource. The fishing strategy is to catch as much as possible.

**Daily limits** by fisherman in 2009 and **daily quotas** by vessels in 2011 are introduced by Spanish administration. These quotas are introduced to avoid saturation of the daily market and increase the prices. However, fishermen do not think the prices will be affected. Artisanal vessels are in favour of it, but not purse seiners due to their huge capacity. This behaviour also conducts artisanal fishermen not to accomplish this limit. Smaller vessels usually follow the purse seiners’ strategy.

The big capacity of purse seiners and trawlers in contrast to artisanal vessels, the fishermen’s perception about the good situation of the mackerel stock, the low first-sale prices and the seasonality of the fishery push fishermen to overshoot the Spanish quota. Recent **strict control of landings** is being exerted to discourage individual limits surpasses in the mackerel fishery. Fishermen respect the mackerel individual limits thanks to these controls, otherwise surpassed. In general, for any species, fishermen consider controls to be good for the sector.

**Deductions on account of overfishing of a mackerel quota in last years** imposed by the Commission. Reduction of national allocations is also being used to compensate last years surpasses. Fishermen consider these measures as necessary. It seems that these measures are discouraging quota overshooting (maybe only in the short-time)

**Inputs for simulations**

The Fishrent model and econometric techniques will be used to implement different simulations taking into account the qualitative inputs presented in the following table.

<table>
<thead>
<tr>
<th>Management measures, Government factors, external factors</th>
<th>Fishermen's behaviour – input for Impact Assessment</th>
</tr>
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</table>

Table 6. Inputs for simulations for the Basque mackerel fishery
### External management measures

- **TAC:** Established for the mackerel stock at the Council of Ministers.
- **TAC distribution by semester, area and gear**
- **Daily limit by fishermen and by vessel**
- **Daily limit + recent strict control of landings at ports**

Fishermen do not agree with the established TAC. They consider the TAC to be very low given their perception about the stock situation. Quota overshooting.

Smaller vessels usually follow the purse seiners’ strategy which implies catches above quota. Quota overshooting.

Discourage quota overshooting.

### Internal management measures

- **The establishment of daily limits (within the umbrella of the POs)**

Non-compliance of the quotas by some regions.

### Governance factors

- **Producer Organizations, POs**
- **Participation in RACs**

- **Group decisions (self-management)**
- **Extension norms**
- **Consultative role in the management decision process**

### Other factors (deductions)

- **Deductions on account of overfishing of a mackerel quota in last years.**

Discourage quota overshooting.

### Other factors (market factors)

- **High level of Imports**
- **Low first-sale prices**
- **The seasonality of the fishery**
- **The fishermen’s perception about the good situation of the stock**

Quota overshooting.

### 7. Non EU fisheries (Iceland, New Zealand, Australia) case study

The focus group discussion for the non-EU fisheries focused on the Icelandic case, where stakeholder consultation is facilitated by ease of access and well defined stakeholder groups.

#### Organization of contact with stakeholders

The work on impact assessment in the Icelandic case study involved individual consultation by means of semi structured interviews with different kinds of actors. The actors included a senior level fisheries manager, representatives of industrial fisheries, small scale fishermen and artisanal fishermen.

The main aim was to map the different views on the current management regime, the incentive structure for different industry segments and the ideas that different stakeholders have on how different challenges of the system could be dealt with through changes in the management system.

All stakeholders were asked to answers questions regarding both overall issues, such as aims of management, ecosystem management options and co-management, as well as, and with relation to more specific technical issues, such as discards, certification and subsidies.
Qualitative results from stakeholder contacts
Generally speaking the results indicate that there is a consensus among all stakeholders that profit maximization is, and should be, the main aim of fisheries management. Furthermore, they agree that the fisheries management should be based on scientific principles and scientific guidance.

One stakeholder (from the artisanal fisheries group) expressed the view that more weight should be given to ecosystem considerations, rather than setting TACs for species that maximize revenues.

All stakeholders express the view that the current system, where the Marine Resource Institute holds regular meetings to get different views and communicates its view on the state of stocks and the ecosystem, is a good ground for stakeholder participation. There are not strong views on going further in the direction of co-management as stakeholders already can have their say on the scientific advice, its assumptions and the process itself.

They furthermore agree that the obligation to land all catch was a good one, although it did not have the effect of eliminating bycatch. It nevertheless is a common understanding that it leads to more accurate catch data.

The main differences between stakeholders’ perceptions of the main challenges of the system reflect the classical insider-outsider relationship, where those that are operating within the ITQ systems are generally happy with the system. These stakeholders see the main challenges in political involvement aimed at weakening the system, mostly through exceptions from the ITQ systems, such as the coastal fishery (seasonal derby fishery) and the special quotas allocated by the government to regions considered to be vulnerable (thoroughly described in the case study). All stakeholders, with the notable exception of those participating in the artisanal/coastal derby fishery, expressed the view that these two exceptions from the ITQ systems were diminishing economic returns in the fishery and should be abolished. At the same time all stakeholders consider it important to have a stable political framework for fisheries management with constraints on how much politics can influence the management system.

These different views mirror different incentives as the artisanal/coastal fishermen are in fact operating outside the ITQ systems and are depending on the exemptions from the system such as regional quotas allotted to them and/or TACs for coastal communities.

Concerning certification, all stakeholders consider that certification schemes are driven by the market, i.e. wholesalers and retailers rather than by the harvesting or processing industries. They consider it an unavoidable fact that they must adhere to such schemes if demanded by the market participants. The industrial boat owners underline that it should be up to the companies themselves whether and how they adhere to such schemes, as opposed to regulatory or legal obligations to do so.

Direct subsidies are absent in the Icelandic fisheries but most stakeholders consider the regional quotas to be a form of subsides, as well as special allocations of the TACs to coastal fisheries.
**Inputs for simulations**

Building on the outcome of the discussion with stakeholders, simulations should focus on the effect of removing the current exemptions to the ITQ systems, notably the coastal fishery and the special quota allocations to vulnerable regions.

As the main concern of stakeholders is with economic outcomes (mainly profitability), the focus of the analysis should be on the effect on profitability of the fishing industry, both as a whole as well as for different sectors.

The running of such simulations could be compared with the outcomes from the on-going ECOFISHMAN project.

8. Conclusions

The gathering of qualitative data for the different case studies highlights the importance of a differentiated approach to impact assessment for each fishery. In many of the cases, institutional aspects strongly influence the effect of some measures. For example, stronger regulation by producer organizations in the French sole fleets were enough to improve the compliance with quotas, while Basque mackerel fleets required external controls to keep the daily limits. The effects on those fisheries were effort reallocation throughout the year (in the sole fishery) and quota overshooting (for the mackerel fishery), and the qualitative approach showed many external factors influencing this behavior (as for example low prices or behavior of competing fleets for mackerel). The license system in the Turkish Black Sea fisheries. Another example of different effect of a same measure depending on local institutions is the case of fuel subsidies for the Black Sea Turkish fisheries, where small scale fisheries have problems to fulfill the bureaucratic requirements to access the subsidy.

Part of the success of the approach relies on the variety of methodological approaches in order to make the most of a broad set of sources qualitative inputs. In this first round (a second round will take place further on in the project), the contact with stakeholders took the form of focus groups (for the Western Waters, Mediterranean and Black Sea and pelagic), semi structured interviews (for all case studies) as well as a review of other initiatives involving stakeholders at national and regional level for the North Sea.

The qualitative input described in this deliverable will be employed in further work in the project, more concretely in deliverable 5.5 (“Reports on the first implementation of the quantitative analysis at CS level”) and deliverable 5.6 (“Ranking of management measures at CS level”). It is therefore seen as a useful first step in the process of impact assessment of fisheries management measures inside the SOCIOEC project.
9. References

ECOFISHMAN FP7 Project Deliverable D7.4 report on seminar on RFMS

MYFISH FP7 Project Deliverable 2.2: Regionally relevant and acceptable MSY variants, constraints and management measures


NSRAC Agenda No.4 Paper No. 4.1 Demersal Working Group Meeting Paper for Discussion 9th July 2013 The Future for Cod Recovery in the North Sea First Draft Available at:


NSRAC Secretariat Agenda No. 7 Paper No. 7.2 Demersal Working Group Meeting Paper for Discussion 9th July 2013 Thinking Through a Discard Ban: Choke Species. Available at:

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