

Case Study Report, Task 7.3

Synthesis and recommendations for Discard Mitigation Strategies by case study

Year 1 : March 2015-February 2016

Case Study: Bay of Biscay

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1 What has been going on in this case study during the last 12 months?

1.1 Important changes in stock development, discard data and ecosystem

- No major changes were observed in stocks, discard data or ecosystem since no LO is in place in the Bay of Biscay as yet.

1.2 Important changes in terms of fisheries and stakeholders perception

- The LO has been applied to the trawling fisheries operatin in the Bay of Biscay in 2106. By March 2016, no changes in the fisheries have been observed yet.
- No major change on the fishers perception towards the LO was observed. Local fishermen and fishers associations are now discussing with the local government how the LO regulation will affect their activities.

1.3 Important changes in management

During 2014 and 2015, Member State (MS) individually and collectively by region have elaborated a number of reports to base and require exemption to the landing obligation for some of the main fisheries targeting pelagic species (2015) and Hake, Sole and Nephrops (2016). These scientific reports, in which the causes for exemption or requirements for *de minimis* have been argued, for each of the fisheries have been presented annually in June 2015 to STECF for scientific assessment.

Base on these assessments, exemptions to the landing obligation have been applied to some fisheries. These fisheries and target species along with their exemptions are included in the annual delegated regulation published in December 2014 and 2015 (EU 2015/2439).

Apart form these, South Western Waters Advdisory Council (SWW AC) has also summarised and explained its position in relation to the Landing Obligation, possibles consequences in the industry and difficulty of implementation by the fishermen in recommendation 95 produced in May 2015. The main issue and focus has been the phased implementation of the landing obligation and the need for better definitions of the fisheries (<http://cc-sud.eu/images/img-ccs/avis/avis-2014-2015/95-obligation-de-debarquement-2016/Avis95-LandingObligation-2016-EN.pdf>).

In general, there has been cooperation between Members States groups (MS) and Advisory Councils (ACs), on the landing obligation issue and the deployment of reports. SWW AC Members have been also involved in both the technical and high level works of the MS group. Cooperation allowed a better definition of the fisheries and dialogue on exemptions.

Thus , the exemptions and deminimis defined in the regulation in relation to the landing obligation have been the main important management changes in the last 3 years.

2 The Year behind us: What has DiscardLess produced in this case study during the last 12 months?

Several deliverables have been already submitted during this first year of the project. In WP1, D1.1. and D1.2. have been submitted, along with their homologous deliverables in WP2, D2.1 and D2.2. In both WP the models have been described as well as the scenarios that will be tested and the indicators to be obtained.

In the Bay of Biscay Case Study we will use the Ecopath with Ecosim (EwE) model to assess the effects of the implementation of the Landing Obligation at an ecosystem scale, and the FLBEIA model for assessing its effects at a fishery level. The scenarios to be tested, others than the Business as Usual and the Full Implementation ones, have been set up after having been discussed with stakeholders. As a result of this discussion, three alternative scenarios have been selected: 'de minimis', 'year transfer' and 'both exemptions'. The models in both WP (1 and 2) have been parametrized and preliminary results obtained for all the initial and the alternative scenarios.

Required information from WP3, 4, 5 and 6 has already been submitted. Some of this information is already published in the project web page.

2.1 Impact assessments

2.1.1 ecosystem scale

Contributions of this CS to deliverables D1.1 and D2.1 were submitted by month 6, and are now publically available in the project webpage.

Additionally, the EwE model has been parametrized aiming at assessing how the implementation of the LO affects the different biological components of this ecosystem. The Ecopath model has been balanced for the first year of the simulations (1996) and the Ecosim model has been fitted to observed time series data for the period in 1996-2013. Both initial and alternative assessment scenarios have been simulated forward, using future fishing mortalities calculated in WP2 (see Prellezo et al., submitted, see ref below), resulting in not very big changes at an ecosystem level in any of the scenarios, but significant ones for some of the species. But this work is still in progress.

All these results have been included in a manuscript to be submitted soon.

Andonegi, E., Prellezo, R. et al. In preparation. Ecosystem response to changes in fishing activity: An analysis of the consequences of the landing obligation in the Bay of Biscay.

2.1.2 Fishery scale

The FLBEIA model has been parametrized aiming at assessing potential effects that the implementation of the LO might cause at a fishery scale.

Contributions of this CS to deliverables D2.1 and D2.2 were submitted by month 6, and are now publically available in the project webpage.

In addition to that, both initial and alternative assessment scenarios have been forward simulated, getting some interesting results that have also been used for projections in WP1.

A manuscript has been already submitted where all these developments are detailed:

Prellezo R., Carmona, I., Garcia, D. Submitted. The bad, the good and the very good of the Landing Obligation implementation in the Bay of Biscay: A case study of Basque trawlers

2.2 Avoiding unwanted catches: fishing strategies

After analyzing discard time series, identifying possible choke species by métier and understanding discarding reasons a survey was carried out among the trawl skippers. The aim of the survey was to contrast both, the industry and scientific point of views of the discard phenomena.

The skippers were asked about their awareness of the new regulation. They answered that they only had some partial and confused information. In this context some explanations on the most relevant aspects of the new regulation affecting to their activity were given by the interviewer.

In the second part, skippers were asked about the reasons for the discard of the identified species by metier. The last part of the survey was related with possible solutions to minimize the effect caused by the previously identified choke species. Skippers were asked to classify several alternatives to reduce unwanted catch in terms of the perceive utility from them.

The answers given by the skippers were negative for most of the possible solutions proposed; they did not find that fishing gear ban, or the landing obligation, would be an alternative to reduce the unwanted catch. In their opinion, the de minimis exemption would be only a partial solution because allowed them to discard only a fraction of the unwanted catch while they were adapting to the new situation. Area closures were seen as a partial solution as well. Fishing effort is shifted to adjacent areas, thus discard reduction is not ensured, at list for highly distributed species. High survivability could be a solution for many species in other fisheries but for this one, and considering species under LO, it was only seems to be a solution for sole. Finally the proposals that could bring some solution were the seasonal area closures and the improvements on selectivity.

Regarding this last issue a manuscript has been submitted in whee an impact assessment of a selectivity improvement has been performed.

Prellezo, R., Carmona, I., García, D., Arregi, L., Ruiz, J., Onandia, I. Biologic, economic and social impact assessment of a fishing gear selectivity change

2.3 Optimal use of unavoidable unwanted catches

2.3.1 from deck to first sale

There is not an specific work for any case study as the revision on current practices in the handling of unavoidable, unwanted catches has been performed in a global maner. A report on current practices in the handling of Unavoidable Unwanted Catches (UUC) based on projects, on-going initiatives, and existing experiences has been generated (Deliverable D5.1).

Discard estimates in global and European fisheries have been presented, the most common methods of discarding and associated incentives have been reviewed, the landing obligation of the Common Fisheries Policies (CFP) as well as landing obligations in other countries have been accounted for, Monitoring, Controlling and Surveillance (MCS) alternatives have been discussed and a number of initiatives temped to reduce bycatch and discards have been reviewed.

The document present basic back-ground information on the most important discard mitigation issues and the available tools for battling the discard problem. This will then serve as input to stakeholder interactions in later stages of the DiscardLess project, particularly when it comes to interacting with fishermen. D5.1 will trigger discussions on which measures can actually be adopted on-board the European fishing vessels.

2.3.2 Products to the value chain

An overview of historic landing has been reported and used to predict the possible change in landing due to the LO application. Infrastrucutres have also been assessed in order to evaluate their capacity and the needs of modifications.

Reported annual landings of the Spanish fleet landing in the Basque country have been around 80 thousand tonnes for the past decade. Significant parts of these catches are coming from the Bay of Biscay. The landing and discard volumes are extremely variable between years, seasons and fleet types, which makes it difficult to predict future landings of UUC when LO comes into effect. The species that represent majority of discards are horse mackerel, mackerel, blue whiting, hake and whiting. The available data does not give any indications of what the incentives for discarding are, but MLS is the most logical explanation. Harbours with significant landing volumes in the Basque country are few and fairly close to one another. Common facilities for utilising below MCRS catches could therefore be an applicable solution. Current infrastructure for products intended for human consumption are for the most parts likely to be sufficient to cope with changing supplies associated with the LO.

2.4 Policy outreach

Required information has been sent to leaders. Special effort is being done to feed the DiscardLess online atlas.

Different meetings have been arranged with the SWW AC aiming at establishing some discussion about the work being develop in WP1 and WP2. Some approaches were done aiming to get Birdlife people involved. None of these approaches with the AC and the NGOs involved worked properly, and the communication has not been good. More effort will need to be done during this second year.

2.5 Summary:

Substantial effort has been done for progressing in the impact assessment models and their linkages. Achievements were translated into a submitted paper and another on in preparation.

Different meetings with stakeholders have been carried out during this first year aiming to get their feedback to progress on the work planned. All out work has already been presented to them, but the feedback from the AC has been really limited, not covering our expectations.

Communication with the NGOs involved (BirdLife Europe up to now) has also been scarce, getting not feedback from them by the end of this first year. A solution will be needed to be found for that, and using a more regional part of the NGO will be tested. Other NGOs have also showed interest for our activities, and the potential of including new NGOs in this CS will be considered.

3 The Year ahead of us: What do we expect for the next year?

- Ecosystem impact assessment-
 - Recalibrate models once new functionalities have been implemented
 - Run scenarios again
 - Comparisons with Didier and colleagues' work
 - Double-check about the indicators to be developed
- Fishery impact assessment
 - Not a lot to add, work almost finished
- From deck to first sale – 3D plot of basque Trawler with the necessary changes in the layout for the handling of UUC
- Products to the value chain – Evaluating the different options existing for the valorization of UUC and the criteria of selection of each of them. Then these results will be compared with the possibilities of bay of Biscaye case study in order to choose the most appropriate and to get ready for the future trials.
- Policy outreach– Case study reports, continue feeding the atlas with the required information, dialogue with stakeholders.