
**DEEPFISHMAN**
Management and Monitoring of Deep-sea Fisheries and Stocks

Project number: 227390

Small or medium scale focused research action
Topic: FP7-KBBE-2008-1-4-02 (Deepsea fisheries management)

# *DELIVERABLE D8.6*

**Title:** Consensus report from stakeholder workshop

**Due date of deliverable:** M40 (July 2012)

**Actual attending date of the workshop:** M42 (31 August 2012, Galway, Ireland)

**Start date of the project:** April 1st, 2009 **Duration :** 42 months

**Organisation Name of lead coordinator:** Ifremer

**Dissemination Level: PU Public**

**Date:** 24 September 2012

Research project 2009-2012 supported by the European Union,
Seventh Frame Work Programme

# Contents

# 1. Context of the workshop

This deliverable presents the discussions and conclusions of the final stakeholder workshop of DEEPFISHMAN held on 31.08.2012 in Galway. The workshop was the last stakeholder workshop in DEEPFISHMAN it aimed at presenting the management and monitoring framework proposed by the project.

The workshop was organized in conjunction with the project CoralFISH following the joint final symposium organized the projects. The workshop was announced by email on the symposium website and by direct contacts during meetings at national and international levels. Lists of stakeholders were assembled throughout the project based upon the two stakeholder workshop held in Brussels (29-30 June 2009) and Lisbon (4 December 2009), stakeholder email provided in DEEPFISHMAN questionnaires distributed through the project WIKI (http://deepfishman.hafro.is/) and face-to-face interviews and other lists of deep-water stakeholders. Invited stakeholders included inter-alia ICES Advisory committee (ACOM), FAO, OSPAR, the EU Directorate-General for Maritime Affairs and Fisheries (DG-MARE), Regional Advisory Councils (NWWRAC, SWWRAC and LDRAC), National and regional administration and governments, NGOs and the fishing industry, catching and processing sectors. Project scientists of both DEEPFISHMAN and CoralFISH distributed the invitation at national and regional levels. All contacted stakeholders were asked to forward the invitation to their own contacts.

The workshop was attended by 39 persons. Attendees included DEEPFISHMAN participants (13) and CoralFISH participants (9), scientists outside of the projects (3), FAO (1), ICES (1), fishing catching sector (4), seafood sector (1), RAC representative (1), National Administration (1) Government Agency (1) and NGOs (4). Some people may have been involved as several stakeholder categories, e.g. Dr Tom Blasdale was present as a scientist outside DEEPFISHMAN but he also a fishery advisor as ICES WGDEEP chairman and JNCC (Joint nature and Conservation Committee) representative. JNCC is a UK public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. Overall 4 government public bodies were represented:

- AAMP (Agence des Aires Marine Protégées) France
- BIM (Bord Iascaigh Mhara, Irish Sea Fisheries Board) Ireland
- DPMA (Fisheries directorate), France
- JNCC (Joint nature and Conservation Committee), UK

The NGOs represented were Oceana (http://oceana.org), Seas at Risk (www.seas-at-risk.org/) and Pew Environment group (http://www.pewtrusts.org)

Questionnaires were distributed with all topics listed where stakeholders could document their views on each issue presented. They could either return the questionnaire at the end of the workshop or by email after consulting with their organization. Completed questionnaires are appended in annex I.

The report of a previous stakeholder workshop held in Lisbon on 9.12.2009 is appended in annex II. This Lisbon workshop, included working with cognitive maps followed by the circulation of a questionnaire and the material collected was analysed and published (see deliverable D7.2).

# 2. Agenda

**Friday 31st August 2012**

**Stakeholder Workshop**
**Ecosystem based management and monitoring of deep-water fisheries**

The workshop will review issues and recommendations for the monitoring and management of deep-water fisheries.

**10:00 – 10:30 Workshop context**
10:00 Introduction (P Lorance)

10:10 Overview of previous Deepfishman stakeholder consultations, results and outputs (P Lorance).

10:20 Introduction to the draft DEEPFISHMAN monitoring and management framework (P. Lorance)

10:30 CoralFISH recommendations for the requirements of maritime spatial planning need to be taken into account in the formulation of deep-sea fishery management plans (A. Grehan)

**10:45 – 11:15 Coffee**

**11:15 – 13:00 Presentations on key issues and plan elements**
(drawn from inter alia: Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management etc); Definition of deep water and deep-water species; Total Allowable Catch (TAC) management: review of the current list of species and the periodicity of TAC reviews; Review of TAC management units taking into account new knowledge of stock structure. Preliminary suggestions for fisheries-based management units; Definition of deep-water fishing effort; Capacity ceilings; Spatial patterns of bycatches and discards; Management and monitoring of bycatches, discards and protected, endangered and threatened (PET) species; Spatial and temporal closures and technical measures; Ecosystem (including vulnerable marine ecosystems (VMEs)) management and monitoring; EU Data Collection Framework (DCF) and observer sampling plans; DCF socio-economic monitoring; Fisheries-independent surveys and monitoring; Stakeholder participation in monitoring and management; Long-term management plans).

**13:00 – 14:00 Lunch**

**14:00 – 15:30 Presentations on key issues and plan elements (continued)**

**15:30 – 16:00 Coffee**

**16:00-17:00 Discussion (moderators: A Kenny & P Lorance)**
Relevance/completeness of the DEEPFISHMAN monitoring and management framework and priority ranking of topics 17:00 Closure of the workshop, follow up actions

**17:00 Closure of the workshop with list of follow-up actions**

# 3. List of Participants

| Name | Email | Organisation | Country |
|---|---|---|---|
| Alan Addison | aje70@bt.internet.com | SWFPA | Scotland |
| Sveinn Agnarsson | sveinnag@hi.is | University of Iceland | Iceland |
| Aikaterini Anastasopoulou | lanast@hcmr.gr | HCMR | Greece |
| Odd Aksel Bergstad | oddaskel@imr.no | IMR | Norway |
| Aurélie Blanck | aurelie.blanck@aires-marines.fr | AAMP | France |
| Tom Blasdale | tom.blasdale@jncc.gov.uk | JNCC | UK |
| Guzman Diez | gdiez@azti.es | Azti-Tecnalia | Spain |
| Inès Farias | ifarias@ipma.pt | IPMA | Portugal |
| Ivone Figueiredo | ivonefig@ipimar.pt | IPMA | Portugal |
| Marc Ghiglia | mg@uapf.org | UAPF | France |
| Juan Gil | juan.gil@cd.ieo.es | IEO | Spain |
| Anthony Grehan | anthony.grehan@nuijalaway.ie | NUIG | Ireland |
| Paula Harrison | paula.Harrison@ucc.ie | UCC | Ireland |
| Klara Jakobsdottir | klara@hafro.is | MRI | Iceland |
| Andrew Kenny | andrew.kenny@cefas.co.uk | CEFAS | UK |
| Jonathan Lemeunier | jonathan.lemeunier@agriculture.gouv.fr | MEDDE - DPMA | France |
| Ronan Long-Law | ronan.j.long@nuigalwaj.ie | NUIG | Ireland |
| Javier Lopez Santiago | jlopez@oceana.org | Oceana | Spain |
| Pascal Lorance | pascal.lorance@ifremer.fr | Ifremer | France |
| Marta Marrero | martamarrerom@gmail.com | PEW | Spain |
| Teresa Moura | tmoura@ipma.pt | IPMA | Portugal |
| Chryssi Mytilineou | chryssi@hcmr.gr | HCMR | Greece |
| Brendan O'hea | brendan.ohea@marine.ie | Marine Institute | Ireland |
| Patrick O'Malley | pomalley@msvint.com | Fisher | Ireland |
| Pia Orr | p.orr@imperial.ac.uk | Imperial College London | UK |
| Nadia Papadopoulou | nadiapap@hcmr.gr | HCMR | Greece |
| Paulette Posen | paulette.posen@cefas.co.uk | CEFAS | UK |
| Genevieve Quirk | genevieve.quirk@gmail.com | Pew Environment Group | NL |
| Anna Rengstorf | a.rengstorf1@nuigalway.ie | NUIG | Ireland |
| Alex Rodriguez | rodriguez@bim.ie | NWWRAC | Ireland |
| Chris Smith | csmith@hcmr.gr | HCMR | Greece |
| Björn Stockhausen | bstockhausen@seas-at-risk.org | Seas At Risk | Belgium |
| François Theret | ftheret@comata.com | Scapêche | France |
| Tony Thompson | tony.thompson@fao.org | FAO | Italy |
| Verena Trenkel | verena.trenkel@ifremer.fr | Ifremer | France |
| Peter Tyndall | tyndall@bim.ie | BIM | Ireland |
| Les Watling | watling@hawaii.edu | University of Hawaii at Manoa | USA |
| Claus Wol | info@deutscher-fisherei-verband.de | DFV | Germany |
| Chris Yesson | chris.yesson@ioz.ac.uk | ZSL | UK |

# 4. Minutes of the workshop

This section provides minutes of the workshop, when useful some comments and information have been added afterwards and appears in dark blue between square brackets [].

## 4.1. Introduction

### 4.1.1. Welcome by Anthony Grehan and Pascal Lorance

**Pascal Lorance**: DEEPFISHMAN proposal given as scientific advice that may be included in policy by managers.
DEEPFISHMAN is expected to produce proposal options for management of deep-water fishery. Proposal needs to be supported by scientific results. The scientific advice given by the project may then be taken up by advisory bodies such as ICES or OSPAR and only then might be included in policy proposals at the management level.

Introductions by attendees.

## 4.2. Workshop Context

**Pascal Lorance:** Presentation of the project and overview of previous DEEPFISHMAN stakeholder consultations, results and output.
Overview of stakeholder process – workshop in Brussels 2009 – stakeholder identification: fisheries managers, policy advisors, marine scientists, vessel owners, environmental NGOs, processors & marketing, consumers – all with immediate interest in our work & secondary interest, e.g. new fishing gear developers, vessel crews, fishing communities affected by science & management.
Lisbon 2009 – stakeholder involvement; 2011 stakeholder contribution to model development; questionnaires, haul-by-haul data.
Cognitive maps drawn for different fisheries – type of stakeholders contributing to map in each sector of fishery. Map is drawing with bubbles & arrows – graphical representation of a management system and interactions within individual fisheries – all with stakeholder contributions: management & measures, socio-economy, fishery, other fisheries, fish stocks, ecosystem and other factors. e.g. Greenland halibut NAFO (global factors); black scabbardfish Madeira (local factors) – what are management levels that can be used for proper management of fisheries.
Questionnaire distributed through project website, during one RAC (Regional advisory Committee) meeting & at regional level – 9 questions + free text – 45 responses from 3 deep-water fisheries. e.g. *which management tools would you like to see changed*? 'Nothing should change' reply was never given – many small changes were suggested (e.g. TAC and licensing), but large changes were rarely suggested.
Stakeholder data and knowledge were used for stock assessment - EU logbook and Tallybook records compared (e.g. aggregated vs individual hauls, depth vs no depth, ICES rectangle vs position).
Overview of final stakeholder workshop agenda – stakeholders invited to document their views, which will be collected at end of workshop or send them in at later time by email.

**Anthony Grehan : Ecosystem (including vulnerable marine ecosystems (VMEs) management and monitoring**
-Overview of CoralFISH project

Mapping VMEs using high resolutions VMS as a support ettc.
CoralFISH approach – 17 partners from 11 countries – research scientists & fisheries specialists. Regional settings & fisheries that occur – 6 study areas from Norway to Azores to Mediterranean. Detailed mapping & longer term studies with observational equipment on sea floor.
Objectives of MSFD – management of resources on long-term basis with implementation plans at regional level – affecting fisheries as well. CoralFISH input into identifying habitats & protected areas – improve decision-making & interaction between ecosystem and human activity. Spatially explicit information from natural and social sciences – interplay between both. Improvement of maps in terms of coral spatial extent – linked to geomorphological classes & habitat suitability modelling. Multibeam mapping + bathymetric data – feed into GIS for quantification of fishing activity within defined areas, etc. Modelling predicts 'suitable' habitats – global Octocoral database built using these modelling techniques.
Habitat Suitability Modelling (HSM) used in 2 case studies: NEAFC area predicted distribution map (octorals widespread in area, but these are also highly suitable for fisheries); Lophelia reefs off Ireland (from global to regional to local resolution HSM mapping) – different variables important at different scales – good for assessment of localities requiring conservation measures. Recommendation that best available multibeam bathymetry should be used for high-resolution mapping.
High-resolution VMS data for use as support in delineation of fit-for-purpose marine protected areas – can actually help to *reduce* protection area – good for both conservation *and* fisheries.
Do MPAs work? Review of MPA as a tool for ecosystem conservation and fisheries management – wrong place, derogations overriding MPAs, etc. Recommendations for: clearly stated goal & management objectives; monitoring against good baseline data; better spatial resolution of data; availability of data to scientists; involvement of fishing industry at early stage. Other considerations: impact assessment for deep-sea fisheries moving into new areas; authorities & scientists in nominated projects should have full access to VMS data; observers should monitor entire catch, including non-commercial fish species and invertebrates.
Recommendations:
-High resolution multi-beam data needed for detailed predictions
-For MPAs there is a need of clear management goals and monitoring, directed monitoring,improved spatial resolution for data, access to VMS data and involve fishing industry and RACs in discussions of proposed MPAs (which is already done)
-impact assessment of fisheries with bottom gears in new fishing areas
-In general, access to VMS data of importance

**Coffee Break**

## 4.3. Management and monitoring framework proposals

Presentations on key issues and plan elements by Pascal Lorance
Options for management are presented by topic of the management framework (Deliverable D7.4) every topic includes 1 or several recommendations.

### 4.3.1. Topic 1 Management of deep-water fisheries in the NE Atlantic at macro-level

**Recommendations specific to EU fleets**
The two recommendations below are specific to EU fleet

**Recommendation 1.1** EU vessels fishing for deep-water species in EU waters and international waters of the NEAFC RA continue to be managed by TACs and effort /licensing, meaning that the current management is kept in place, i.e. status quo.

**Recommendation 1.2** TAC and effort regimes currently incorporated in the EU Access Regime should be substantially revised in content and scope.

**General Proposal: recommendation suitable to all fleets**
**Recommendation 1.3** Transferable fishing rights (preferably Individual Transferable Quotas, ITQs) are expected to be more efficient for the management of deep-water fisheries.

**Sveinn Agnarsson** presents ITQs ideas and the model. ITQs have their faults that need to be taken into account if we are to move in this direction. The current EU TAC system only sets the upper limit of the catch from a stock. Current additional controls are restrictions on gears, capacities, engine size, etc. This system promotes constant race between managers and operators, leading to economic waste through more powerful fleet, more numerous vessels, tending to waste of resources, i.e. the so-called race for fish. Three points that appear to make ITQ preferable are:
(1.) fishing becomes more responsible with improved long-term management, which is extremely important in case of deep-water fisheries. ITQ system make fishermen are more responsible for long-term security of stock – good-quality ownership; fishers & scientists more in step – long-term strategies for protection of stocks; extra care needed in deep-water stocks – slow growing, more vulnerable.
(2.) ITQ appears to lead to more economically efficient fisheries. Fewer vessels and for instance no longer weather dependent (e.g. a vessel would no go at sea in very rough conditions if the ITQ can caught in easier/safer conditions) will lead to better quality of production and higher salary i.e. Conflict between no. of fishers and viability of income is less pronounced.
(3.) Effect of ITQ on marketing appears to be better planning and better pricing– by comparison with Norway, Iceland can plan much better and obtain higher prices.

There are some drawbacks in ITQ systems like the initial distribution of quota rights, the organisation of the transferability of quota rights. These problems have to be addressed.

**Alex Rodriguez** asks for details about link between ITQs and scientific advice and current vision of CFP. The legal framework is going to be a huge issue as there is strong divergence within RAC members on this issue. Is there going to be link from proposal to the overall framework?

**Pascal Lorance:** Our project output is that in deep-water fisheries, ITQ system appears to perform better. Other fisheries and other issues are far beyond the scope of the discussion in this context. Matter of negotiation between fishery & management to achieve goals and have system working properly. The project does not aim at suggesting how things should be done and agenda of implementation but to identify management options based upon scientific work carried out in the project.

**Marc Ghiglia:** Can you be more precise about what is “deep-water fisheries’. Is monkfish fishery a part of it?

**Pascal Lorance:** Will give definition later but deep water fisheries and some additional fisheries & studies from socio-economic part of project were EU deep-water fisheries according EU regulation 2347/2002 plus redfish in Icelandic and Norwegian waters.

**Jonathan Lemeunier**: ITQs was one proposal to solve capacity issue for CPF, France not in favour, the European commission proposed it as means to reduce overcapacity. Is there a capacity problem in the deep-water fishery?

**Sveinn Agnarsson:** Capacity regulation is only one expected benefit, other include economic benefits, etc. In terms of overcapacity in deep-water fisheries, our proposal is only that ITQs have some qualities for the deep-water fishery.

**Ronon Long**: Does ITQs provide a plinth for greater stakeholder involvement in management of stocks? Is there an evidence for this?

**Sveinn Agnarsson**: Some types of management, e.g. community-based management do not introduce ITQ system, but takes decisions closer to fishers, therefore increase consultation. ITQ does not necessarily imply more interaction between government and stakeholders. However, in New Zeeland case it has shown to lead to improvement of interaction between those two bodies.

**Francois Theret**: In UK & France, fishing companies receives quota for year [i.e. national quota are further allocated to fishing companies, which may allocate at vessel level]– in that case, why would ITQ be necessary?
**Sveinn Agnarsson**: One thing to examine would be to what degree a current system is *de facto* an ITQ and to what extent there is an individual quota in force. If so, it should be taken into account if an ITQ system was introduced.

**Alex Rodriguez**: Yes but the *de facto* system is within a given country, not across countries; the RAC members will not accept an ITQ system [allowing for transfer through countries] at the moment.

**Ronan Long:** What about speculation like coastal villages disappearing?

**Sveinn Agnarsson:** The Iceland case has shown that it can happen but there are possibilities to handle these issues for example with taxes. Concerning coastal villages, it is desirable to have different set of rules for small communities and industrial groups.

**Björn Stockhausen:** What about the problem of initial allocation of rights? option for allocating fishing rights to stakeholders that act more sustainably? And what about discard- ITQs might provide incentives to discard?

**Sveinn Agnarsson:** In Iceland discard are estimated to be very low. In ITQ systems in general, discard is wasteful, also in longer term.

**Björn Stockhausen:** yes, but ITQ system can also lead to a collapse.

**Sveinn Agnarsson**: This does not affect deep-water fishery. The long-term planning will not give incentive to fishermen to discard. Discards in Iceland are low and there are incentives in all fisheries managements systems to discard. Increased incentive to not discard can be

implemented by good-quality ownership. If TAC is set at a too high level, problems arise. Environmental changes in ocean will also affect issues.

**Ronan Long:** Initially, how does allocation of rights take place? How is it implemented? Most powerful catchers can prepare for these actions. Monitoring and compliance is inherently expensive, so who should pay is an issue. Will ITQ reduce costs of compliance and monitoring? In the example of New Zealand there is a different compliance system due to the ITQ system.

**Verena Trenkel:** Asks for more specific comments as these have all been more general ones.

**Ronan Long**: Cost of monitoring and compliance – will ITQs reduce this? Compliance system in NZ is fundamentally different to that in EU – emphasis on monitoring.

**Sveinn Agnarsson**: Any system will introduce a corresponding compliance compliance.

[closure of discussion on ITQs]

**Recommendation 1.4.** TAC levels to be evaluated using management strategy evaluation (MSE) where possible.

**Recommendation 1.5.**. Management strategies to be developed with stakeholders and assessed using Management Strategy Evaluation (MSE) methods.

**Jonathan Lemeunier:** Identification of relevant scenarios could be carried out in workshop.

**Marc Ghiglia:** Proposal of management strategies already done for other species in EU waters; why not do it for deep-water species: question who is doing the simulations?

**Pascal Lorance:** Simulation needs to be done by scientists-MSE done by ICES stepwise framework. The idea of identify relevant scenario could be a workshop as today.

**Verena Trenkel:** what would be the interest of industry to participate in defining these strategies to be evaluated in MSE ? Trajectory to appropriate level of stock recovery is something to discuss.

**Francois Theret:** Industry has interest to reach MSY as fast as possible

**Alex Rodriguez:** What is the proposal? TAC and effort or only TAC? Commission is proposing to simplify management by only doing effort management (but this is general)

### 4.3.2. Topic 2: Definition of deep-water species and environments

**Recommendation 2.1** In some areas of the NE Atlantic deep-water species be defined as those which spend a significant part of their life-cycle at depths >200 m and have 50% or more of their adult biomass occurring at depths >200m.The appropriateness of 200 m depth limits should be evaluated for all areas

**Marc Ghiglia:** What is rationale for setting a depth limits?

**Pascal Lorance:** 200 m is the lower limit of the euphotic zone, corresponds to shelf break in most European waters: the method was tried for the Bay of Biscay and Celtic Sea based upon scientific survey data: monkfish, conger eel were classified as shelf species. Currently the definition of deep-water species in the EU regulation is based upon lists [annex I and II of the EU regulation 2347/2002]. The attempt to define a depth criterion is to have an objective criterion to decide which species should be included in such lists

**Björn Stockhausen:** Have you compared definitions to the list of deep-sea access regime, compared list of species with this?

**Pascal Lorance:** Yes, this method has worked quite well by comparison. (table of species shown). The resulting list removes conger eel, currently included in annex II of the EU regulation. Species exploited only with pelagic trawls [e.g. blue whiting] should be excluded [considering the other criterion that deep-water fisheries are those which "the fishing gear is likely to contact the seafloor during the normal course of fishing operation"]. The depth distribution criterion was not checked for tusk.

**Les Watling:** List of life history regimes combined – better to make subdivision by capping upper limit at shelf, but subdividing category below 200 m, which is too general. Others have started to make definition of mid-depth species and true deep-sea species.

**Pascal Lorance**: Matter of ranking vulnerability to indicate sub-categories – will be considered.

**Recommendation 2.2**. In line with the FAO guidelines for the management for deep-sea fisheries in the high-seas Deep-water fisheries are those which i. the total catch (everything brought up by the gear) includes species that can only sustain low exploitation rates; and ii. the fishing gear is likely to contact the seafloor during the normal course of fishing operations.

**Recommendation 2.3** For licensing purposes the species listed in Annex I and II of 2347/2002 be combined, that *Conger conger*, *Lepidopus caudatus* and *Sebastes viviparus* be deleted and Greenland halibut, tusk, beaked redfish be included.

[recommendation does not give rise to discussion, further stakeholder view were expressed in questionnaire, see section xx]

**Recommendation 2.4** Regarding the list of deep-water species used for management purposes by NEAFC (NEAFC, 2011), the NEAFC and EU lists should be harmonized. (Tusk and Greenland halibut should continue to be included, that beaked redfish is added, and that ling, conger eel and Norway redfish be removed)

[recommendation does not give rise to discussion, further stakeholder view were expressed in questionnaire, see section xx]

### 4.3.3. Topic 3: TAC management review of current list of species & periodicity of TAC reviews

**Recommendation 3.1** DEEPFISHMAN consider that the list of species managed by TACs could be expanded. Some species that may be considered are:
Common Mora (*Mora moro*) ;

Rabbitfish (*Chimaera monstrosa* and *Hydrolagus* spp.);
Baird's smoothhead (*Alepocephalus bairdii*);
Wreckfish (*Polyprion americanus*);
Bluemouth redfish (*Helicolenus dactylopterus*);
Black (deep-water) cardinal fish (*Epigonus telescopus*);
Deep-water red crab (*Chaceon* (*Geryon*) *affinis*)

**Anthony Grehan:** Are species without TAC part of descriptor 3 in MSFD?

**Marc Ghiglia**: Why are Baird's smoothhead included?

**Pascal Lorance:** Significant catches recently – possibility for commercialisation – may require TAC. [landings reported to ICES over 60,000 tonnes cumulated for 2001-2012, amount to

**Francois Theret**: Is there any assessment of these species (in list)? Do we not need an assessment?
**Pascal Lorance**: There is no assessment for these species. The idea is not to have an expansion of fishery, but the question is to prevent future over-exploitation of species that are not currently commercial or are bycatch only.

**Recommendation 3.2** Periodicity of TACs revisions. DEEPFISHMAN recommends that TAC are revised as follows:

- orange roughy: every 5 years
- deep-water sharks: every 5 years
- roundnose grenadier: every 3 years
- beaked redfish: every 3 years
- all other deep water species: every 2 years

[recommendation does not give rise to discussion, further stakeholder view were expressed in questionnaire, see section xx]

**13:00 –14:00 Lunch break**

### 4.3.4. Topic 4: Review of stock and management units

**Recommendation 4.1 Review management units: take account of new knowledge of stock structure**
**Pascal Lorance :** Displays overview table, which shows species, areas and recommendations, explains species by species [see annex xx].
Roundnose grenadier: add XIIb area to management unit and remove from mid-Atlantic area: Population structure based on genetics-small TAC where fishery is not abundant.
Comment: There is survey data for indicator trend assessment in area IIIa
Black scabbardfish: separate XIIb from mid-Atlantic ridge; separate Azores from management unit in Bay of Biscay and Iberian peninsula
Greater forkbeard: stocks structure is not known, the recommendation is to carry out assessment by indicators by area base upon survey data.

**Odd Aksel Bergstad:** Consistency needed, but here recommendations by indicators in different areas? In case of RNG there are surveys going back to the eighties but there is a lack of comment on that.

**Pascal Lorance:** yes lack of consistency [properly identified for greater forkbeard, this come for this species being a small bycatch species where no fishery dependent data seem informative on the stock structure and no stock identity study has been carried out] and yes, the suggestion to adding assessment based on survey indicators as in div. roundnose grenadier in IIIa must be considered.

**Odd Aksel Bergstad**: Directed fisheries banned in that area and that should be noted?

**Pascal Lorance:** yes, as the only monitoring available comes from surveys
[follows-on table for other species] Alfonsino: separate into two management areas-assess from indicator trends
[No comments]
Orange roughy: recent stock identity results suggest panmictic population at large scale. However for such a long-lived and aggregating species that is subject to local depletion, there is currently no method for reliable monitoring [of the small fish aggregation that occur in the NE Atlantic compared to large biomass occurring in New-Zeland]. Productivity Susceptibilty Analysis (PSA) has been used in DEEPFISHMAN to assess the vulnerability of this species to current [i.e. targeted to other species] fisheries. This is proposed as assessment method by Deepfishman.
Blue ling: currently managed as several stocks - add area XIIb to management unit, Vb, VI and VII

**Alex Rodriguez:** Addition of area XIIb not favored as the area does not have a TAC at the moment.

**Pascal Lorance:** Highlights that this is proposal based on biological findings.

**Alex Rodriquez:** not sure about this issue but will check with RAC members.

Red seabream: stock unit currently used seem appropriate

Portuguese dogfish: currently one single management unit –zero TAC no clear indication of improvement suggesting status quo on that.

**Verena Trenkel:** Tables is confusing considering the shark issue

**Pascal Lorance**: Landings data show that some species are caught mainly in some areas. [Landings reported to ICES and used for stock assessment purposes show that Portuguese dogfish (*Centroscymnus coelolepis*) and leafscale gulper shark (*Centrophorus squamosus*) formed the bulk of deep-sea sharks landings in ICES Subareas V, VI, VII, VIII, IX and XII. Kitefin shark was mainly caught in ICES Subarea X (Azores). The main species that were commercial before TAC were set to 0, i.e. Portuguese dogfish, leafscale gulper shark and kitefin shark are identified separately in the assessment and management area table. As long as the fishery remain closed (0 TAC) according to stock assessment, the way forward is to include *Deania hystricosa* and *Deania profundorum*a in the list of deep-sea sharks and have 0 TAC in every area. The suggested areas by species could be considered if assessment suggest that deep-sea fisheries can be re-open, then there would be a clear need to have separated TACs for four taxa (Portuguese dogfish, leafscale gulper shark, kitefin shark and all other deep-sea sharks)].

### 4.3.5. Topic 5: Deep water fishing effort

**Recommandation 5.1** For the need of fisheries and stocks assessment, deep-water fishing intensity to be estimated from VMS, this allow to assess the depth distribution**.**

**Pascal Lorance**: explains the rationale and that intensity can be measured with VMS data. VMS is essential for study and monitoring for scientific purpose.

**Recommandation 5.2.** appropriate VMS data should be made available

**Mark Ghiglia**: Industry ha no problem to make VMS data available to science provided the data are treated under confidentiality.

### 4.3.6. Topic 6: Capacity ceiling

[There is no proposal on this topic, estimated of effort made in DEEPFISHMAN using VMS data and in other groups using logbook data show consistent trends of decreasing effort. In some area, e.g. ICES subareas VI and VII, level of effort expended in the deep-water are well below the EU ceilings. The capacity of the deep-water licensed fleet has not changed much because some vessels use the license only to land minor by-catch, e.g. bycatch of greater forkbeard that may be caught while fishing for hake. It may then be that constraining the capacity would only generate discards of such small bycatch. Keeping the current capacity ceiling in place seems however necessary as it facilitates controls (vessel without deep-water fishing permits should not land deep-water species)].

### 4.3.7. Topic 7: Spatial patterns of bycatch and discards

No proposal. [The discards studies carried in DEEPFISHMAN did no allow to identify clear spatial patterns in the rate of discarding that could be used for management purposes. Further analyses on this topic will be carried out in the future. As on-board observation data are accumulating, this allow for more statistical po and some spatial or spatio-temporal patterns may become evident.]
No comments or suggestions

**Genevieve Quirk:** on ITQ : would be in favour to distribute rights to coastal communities but not classical ITQ system: support reduction of fishing capacity (in relation to current proposal by Commission to phase out deepwater trawling and netting).

### 4.3.8. Topic 8: Management and monitoring of bycatches, discards and protected, endangered and threatened (PET) species

**Tom Blasdale:** Does Orange roughy fall under PET species?
[orange roughy is a PET species according to OSPAR, it is not according to IUCN].

**Pascal Lorance:** According to recent study done by L. Dransfield bycatch of OR has a low vulnerability to on-going fisheries.

**Tom Blasdale:** Do we have information on bycatch of seabirds and marine mammals?

**Pascal Lorance:** In Deepfishman case studies there was no such incidental catch of seabird, marine mammals and sea turtles to any significant level.

[Based upon DEEPFISHMAN reviews and data, most deep-water fisheries studied as DEEPFISHMAN case studies can be considered having no direct impact on marine mammals, turtles and seabirds. There are records of bycatch of dolphins and turtles in the red sea bream fishery in Greek waters. However, for most of the vessels involved, red sea bream is a bycatch of a mix fishery with either static or towed gears. Therefore the bycatch of dolphins and turtles need to be addressed in the larger context of these mix-fisheries and no particular deep-water fishing management measure can be of interest in this respect.
In the Greenland Halibut fishery in the NAFO area incidental catch have been reported in the early 1990s in Greenland halibut trawl and gillnet fisheries]

**Genevieve Quirk:** There is concern that over-fishing some species via bycatch is an issue – corals being cited. Would like their inclusion, because some fishing techniques mean that certain benthic habitats should be included under Topic 8. Up to 70 different species make up bycatch – 30% discard by weight (cited in EC EIA – between 20-50%) contain a diverse set of species, some of which may be threatened.
Proposal from NGO: all catch should be landed to know what is actually caught

**Pascal Lorance:**Benthic fauna are considered under a subsequent topic. In the French fishery there is 20% discard by weight in deep-water fisheries.

This was followed by general discussion of the number Genevieve Quirk refers to and which species they may apply to. Björn Stockhausen confirms that the Commission believes the discards to be 20-50% in all EU waters. Verena Trenkel asks about the statistics this is based on, if it is haul-by-haul numbers and how much PET species contribute in these numbers.

**Verena:** probably total catch discards number-Perhaps project should recommend detailed information on discards rather than ball-park figures and estimate of onboard observations.

**Tom Blasdale:** Needs to be clarified whether Commission has misinterpreted text from Impact assessment 2010 WGDEEP- (20-30%) and discard for one species has wrongly been applied to the whole catch (i.e. sometimes bycatch of roundnose grenadier can be very high), it seems that the higher figures could be based on the work by Valérie Allain in the late nineties.

[A short account on discards figures reported by ICES (2012), and other data is given below, only to clarify which estimates have been recently circulating. ICES (2012) reported data by area and for assessed stocks as follows:
- in the Celtic Seas, the estimates from Allain (2003) that deep-water trawl catch may include 50% of unpalatable species that area discarded. ICES (2012) further described that "the main species in the discards in weight of the trawl fishery is by far the Baird's smoothhead (*Alepocephalus bairdii*) however; a large number of other nonmarketable benthopelagic species are discarded. The survival of these discards is unknown, but considered to be virtually zero because of fragility of these species and the effects of pressure changes during retrieval (Gordon, 2001). Therefore such fisheries tend to deplete the whole fish community biomass."
- in ICES Subarea IX (West Iberia), the description of the Portuguese longline fishery for black scabbardfish (*Aphanopus carbo*) with a bycatch (now discarded since the introduction of 0 EU TAC in 2010) of the deep-water sharks
- In Azorean waters, it is reported that discards from observers in the longline fishery from 2004 to 2010 shows that for some species, like deep-watersharks, the discards may be

important and that commercial species like red blackspot seabream, alfonsinos and wreckfish, among others, may also be discarded, probably as a consequence of management measures.

Discards of commercial species assessed by ICES WGDEEP (2012) are reported for some species and briefly summarized below. Some additional information is given with the relevant literature.
For ling (not a deep-water species according to EU regulation 2347/2002, but assessed by WGDEEP) discards results from undersize catch and quota restriction. Tally books indicated discards up to 100% of ling catch in some fishing trip, but the overall figure is lower. Observer data show discard rate of 10% to 60% (SISP, 2011).
For blue ling, discarded are either banned or negligible in all ICES areas where the species is fished, e.g. less than 1% in number in French fleets (Guérineau et al., 2010).
For tusk (not a deep-water species according to EU regulation 2347/2002, but assessed by WGDEEP) discards are banned or data are lacking in all areas.
Greater silver smelt (*Argentina silus*) can be discarded in high quantities in bottom trawl fisheries.
Discards of orange roughy, which landings are banned, are very low. The effect of these discards on the populations have been assessed in DEEPFISHMAN and do not seem to be a threat to the population (Dransfeld et al., 2012).
For roundnose grenadier, in the French observer program, about 30% by weight and 50% by number of the catch of roundnose grenadier was discarded, because of small size in 2004-2010. This figure is higher than in previous sampling where the discarding rate in the French fisheries was estimated slightly above 20% from sampling in 1997-1998 (Allain et al., 2003). The change may come from a combination of changes in the depth distribution of the fishing effort and a decrease in the abundance of larger fish as visible in the landings. However, 2011 data show a change in discards where only 30% of the individuals are discarded (12% in weight of the catch). This is linked to 1) a change of depth of the French fleet towards shallower waters and 2) attempts to avoid areas where discards are high. In the Spanish Observer program on Hatton Bank (ICES Division VIb and XIIb), the average discarding rate is estimated around 5% by weight in 2002-2010. However, discards data for 2011 were not presented as they are considered to be inaccurate.

Discards of black scabbardfish are minor, in the Portuguese longline fishery an estimated 3.5% of the black scabbardfish catch is discarded as a consequence of depredation by marine mammals and sharks. Discards of black scabbardifsh are also negligible in the French deep-water trawling fleet to the West of the British Isles (Guérineau et al., 2010).
For greater forkbeard, discards are minimal in deep-water fisheries, however the juveniles occur on the shelf and are subject to discarding by all shelf fishing fleets. As a result of these discards in shelf fisheries, discards of greater forkbeard may be higher than landings as shown for French (ICES 2010) and Spanish fleets (ICES, 2012).

In the French deepwater trawl fishery to the West of the British Isles, total catch and discards are estimated yearly in recent years. Over 2003-2008, the main species in the discards were smoothheads and roundnose grenadier with estimated median discards per year of 1192 tonnes and 1840 tonnes respectively (Guérineau et al., 2010). These estimates had high confidence intervals probably as a result of highly variable discards per haul. In 2010, the main species in the total catch were roundnose grenadier, black scabbardfish, blue ling and Baird's smoothhead making up altogether about 2/3 of the total catch (Fauconnet et al., 2011). The figures for 2010 are based upon observations of 11% of deep-water fishing trips and 15% of days-at-sea. In 2011, the total catch comprised 38% of blue ling, 26% of black scabbardfish

and 9% of roundnose grenadier, 6.5% Baird's smoothhead, 5.3 % greater silver smelt, 2.2% rabbitfish, 1.9% greater forkbeard, 1.2 % birdbeak dogfish. About 70 other species made the remaining 10% of the catch. On the total estimated catch of 4300 tonnes, 3400 tonnes were landed and 902 tonnes (21%) were discarded. Five species (Baird's smoothhead, greater silver smelt, rabbitfish, birdbeak dogfish and roundnose grenadier) made up 75% of the discards.

Allain, V., Biseau, A., and Kergoat, B. 2003. Preliminary estimates of French deepwater fishery discards in the Northeast Atlantic ocean. *Fisheries Research*, 60: 185-192.

Dransfeld, L, Hareide, NR, & Lorance, P. (2012.) Managing the risk of vulnerable species exposure to deepwater trawl fisheries- The case of Orange Roughy to the west of Ireland and Britain. Symposium "The scientific basis for ecosystem based resource management and monitoring in the deep-waters of the Mediterranean & North Atlantic", 28-30 August 2012, Galway, Ireland (Poster).

Fauconnet, L., Badts, V., Biseau, A., Dimeet, J., Dintheer, C., Dube, B., Gaudou, O., Lorance, P., Messannot, C., Nikolic, N., Peronnet, I., Reecht, Y., Rochet, M.-J., and Tetard, A. 2011. Observations à bord des navires de pêche. Bilan de l'échantillonnage 2010. http://archimer.ifremer.fr/doc/00054/16490/

Guérineau, L., Rochet, M.-J., and Peronnet, I. 2010. Panorama des rejets dans les pêcheries françaises. http://archimer.ifremer.fr/doc/00001/11232/. 49 pp.

Gordon, J.D.M. 2001. Deep-water fisheries at the Atlantic frontier. *Continental Shelf Research*, 21:987–1003.

ICES 2010. Report of the Benchmark Workshop on Deep-water Species (WKDEEP),17–24 February 2010. ICES CM 2010/ACOM:38, 247 pp.

ICES 2012. Report of the working group on biology and assessment of deep-sea fisheries resources (WGDEEP), 28 March - 5 April 2012. ICES CM 2012/ACOM:17, 942 pp.

SSIP 2011. Final Report - Monitoring changes in exploitation pattern for a data deficient species with decreased quota: Ling. Scottish Science/ Industry Partnership Report no. 03/11 - SISP project 007/10, 64 pp.]

### 4.3.9. Topics 9. Spatial and temporal closures and technical measures, 10. Ecosystem (including VMEs) management and monitoring, 20. Vessel Monitoring by Satellite (VMS) effort data and fishing fooprint

[Thanks to the contribution of coralFISH to the stakeholder workshop, these topics were presented by CoralFISH. Spatial and temporal closures, have been analysed in DEEPFISHMAN (Posen et al., 2012), the project has however no new recommendation in this respect. The ICES advice for 2013-2014 for blue ling in ICES division Vb and Subareas VI and VII, a stock and fishery which assessment strongly relied on DEEPFISHMAN data and methods recommends that "*Spatial management to prevent targeted fishing on spawning aggregations should be expanded to cover spawning areas in Division VIb*"].

### 4.3.10. Presentation of proposals based on CoralFISH work

**Anthony GREHAN** presents a Maritime Strategy Framework Directive (MSFD) overview.

Proposal: Harmonize EC technical conservation measures to ensure consistent implementation of FAO guidelines in high seas and within EEZ.

**Marc Ghiglia**: Conservation should be done by conservation measures not fishing management?

**Anthony Grehan:** Harmonisation of different conservation measures is needed.
[the objective of defining a management and monitoring framework is in fact to propose a coherent management system covering both conservation and fishery management aspects]

Proposal: Define the fishing footprint classify EEZ into “existing”, “new” and “closed” fishing areas. By request from Pascal Lorance adding that data from five most recent years should be used.
Proposal: Improve mapping.

Proposal: Impact assessment (needed for new fishing areas) need standard impact assessment guidelines.

Proposal: Improved quality and access to VMS data

**Odd Askel Bergstad:** Access to VMS data will enable science to assess spatial distribution of fishing effort and intensity

**Marc Ghiglia**: Not sure about usefulness of VMS for longline operations. Within fishing footprint it is necessary to separate the type of fisheries.

**Anthony Grehan:** There is a possibility to identify the activity [fishing or steaming] of longliners by speed

**Anthony Grehan:** Proposal that a shared dynamic integrated European EEZ deep-water maritime spatial planning GIS should be developped. DG Mare did not even have the map some years ago. Maritime spatial planning needs good maps. Elements to include in the GIS are:
- fisheries (existing, new and closed areas) and other activities in particular in closed fishing areas. Other activities also should have a defined foot print.
- impact assessment results and bathymetry
-spawning habitats, juvenile nurseries etc
Proposal: Improve closed areas (including MPAs) management (clear objectives, ecosystem status and compliance monitoring etc.), this requires high resolution data.
Some discussion about improved closed area management followed.

**Alex Rodriguez:** fishing industry members want to see rewards and effect of closures-monitoring of areas closed for fishing to see whether they work and if they are in correct location

**Paulette Posen:** In support of shared GIS

**Odd Askel Bergstad:** Questions about a suggested lack of management in MPAs?

**Anthony Grehan**: Yes, in Ireland there are 4 SACs and each management objective is looked at in respect of a range of metrics – even though this was agreed by everyone, derogation was still given to pelagic fleets, creating extra monitoring/control costs – this type of issue could be handled more easily by integrated GIS.

**Discussion**
**Genevieve Quirk:** When recommendations are supplied to Commission, will they be weighted with stakeholder comments, etc? And how about other consultations, post-project?

**Pascal Lorance:** Stakeholder wishes will be made clear to Commission. Other consultations are out of our remit.
[It is reminded here that DEEPFISHMAN is a scientific project carried out with financial support from the Commission of the European Communities, specific RTD programme "Knowledge-Based Bio-Economy" KBBE-2008-1-4-02, funded through the seventh framework programme, theme 2 Food, agriculture and fisheries, Grant agreement no.: 227390. It does not necessarily reflect views of the Commission and in no ways anticipates the Commission's future policy in this area. The proposals for management are derived from scientific analyses and review carried out during the project].

Genevieve Quirk: will all considerations go to advisory bodies such as ICES?

**Pascal Lorance:** For advice to go to ICES, the European Commission or another ICES client will have to make a request for advice. [Results from projects do not go directly to ICES. Scientists involved in ICES work use all available science to carry out the analyses useful to ICES work and advice, where relevant DEEPFISHMAN/CoralFISH method, models and results may be used and go through to advice provided they are agreed in expert groups and advice elaboration process]

15:30- 16:00 Coffee break

### 4.3.11. Use of VMS data (Topic 20)

**Pascal Lorance :** demonstration of UK VMS data analysed by Cefas. The analysis shows a breakdown of fishing effort (hours) and fishing intensity (hours/km²) by depth zones (<200m; 200-500 m; 500-800 m; 800-1100 m; > 1100 m) for all vessels within the UK EEZ in ICES Subareas VI and VII.
[Following question from the audience, Andrew Kenny provided the figures for this deliverable, see below]
Discussion with assistance: the lower category should be limited to about 1400 m (fishing deeper is minimal and taking no lower limit returns a very low fishing intensity as large areas down to 3000 m are included in the deeper strata).

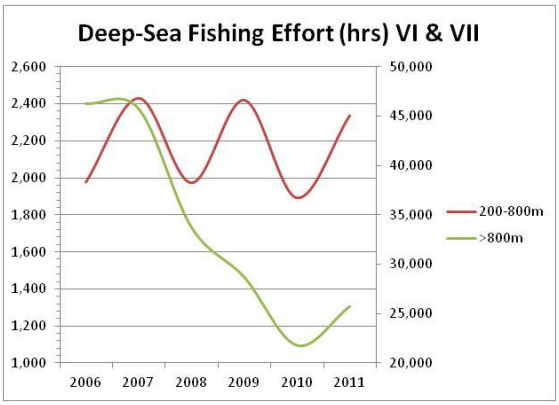



**Figure 1.** Deep water fishing effort (total hours fished) for all vessels operating in UK waters in ICES Areas VI and VII for water depths 200 – 800m and >800m.

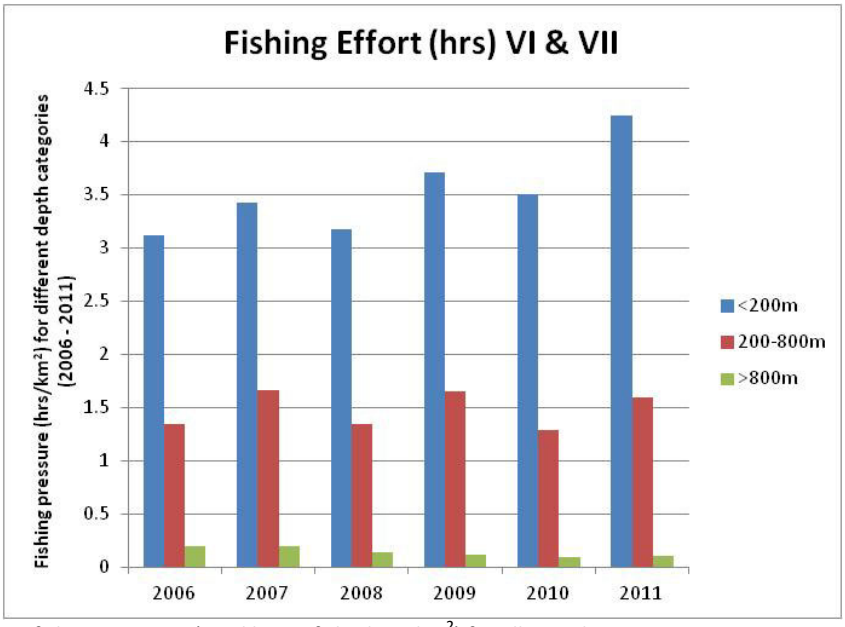



**Figure 2.** Deep water fishing pressure (total hours fished per $km^2$) for all vessels operating in UK waters in ICES Areas VI and VII for water depths <200m, 200 – 800m and >800m.

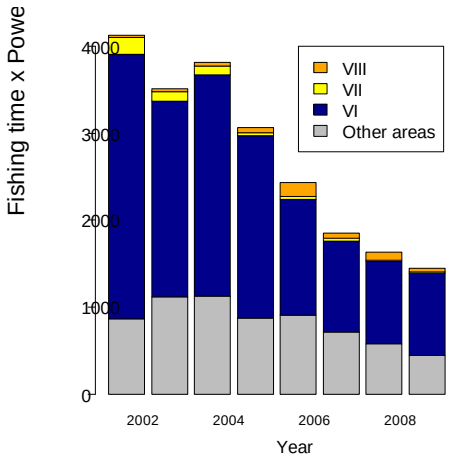



**Figure 3. French licensed deep-water fishing fleet 2002-2009. Fishing effort on seafloor deeper than 800 m by ICES subarea (in thousand kW*fishing days).**

**Tom Blasdale:** Presumably a lot of effort in 200-800m depth range is targeted to hake and other species but not targeted towards deepwater species.

**Pascal Lorance:** In the commission proposal (European Commission, 2012), the ban of bottom deep-water trawling applies to fishing activities regulated by EU regulation 2347/2002.
[European Commission, 2012.Proposal for a regulation of the European parliament and of the council establishing specific conditions to fishing for deep-sea stocks in the North-East Atlantic and provisions for fishing in international waters of the North-East Atlantic and repealing Regulation (EC) No 2347/2002. Brussels, 19.7.2012, COM(2012) 371 final, 2012/0179 (COD)]

**Alan Addison**: Effort restrictions in deep-water (800-1100m) will lead to effort displacement to shallower waters.

**Andrew Kenny:** proposal by Commission is not going to protect VMEs, as fishing in depth range 200-800m is still happening for non deep-water species.

**Genevieve Quirk:** Need reform for deep sea access regime, because in 2010 ICES considered all deep sea stocks were overfished

**Tom Blasdale:** For a number of species we actually do not know whether they are overfished: quantitative advice has been provided based on trends.

**Björn Stockhausen:** In qualitative terms?

**Tom Blasdale:** From now on will be using a harvest control rule for defining MSY.

**Pascal Lorance**: latest ICES advice for 3 stocks [in ICES areas Vb, VI and VII where deep-sea species are exploited by trawlers, the black scabbardfish stock component off Southwest Portugal, was also qualitatively assessed to be exploited in line with the MSY framework] is that exploitation is already in accordance with MSY framework

**Andy Kenny:** Impact on benthic ecosystem is of concern, probably the regulation is not going to have much effect.

**Les Watling:** Brings up the issue of definition of what deep-water species are. Definition of deep sea stocks is of outmost importance in making recommendations.

**Pascal Lorance:** DEEPFISHMAN uses FAO description, which does not name species, for deep-water fisheries [see recommendation 2.2 above] and a depth criteria for deep-water species [recommendation 2.1].

**Andrew Kenny:** Important to draw distinction on depth criteria for benthic ecosystems and depth criteria for fish species. Therefore use combination of fishing footprint and habitat delineation.

**Genevieve Quirk:** NGOs absolutely supportive of this type of harmonisation activity and impact assessments.

### 4.3.12. Topics 11. EU Data Collection Framework (DCF) and observer sampling plans; 12. DCF socio-economic monitoring; 13. Fisheries-independent surveys and monitoring

**Recommandation 11.1:** The ICES proposals for fishery independent surveys for the NE Atlantic deep water stocks be adopted by the new DCF.

**Pascal Lorance:** [in response to a question] It is well understood that it is important to monitor ecosystems, the proposal for survey includes collection of data on fish and other ecological components.

**Andrew Kenny:** MSFD has monitoring requirements specifically related to habitat

**Verena Trenkel**: All non-fish data is to be included in DCF but financing is an issue

**Pascal Lorance**: There are options to have additional sampling (e.g. drop cameras on fishing gears). It is explicit in MSFD that MSFD will drive CFP

**Anthony Grehan:** Are there any intention to incorporate habitat reference points from WGDEC into WGDEEP?

**Tom Blasdale:** There have been joint meetings to foster interaction, but workload has not allowed strong interactions, WGDEEP considers ecosystem impacts but due to lack of expertise to complete the section well; has been proposed in 2012 to have the section in the report completed by WGDEC.

### 4.3.13. General discussion and suggestions for additional topics/comments

**Pascal Lorance:** in particular something you would like to address in management and monitoring framework?

**Björn Stockhausen:** Could one get the project report

**Pascal Lorance:** About 6 months after the project closure

**Odd Aksel Bergstad:** Primary role of these two projects is to provide good science and there are already publications/reports available in the public domain, from which lots of information can be obtained and also the new insights have already gone into ICES expert groups.

Stakeholders were again reminded of information that can be collected at the projects websites or WIKI sites.

Final words from Pascal Lorance and Anthony Grehan about the importance of cooperation with stakeholders

## 4.4. Workshop closure

The workshop was closed at 17:00.

# 5. Synthesis of questionnaires

Questionnaire were returmed from 4 organisations, Artesanal Pesca (Portugal), Union des Armateurs à la Pêche Française (UAPF, France), Scottish White Fish Producers Association (SWFPA) and Oceana (Spain).

The responses to the questionnaires were overall in line with discussions during the workshop. Views from stakeholders are summarised in table 1, further comments by topics are synthesised below and the full questionnaires are in annex1. Because of some inconsistencies in the numbering of topics between the presentations during the workshop, the questionnaires, topics in the questionnaires were re-numbered as indicated in annex1.

Topic 1.
R1.1 and R1.2. Industry organisations and Oceana agreed that the management system based upon a combination of TACs, effort limitation and capacity ceiling should be kept. UAPF asked to which fleets the recommendation should apply (EU vessels in EU EEZ, EU and non-EU vessels in EU EEZ or EU vessels in EU and International waters). Artesanal Pesca considers that the balance between TAC, effort and capacity requires some adjustment by region/fishery. P O'Malley (Fisher and CoralFISH partner) mention that discards have to be accounted and recorded. Oceana pointed out that TAC and effort should be adjusted to scientific advice.

R1.3. Stakeholders were mainly against ITQ, UAPF considers it is de facto in place. Artesanal Pesca considers it is not in favour of sustainability. SWFPA is in favour of ITQs which is already in place in Scotland at community level. Oceana does not consider ITQs provide a more efficient management.

R1.4 and R1.5. The use of MSE with contribution of stakeholder to define scenarios to test is agreed.

Topic 2.
R2.1.
There are some reservations on the depth limit to consider. Artesanal Pesca consider it is not appropriate for the West Iberia where the shelf is narrow, and a high proportion of several species may occur deeper than 200m. This needs to be tested with depth distribution data from this area, the criterion may need some regional adjustment. Chris Yesson (scientist, CoralFISH partner, note that at 200 m thre is a wide range of life histories (as pointed by Les Walting in the workshop).

R2.3. There are reservations about the interest merging of regulation 2347/2002 annex I and II. Species in annex II. UAPF suggets the annex II species are bycatch species, which are not caught in fishing operation not catching annex I species. As a consequence Annex I is sufficient to identify deep-sea fisheries. Artesanal Pesca considers that *Galeus melastomus* should be remove from the list. In some areas *Galeus melastomus* is actually abundant and it may not be appropriate to protect it with a 0 TAC.

R2.3 and R2.4: the harmonisation of the two rules is agreed. UAPF agrees that tusk and Greenland Halibut should be added while SWFPA consider tusk is not a deep-sea species.

Topic 3.

R3.1 Stakeholder question the interest of setting TACs for species which quantitative assessment will not be praticable. UAPF suggested that provide there are TACs on the main target and an effort limitation, theses bycatch species should be properly managed. P O'Malley notes that information is not available for species suggested to be added.

R3.2. there is a general agreement on the revision periodicity. Artesanal Pesca suggest that two groups of sharks (more and less vulnerable) should be defined. Oceana considers that a longer revision period can only be apply to low productivity species.

Topic 4
There is a strong agreement on the principle to adjust assessment and management areas to the actual stock structure. There are reservations on the practicality. In some areas assessment, a single assessment unit in line with stock structure, may need to be split for management in order to maintain the relative stability of quotas.

Topic 5
Artesanal Pesca and UAPF noted that VMS is not appropriate to estimate fishing effort for longliners. On the Available of VMS, the reservation that the confidentiality issue should be treated properly was made.
Oceana indicates that according to the Directive 2003/4/EC on public access to environmental information VMS information should be available to all stakeholders and capacity should be adapted to fishing opportunities.
Topic 6
The industry considers that the capacity has be driven to appropriate levels by management. Oceana suggest that the Commission proposal to ban bottom trawling for harvesting deep sea species is a good strategy to capacity.

Topic 7 Artesanal Pesca comments that discards should be analysed on a haul by haul basic in weight and number caught.
[This is a request for analyses, which seem feasible based on on-board observation data.]
Oceana: recording all specis catches should be mandatory.

Topic 8. Artesanal Pesca suggests analyses to be done on the spatial distribution of target and PET species. The industry is not in favour of observation cameras and suggests that a good observers coverage is more appropriate, although funding is questioned. Oceana favours an obligation to land all species so that the catch is fully documented. Oceana suggest effort allocation and TAC should be allocated to selective non-destructive fishing gears.

Topic 9. Artesanal Pesca suggest that nursery areas should be closed for fishery management.

Topic 10. Fishers wish to be involved in the identification of VMEs. There are strong reservations about defining VME area from Habitat Suitability Model. Ground truthing is requested (and is also suggested by CoralFISH).

Topic 11, 12 and 13. SWFPA indicate that a socio-economic study is on-going. It is generally mentioned that commercial skippers should be associated to surveys design and/or that commercial vessels could be used. Oceana considers that data on fishing activity, stocks status and impact is limited and that reporting should be improved.

Topic 14. Fishers are generally willing to be associated to the design of long-term management plans. Oceana requests multi-species management plans integrating VMEs and habitats.

Topic 15. New fisheries. this topic refers mainly to the management in NEAFC area. Artesanal Pesca points out that new fisheries should not be allowed on stock that are already exploited in other areas.

Topic 20: The use of VMS data to define a fishing footprint is agreed by the industry, Oceana also consider VMS data highly useful. However, it may not be appropriate for longliners.

Topic 21. Proposal from stakeholders on future research included

- Methods to assess the fishing effort (Oceana)
- Improve the knowledge of the biology and stock status of the deep sea species (Oceana, Artesanal Pesca)
- Identification of vulnerable marine ecosystems (Oceana)
- Evaluation of the impacts on non-targeted species and habitats (Oceana)
- spatial distribution of target and uwanted fish (Artesanal Pesca)
- using knowledge of experienced deepwater captains (SWFPA)

Table 1. Synthetic view of agreement from stakeholders according to the questionnaire (see full replies in annex)

| **Topic** | **Recommendation** | **Artesanal Pesca** | **UAPF** | **SWFPA** | **Oceana** |
|---|---|---|---|---|---|
| 1 | 1.1 TACs/effort/licences | Yes | Yes | Yes | Yes |
| 1 | 1.2 Regime | Yes/No | | Yes | Yes |
| 1 | 1.3 ITQs | No | No | Yes | No |
| 1 | 1.4 MSE | Yes | | Yes | Yes |
| 1 | 1.5 MSE, stakeholder contribution | Yes | | Yes | Yes |
| 2 | 2.1 200 m criterion | No | Yes | Yes | Yes |
| | 2.2 FAO criterion | | Yes | | Yes |
| | 2.3 2347/2002 species | | Yes partly | No | Yes |
| | 2.4 NEAFC species | | Yes | No | Yes |
| 3 | 3.1 Additional species | see text | No | Yes | Yes |
| | 3.2 Periodicity of TAC revision | Yes/No | Yes | Yes | Yes |
| 4 | 4.1 Management units | Yes | Yes, see text | Yes | Yes |
| 5 | 5.1 VMS-defined Effort | No | Yes | Yes | Yes |
| | 5.2 VMS availability | | Yes, see text | Yes | Yes |
| 6 | Capacity ceiling | | Yes | Yes | |
| 7 | Spatial patterns of by-catch and discards | | | | |
| 8 | 8.1. Set maximum discard level | see text | | Yes | |
| 9 | Spatial and temporal closures and technical | see text | | | |

| Topic | Recommendation | Artesanal Pesca | UAPF | SWFPA | Oceana |
|---|---|---|---|---|---|
| | measures | | | | |
| 10 | Ecosystem, VMEs | see text | see text | | |
| 11 | DCF | | | | |
| 12 | DCF socio-economy | | | | |
| 13 | Surveys | Yes | | Yes | Yes |
| 14 | Stakeholder participation in LTMP | Yes | | Yes | |
| 15 | LTMP | see text | | Yes | Yes |
| 16 | New fisheries | see quest. | | Yes | |
| 17 | Mixed fisheries | see quest. | | | See quest. |
| 18 | NEACF regime | | | | See quest. |
| 19 | Orange roughy boxes | | | | |
| 20 | 20.1 Footprint: 5yrs VMS | see text | Yes | Yes | Yes |
| 21 | Further research | see text | | | |

# Annex I. QUESTIONNAIRES RETURNED BY STAKEHOLDERS

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

Name Javier Lopez Santiago

Organisation Oceana

Email jlopez@oceana.org

Stakeholder type Environmental NGO

Because of inconsistent topic numbering between slides, questionnaires and other documents, topics were re-numbered in red in this questionnaire to indicate properly the reference to the text and table 1.

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 1 | Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management etc) | | 1.1 Oceana considers that deep sea species should be managed through effort restrictions (input control) and catch limits (output control). Both type of management measures together.<br>1.2 Oceana agrees to review the TAC and effort regimens and adjust them to the scientific advice.<br>1.3 Oceana does not consider that the ITQs implementation guarantee a more efficient management of deep-water fisheries as there are no evidences that the remaining fishing practices will be low impact on the resources and the environment.<br>1.4 Any kind of planning in the management of fish resources is welcome<br>1.5 Management strategies should take into consideration the stakeholders opinion to enrich its content and facilitate its implementation |
| 2 | Definition of deep water and deep-water species | | 2.1 Maybe the term “significant” from “…those which spend a significant part of their life-cycle…” is a bit ambiguous, we recommend deleting it.<br>2.2 Oceana agrees with the incorporation of the FAO criteria<br>2.3 Oceana trust in the scientific opinion to exclude and include species listed in the access regulation<br>2.4 Oceana agrees with the harmonization of the list but it should not imply the exclusion of species that should be included in the lists, the most precautionary criteria should be prioritized. |
| 3 | Total Allowable Catch (TAC) management: review of the current list of species and the periodicity of TAC reviews | | 3.1 Oceana agrees with increasing the number of species managed through catch limits.<br>3.2 The periodicity of TAC reviews could be increased only in the species, with sound evidences of low productivity, for which there are no expectations of status change. |

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

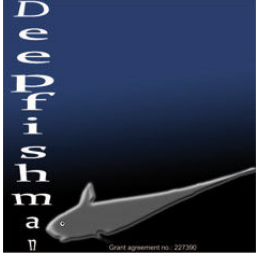
| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 4 | Review of TAC management units taking into account new knowledge of stock structure. Preliminary suggestions for fisheries-based management units | | 4.1 Totally agree, management measures (effort, TACs) should be defined for areas that represent stock functional units. For several species management areas do not correspond with stock functional units therefore management areas should be redefined according to the best biological evidences of the stocks and species. |
| 5 & 6 | Definition of deep-water fishing effort and Capacity ceilings | | 5.1 VMS are a very useful tool to acquire data and assess the fishing activity. The availability of this information can substantially improve the management of the fishery and resources, and the Marine Spatial Planning.<br>5.2 According to the Directive 2003/4/EC on public access to environmental information VMS information should be available to all stakeholders. Otherwise as the VMS is paid by the citizen's taxes and the resources exploited are public resources, this VMS information should be made available.<br>6 Capacity should be adapted to fishing opportunities possibilities. No public funds should be provide for activities that encourage the capacity enhancing like construction or modernization nor scraping. The approval of Commission proposal to ban bottom trawling for harvesting deep sea could be a good strategy to reduce deep sea fisheries capacity |
| 6 7 | Spatial patterns of bycatches and discards | | 6.1 For several deep sea fisheries there is a lack of knowledge in the by-catch and discards record and ratios. The record of all by-catch species caught should be compulsory, it would help to improve the knowledge of the impact of the deep sea fisheries and it would be a main tool to design the spatial management plans. |

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 7<br>8 | Management and monitoring of bycatches, discards and protected, endangered and threatened (PET) species | | 7.1 As it has been said above it is essential to implement a sound monitoring system in the deep sea fisheries to assess their impact in the ecosystem and design a coherent marine spatial planning.<br>Oceana agrees that according to available information it seems that deep sea fisheries have a low impact on mammals, seabirds and turtles but it cannot be said for other deep sea fish species and invertebrates that in most cases are very vulnerable to impacts.<br>The record and monitoring of all by-catch species should be compulsory. Oceana considers that by-catch species should be landing; only species for which it is scientifically established that there is good prospect for their survival, species for which a zero TAC has been set and species for which fishing is prohibited should be excluded from the landing obligation.<br>The best way to avoid this situation is to minimize or ban the use of high impact fishing practices and conversely encourage the allocation of fishing opportunities (effort and TACs) to the most efficient, selective and least destructive practices. |
| 8<br>9 | Spatial and temporal closures and technical measures | | 8.1 Oceana agrees with the spatial and temporal closures, based on the best available information, attending to the presence of vulnerable habitats or species (spatial closures) and essential fish habitat – reproduction, spawning, nursering, feeding…- (spatial and/or temporal closures). |
| 9<br>10 | Ecosystem (including vulnerable marine ecosystems (VMEs)) management and monitoring | | 9.1 For the responsible management and exploitation of the deep sea resources it is essential to have previous information on the ecosystem. It is priority to increase the research and improve the knowledge of deep sea ecosystem. |
| 10<br>11 | EU Data Collection Framework (DCF) and observer sampling plans | | 10.1 For many deep sea fisheries there is a lack of information about the fishing activity, stock status and impacts on the ecosystem. Fishing vessels and Member States should improve the report of fishing data to improve the knowledge of the fishery and therefore the management of the resources. |




# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 11<br>12 | DCF socio-economic monitoring | | 11.1 Deep sea fishing activity and capacity should be adapted to fishing opportunities and not contrary. It could have potential impacts in the socio-economic aspects of the fishery but is the only way to guarantee a responsible and sustainable activity. |
| 12<br>13 | Fisheries-independent surveys and monitoring | | 12.1 Independently of the reporting data from fishing vessels it is recommendable to deploy independent scientific surveys to assess the resources and ecosystems. |
| 13<br>14 | Stakeholder participation in monitoring and management | | 13.1 |
| 14<br>15 | Long-term management plans | | 14.1 Oceana considers that the single-stock/species long-term management plans should move towards multi-species management plans. This new type of multiannual plans (MAP) should also integrate specific measures to minimize unwanted catches, by using the best available technology, to minimize fishing impacts of vulnerable marine ecosystems and species, and to protect essential fish habitats. In this manner they should also contribute to achieving the objective under the Marine Strategy Framework Directive to restore or maintain the good environmental status of marine waters. |
| 15<br>16 | Monitoring/management of new fisheries | | 15.1 No new deep sea fisheries should be initiated without sound evidence of the exploitation sustainability. |
| 16<br>17 | Management of mixed-fisheries: species/fishery level | | 16.1 In mixed fisheries TAC and effort should be defined according to the most vulnerable species. |

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 17<br>18 | NEAFC: deep-water management regime | | 17.1 NEAFC should encourage the implementation of actions and management measures that facilitate progress towards the responsible exploitation of the deep resources.<br>• Incorporate into NEAFC the provisions and recommendations of the UN General Assembly and international guidelines.<br>• Identifications and listing of new vulnerable species and habitats.<br>• Prior impact assessment of new fishing areas.<br>• Definition of new closure areas according to best available information.<br>• Improve the assessment of target and non-target species.<br>• Improve the data reporting, monitoring and control of fishing activities and the enforcement of the regulations. |
| 18<br>19 | Orange roughy protection box | | No comments |
| 19<br>20 | Vessel Monitoring by Satellite (VMS) and fishing footprints | | 19.1 VMS is a useful tool to manage the exploitation of the deep sea species. It allows to estimate the footprint of the fishing activity, it facilitates information of the fihing grounds and distribution of the target and non-target species. It allows to distribute in a more sustainable way the fishing effort and TACs. |
| 20<br>21 | Recommendations for further research studies | | 20.1 Scientific research is essential for manage the resources. In this sense Oceana recommends to research studies related with:<br>• Methods to assess the fishing effort<br>• Improve the knowledge of the biology and stock status of the deep sea species<br>• Identification of vulnerable marine ecosystems<br>• Evaluation of the impacts on non-targeted species and habitats |

Other topics

| |
|---|
| |

General comment

| |
|---|
| |

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

Name : Carlos Alexandre Macedo

Organisation : ArtesanalPesca – Organização de Produtores

Email : artesanalpesca@mail.telepac.pt

Stakeholder type : fishing industry – Producer organization

Because of inconsistent topic numbering between slides, questionnaires and other documents, topics were re-numbered in red in this questionnaire to indicate properly the reference to the text and table 1.

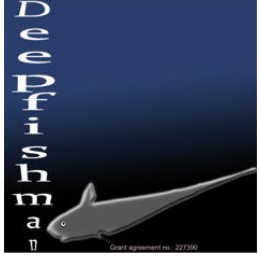
| | **Topic** | **Overall agreement with recommendation (YES/NO)** | **Comments and suggestions** |
|---|---|---|---|
| 1 | Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management etc) | YES and NO | The deep-water fisheries management should evolve into a system were there are a balance between effort, TAC's and licensing, where the different characteristics of the different fisheries should be taken in account.<br>We are against the introduction of ITQ, because that will distort the principles of the sustainable management, transforming licensing into a business.<br>We agree with the use of a management strategy evaluation suitable for the different fisheries. |
| 2 | Definition of deep water and deep-water species | NO | We do not agree with the definition of deep-water species on the proposal. If in geographic terms we understand the 200m depth, because is the end of the continental platform, we don´t understand, neither agree that, at least for the Iberian peninsula, that depth can be used to define the deep-water species. Due to the continental platform in our area, that doesn't make any sense, because, at 200m the majority of the species found are demersal, like hake, monkfish and others. The specie with deep-water characteristics occurs >600m, and that should be depth limit to our area. |
| 3 | Total Allowable Catch (TAC) management: review of the current list of species and the periodicity of TAC reviews | YES and NO | In general, we agree with the periodicity of the revision, but that has to be in pair with the end of the zero TAC measure sin place. In the case of the deep-water sharks, there should have, at least, 2 different groups of deep-water sharks, according to the different characteristics and vulnerability of the species. Therefore different periodicity and measures for the distinct deep-water sharks.<br>If some species should be added to the list, some species should be taken of the list, like *galeus*. |

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 4 | Review of TAC management units taking into account new knowledge of stock structure. Preliminary suggestions for fisheries-based management units | YES | First of all, the management areas for black scabbardfish should be split according to ICES assessment units. It doesn't make any sense that in the southern area, ICES assessment unit (VIII e IX), do not correspond with the EC management unit that evolve areas VIII, IX and X. ICES Subarea X must be split from the others. Even because in ICES X subarea is beginning a new fishery without any preliminary approach. |
| 5 & 6 | Definition of deep-water fishing effort and Capacity ceilings | NO | For example, the measures used to deep water trawl are not suitable to be used in deep water longline. On our case (longline) doesn't make any sense to use kw/day has a effort measure. What should be used is the number of hooks and the longline immersion period of time. Should also be developed a way of comparison between the kind of measures used in each fishery. Not ITQ. |
| 6 7 | Spatial patterns of bycatches and discards | | We advocate that the discards and by-catch should be discriminated by fishing haul, and not just by weight but by number of individual caught. |
| 7 8 | Management and monitoring of bycatches, discards and protected, endangered and threatened (PET) species | | In our opinion what is really important is to identify the spatial and temporal overlap between target specie and the PET by-catch species. According to that knowledge it should be established the permissible level of exploitation for the PET species. |
| 8 9 | Spatial and temporal closures and technical measures | | When appropriated depending on the species stock. When there are identified areas of breeding or juveniles should be made spatial and temporal closure of areas. |

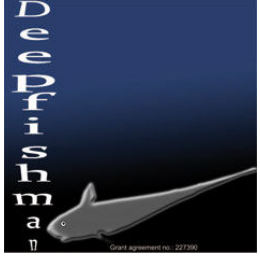



# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 9<br>10 | Ecosystem (including vulnerable marine ecosystems (VMEs)) management and monitoring | | We are available to be active in programs of ecosystem monitoring. |
| 10<br>11 | EU Data Collection Framework (DCF) and observer sampling plans | | At this moment we are cooperating with a company who is making a study for the European commission supported on observers. |
| 11<br>12 | DCF socio-economic monitoring | | |
| 12<br>13 | Fisheries-independent surveys and monitoring | YES | We are open to cooperate with surveys and monitoring in our associated vessels. |
| 13<br>14 | Stakeholder participation in monitoring and management | YES | We, in Artesanalpesca, have some good experiences in working with the investigation institutes, even in self sampling, like our participation in LOT1 program. We have internal management measures, ranging beyond the legal and institutional obligations, that incorporate limitations on the number of sets and number of hooks. |




# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 14<br>15 | Long-term management plans | | If it has the involvement of the stakeholders. |
| 15<br>16 | Monitoring/management of new fisheries | YES | It's important especially in fisheries targeting species which it is considered the existence of a single stock. Not has it is happening in fisheries targeting black scabbardfish in ICES subarea X.<br>The definition of sustainability in the case of a new fishery should consider the existing fisheries targeting the same stock. |
| 16<br>17 | Management of mixed-fisheries: species/fishery level | | Should be detailed for each haul, so it can by differentiate and manage effectively. |
| 17<br>18 | NEAFC: deep-water management regime | N.A. | |
| 18<br>19 | Orange roughy protection box | N.A. | |

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 19<br>20 | Vessel Monitoring by Satellite (VMS) and fishing footprints | | Doesn't work quite good with fixed gear fisheries. |
| 20<br>21 | Recommendations for further research studies | | For example:<br>- Study for the definition of spatial and temporal overlap of target species and by-catch species;<br>- Study to identify if exists only one our more populations of black scabbardfish, and theidentification of the reproduction areas, and the areas of biggest occurrence of juveniles. |

Other topics

| |
|---|
| |

General comment

| |
|---|
| We'd like to reaffirm our entire availability in collaborating with the investigation institutes in the reinforcement of the scientific knowledge.<br><br>Seeking that objective we have been working with IPIMAR, Portuguese institute of fishing investigation, and in cooperation, we are getting important updates in the knowledge of deep water species. |

**Sujet:** Deepfishman Qestionnaire
**De :** ALAN ADDISON <aja70@btinternet.com>
**Date :** 13/09/2012 16:45
**Pour :** "Pascal.Lorance@ifremer.fr" <Pascal.Lorance@ifremer.fr>
**Copie à :** Mark Lovie <marklovie72@aol.com>, Mike Park <mikeswfpa@aol.com>, Peter Lovie <PL515@aol.com>

Hello Pascal,

Please find below, after consultation with other Scottish Deep Water trawler skippers, our contributive answers to the questionnaire.

**Topic 1**

1.1 Yes .. We feel that we fish the deep water stock sustainably determined by using bigger mesh size in our nets and is managed responsibly through Tacs, effort and licensing.

1.2 Yes .. The deepwater licence situation should be addressed, as of at present only a small percentage of UK deepwater licence holders actually fish the stocks. (Vms data would confirm this.)

1.3. Yes .. We presently operate through an ITQ system in all but name. Having to have the quota in place prior to operating in the fishery.

1.4 & 1.5 Yes .. Tac levels to be revised and evaluated though lack of scientific currently appears to be an issue. We in industry are willing to help in any way to gather more information for instance observers or tally book style records.

**Topic 2**

2.1 Yes ... Evaluation should be made to the relevance of the 200m contour depth on an area to area basis. Normally before we see any deepwater stock in area VIa we are trawling at depths >450m

2.3 & 2.4 No .. Ling and Tusk should be removed from any deepwater list.

**Topic 3**

3.1 Yes ... No comment to add

3.2 Yes .. No comment to add

**Topic 4**

Yes.. For definite in area VIa the stock structure for Blue Ling and Black scabbards should be addressed, as the UK share of the Tac is so small yet the stocks are so healthy, the Tac and UK share need to increase. Scientific catch recommendation treated by managers in the EU-Faroes negotiations.

**Topic 5**

5.1 & 5.2 Yes .. VMS data would certainly highlight the amount of effort being subjected to the deepwater fisheries. Though in certain areas because of the steep angle of the shelf edge, depth distribution may be prone to considerable anomalies

**Topic 6**
Status quo

**Topic 7 & Topic 8**

Yes.. To manage and monitor discards and bycatches observers would need to be placed onboard our ships during deepwater trips as Marine Scotland will not accept any non-scientific information supplied by fishermen. We see very little discards because of our larger mesh sizes. The opinion of 90% of the Scottish fleet covering all areas, is against the installation of cameras in any shape or form. We see no PET species during our fishing opps.

**Topic 9.10.20**

Yes ... We already have in area VIa closed areas (VMEs) and VMS data would support that these areas are being respected along with the activity inside the 'Blue Ling' box. Current fishing footprint supported by VMS data we have no issue with it in its present form. We also agree with more observer sampling (funding could be an issue )

**Topic 11**
Yes .. We are still presently waiting on our economic analysis fom the University of Aberdeen.

**Topic 12**
Yes ... Though should include input from experienced active ship captains on the areas to be surveyed.

**Topic 13**
Yes .. Industry needs to be invited and welcomed onboard to these types of projects as we feel not enough input
from the catching sector has been incorporated in the final proposal.

**Topic 14**
Yes ... We welcome any longer term management plans which enables us to plan our business models around. The stocks need to be correctly reviewed with a Tac set to match the stock abundance, as we see the stocks improving year on year because of reduced effort, closed areas, bigger mesh size etc.

**Topic 15**
Yes ... Any new fishery to be properly monitored and managed so as to stop a repeat of the overfishing in the 80's & 90's as occured in area VIa (the legacy of which we are still paying for today!)

**Topic 16, Topic 17**
No comment

**Topic 18**
Yes.. Industry consulted

**Topic 19**
Yes ..

**Topic 20**
Yes ... Definitely, more and future research studies must be carried out in liason with the industry and using the knowledge of experienced deepwater captains. Working together the future stocks will increase in harvest size so a sustainable profitable deepwater fishery is available for future generations..

Best Regards
Alan Addison on behalf of SWFPA
Captain Venture II, BF326

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

Name : marc GHIGLIA

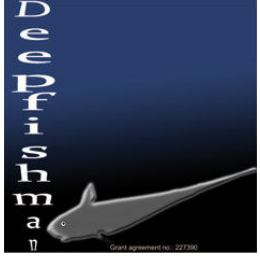
Organisation : Union des Armateurs à la Pêche de France

Email : mg@uapf.org

Stakeholder type : Fishing industry

Pour chaque sujet les références faites à des « sous-points » (1.3, 2.4, etc ..) se rapportent à la déclinaison des recommandations par sujet qui apparait dans le document soumis aux parties prenantes.

| | **Topic** | **Overall agreement with recommendation (YES/NO)** | **Comments and suggestions** |
|---|---|---|---|
| 1 | Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management etc) | 1.1 : Oui<br>1.2 Cf.infra 1.4 & 1.5 & 2 & 3<br>1.3 Non<br>1.4 Oui<br>1.5 Oui | Les navires EU ne sont potentiellement pas les seuls à pêcher des espèces profondes dans les eaux EU (navires de pays tiers), ni n'en pêchent seulement dans les eaux EU ou dans les eaux de la haute mer relevant de la NEAFC dans l'Atlantique Nord-est (également dans les eaux de pays tiers). Par ailleurs les pêcheries profondes qui existent dans l'Atlantique Nord-ouest sont a priori proches en nature de celles de l'Atlantique Nord-est :<br>Les recommandations faites par DEEPFISHMAN ont-elles vocation à s'appliquer à toutes les pêcheries profondes communautaires de l'Atlantique Nord et à toutes les pêcheries profondes des eaux communautaires qu'elles soient le fait de navires communautaires ou de pays tiers ?<br>1.1 Les TAC sont nécessaires pour gérer totalement le taux d'exploitation de chacune des espèces cibles, ce que ne permettrait pas un contrôle de l'effort de pêche seul (Cf. abondance saisonnières différentes selon les espèces, intentions de pêche plus ou moins ciblées sur telles ou telles espèces même dans le cadre de pêcheries dites multi-spécifiques etc ..)<br>1.2 Cf. infra<br>1.3 Cette question n'est pas propre aux pêcheries profondes.<br>Nous ne sommes pas d'accord avec le fait que les QIT conduisent dans tous les cas à une meilleure efficience. Dans les faits l'essentiel des pêcheries communautaires, y compris profondes, font l'objet d'individualisation de quotas par entreprises ou navires dans les différents EM (soit au niveau national, soit au niveau des allocataires |




# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| | | | collectifs type OP).<br>Le supplément d'efficience supposé des QIT n'a donc avoir qu'avec l'efficience économique plus grande auxquels ils conduiraient et/ou l'absence de légitimité à utiliser des fonds publics pour l'ajustement des capacités. Ces affirmations font débat dans le cadre de la réforme de la PCP.<br>Tout en remarquant qu'actuellement il n'existe pas de surcapacités des flottilles participant aux pêcheries profondes, nous ne les partageons pas. |
| 2 | Definition of deep water and deep-water species | 2.1 et 2.2 : A priori, Oui mais voir commentaires<br><br>2.3 : Des doutes sur l'utilité d'une fusion des annexes 1 et 2, en termes d'encadrement de l'accès aux pêcheries profondes<br><br>2.4 : moyennant les commentaires sur 2.3, oui | 2.1 : Dans l'absolu le choix de retenir la zone aphotique comme une limite repose sur le postulat d'une différence de productivité des zones photique et aphotique : mais quelle est de fait leur différence de productivité, tenus compte des flux d'énergie autres que ceux issus directement de la photosynthèse ?<br><br>2.2 : La définition FAO telle que strictement retenue conduirait également à inclure d'évidence des pêcheries non profondes dès lors qu'elles conduisent à des captures accessoires d'espèces à faible productivité (requins etc ..).<br><br>2.3 : S'il semble naturel d'inclure flétan noir et brosme à la liste de l'annexe 1 (le flétan blanc n'est pas inclus), et ne pas y inclure le congre, en revanche quelle est l'utilité de fusionner l'actuelle annexe 1 et l'actuelle annexe 2 pour juger de la nécessité de disposer d'une licence pour leur capture ? Celle-ci ne peut en effet dans la plupart des cas difficilement s'envisager indépendamment de la capture des espèces de l'actuelle annexe 1 (augmentée du flétan et du brosme) ?<br>La mention ou pas d'une espèce dans la liste des espèces profondes, devrait être explicitement documentée au regard du critère 2.1 s'il est retenu. |
| 3 | Total Allowable Catch (TAC) management: review of the current list of species and the periodicity of TAC reviews | 3.1 :Pas nécessairement utile en termes de gestion.<br><br>3.2 : Oui | 3.1 : Les objectifs et l'utilité d'une mise sous TAC d'espèces supplémentaires doivent être précisés et justifiés pour chacune des espèces envisagées.<br>1° il est peu probable que les captures de nombreuses espèce citées se développent, étant donné quelles ne constituent souvent que des captures accessoires peu abondantes. En ce sens le maintien d'un encadrement complémentaire des efforts de pêche proposé au point 1, peut être pour ces espèces un mode d'encadrement du taux d'exploitation suffisant. |

# DEEPFISHMAN

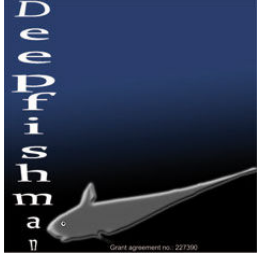
## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| | | | 2° D'autres mesures que la mise sous TAC, peuvent conduire à la complète documentation des captures.<br>3° A ce jour la mise sous TAC s'accompagne traditionnellement de demandes d'évaluations quantitatives, quand pour les espèces citées dans un premier temps, des évaluations qualitatives ou des analyses de risques doivent/peuvent suffire pour juger de la durabilité des mortalités par pêche qu'elles subissent ; Un encadrement par des TAC ne se justifie dès lors que lorsque au vue des analyses qualitatives ou de risques évoquées infra, il s'avère nécessaire de précisément contrôler ces taux d'exploitation. |
| 4 | Review of TAC management units taking into account new knowledge of stock structure. Preliminary suggestions for fisheries-based management units | Oui à la réserve près des commentaires ci-contre | Grenadier 5b 6 7 + 12 b : oui sous réserve que les avis scientifiques et la gestion des captures tiennent compte de deux sous unités, 5b 6 7 d'une part et 12b d'autre part. Les flottilles et l'historique de l'exploitation sont différents pour ces deux zones, et leur fusion soulèverait des difficultés en termes de stabilité des droits de pêche nationaux, de maîtrise des taux d'exploitation du fait de déplacements possibles des efforts de pêche, et de cohérence des évaluations.<br><br>Sabre noir 5 6 7 et 12b (et non 12) : Oui si l'historique différentié des captures 12b et reste du 12 est accessible.<br><br>Sabre CECAF 34.1.2 : le commentaire sur l'inadéquation de la zone de gestion, n'est suivi d'aucune recommandation de la part de DEEPFISHMAN/<br><br>Lingue bleue 5b 6 7 + 12 b : les captures de lingue bleue 12 sont encadrées au niveau communautaire, au travers d'un TAC qui couvre l'ensemble de la zone 12 seule (cf. règlement 43/2012 pour 2012 – et non 44/2012).<br>Oui donc sous réserve que les avis scientifiques et la gestion des captures tiennent compte de deux sous unités, 5b 6 7 d'une part et 12b d'autre part. Les flottilles et l'historique de l'exploitation sont en effet différents pour ces deux zones, et leur fusion totale soulèverait des difficultés en termes de stabilité des droits de pêche nationaux, de maîtrise des taux d'exploitation du fait de déplacements possibles des efforts de pêche, et de cohérence des évaluations. Et que l'historique différentié des captures 12b et reste du |

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| | | | 12 est accessible. |
| 5 Et 6 | Definition of deep-water fishing effort and Capacity ceilings | Oui | 5.1 : Mais l'effort déployé par des engins fixes est techniquement difficilement mesurable au travers des seules données VMS<br><br>5.2 : A la condition que les objectifs et les bénéficiaires de cette mise à disposition soient précisément définis, et que la confidentialité tant en termes de protection des données personnelles que de protection des intérêts économiques des entreprises soit garantie.<br><br>5.3 : nous considérons que les modalités actuelles d'encadrement des capacités qu'il est possible de mettre en œuvre, ont conduit à une adéquation ressources/capacités. |
| 7 | Spatial patterns of bycatches and discards | | Aucune recommandation examinée. |
| 8 | Management and monitoring of bycatches, discards and protected, endangered and threatened (PET) species | | Aucune recommandation totalement explicite examinée.<br>Il semble suggéré d'utiliser cependant un système de caméras pour observer (et contrôler ?) : en terme de contrôle, d'autres dispositifs et moyens existent cependant qui peuvent être combinés (observateurs, comparaison entre l'activité des navires observés/contrôlés et les autres, etc ..) |
| 9 | Spatial and temporal closures and technical measures | 9.1 : Oui | 9.1 : Au moins pour les eaux européennes, considérant le continuum des pêcheries qui existent sur le talus entre des pêcheries « moins profondes » et d'autres « plus profondes », la manière la plus pragmatique de déterminer une empreinte globale - dont l'objectif est d'éviter une extension des activités sans garantie que les risques d'impacts sérieux et dommageables sur les écosystèmes ne soient maîtrisés - pourrait être de cumuler les empreintes individuelles pour déterminer la limite de l'expansion bathymétrique maximum, de façon |

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| | | | à ne pas permettre une expansion nouvelle sans analyses de risques préalables. |
| 10 | Ecosystem (including vulnerable marine ecosystems (VMEs)) management and monitoring | Discussion sur la gestion des VME (issue des travaux de CORALFISH) | Les décisions de gestion ne peuvent pas être prises sur la base de résultats de cartographies des habitats potentiels de VME (rappel : un VME ce n'est pas qu'une présence c'est également un niveau significatif de présence) :<br>- sans que la corrélation entre habitats potentiels et présence attestée de VME n'ait été établie in situ.<br><br>Par ailleurs les méthodes de cartographies des habitats potentiels soufrent de limitations importantes pour pouvoir servir de support à une gestion opérationnelle des VME :<br>- Ne se prononce pas sur l'état de conservation des VME éventuels qui commande les modalités de gestion à adopter ;<br>- Ne se prononce pas sur les niveaux d'abondance qui commande les modalités de gestion à adopter (abondances et leurs répartitions étant liées au niveau de risque de dommages sérieux) ;<br>- Etablissent des résultats à une échelle trop large au regard des besoins des activités de pêche, du fait des limites inhérentes à l'échelle de définition des données d'entrée des modèles et à la nature de ces données (données abiotiques et peu nombreuses) ; |
| 11 | EU Data Collection Framework (DCF) and observer sampling plans | | Sans commentaire. Aucune recommandation totalement explicite examinée (à l'exception de soutenir la recommandation du CIEM de campagnes à la mer dédiées pour en faire un élément de la DCF) |
| 12 | DCF socio-economic monitoring | | Aucune recommandation examinée. |



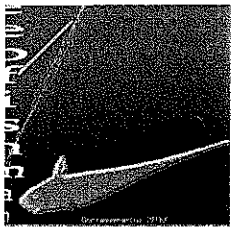

# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 13 | Fisheries-independent surveys and monitoring | | Aucune recommandation examinée. |
| 13 | Stakeholder participation in monitoring and management | | Aucune recommandation examinée. |
| 14 | Long-term management plans | | Aucune recommandation examinée. |
| 15 | Monitoring/management of new fisheries | | Aucune recommandation examinée. |
| 16 | Management of mixed-fisheries: species/fishery level | | Aucune recommandation examinée. |
| 17 | NEAFC: deep-water management regime | | Aucune recommandation examinée. |
| 18 | Orange roughy protection box | | Aucune recommandation examinée. |
| 19 | Vessel Monitoring by Satellite (VMS) and fishing footprints | | Aucune recommandation examinée. |
| 20 | Recommendations for further research studies | | Aucune recommandation examinée. |

Other topics



# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

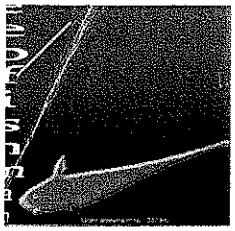
Name CHRIS YESSON

Organisation ZOOLOGICAL SOCIETY OF LONDON

Email Chris.yesson@ioz.ac.uk

Stakeholder type Researcher - marine biology

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 1 | Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management etc) | Yes | I like the idea of ITQs but the comment about setting the initial levels is a serious issue. |
| 2 | Definition of deep water and deep-water species | Yes - species. | Agree with Les Watling that 200m+ species incorporates a wide range of life histories that may require different management. |
| 3 | Total Allowable Catch (TAC) management: review of the current list of species and the periodicity of TAC reviews | Yes | |
| 4 | Review of TAC management units taking into account new knowledge of stock structure. Preliminary suggestions for fisheries-based management units | | |



# DEEPFISHMAN

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

Name PATRICK O MALLEY

Organisation O MALLEY FISHERIES

Email POMALLEY@MSCINT.COM

Stakeholder type FISHERMAN

| | Topic | Overall agreement with recommendation (YES/NO) | Comments and suggestions |
|---|---|---|---|
| 1 | Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management etc) | NO | discards HAS to be account in the fishing and disclosed and recorded |
| 2 | Definition of deep water and deep-water species | Yes | |
| 3 | Total Allowable Catch (TAC) management: review of the current list of species and the periodicity of TAC reviews | No | No real information methods not reliable all partners (i.e. Fishermen) not properly consulted. |
| 4 | Review of TAC management units taking into account new knowledge of stock structure. Preliminary suggestions for fisheries-based management units | | |

**DEEPFISHMAN**

**Stakeholder workshop, Galway, 31.08.2012**

**Monitoring and management framework proposal**

Response from the Deep Sea Conservation Coalition

Matthew Gianni
Marta Marrero
Bjorn Stockhausen
Contact information: matthewgianni@gmail.com

| | **Topic** | **Overall agreement with recommendation (YES/NO)** | **Comments and suggestions** |
|---|---|---|---|
| 1 | Management of deep-water fisheries in the NE Atlantic at the macro-level (TACs, effort, rights-based management, etc.)<br>**Recommendations specific to EU fleets**<br>**1.1.**EU vessels fishing for deep-water species in EU waters and in international waters of the NEAFC RA continue to be managed by TACs and effort/licensing. [STATUS QUO]<br><br>**1.2.** TAC and effort regimes currently incorporated in the EU Access Regime should be substantially revised in content and scope<br><br>**General proposals**<br>**1.3.** Transferable fishing rights (preferably ITQs) are expected to be more efficient for the management of deep-water fisheries. | YES - A MAJOR OVERHAUL OF THE REGIME FOR THE MANAGEMENT OF DEEP-SEA FISHERIES IS NEEDED | A major overhaul of NE Atlantic deep-sea fisheries is needed to align fishing practices in the EU for deep-sea species with UNGA international resolutions 61/105 and 64/72, and FAO standards. To better manage deep-sea fisheries in the NE Atlantic the deep-sea access regime should include:<br>1) Ending destructive bottom fishing through a mandatory phase out of bottom trawling and bottom gillnetting within two years;<br>2) Requiring prior impact assessments for all other deep sea fisheries;<br>3) Ensuring that fishing only be permitted if the catch, including any bycatch, can be limited to sustainable levels based on a clear scientific understanding of the species impacted, and that deep-sea fisheries are managed to minimize or prevent the catch of vulnerable, threatened, or endangered species;<br>4) Ensuring that any deep-sea fisheries not covered by above are managed in a way that prevents adverse impacts on deep-sea ecosystems such as deep-sea coral, sponge and seamount ecosystems.<br><br>1.3 There is little evidence that ITQs could lead to sustainable deep-sea fisheries. |

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | | | |
|---|---|---|---|
| | **DEEPFISHMAN proposal for management**<br>- TAC levels to be evaluated using management strategy evaluation (MSE) where possible.<br><br>- Management strategies to be developed with stakeholders and assessed using MSE methods | | - |
| 2 | Definition of deep water and deep-water species.<br><br>**Deepfishman proposal**<br>**2.1.** In some areas of the NE Atlantic deep-water species be defined as those which spend a significant part of their life-cycle at depths >200 m and have 50% or more of their adult biomass occurring at depths >200m.<br>The appropriateness of 200 m depth limits should be evaluated for all areas.<br><br>**2.2.**In line with the FAO guidelines for the management for deep-sea fisheries in the high-seas Deep-water fisheries are those which<br>i. the total catch (everything brought up by the gear) includes species that can only sustain low exploitation rates; and<br>ii. the fishing gear is likely to contact the seafloor during the normal<br>course of fishing operations.<br><br>**DEEPFISHMAN proposals specific to EU fleets**<br>**2.3.** For licensing purposes the species listed in Annex I and II of 2347/2002 be combined, that *Conger conger*, *Lepidopus caudatus* and *Sebastes viviparus* be deleted and Greenland halibut, tusk, beaked redfish be included.<br><br>**2.4.** Regarding the list of deep-water species used for management purposes by NEAFC (NEAFC, 2011), the NEAFC and EU lists should be harmonized. (Tusk and Greenland halibut should continue to be included, that beaked redfish is added, and that ling, conger eel and Norway redfish be removed) | YES – A MORE PRECISE DEFINITION OF DEEP-SEA FISHERIES WOULD BE HELPFUL THOUGH WE DON'T THINK THEY SHOULD NECESSARILY BE LIMITED TO BOTTOM CONTACT FISHERIES ONLY. | 2.1. This seems a potentially constructive approach, although we would like to see which species this applies to and how. We would also like to know whether this type of information is available (e.g. % of adult biomass occurring below 200m) for all of the species on the Annexes to EU 2347/2002, the Commission proposal of 19 July 2012, and the NEAFC deep-sea species list. We would also be interested to know if this definition would result in additional species (species not on the abovementioned lists) being defined as deep-sea species (those not on the abovementioned lists) such as anglerfish and hake.<br><br>2.2 The concern is with both the impact on the benthos and the impact on low-productivity vulnerable species. Impact assessments should be required in regard to the impact on deep-sea species and low-productivity species as indicated in paragraph 47 of the FAO Guidelines. This is also a requirement of the UNGA resolutions including Resolution 64/72, especially paragraph 119(d) and 120.<br><br>2.3 We assume that this recommendation is based the definition of deep-sea species under point 2.1. If so then, as indicated in our comments on point 2.1 above we would like to see how this definition of deep-sea species applies specifically to Annex I and II of Regulation 2347/2002, and other species that may qualify. |

| | | | |
|---|---|---|---|
| | | | 2.4 NEAFC and EU lists should be harmonized and extended to include any species that qualify for the definition of deep-sea species. For example, the shark species *C. Lusitanicus* should be included in the annex of Regulation 2347/2002 and in the Annex to the proposal released by the Commission on 19 July 2012. |
| 3 | Total Allowable Catch (TAC) Management review of the current list of species and the periodicity of TAC reviews<br>3.1 DEEPFISHMAN consider that the list of species managed by TACs could be expanded. Some species that may be considered are:<br>Common Mora (*Mora moro*) ;<br>Rabbitfish (*Chimaera monstrosa* and *Hydrolagus* spp);<br>Baird's smoothhead (*Alepocephalus bairdii*);<br>Wreckfish (*Polyprion americanus*);<br>Bluemouth (Bluemouth redfish) (*Helicolenus dactylopterus*);<br>Black (deep-water) cardinal fish (*Epigonus telescopus*);<br>Deep-water red crab (*Chaceon* (*Geryon*) *affinis*<br>Etc…<br><br>**3.2.** TACs revisions:<br>- orange roughy: every 5 years<br>- deep-water sharks: every 5 years<br>- roundnose grenadier: every 3 years<br>- beaked redfish: every 3 years<br>- all other deep water species: every 2 years | YES BUT WE WOULD ADD THAT THE IMPACT OF FISHING ON *ALL* DEEP-SEA SPECIES MUST BE MANAGED | In 2010, ICES estimated that 100% of the assessed deep-sea species in the NE Atlantic were outside safe biological limits. The progress made on TAC coverage and designation of fewer quotas for species at risk has been insufficient. No species should be depleted as a result of the exploitation of other species. Conservation and management measures for mixed fisheries should be established on the basis of catch or by-catch of the most vulnerable species. including non-commercial species. The catch of all species in deep-sea fisheries needs to be monitored and regulated, including prohibitions on the catch (as opposed to landings only) of particularly vulnerable species through gear modifications, prohibitions and/or area closures. |

| | | | |
|---|---|---|---|
| 4 | Review of TAC management units taking into account new knowledge on stock structure. Preliminary suggestions for fisheries-based management units.<br>**4.1** Go to table in: TAC management and stock area. | ? | We do not have the expertise on this but we would note that ICES has stated on more than one occasion that the data quality from the fisheries has been insufficient to determine the stock structure including stock range for many deep-sea species in the NE Atlantic. ICES believes that the quality of the data is not yet sufficient to provide information on the spatial and temporal extent of current deepwater fisheries in the NE Atlantic. (See 2009 ICES Advice, Book 9, Section 9.3.2.2.) Without knowing the structure of the stock including its range it is difficult if not impossible to ensure that management measures will result in sustainable levels of catch and/or bycatch. |
| 5 | Definiton of deep-water fishing effort and Capacity ceilings<br>**Deepshipman proposals**<br>5.1 For the need of fisheries and stocks assessment, deep-water fishing intensity to be estimated from VMS, this allow to assess the depth distribution<br><br>5.2. appropriate VMS data should be made available | YES | During the Deepfishman conference it was made very clear that VMS data is poor, and logbooks do not show the reality of the fishery activity. Hence it is clear that at this moment VMS data and logbooks are not reliable sources of information to estimate effort or intensity of the fisheries in the NE Atlantic nor do they serve as a sound basis to estimate the status of deep-sea fish stocks including the extent to which stocks or species have been depleted by fishing. (TAKEN FROM POINT 9) The VMS signal time should be more frequent and linked to both catch, on a tow by tow or set by set basis, and the depth and bathymetric features of the fishing area. VMS data including intensity of fishing should be available to the scientists. VMS data should be analyzed by relative fishing intensity (i.e. lightly, moderately, and heavily fished areas), and, again, should be directly linked to the reported catch including by-catch on a tow-by-tow or set-by-set basis.<br><br>5.2 Agree as indicated in comments under 5.1 above. |
| 6 | Spatial patterns of by catch and discards<br>**Deepfishman proposal**<br>[suggestion for appropriate adaptation in line with ITQ system?] | NO – WE DO NOT AGREE THAT ITQS ARE THE SOLUTION BUT YES, THIS IS AN URGENT PROBLEM THAT MUST BE ADDRESSED | As indicated above we do not believe an ITQ system is the solution to sustainable deep-sea fisheries. Hence we cannot agree with this recommendation.<br><br>However, in regard to the issue of the "Spatial patterns of bycatch and discards", as we indicated previously, this, together with better reporting and analysis of the 'spatial patterns of target catch' is an area which requires urgent remedy if deep-sea fisheries are to be managed for sustainability as well as impacts on VMEs. ICES has repeatedly expressed concern over the lack of reporting of by-catches and discards in deep-sea fisheries. Since catch reports are incomplete, the data is "unsuitable for differentiating |

| | | | |
|---|---|---|---|
| | | | between target and bycatch fisheries". ICES believes that the quality of the data is not yet sufficient to provide information on the spatial and temporal extent of current deepwater fisheries in the NE Atlantic. (Please see 2009 ICES Advice, Book 9, Section 9.3.2.2.) |
| 7 | Management and monitoring of bycatches, discards and protected, endangered (PET) species<br>(No recommendation available) | | See relevant comments on previous points above. |
| 8 | Spatial and temporal closures and technical measures<br>**Deepfishman discussion**<br>**Background**<br>No catch on mammals, seabirds and turtle in most case studies<br><br>There are probably spatial patterns depending on targeting (e.g. lesser discards when targeting blue ling) and higher discards below some depth in some area. There is probably more opportunity to manage the amount discarded by managing how species are targeted and which depth are fished than by using a spatial approach.<br><br>8.1. Result based: fix threshold to vessels and set system to observe (i.e. cameras)? | YES | The EU is obliged to adopt and implement the international commitments established under the UNGA resolutions 61/105 (paragraphs 83-87) and 64/72 (paragraphs 119 and 120), which include area closures to bottom fishing where VMEs are known to occur or are *likely* to occur unless or until conservation and management measures have been established to prevent significant adverse impacts on VMEs and ensure sustainable exploitation of deep-sea species. In this regard, we would agree that spatial and temporal closures are a management tool to be used to protect both vulnerable deep-sea species such as deep-sea sharks as well as VMEs.<br>In this line, the UNGA resolutions also call upon States to conduct impact assessments prior to authorizing deep-sea bottom fishing (either in existing or new fishing areas). The impact assessments must demonstrate that the bottom fishing would not have significant adverse impacts on VMEs or low-productivity fish species. If this is not the case, bottom fishing should not be permitted in the area or for the species concerned.<br>Moreover, the UNGA resolutions call on States to apply the precautionary and ecosystem approach, as established under the 1995 UN Fish Stocks Agreement Articles 5 and 6. These Articles oblige States to prevent overfishing, assess the impact of fishing on the marine environment, minimize impacts on non-target species, protect biodiversity in the marine environment, protect habitats of special concern, be particularly cautious when information is poor (as is the case with many deep-sea species and ecosystems) and ensure that that "the absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures" (UNFSA Articles 5 and 6).<br><br>8.1 We agree that better systems to observe the vessels activities are needed. |

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

| | | | |
|---|---|---|---|
| 9 | Ecosystem (including vulnerable marine ecosystems (VMEs)) management and monitoring<br>Deepfishman proposal<br>**9.1** Use 5 years of VMS data to define current fishing footprint and constraint fishery to that footprint, considering fishing intensity | YES BUT WE NOTE THAT MANAGEMENT MEASURES WOULD BE REQUIRED WITHIN THE FOOTPRINT | In order to monitor VMEs, the VMS signal time should be more frequent and VMS data including intensity of fishing should be available to the scientists. VMS data should be analyzed by relative fishing intensity (i.e. likely, moderately, and heavily fished areas), and should be directly linked to the reported catch including by-catch on a toe-by-toe or set-by-set basis.<br><br>On the question of the footprint, we would draw to the attention of Deepfishman that UN General Assembly resolution 64/72 paragraphs 119(a) and 120 require - as a pre-condition for bottom fishing to be permitted - that States conduct impact assessments of areas where bottom fishing activities would be authorized to take place, which should ensure that significant adverse impacts on VMEs would not occur. Neither the UNGA resolutions not the UN FAO Guidelines for the Management of Deep-Sea Fisheries in the High Seas exempt historically fished areas or fishing areas within an existing 'fisheries footprint' from the requirement of an impact assessment.<br><br>as well as new fishing areas in the NE Atlantic should be subject to this obligation.<br>Moreover, Resolution 64/72 also requires closures of areas to bottom fishing where VMEs are known to occur or are likely to occur whether within or outside of the bottom fisheries 'footprint' unless or until conservation and management measures have been established.<br><br>In the short-term future, infringements for failing to comply with reporting rules, including the provision of updated VMS data, should entail a severe penalty for operators. |
| 10 | EU Data Collection Framework (DCF) and observer sampling plans<br>Deepfishman proposal<br>**9.1** Use 5 years of VMS data to define current fishing footprint and constraint fishery to that footprint, considering fishing intensity | | See comments under item 9 above |
| 11 | DCF socio-economic monitoring<br>Deepfishman proposal<br>**11.1** The ICES proposals for fishery independent surveys for the NE Atlantic deep water stocks be adopted by the new DCF. | YES | We do not understand the link between the topic of item 11 and the recommendation. . That said, we would agree that independent surveys – as ICES has recommended – are needed in order to understand the status and structure of deep-sea stocks and as a prerequisite for sustainable management of deep-sea fisheries. |
| 12 | Fisheries-independent surveys and monitoring | YES | We would add to our comments on the previous point |

| | | | |
|---|---|---|---|
| | Deepfishman proposal<br>**11.1** The ICES proposals for fishery independent surveys for the NE Atlantic deep water stocks be adopted by the new DCF. | | (number 11) that fisheries-independent surveys and monitoring should identify where VMEs are known to occur or are likely to occur, using the best scientific and technical information available in order to prevent significant adverse impacts on such ecosystems through measures consistent with the FAO Guidelines or close such areas to bottom fishing until conservation and management measures have been established. This is in line with UNGA resolution 64/72 paragraph 119 b). |
| 13 | Stakeholder participation in monitoring and management<br>Deepfishman proposal<br>**11.1** The ICES proposals for fishery independent surveys for the NE Atlantic deep water stocks be adopted by the new DCF | YES | We strongly agree with the stakeholder participation in monitoring and management but we do not understand the relation of this point with the recommendation linked to it. |
| 14 | Long-term management plans<br>(No recommendation available) | ? | The EU long-term management plan for deep-sea fisheries in the NE Atlantic should be covered under the new Access Regime Regulation. The management plan should be in line with the international agreed obligations, namely the UNGA Resolutions 61/105 and 64/72, and the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas. The long-term management plan should specifically cover:<br>1) Ending of destructive bottom fishing through a mandatory phase out of deep-sea bottom trawling and deep-sea bottom gillnetting within two years;<br>2) Requiring impact assessments for all other deep sea fisheries;<br>3) Ensuring that fishing only be permitted if the catch, including any bycatch, can be limited to sustainable levels based on a clear scientific understanding of the stock status, structure and other essential parameters and life history characteristics of deep-sea species, that depleted stocks be allowed to recover, and that<br>deep-sea fisheries are managed to minimize or prevent the catch of vulnerable, threatened, or endangered species;<br>4) Ensuring that all deep-sea fisheries are managed to prevent adverse impacts on vulnerable deep-sea ecosystems such as deep-sea coral, sponge and seamount ecosystems. |
| 15 | Monitoring/management of new fisheries<br>(No recommendation available) | ? | Prior impact assessments should be conducted in line with paragraphs 42-47 of the FAO International Guidelines for the management of deep-sea fisheries |

| | | | |
|---|---|---|---|
| | | | in the high seas consistent with the UNGA resolution 64/72. This would also apply to existing fisheries. In this regard, the measure adopted by both NEAFC and NAFO that require impact assessments in existing fishing areas or within the existing bottom fisheries footprint "if there are significant changes to the conduct, or technology of existing bottom fisheries, or new scientific information indicating a VME in a given area" ***provided that*** an initial impact assessment has already been conducted for the fishery(ies) concerned. (language in quotes above taken from Article 5.3.i of the NEAFC "Consolidated text of all NEAFC recommendations on regulating bottom Fishing" |
| 16 | Management of mixed fisheries: species/fishery level<br>(No recommendation available) | | Conservation and management measures for mixed fisheries should be established on the basis of catch or by-catch of the most vulnerable species including non-commercial species. The management measures should include area and seasonal closures to protect the most vulnerable and should ensure – consistent with UNGA resolution 64/72 paragraph 119(d); the UN FAO Guidelines, and the relevant provisions of UNFSA that deep-sea fisheries be managed to assess the impact of deep-sea fisheries on non-target species and species belonging to the same ecosystem(s); minimize the impact of the fisheries on non-target species; and ensure the rebuilding of depleted deep-sea fish stocks, including stocks of species taken as bycatch.<br><br>We include UNGA resolution 64/72 paragraph 119(d):<br><br>"(d) Adopt conservation and management measures, including monitoring, control and surveillance measures, on the basis of stock assessments and the best available scientific information, to ensure the long-term sustainability of deep sea fish stocks and non-target species, and the rebuilding of depleted stocks, consistent with the Guidelines; and, where scientific information is uncertain, unreliable, or inadequate, ensure that conservation and management measures be established consistent with the precautionary approach, including measures to ensure that fishing effort, fishing capacity and catch limits, as appropriate, are at levels commensurate with the long-term sustainability of such stocks"; |
| 17 | NEAFC: deep-water management regime<br>(No recommendation available) | ? | The NEAFC regulations for the management of deep-sea species have improved considerably in the last 8 years in response to the UNGA resolutions. |

| | | | |
|---|---|---|---|
| | | | Nonetheless these contain a series of shortcomings. For a critique of the current NEAFC management regime and a set of recommendations for improving the NEAFC regime, please see the joint NGO submission (WWF, Pew Environment Group, Iceland Nature Conservation Association, Seas at Risk, and the Deep Sea Conservation Coalition) to the NEAFC review of its deep-sea fisheries regulations. This submission can be found at http://www.neafc.org/pecmas/symposium, in document number 30. Please also see the Pew Environment Group/Deep Sea Conservation Coalition and the Seas at Risk presentation to the NEAFC Symposium held on 25 June 2012 for the purpose of soliciting stakeholder input into the NEAFC Review of its bottom fisheries regulations. Both presentations can be found as document number 32 and document number 22 on the same link to the NEAFC website indicated above. |
| 18 | Orange roughy protection box<br>(No recommendation available) | ? | |
| 19 | Vessel Monitoring by Satellite (VMS) and fishing footprints<br>(No recommendation available) | ? | See comments under point number 9 above. |
| 20 | Recommendations for further research studies<br>Deepfishman proposal<br>**9.1** Use 5 years of VMS data to define current fishing footprint and constraint fishery to that footprint, considering fishing intensity | | See our comments and recommendations under point number 9 above. We would add that in relation to this point, we recommend detailed benthic surveys of areas where fishing is permitted as a condition to authorization to fish, and fisheries independent surveys of the status of deep-water species including the community structure of deep-water fish to determine sustainable levels of exploitation. These are necessary elements of long-term management plan to ensure the rebuild of depleted stocks. |
| | | | |

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

Other topics

The adverse impacts on VMEs are not limited to fisheries targeting deep-sea species under the deep-sea access regime. The phase-out of destructive bottom fishing together with the use of less destructive deep-sea fishing methods can reduce significant ecosystem impacts. Harmonization of EU high seas regulation with that of RFMOs and measures inside EEZs requires rigorous impact assessments prior to the authorization of individual fishing activities to determine the long-term impacts of deep sea fishing on VMEs, and the long term conservation of fish stocks including both target and by-catch species. It is alarming that the intensity of bottom trawling for species other than those listed in Annex I and Annex II of the deep-sea access regime is also responsible for significant decrease in the biomass and health of species caught as by-catch and VMEs of the seabed. It is needed to fully address the impacts on VMEs to ensure that they meet GES by 2020 under the MSFD. As party to the UNFSA the EU has committed to ensuring the compatibility of conservation and management measures on the high seas and within its waters.

General comment

1. Many of the issues listed in this feedback document do not have concrete recommendations linked to them. This limits the ability to provide to Deepfishman with complete feedback on each of them. We request to be informed of and involved in the future consultation process that will be taking place between Deepfishman and EU public institutions in the coming months, in order to be able to provide feedback on all the final recommendations that will be presented during the process.

2. There are several key international agreements relevant to deep-sea fisheries, which establish international obligations and standards for the management of deep-sea fisheries and their impacts on vulnerable marine species and ecosystems. These are primarily the 1995 UN Fish Stocks Agreement, Articles 5 and 6; UN General Assembly resolutions 59/25 (paragraphs 66-71); 61/105 (paragraphs 80 & 83-86); 64/72 (in particular paragraphs 119-120) and resolution 66/68 (in particular paragraphs 129-130).

Deep-sea fishing nations, including the EU, have repeatedly committed to implementing the UN General Assembly resolutions and the UN FAO Guidelines – adopted by the UN General Assembly and the UN FAO Committee on Fisheries by consensus after detailed intergovernmental negotiations - and are legally bound to implement the provisions of the UN Fish Stocks Agreement. .

The scientific advice provided by Deepfishman should be designed to both assist EU regulators to implement and comply with these measures and should be clear on whether and when the measures have not been implemented. The advice to public institutions should be consistent with the international provisions and agreements that their governments are bound to and provide recommendations in line with these provisions and agreements.

## Stakeholder workshop, Galway, 31.08.2012

## Monitoring and management framework proposal

3. As indicated above, there are a number of relevant provisions of United Nations General Assembly (UNGA) resolutions to the work and final recommendations of Deepfishman. We would like to highlight the following paragraphs from UNGA resolution 64/72:

119. *Considers* that, on the basis of the review carried out in accordance with paragraph 91 of its resolution 61/105, further actions in accordance with the precautionary approach, ecosystem approaches and international law, are needed to strengthen the implementation of paragraphs 80 and 83 to 87 of its resolution 61/105 and, in this regard, calls on regional fisheries management organizations or arrangements with the competence to regulate bottom fisheries, States participating in negotiations to establish such organizations or arrangements, and flag States to take the following urgent actions in areas beyond national jurisdiction:

(a) Conduct the assessments called for in paragraph 83 (a) of its resolution 61/105, consistent with the Guidelines[1], and to ensure that vessels do not engage in bottom fishing until such assessments have been carried out;

(b) Conduct further marine scientific research and use the best scientific and technical information available to identify where vulnerable marine ecosystems are known to occur or are likely to occur and adopt conservation and management measures to prevent significant adverse impacts on such ecosystems consistent with the Guidelines, or close such areas to bottom fishing until conservation and management measures have been established, as called for in paragraph 83 (c) of its resolution 61/105;

(c) Establish and implement appropriate protocols for the implementation of paragraph 83 (d) of its resolution 61/105, including definitions of what constitutes evidence of an encounter with a vulnerable marine ecosystem, in particular threshold levels and indicator species, based on the best available scientific information and consistent with the Guidelines, and taking into account any other conservation and management measures to prevent significant adverse impacts on vulnerable marine ecosystems, including those based on the results of assessments carried out pursuant to paragraph 83 (a) of its resolution 61/105 and paragraph 119 (a) of the present resolution;

(d) Adopt conservation and management measures, including monitoring, control and surveillance measures, on the basis of stock assessments and the best available scientific information, to ensure the long-term sustainability of deep sea fish stocks and non-target species, and the rebuilding of depleted stocks, consistent with the Guidelines; and, where scientific information is uncertain, unreliable, or inadequate, ensure that conservation and management measures be established consistent with the precautionary approach, including measures to ensure that fishing effort, fishing capacity and catch limits, as appropriate, are at levels commensurate with the long-term sustainability of such stocks;

120. *Calls upon* flag States, members of regional fisheries management organizations or arrangements with the competence to regulate bottom fisheries and States participating in negotiations to establish such organizations or arrangements to adopt and implement measures in accordance with paragraphs 83, 85 and 86 of its resolution 61/105, paragraph 119 of the present resolution, and international law, and consistent with the Guidelines, and not to authorize bottom fishing activities until such measures have been adopted and implemented;

[1] International Guidelines for the Management of Deep-sea Fisheries in the High Seas. Directives internationales sur la gestion de la pêche profonde en haute mer. Directrices Internacionales para la Ordenación de las Pesquerías de Aguas Profundas en Alta Mar. Rome/Roma, FAO. 2009. 73p.

# Annex II. Stakeholder workshop Friday 4 December 2009


**DEEPFISHMAN**
Management And Monitoring Of Deep-sea Fisheries And Stocks

**Project number: 227390**

Small or medium scale focused research action
Topic: FP7-KBBE-2008-1-4-02 (Deepsea fisheries management)

# Stakeholder workshop
# Lisbon, 4 December 2009

**Title: Stakeholder workshop, Lisbon, 4 December 2009**

**Due date of deliverable:** Additional deliverable not scheduled in the project

**Actual submission date:**

**Start date of the project:** April 1st, 2009 **Duration :** 36 months

**Organization Name of lead coordinator:** Ifremer

**Dissemination Level:** PU (Public)

**Date:** 14 December 2009

Research project 2009-2012 supported by the European Union,
Seventh Frame Work Programme

# 1. - Introduction

The aim of this stakeholder workshop was to meet stakeholder from Spain and Portugal. Invitations were distributed since September and several stakeholders expressed their intention to join the workshop. The workshop was then organised during the case study meeting of the project and the venue of the meeting was set in Lisbon, which appeared as a location where a significant audience would be willing to join.

During all the workshop, presentations and discussions were made in English, Portuguese and Spanish (no interpreters were hired), as sub groups were necessary for the work expected between project scientists and stakeholders. Most of the workshop was moderated by Pascal Lorance (Ifremer, France) and Ivone Figueiredo (IPIMAR, Portugal). The workshop was held at IPIMAR, it started at 9:30 and closed at 5:00.

The project aim, structure and consortium was first presented and the agenda of the day was shortly discussed. The Deepfishman case studies of major interest to the audience were presented:

- Case study 3c, Portuguese artisanal fishery for black scabbardfish in ICES sub-area IXa;
- Case study 3a, Fishery for red seabream in the Strait of Gibraltar
- Case study 5, fishery for Greenland Halibut in NAFO area.

For the agenda of the day, it was proposed to have an open discussion after the introduction and presentation of the project, to present the cognitive maps method and then to build up cognitive maps with stakeholders, and to have another discussion after the cognitive maps session for discussion of the outcome and continuation of the morning session and to discuss further exchange with and contribution of stakeholders. The comments and questions raised by stakeholders during open discussion sessions are given below in section 2, replies for project scientists are shortly given in section 3, the work with the cognitive maps is described in section 4 and plans for further work is given in section 5.

# 2. Open debate with stakeholders

Following introduction and presentations, a first session was dedicated to an open hearing of stakeholder views. The debate was structured with 3 questions. Text in square brackets [ ] have been added to the report to provided context on the aspects developed by stakeholders.

## 2.1. Question 1: who are stakeholders in deep-water fisheries?

For this question, the identification of the Deepfishman stakeholder community from the stakeholder meeting held in Brussels (29-30 June 2009) was presented and it was discussed whether it was complete, what was missing. A few comment were made. Stakeholders considered obvious that the European Commission and national administrations are important stakeholders to have in the project all well as the the fishing industry, organisation of producers and fishing community that lives from the fishery (for local fisheries). Regional advisory council (RACs) were also considered essential.

## 2.2. Question 2: what are stakeholder's needs and interest from the project?

Monica Verbeek: the main expectation from Deepfishman is an improved management of deep-water fisheries.

Sara Reis Gomes: one problem is the incompleteness of catch data because fish are not landed whole, some are gutted, headed or filleted. This induces unreliable data in terms of number and weight of fish caught from the stock. Another problem is stock identity; black scabbardfish stock should be dealt with as a whole, not only as parts of the stock. The maturity stages by area for this stock is also an aspect to take into account, North of Madeira black scabbardfish are immature.
[black scabbardfish is the main deep-water species exploited at Madeira, the current understanding is that there is one single large population in the Northeast Atlantic while assessment is made for several unit (ICES VI and VII; ICES IXa, CECAF (Commission for Eastern Central Atlantic Fisheries) area 34 1 2]

Juan Manuel Liria: It is important to have exchanges between people that have data [stakeholders] and those that use it [Deepfishman scientists]. It is important to include Fishermen's knowledge. Simple ways for organizing data exchanges need to be defined (this is especially important for socio-economic data). Management rules should be more practical and take account of the socio-economic aspect.

Carlos Macedo: the association ArtesanalPesca has been collaborating with Ipimar for several years, self-sampling in the artisanal fishery is carried out (within EU project LOT1). The association is keen to know more about the dynamics of species and to contribute to Deepfishman. The case study [CS3c, Portuguese fishery for black scabbardfish in ICES subarea IXa] should not be limited to the Portuguese area, the whole stock area should be considered. Efforts were made by the national administration to make fishery sustainable.

António Cabral: there are problems with stock assessments. Unreliable assessments have conditionned TACs. This impacts the sector. Widely changing TACs cause problems, the fishing industry prefers stable TACs because they allow to plan the fishing activity. Reductions in TACs should be slow and planned rather than abrupt.

João Correia: interested in two aspects:

1) all elasmobranchs should be included in TAC species list. In 2009, the TAC for deep-sea sharks was fished in July, which led to misreporting of deep-sea sharks species as other elasmobranch species that are not TAC managed;
2) fleet size reduction is now much talked about, the project should address the aspect of effort/fleet reduction and the interaction between fleet size and fishing efficiency. Fishermen and NGOs are working together on this topic.

Cristina Rosa: the management of deep-water fishery at EU level needs to consider what is the best way to manage stocks. Different types of fleets (artisanal, industrial) exploit the same stocks. Bycatch of shark is a problem. From 2010, there is 0 TAC for deep-sea sharks, this

leads to discards. This is not a good way to manage the resource (discards are not profitable to anyone, catch data are lost). Thie project should consider this issue.

Monica Verbeek: two questions (1) On the socio-economic aspect, there are published articles stating that deep-water fisheries are not economically viable. It would be good to have more detailed results on economic viability, i.e. what kind of fisheries (high seas, coastal, small-scale,....) is more suitable. What will be the impact of increasing fuel costs on these fisheries? (2) On the biodiversity aspect, what will be done about biodiversity in Deepfishman? In the high seas vulnerable habitats are mapped, is something similar going to be done in Deepfishman?

Luís Calaça : Relationship with fishermen are important. Fishermen need to learn and profit from research, fishermen are interested in viable resource Scientific result should reach fishermen.. Legislation doesn't take regional differences or differences between artisanal and industrial fisheries into account, artisanal fisheries might loose out. Longline fisheries are selective, which make them different from trawling. Different measures should be adopted. EC management measures at exaggerated

## 2.3. Question 3: Management regime: opinions from stakeholders.

**Two aspects of this question were discussed: (1) What is wrong with current management?; (2) What should be part of better management?**

**(1) What is wrong with current management?**

Monica Verbeek: everything is wrong. But this is a difficult question ; implementation of TACs was rather arbitrary in terms of which species was included in the regulation, there are problems with mixed fisheries. TACs are set based on little information and only for some species. Fisheries have expanded despite over passing precautionary limits. TACs were set too high to limit fisheries; these deep-water fisheries are very data poor fishery. Then the requirements are to know more about (i) stock size, effort deployed etc, (2) on the management side, to be precautionary, limits need to set much lower. Currently, the fishing capacity is too high, when we don't know what kind of fishing level species can sustain.

Sara Reis Gomes: in the future there is a need to differentiate between fishing strategies, e.g deep water trawling is a problem for habitat. Advices on less damaging fishing methods are expected.

Portuguese administration (name not recorded on participant list): deep-water effort has been frozen since 2003 in ICES area and NEAFC, so there is no longer expansion of fisheries, or only due to insufficient enforcement. Management based on effort can be difficult for mixed fisheries, hence it would be good for the project to consider TAC, effort management and transferable rights altogether. Such an approach could be suitable for the NAFO Greenland halibut fishery [i.e. Case Study 5 in Deepfishman].

Monica Verbeek: in NEAFC landings have increased three-fold since effort limitation was implemented, so there must be something wrong with effort management;

João Correia: Recent literature point towards ITQ as a successful management strategy eg abalone in Australia and numerous examples worldwide; so would like the project to consider ITQs.

Manuel Liria: No ultimate solution exists, each case needs a particular solution; for mixed fisheries effort management might be suitable but then the question arises how to measure effort ; TAC lead to discards ; fishermen want to maximise profit within effort limits.

*Carlos Macedo* : two points 1) problem of TAC for deep-water species. Sustainable levels of catch need to be known, taking into account all fisheries components exploiting the actual stock 2) ITQ: seen from artisanal fisheries, ITQ is not the best measure. There are examples of small fishery in Iceland that disappeared due to large companies buying ITQs from artisanal fisheries.

**(2) What should be part of better management?**

What will be done for biodiversity : data limited, can respond to stakeholder views, know less on biodiversity when stock biology, VME,
Manuel Liria: in NAFO area Spanish administration is mapping vulnerable areas (results expected in 2011), has already done so in other areas ; results (footprint) seem to indicate that trawls avoid areas with corals and sponges

Monica Verbeek : differentiation of life history traits mentioned, until now all species have been treated in a similar manner, it would be good if project could contribute to provide insights into different species and suitable management measures (what kind of exploitation levels for which species?);

# 3. Information from project scientists (given as replies to stakeholder questions)

The overarching concern from all categories (NGOs, fishing sector, administration …) of stakeholders about suitability of management matches to central aim of Deepfishman: develop a management and monitoring framework for deep-water fisheries in the Northeast Atlantic. Integrating the views of stakeholders is here essential.

In respect to management again, the relationship between fleet capacity and fishing effort is one of the aspect that the project might take into account.

Stock identity: this question was raised mainly with respect to black scabbardfish. For this species the project will review stock identity. Further stock identity studies (included or not in the deepfishman) are on-going based upon genetics and other methods, the outcome from these studies will be included in the management and monitoring framework developed by the project. The project will develop models and analyses to assess the most likely stock structure and do assessment at stock level.

Zero TAC and by-catch of shark: this is an issue identified also by the project scientist. Aspects that the project plans to consider are (i) the sustainability of by-catch for species which landings are banned (0 TAC); (ii) integration of the management of these vulnerable species into the management and monitoring framework.

Socio-economic aspect: the project aims at assessing the economic part of deep-water fishery in the national economic picture (value chain, supplying industry,...) and project the economic impact of changes in management.

Biodiversity: the project aims at defining biodiversity indicators suitable for management using all available data (scientific survey, on-board observation, landings and effort statistics). Nevertheless, data on biodiversity are limited. Biodiversity aspects developed in Deepfishman will be in strong relationship with on-going work in the EU project CoralFISH. Strongly related to biodiversity is an approach of an ecosystem impact assessment of deep-water fisheries.

# 4. Cognitive maps

The aim and the method for cognitive maps was presented to the audience, then seven groups of stakeholders and project scientist were organised to draw seven cognitive maps to be used to identify what is important in deepwater ecosystems/fisheries and what are the main issues. Each group comprised stakeholders and scientists from the project who drew and coded the maps according to stakeholders' views (Table 1).

Table 1. Groups organised for cognitive maps drawing.

| Stakeholder group | Stakeholders | Deepfishman scientists |
|---|---|---|
| Scientists | Laura Wise<br>Alberto Murta<br>Filipe Rodrigues | Sveinn Agnarsson<br>Leonie Dransfeld<br>Dimitrios Damalas |
| NGOs | Monica Verbeek<br>Rita Sá<br>João Correia | Phil Large<br>Pascal Lorance |
| Administration | Sara Reis Gomes | Juan Gil |
| Fishery (NAFO greenland halibut) | Antonio Cabral<br>Juan Manuel Liria | Fernando Gonzalez<br>Ricardo Alpoim |
| Fishey (artisanal, Azores, red seabream) | Manuel Pacheco | Inês Farias |
| Fishery (artisanal, Sesimbra, black scabbardfish) | Luis Calaça<br>Carla Rato<br>Carlos Macedo<br>Tiago Cagita | Ivone Figueiredo<br>Guzman Diez |
| Fishery consultant | Luis Ambrosio | Verena Trenkel |

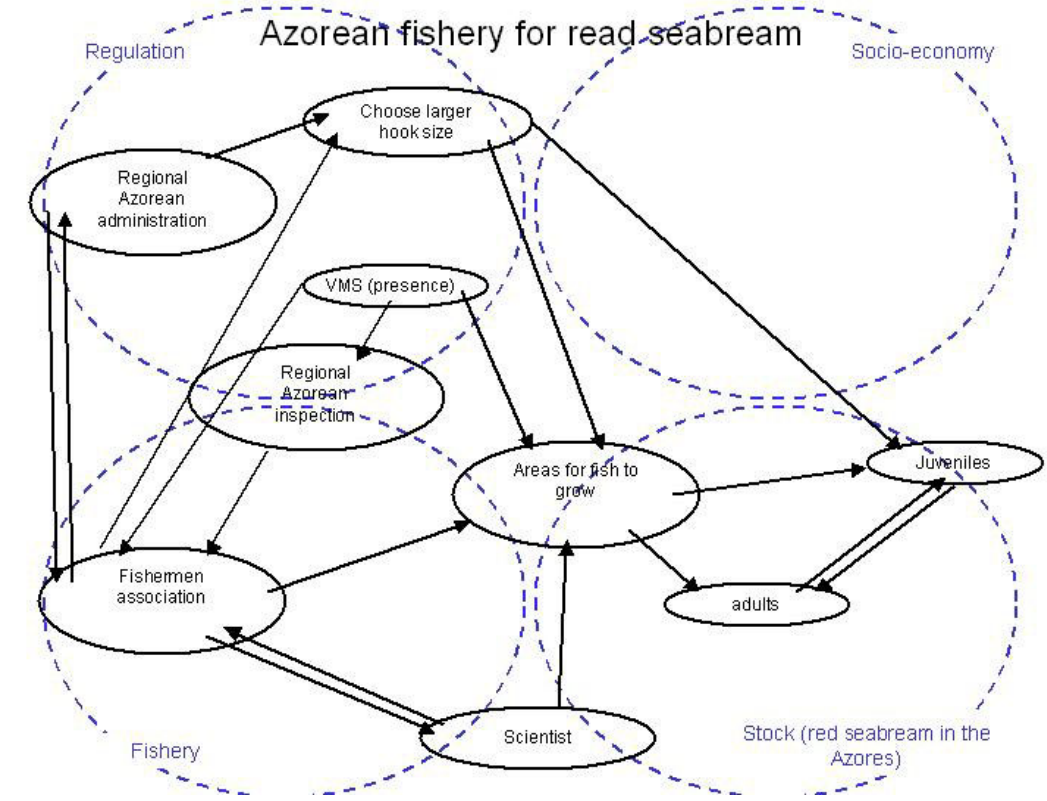
Cognitive maps were drawn in sub-groups for one and half hour. A short debriefing session gave the following feed back:

- overall the exercise was felt interesting and stakeholders are keen to see the result of the analysis.;
- groups were different in numbers. One group with only one interviewee found it difficult and though that larger groups might be easier and was concerned of the

impact on the analysis of different number of participant per group. This aspect can be accounted for in the analysis;
- it was more difficult than expected, it was good to limit time otherwise will go on for ever;
- it is difficult to describe relationships. It is important to well define bubbles as this determines links and later on it can turn out that it is difficult to define links if bubbles are not well defined;
- an analysis of differences across groups/maps should be interesting;
- the view may be different according to the group and main focus chosen, i.e. for the red seabream fishery the main focus was put on areas closed to fishing;
- the maps have been mainly drawn for the current situation [this was not intentional but derived from the descriptive aspect suggested by Deepfishman scientists]. Stakeholders suggested that this approach could be used to define future desirable situation.

The cognitive maps require further analysis. Electronic copies were drawn (Figures 1-4). Different groups of stakeholders put the emphasis on different aspect (e.g. socio-economy or ecosystem) and some maps suggest clear views form stakeholders about the possible managements at case study level (Figures 1-4). A full analysis is required, the analysis is not to be carried out based upon the graphical representation but upon the list of elements (bubbles) and interactions (direction, strength and time frame) identified by stakeholders. Nevertheless the maps suggest different emphasis from different stakeholders groups and different management perspective according to case studies.

Figure 1. Cognitive maps by case study fishery, Azorean fishery for red seabream (stakeholder from the fishing sector), and Madeiran deep-water fishery (stakeholder for the administration).



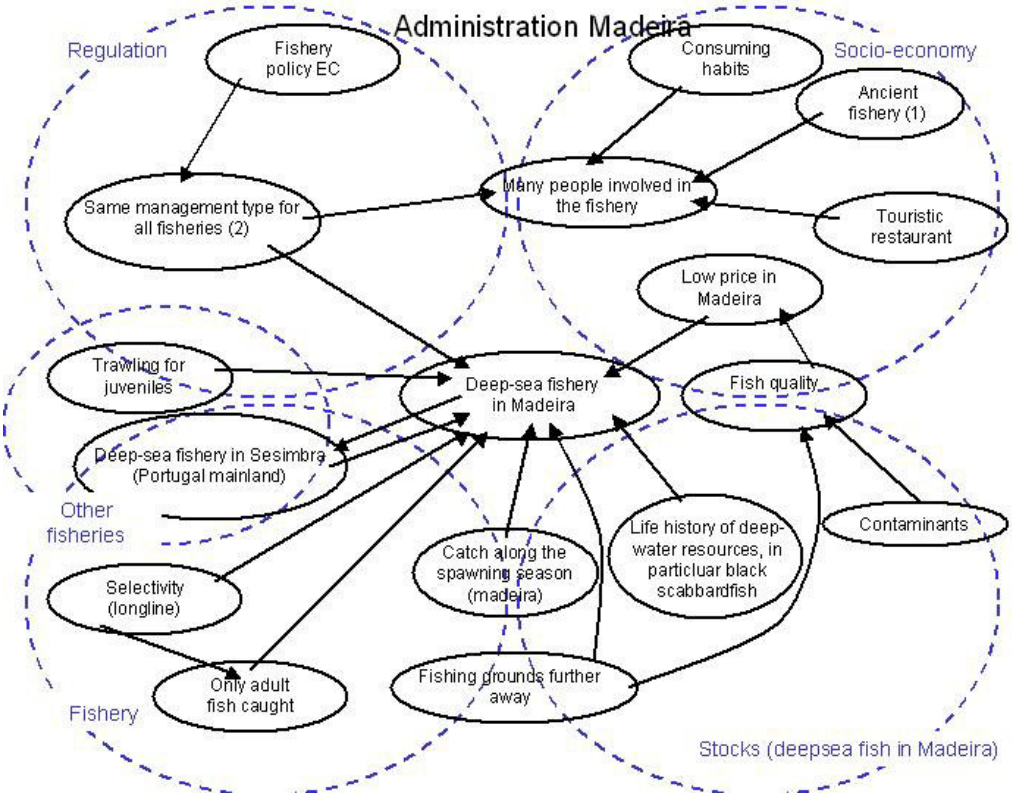



Figure 2. Cognitive maps by case study fishery, scientist working on a generic case and NGOs, working on the Portuguese black scabbardfish fishery.

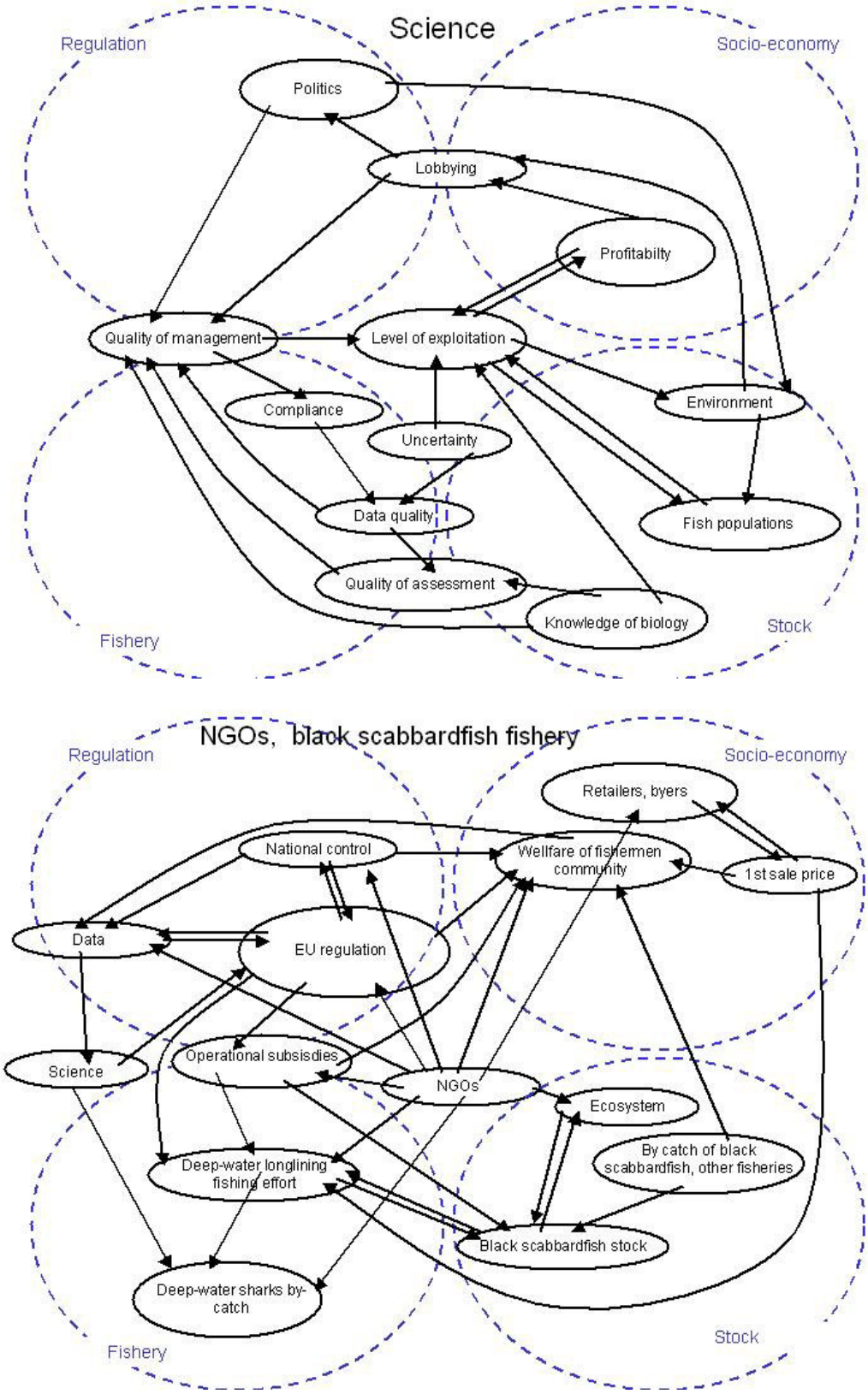
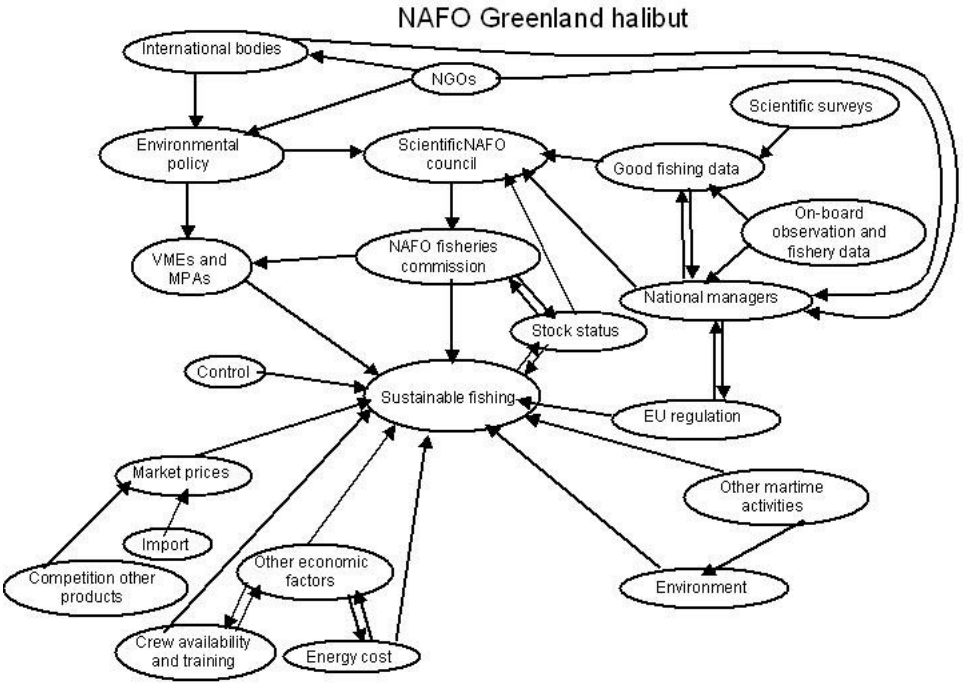


Figure 3. Cognitive maps by case study fishery. Stakeholders from the fishing sector, Greenland Halibut fishery in the NAFO area and Portuguese black scabbardfish fishery.



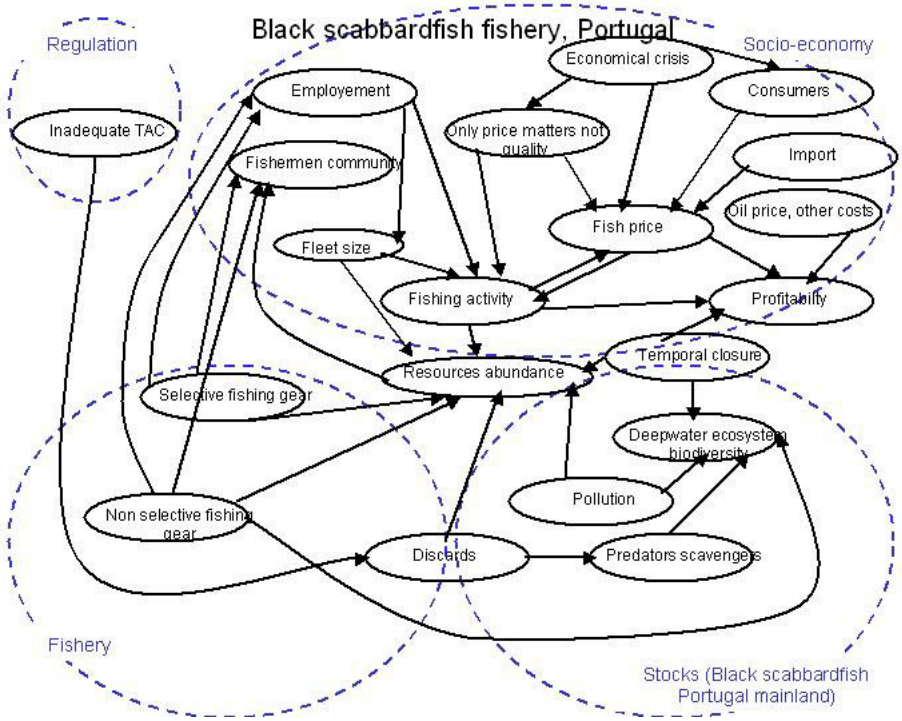
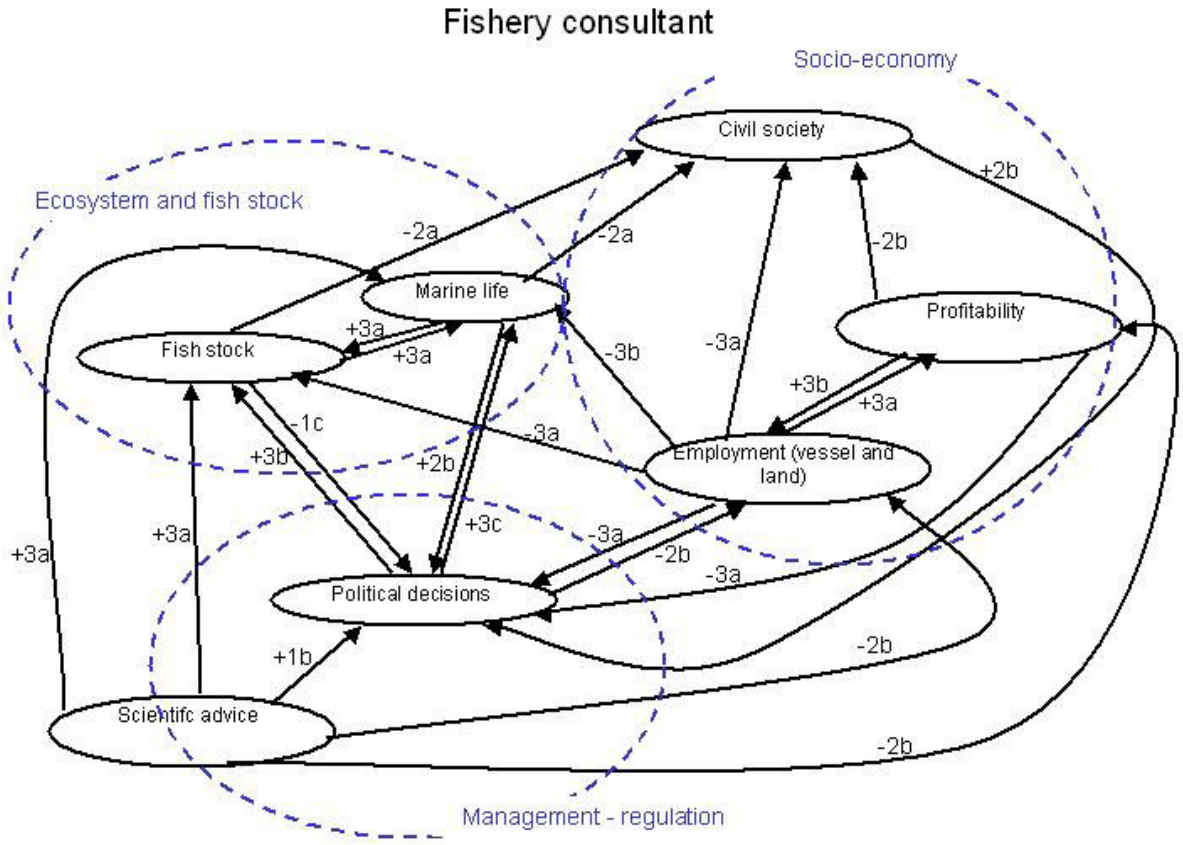



Figure 4. Cognitive maps by on the management of deep-water fishery from a fishery consultant.




# 5. Future stakeholder meeting

It appeared that following to this workshop, stakeholders were keen to meet the project again. The option of a future stakeholder meeting in April 2011 was discussed. At this period one year before the end of the project, it will be possible to present a draft monitoring and management framework and there will be still time to integrate view from stakeholders into it.

This stakeholder workshop in 2011 would be larger as stakeholders from the workshops in Brussels and Lisbon might be keen to join again and further works with stakeholders will be made at case study level. The participation of the EC at this 2011 workshop will be required. This is a significant change from the Deepfishman plan for stakeholder workshops as scheduled in the Deepfishman contrat with the EC (Deepfishman, annex II, Description of the Work (DoW) pages 51-52) so that it needs to be agreed by the EC. Nevertheless, it is an improvement to hold a stakeholder workshop one year before the end of Deepfishman rather than closer to the end when it would be more difficult to take into account of stakeholder comments.

## 6. Any other business

The website and wiki sites were presented and stakeholders were invited to visit these to keep informed of what is going-on in the project and to access to reports and other products. The web-based questionnaire was presented and a paper version in Portuguese will be distributed to a few stakeholders to whom it is more convenient.

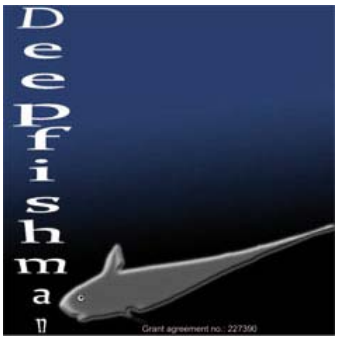
# List of participants: Stakeholders

| Name | Organisation | Stakeholdertype | Country | e-mail, telephon |
|---|---|---|---|---|
| Luís Calaça | Coopescamadeira | Fishing Industry (catching) | Portugal | 00351291230317 |
| Manuel Pacheco | Porto de Abrigo do Propesca CRL | Fishing Industry (catching) | Portugal | 00351296201550 |
| Luis Ambrosio | PROBITEC S.L. | Fishing Industry (catching) | Spain | lambrosio@probitec.com |
| Carla Rato | AAPLCLZO | Fishing Industry (catching) | Portugal | aaplclzo@sapo.pt |
| Filipe Rodrigues | Escola Superior de Turismo e Tecnologias do Mar, Peniche | Student | Portugal | filipe.shoter@gmail.com |
| Sara Reis Gomes | DSIP - Direcção Regional de Pescas da Madeira | National (Regional) Administration | Portugal | sararg.dsip@gmail.com |
| Manuela Corvo | DGPA - Direcção Geral de Pescas e Aquacultura | National Administration | Portugal | mcorvo@dgpa.min-agricultura.pt |
| António Cabral | ADAPI | Fishing Industry (catching) | Portugal | adapi.pescas@maiol.telepac.pt |
| Juan Manuel Liria | CEPESCA | Fishing Industry (catching) | Spain | mliria@iies.es |
| Carlos Macedo | ArtesanalPesca | Fishing Industry (catching) | Portugal | artesanalpesca@mail.telepac.pt |
| Tiago Cagita | Câmara Municipal de Sesimbra | Local Government | Portugal | pescas.ruralidade@cm-sesimbra.pt |
| Rita Sá | LPN / PONG-Pesca | NGO | Portugal | pongpesca@gmail.com; rita.sb.sa@gmail.com |
| Monica Verbeek | Seas At Risk | NGO | Portugal | mverbeek@seas-at-risk.com |
| Maria Cristina Rosa | DGPA - Direcção Geral de Pescas e Aquacultura | National Administration | Portugal | crosa@dgpa.min-agricultura.pt |
| Carla Frias | DGPA - Direcção Geral de Pescas e Aquacultura | National Administration | Portugal | cfrias@dgpa.min-agricultura.pt |
| Emilia Batista | DGPA - Direcção Geral de Pescas e Aquacultura | National Administration | Portugal | ebatista@dgpa.min-agricultura.pt |
| Teresa Moura | IPIMAR | Scientist | Portugal | tmoura@ipimar.pt |
| Alberto Murta | IPIMAR | Scientist | Portugal | amurta@ipimar.pt |
| Laura Wise | IPIMAR | Scientist | Portugal | lwise@ipimar.pt |
| Cristina Rosa | DGPA | Administration | Portugal | |
| João Correia | Fishery school director and founder of APECE, elasmobranch protection association | NGO | Portugal | mail@apece.pt |

## List of participants: Deepfishman scientists.

| Name | Organisation | Country | email |
|---|---|---|---|
| Sveinn Agnarsson | University of Iceland | Iceland | sveinnag@hi.is |
| Ricardo Alpoim | Ipimar | Portugal | ralpoim@ipimar.pt |
| Dimitrios Damalas | HCMR | Greece | shark@ath.hcmr.gr |
| | | | |
| Guzman Diez | Azti-Tecnalia | Spain | gdiez@suk.azti.es |
| Leonie Dransfeld | Marine Institute | Ireland | leonie.dransfeld@marine.ie |
| Inês Farias | Ipimar | Portugal | ifarias@ipimar.pt |
| Ivone Figueiredo | Ipimar | Portugal | ivonefig@ipimar.pt |
| Juan Gil | IEO | Spain | juan.gil@cd.ieo.es |
| Fernando Gonzalez - costa | IEO | Spain | fernando.gonzalez@vi.ieo.es |
| Phil Large | Cefas | UK | phil.large@cefas.co.uk |
| Pascal Lorance (project coordinator) | Ifremer | France | pascal.lorance@ifemer.fr |
| Lionel Pawlowski | Ifremer | France | lionel.pawlowski@ifemer.fr |
| Verena Trenkel | Ifremer | France | verena.trenkel@ifemer.fr |

## invitation




# Management and Monitoring of deep-sea Fisheries and Stocks

## Stakeholder Workshop
## 4 December 2009
## Lisbon

Deepwater fisheries pose particular difficulties for management. Target species are difficult to assess and they are generally vulnerable to overfishing. The EU project DEEPFISHMAN will develop a range of strategy options for the management of deepwater fisheries in the NE Atlantic that will take account of these factors. Firstly, the aim will be to identify new and more effective assessment methods, reference points, control rules and management strategies to be used in the short term, making better use of available data. Secondly, a reliable long-term framework will be developed for which additional data needs will be specified in order to fill current information gaps to achieve reliable long-term management requirements. This work will be developed by examining a range of case studies selected to reflect the diverse characteristics of the different types of deepwater fishery. The socio-economic profile and projected impact of the management strategy options will be examined. The project outputs will aim to provide robust guidelines for deepwater fisheries management suitable for adoption within the Common Fishery policy.

**The workshop will provide short descriptions of the three-year project tasks and partners.**


# Preliminary agenda for the Stakeholder meeting Friday 4 December 2009, Lisbon

**9:00- 9:30 welcome**

**9:30- 10:00 Introduction to the project Deepfishman. P. Lorance (project coordinator)**

**10:00 – 10:30 Case studies of interest to stakeholders present at the meeting**

**10:30 – 10:45 Presentation of cognitive maps tools (V. Trenkel)**

**10:45-11:15: Coffee break**

**11:15 - 12:30 Building cognitive maps with stakeholders**

**12:30 – 13:00 Marine strategy framework directive, relationship with deepfishman**
Presentation from P. Lorance

**13:00- 14:00 lunch break**

**14:00-15:00 Questionnaire to deep-sea fisheries stakeholders**
Questionnaire to be distributed and filled in by stakeholders

**15:00-15:30 Stakeholder analysis**
Open discussion about :

- who are the stakeholders in deep-water fisheries (stakeholder present at the workshop to make list of other stakeholders of importance to the project?
- stakeholders needs and interest
- Management regime : opinions from stakeholders

**15:30-16:00 Coffee Break**

**16:00-16:30 Stakeholder analysis (continued)**

**16:30-17:00. Contribution of stakeholders to the project**

- organizing the communication with stakeholders
- how stakeholder can contribute to the project

**17:00-17:30 Wrap up**