

Report of the 3rd Meeting of the
Mediterranean Planning Group for Methodological Development
(PGMed)

Data Collection Framework (DCF)
Council Regulation (EC) No. 199/2008,
Commission Regulation (EC) No. 665/2008
Commission Decision 2008/949/EC

Montpellier, 2nd - 6th March 2009

Final Report

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Background

During the 2006 Regional Coordination Meeting for the Mediterranean area (Malta, 26th - 28th April 2006, 3rd RCM Med) the creation of a Planning Group for the Mediterranean (Mediterranean Planning Group for Methodological Development - PGMed) was recommended, as a forum similar to the ICES Planning Group on Commercial Catch, Discards and Biological Sampling (PGCCDBS) for discussing methodological matters related to data collection referring particularly to the Mediterranean area.

During the 4th RCM Med (Cyprus, 2007) it was clarified that PGMed operates under the umbrella of the RCM Med, and it was recommended that the chairman of the PGMed participates to the RCM Med. The need for maintaining strong links with the General Commission for Fisheries in the Mediterranean (GFCM) and the PGCCDBS was strongly supported.

Following the proposal of the 2006 3rd Liaison Meeting, the first meeting of the PGMed was arranged to take place jointly with the 2007 PGCCDBS meeting in Malta (5th – 9th March 2007).

Although organized in an autonomous group, it was agreed among all scientists that the contact and cooperation between the Mediterranean area and the ICES area (PGCCBDS) should be promoted and maintained.

The link between the two planning groups (PGs) will be maintained through:

- (i) the inclusion of each group's report as an annex of the other;
- (ii) the organization of parallel meetings;
- (iii) the organization of joint plenary for generic issues;
- (iv) the organization of joint workshops.

Introduction

The 3rd Meeting of the Mediterranean Planning Group for Methodological Development (PGMed) was arranged in parallel with the ICES Planning Group of Commercial Catches, Discards and Biological Sampling (ICES PGCCDBS) in Montpellier 2-6 March, 2009. The conduction of parallel meetings between the two groups ensured the link between them.

The 2009 PGMed was attended by 7 Mediterranean Member States (Cyprus, France, Greece, Italy, Malta, Slovenia and Spain); although the meeting was opened to the Black Sea, no representatives of Romania and Bulgaria participated to the meeting. The list of participants and the terms of reference are provided in [Annex I](#).

The Group revised and approved the Terms of Reference ([Annex II](#)) proposed during the 2008 RCM Mediterranean & Black Sea (Report of the RCM Med &BS 2008).

The agenda was planned in order to have a common plenary of both PGMed and PGCCDBS groups during the first two days and separate sessions dealing with the specific Mediterranean ToRs ([Annex II](#)) the remaining days. A short summary of the issues addressed during the common session, which are also relevant to the Mediterranean, are reported in the Annexes from III to VII ([Annex III](#) - Guidelines for collecting maturity data and estimating proportion mature; [Annex IV](#) - Minimum Sampling Protocol for Age Calibration; [Annex V](#) - Working Group on Maturity Stages of Small Pelagic, *Engraulis encrasicolus* and *Sardina pilchardus*; [Annex VI](#) - WebGr project; [Annex VII](#) – Cost project). Further details can be found in the PGCCDBS 2009 report.

1) Review and follow up of last year's PGMed recommendations (Cyprus, March 2008).

The chairman referred to the relevant recommendations of the last PGMed and their follow up. It has been noticed that most of the PGMed recommendations were already addressed by both RCM Med&BS (November, 2008) and Liaison Meeting (December, 2008).

- PGMed recommends to continue the landings exchange exercise to develop a Common template on landing data

Follow up: PGMed reviewed the results of the landings exchange exercise and agreed on the usefulness of constituting such landings exchange data as a reference for the Mediterranean. This exercise (based on landings data of the previous 3 years, 2005-2007, of the species presented in Appendix VII of the Commission Decision 2008/949/EC) has been also performed in the current meeting (see paragraph 7).

- PGMed recommends to continue and repeat the “Ranking exercise” during the next RCM meeting.

Follow up: based on the PGMed recommendation this exercise has been carried out by RCM Med&BS (November, 2008). PGMed recall that, for the future, this exercise should include all the parameters needed for the ranking system (effort, landings, value of landings, see SGECA-SGRN 08-01) from all Mediterranean Member States.

- PGMed recommends to collect the different range of gear size and other selected device, making an effort to have a regional agreement at Level 6.

Follow up: based on the PGMed recommendation, MS started to provide information on their data (i.e. mesh and hook size) in common template. This common template had been circulated before the meeting for obtaining homogeneous data. Results of this exercise have been presented and checked in the current meeting (see paragraphs 2 and 3).

- PGMed recommends to Review Annex 4 (output SGRN-SGECA, 08-02)

Follow up: the following suggestions, made up by the PGMed 2008 to the “Annex 4” of the SGRN-SGECA meeting (Nantes, 4-8 February 2008), have been included in the Appendix VII of Commission Decision 949/2008:

Mullus surmuletus was changed from a Group 2 to a Group 1 species;

Spicara spp. was changed to *Spicara smaris*;

Boops boops was included in area 3.2;

Eutrigla gurnardus was removed from area 1.3;

Spicara smaris was removed from area 2.2 and included in area 3.2.

Changes in the number of age readings per 1000 t were reduced for some species. An exception is represented by large pelagic for which age is requested every three years, following the SGRN recommendation (SGRN 07-04).

- PGMed recognise that there is an urgent need to provide Member States with guidelines for statistically robust sampling and data analysis schemes and to ensure the harmonisation of methods across geographic areas. PGs recommend a Workshop on Sampling Methods for Recreational Fisheries.

Follow up: based on both PGs recommendation a workshop on recreational fisheries has been held this year (Nantes, France, 14-17 Apr 2009). The outcome of this workshop (WKSMRF) should provide recommendation on sampling methods for recreational fisheries.

- PGMed recommends to review the length and age sampling for highly migratory species (bluefin tuna, albacore, bonito, dolphin fish and swordfish) in the Mediterranean.

Follow up: based on PGMed recommendation, MS started to provide information on their data (i.e. landing; tuna caged) in common templates. These common templates had been circulated before the meeting. Results have been presented in the current meeting (see paragraph 6) and the results must be reviewed and evaluated by next RCM Med&BS (Italy, 2009).

- PGMed, recommend that, for the future, the list of GFCM meetings dealing with DCR, even if preliminary, should be available to the Commission before the end of the year.

Follow up: based on PGMed recommendation, GFCM meetings dealing with DCR have been included in the list of eligible meetings for 2009 by the Commission.

2) Collate information on mesh and hook size in order to suggest a common level 6 of the matrix (Appendix IV - Commission Decision 2008/949/EC).

Background: during the 2008 RCM Med&BS it was recalled that the level 6 of fishing activity in the matrix (Appendix IV of Decision 2008/949/EC) defined by the Mediterranean Regulation (EC) No. 1967/2006, basically does not differ from level 5 since the Mediterranean Regulation refers only to a minimum mesh or hook size of gears.

The RCM Med&BS recognised that the knowledge on mesh size is scarce for most of the metiers. Following this state of knowledge on metiers at level 6, the RCM Med&BS recommends to improve the global description of metiers at level 6 in terms of target species, fishing areas, mesh sizes used etc. and to provide these information in the MS national programmes.

For this reason, during the 2008 RCM Med&BS it was agreed that information on the size ranges of nets and hooks should be provided to the 2009 PGMed, for suggesting a common level 6.

PGMed discussed the difficulties in obtaining information on the size ranges of hooks and nets, especially since in the framework of the previous DCR (EU Reg. 1543/00) all passive gears for the small scale fishery were combined for sampling purposes. Due to the fact that complete data on the ranges of hooks and nets employed in the different countries are not available and are difficult to obtain, an agreement has been reached only for some relevant metiers.

The decisions of the Group, concerning each metier, are as follows:

- Nets – Trammel nets and Gillnets

Concerning trammel net and gillnets, the overview of the data presented during the meeting showed a high heterogeneity of the mesh size employed in the different Mediterranean countries.

Furthermore, it was commented that it would be difficult to further split the metier at level 6 to mesh size ranges, as the target species may be the same among the different mesh sizes employed.

Since the complete data on the different mesh size were not available during the meeting, the Group recommends all countries to collect during 2009 information on the mesh size ranges employed by their national fleet, in order to discuss the possibility of setting at level 6 metiers with mesh size ranges.

For the time being it was agreed at level 6 to set up the minimum mesh size explicated by the Council Regulation (EC) No. 1967/2006 (i.e. Trammel nets ≥ 16 mm; Gillnets ≥ 16 mm).

Concerning gillnets, it was recalled and agreed that the RCM Med&BS has proposed the metier GNS_DEF_360-400_0_0 for the Black Sea.

- Hook sizes – Drifting and Set Longlines

Drifting longlines: PGMed discussed the possibility to split drifting longlines targeting large pelagics into 3 further metiers on the basis of the target species: *Thunnus thynnus* (BFT), *Thunnus alalunga* (ALB) and *Xiphias gladius* (SWO).

A discussion followed on the possibility in setting the 3 metiers either at level 6, based on hook size ranges, or at level 7 based on the targeted species; it was finally decided that the 3 metiers should be set at level 7, as the relevant RFO (i.e. ICCAT) collects information based on the targeted species.

In order to ensure a regional coordination in the sampling of the drifting longlines, PGMed recommends Member States to include in their national programme the following metiers at level 7 of the matrix:

LLD_LPF_0_0_0(BFT)

LLD_LPF_0_0_0(ALB)

LLD_LPF_0_0_0(SWO)

Set Longlines: Concerning set longlines, it was recalled that the Mediterranean Regulation (EC - 1967/2006) provides a minimum on hook sizes only for one species (*Pagellus bogaraveo*).

The Group, also in this case, could not reach an agreement on a possible split of level 6 to different hook size ranges, since complete data on the ranges of hooks were not available from all countries and due to the high heterogeneity of the data presented. However the Group proposed a further split at level 7 to shelf and slope, for distinguishing fishing operations/trips at depths less or deeper than 200 m (the limit between shelf and slope has been set at 200 m depth).

LLS_DMF_0_0_0 shelf

LLS_DMF_0_0_0 slope

The Group recommends all countries to collect during 2009 information on the hook size ranges employed by their national fleet; these data should be used for discussing the possibility of setting at level 6 different hook size ranges.

- Trawlers

The Group agreed to maintain at level 6 of the matrix for OTB, PTB and TBB the minimum mesh size (≥ 40 mm) as defined by Regulation (EC) No. 1967/2006.

The Group proposed a split at level 7 for the bottom otter trawl targeting demersal species, to shelf, slope and mixed shelf and slope (the limit between shelf and slope has been set at 200 m depth).

The following métiers have been proposed at level 7 of the Mediterranean and Black Sea matrix:

- OTB_DEF≥40_0_0 (shelf)
- OTB_DEF≥40_0_0 (slope)
- OTB_DEF≥40_0_0 (mixed shelf and slope)

Concerning mid-water otter trawl (OTM) the Group, revising the output of the Sofia meeting, (Report of the Sofia meeting between Bulgaria and Romania, EC and RCM Med&BS chair), agreed on the following métier for the Black Sea:

OTM_mixed demersal and pelagic species_13-20

According to current regulations in force concerning management measures in the Mediterranean (specifically Regulation (EC) No. 1967/2006), the following métiers at level 6 of the Matrix are proposed:

- OTM_MPD_>=20_0_0 mid-water otter trawl (OTM) targeting mixed demersal and pelagic species with mesh size \geq 20 mm (as proposed during the 2008 RCM MED&BS).
- PTM_SPF_>=20_0_0 pelagic pair trawl (PTM) targeting mixed demersal and pelagic species with mesh size \geq 20 mm (as proposed during the 2008 RCM MED&BS).
- PS_SPF_>=14_0_0 purse seine (PS) for small pelagics with mesh size \geq 14 mm (as proposed during the 2008 RCM MED&BS).
- PS_LPF_>=14_0_0 purse seine (PS) for large pelagics with mesh size \geq 14 mm.
- LA_SLP_14_0_0 lampara nets (LA) targeting small and large pelagics species with mesh size \geq 14 mm.

The decisions of the Group, concerning each metier, are summarized in the following table:

Table 1: Metier agreed at level 6 and 7 of the Mediterranean and Black Sea Matrix

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 |
|--|------------------|-----------------------------|---------------------------------------|--|--------------------|---|
| Fishing activity | Dredges | Dredges | Boat dredge [DRB] | Molluscs | | |
| | Trawls | Bottom trawls | Bottom otter trawl [OTB] | Demersal species | ≥40 | shelf slope mixed shelf and slope |
| | | | | Deep water species* | ≥40 | |
| | | | | Mixed demersal species and deep water species* | ≥40 | |
| | | Multi-rig otter trawl [OTT] | Demersal species | ≥40 | | |
| | | Bottom pair trawl [PTB] | Demersal species | ≥40 | | |
| | | Beam trawl [TBB] | Demersal species | ≥40 | | |
| | | Pelagic trawls | Midwater otter trawl [OTM] | Mixed demersal and pelagic species | ≥20 | |
| | | | Midwater otter trawl [OTM] | Mixed demersal and pelagic species | 13-20** | |
| | | | Pelagic pair trawl [PTM] | Small pelagic fish | ≥20 | |
| | Hooks and Lines | Rods and Lines | Hand and Pole lines [LHP] [LHM] | Finfish | (a) | LLD_LPF_0_0_0 (BFT) LLD_LPF_0_0_0 (ALB) LLD_LPF_0_0_0 (SWO) |
| | | | | Cephalopods | (a) | |
| | | | | Trolling lines [LTL] | Large pelagic fish | |
| | | Longlines | Drifting longlines [LLD] | Large pelagic fish | (a) | |
| | | | Set longlines [LLS] | Demersal fish | (a) | |
| | | | | | | |
| | Traps | Traps | Pots and Traps [FPO] | Demersal species | (a) | shelf slope |
| | | | Fyke nets [FYK] | Catadromous species | (a) | |
| | | | | Demersal species | (a) | |
| | | | Stationary uncovered pound nets [FPN] | Large pelagic fish | (a) | |
| | Nets | Nets | Trammel net [GTR] | Demersal species | ≥16 | |
| | | | Set gillnet [GNS] | Small and large pelagic fish | ≥16 | |
| | | | | Demersal species | 360-400** | |
| | | | | Demersal species | ≥16 | |
| | | | Driftnet [GND] | Small pelagic fish | (a) | |
| | Demersal fish | (a) | | | | |
| | Seines | Surrounding nets | Purse seine [PS] | Small pelagic fish | ≥14 | |
| | | | | Large pelagic fish | ≥14 | |
| | | | | Small and large pelagic fish | ≥14 | |
| | | Seines | Lampara nets [LA] | Small and large pelagic fish | ≥14 | |
| | | | Fly shooting seine [SSC] | Demersal species | (a) | |
| | | | Anchored seine [SDN] | Demersal species | (a) | |
| Pair seine [SPR] | | | Demersal species | (a) | | |
| Beach and boat seine [SB] [SV] | Demersal species | (a) | | | | |
| Other gear | Other gear | Glass eel fishing | Glass eel | (a) | | |
| Misc. (Specify) | Misc. (Specify) | | | (a) | | |
| Other activity than fishing | | | | Other activity than fishing | | |
| Inactive | | | | Inactive | | |
| (a) Not spelled out in DCR but defined with reference to relevant EU Regulation(s) | | | | | | |
| (*) referring only to red shrimps <i>Aristaeomorpha foliacea</i> and <i>Aristeus antennatus</i> , species not included in the definition of deep sea species given by Council Regulation (EC) 2347/2002. | | | | | | |
| (**) for black sea | | | | | | |

It was clarified that in the cases where metiers at level 7 have been set, the ranking system for sampling purposes will be made at level 6, as required by the Data Collection Framework (DCF). Since level 7 is normally set at national level, it was agreed that for the proposed metiers at level 7 a regional agreement on their inclusion in the national programmes would be preferred.

3) Review list of finalised metier at level 6 for Mediterranean & Black Sea

Following the discussion that the Group had on ToR 2, the harmonised metiers at level 6 of the matrix proposed by RCM Med&BS (Table 3.3.2.1 RCM Med&BS report 2008) has been revised.

The following table provides the modifications proposed by the PGMed.

Table 2: List of finalised metier at level 6 for Mediterranean and Black Sea Matrix

| Metier coding | Metier naming |
|----------------------|---|
| DRB MOL 0 0 0 | Boat dredge for molluscs |
| FPN LPF 0 0 0 | Stationary uncovered pound nets for large pelagic |
| FPO DEF 0 0 0 | Pot and Traps for demersal species |
| FYK CAT 0 0 0 | Fyke nets for eels |
| FYK DEF 0 0 0 | Fyke nets for demersal species |
| GND DEF 0 0 0 | Driftnets for demersal fish |
| GND SPF 0 0 0 | Driftnets for small pelagic fish |
| GNS DEF 360-400 0 0* | Set gillnets for demersal fish |
| GNS DEF >=16 0 0 | Set gillnets for demersal fish according meshsize regulation |
| GNS SLP >=16 0 0 | Set gillnets for small and large pelagics according meshsize regulation |
| GTR DEF >=16 0 0 | Set trammel nets for demersal species according meshsize regulation |
| LA SLP 14 0 0 | Lampara nets according meshsize regulation |
| LHP-LHM FIF 0 0 0 | Hand and Pole lines for finfish |
| LHP-LHM CEP 0 0 0 | Hand and Pole lines for cephalopods |
| LLD LPF 0 0 0 | Drifting longlines for large pelagic |
| LLS DEF 0 0 0 | Set longlines for demersal fish |
| LTL LPF 0 0 0 | Trolling lines for large pelagic |
| OTB DEF >=40 0 0 | Bottom otter trawl for demersal species |
| OTB DWS >=40 0 0 | Bottom otter trawl for deep water species |
| OTB MDD >=40 0 0 | Bottom otter trawl for mixed demersal and deep water species |
| OTM MPD >=13 19 0 0* | Pelagic trawl according meshsize regulation |
| OTM MPD >=20 0 0 | Midwater otter trawl for mixed demersal and pelagic species |
| PS LPF 14 0 0 | Purse seine for large pelagic |
| PS SPF >=14 0 0 | Purse seine for small pelagics according meshsize regulation |
| PTM SPF >=20 0 0 | Pelagic pair trawl for small pelagic species |
| SB-SV DEF 0 0 0 | Beach and boat seines for demersal species |
| TBB DEF 0 0 0 | Beam trawl for demersal trawling |
| MISC | Miscellaneous metiers (defined at national level) |

* for Black sea region

4) Métier variables: updating the matrix (miscellaneous gears)

The Group collated information on the miscellaneous gears (i.e. fishing activities of national interest not clustered in the fleet-fishery matrix) suggested by the MS in their 2009-2010 NPs, and proposed the possible inclusion of the following metiers in the Miscellaneous (MISC) category of fishing activities:

Hydraulic dredge targeting molluscs (DRH)

Mechanised dredge (HMD) targeting molluscs

Beach and boat seine (SB) (SV) targeting small pelagic fish

Stationary uncovered pound nets (FPN) targeting small pelagic fish (performed in the Black Sea)

MS should aggregate all their miscellaneous gears under the activity “Misc” of the matrix. If during the ranking system, performed at level 6 at the national level, the miscellaneous gears are included in the top 90% of the métiers, and therefore selected for sampling, they should be clearly defined and included separately in the matrix.

The Group was informed that all the proposals made by the RCM Med&BS, such the modification of the target assemblage (level 5) of Trolling lines (LTL) from “Large pelagic fish” to “Finfish” and the inclusion of the code “DES” for the description of “Demersal Species” in the target assemblage (codes set by SGRN-08-01), should be provided and clearly justified in the National Program and then accepted by SGRN.

5) Collate information for the classification of vessel category at level 5 (Appendix IV of the Commission Decision 2008/949/EC), in order to suggest common thresholds for the allocation of the target assemblages.

The Group recalled that the definition of the target species, as agreed at the Nantes workshops on fleet-fishery based approach (EC documents, 2006a and 2006b), is “*those species that are primarily sought by the fishermen in a particular fishery.*”

For the Mediterranean the basic métier for which a threshold is required for allocating the target assemblages at level 5 is the bottom otter trawl, with three target assemblages (demersal species, deep water species, mixed demersal and deep water species). Different approaches are currently applied by the MS for allocating the target assemblages of a bottom otter trawl at a trip level: either a quantitative threshold (e.g. 40% contribution in the total catch in weight) or a qualitative one (presence/absence of species) is used.

The Group was informed that a study for allocating métiers based on VMS and logbook data has been granted by the Commission, with a duration of 18 months; by the end of 2010 it is expected that the outcomes of the study will provide support to MS for setting common thresholds for allocating target assemblages.

Awaiting the outcomes of the study, the Group suggested carrying out an exercise for allocating métiers. When deep water species occur in the catch, the catch should be sorted to demersal and deep water species and be ranked by value. In the case the deep water species are ranked first, the target assemblage should be assigned to deepwater species; in the case the deep water species are ranked second, the target assemblage should be

assigned to mixed demersal and deep water species. Information on the allocation of the target assemblages following the proposed common thresholds should be presented at the next RCM Med&BS.

6) Collate all the necessary information to share the sampling effort of *Thunnus thynnus*, *Xiphias gladius*, *Thunnus alalunga*, *Sarda sarda* and *Coryphaena hippurus*, among Mediterranean member states.

The Group followed the 2008 RCM Med&BS recommendation (Sète, 24-28 November 2008) to assess a possible collaboration on the large pelagic sampling intensity as reported in the NP proposals. PGMed revised and proposed a sampling intensity needed to achieve precision levels on a Mediterranean-wide basis for the large pelagic species included both in group 1 and in group 2 list (Commission Decision 2008/949/EC).

Thunnus thynnus

PGMed recognised the difficulties in obtaining biological samples from fisheries capturing *Thunnus thynnus* for farming (purse seiners) and examined the possibility of intensifying sampling at farms for this species based on bilateral agreements between member countries. The Group agreed that collection of all biological variables (length, age, sex and maturity) should be performed by MS where cages are located and not by the flag MS of the purse seiners fishing bluefin tuna for caging. ICCAT Rec. 08-05 clearly establishes the responsibility for the data collection (length frequency) of caged individuals for farming or fattening activity during harvesting. PGMed supports the opinion that MS where cages are located shall ensure the data collection at the harvesting and that bilateral agreements have to be established with the flag country of the fishing vessels concerned.

PGMed also addressed the problem of tuna transferred to tuna cages in non-member states. The latter EC Decision (2008/949/EC) also reports the provision that, if necessary, MS shall cooperate with the authorities of non-EU third countries to set-up the biological sampling required. PGMed recommends member states to sample the tuna transferred in non-member countries either themselves or through bi-lateral agreements.

PGMed gathered all the data on *Thunnus thynnus* farm production for the years 2005, 2006, 2007, from all the participating countries during the meeting.

The Group could not reach a complete agreement since complete data sets (i.e. farm production in the three years considered and/or the allocation of the tuna in other countries) were not available from all countries.

A table, with only 2007 data, was produced for total farm production (caged) and landings from capture fisheries in each respective country (see [table 3](#)).

This work produced preliminary figures of ‘production’ (caged + landing) in each member state. Starting from the values of the total ‘*MS production 2007*’ the minimum number of samples required at regional level for stock related variables (age, weight, sex and maturity) has been calculated.

Table 3: Number of specimens of *Thunnus thynnus* proposed for ageing in the NP 2009/2010 by each MS and number of specimens to be collected for biological variables, on the basis of the 2007 total production, proposes by PGMed.

| | n. of fish proposed in NP | Caged 2007 | Landing 2007 | Total MS production 2007 | % | n. to be collected |
|----------|---------------------------|------------|--------------|--------------------------|-----|--------------------|
| Cyprus | 165 | 711 | 1 | 712 | 6 | 87 |
| France | 0 | 0 | 49 | 49 | 0 | 6 |
| Greece | 280 | 247 | 38 | 285 | 2 | 35 |
| Italy | 640 | 1399 | 461 | 1860 | 16 | 226 |
| Malta | 250 | 7984 | 318 | 8302 | 69 | 1009 |
| Slovenia | 0 | 0 | 0.01 | 0 | 0 | 0 |
| Spain | 120 | 0 | 765 | 765 | 6 | 93 |
| total | 1455 | 10341 | 1631 | 11973 | 100 | 1455 |

The definition of Columns Heading of [Table 3](#) are the following:

n. of fish proposed in NP: refers to the number of tuna proposed to be collect for ageing by each member states in the table III.E.3 “Sampling intensity for stock-based variables” of the NP (in accordance with Decision 2008/949/EC 125 individuals should be sampled for every 1000t).

Caged 2007: weight of the caged tuna (in tons) inputted in the cages of each MS during 2007 (e.g. the Maltese value of tuna caged will be given by the tuna coming from France, Spain and Malta itself. The ‘caged’ refers to the inputted tuna in the farms, not the weight at harvest).

Landing 2007: refers to tuna caught (in tons) by the fishing vessels or fishing traps flying the flag of each MS (caught by longline, tuna traps, purse seine, others). The purse seine catches that were transferred to cages in farms are excluded from the landings of the MS.

Total MS production 2007: the total production (sum of caged and landing weight, in tons) by each Mediterranean Member State recorded in 2007.

%: refers to the percentage contribution per country of the total production (sum of caged and landing).

n. to be collected: refers to the number of specimens to be collected for biological variables (age, weight, sex and maturity). It was designed on the basis of 2007 total production of each MS and the total number of planned specimens in all the NPs.

The group recognised that it was not possible to allocate correctly the catches of the French purse seiners caged in the various bluefin tuna farms (France should specify the quantitative and the MS cages where tuna are transferred) and that the figures provided for caged tuna in Spain were very low and did not include the quantities received from other countries.

PGMed recommends both France and Spain to provide the exact figures in the next RCM Med&BS 2009, so that this exercise could be completed and the sampling intensity of each member state in 2010 could be determined and agreed upon in the same RCM Med&BS (Italy, 2009). The Group recommends to perform this exercise with 2006, 2007 and 2008 data production. Furthermore, PGMed recommends to perform this exercise not only for the collection of stock related variables (age, weight, sex and maturity) but, following the ICCAT Rec. 08-05, to finalise this exercise also for the collection of length frequency data. To achieve these goals, before next RCM Med&BS a table (see as an example [Table 4](#)) will be circulated among Mediterranean MS and should be filled with all the correct values. MS should fill the template with ‘*caged*’ (tuna caught by purse seine and transfer to cages in the same MS; tuna caught by purse seine and transfer to cages in other MS; tuna caught by purse seine and transfer to cages in third countries) and ‘*landing*’ (tuna caught by other gears) data for 2006, 2007 and 2008.

Table 4: example of table that should be filled for the years 2006, 2007 and 2008 by each MS, before the next RCM Med&BS (Italy, 2009).

| FRANCE tuna data for 2006 | |
|----------------------------------|--------|
| landing | 750.0 |
| caged france | 1698.6 |
| caged malta | 1100.0 |
| caged turkey | 115.8 |
| caged tunisia | 119.9 |
| caged other.... | |
| | |

Other large pelagics species

For the other large pelagic species (*Xiphias gladius*, *Thunnus alalunga*, *Coryphaena hippurus* and *Sarda sarda*) landings data for the period 2005-2007 for each Member State were gathered from the ICCAT report of the Standing Committee of Research and Statistics (SCRS), Sep/Oct 08 (ICCAT, 2008). These figures were checked and confirmed by each respective participant and the calculation of the minimum sampling intensity at regional level was conducted using the same procedures as described for *Thunnus thynnus*.

Tables from 5 to 8 present the number of individuals proposed for ageing by each MS in the NP 2009/10 and the number of individuals to be collected suggested by PGMed, for *Xiphias gladius*, *Thunnus alalunga*, *Coryphaena hippurus* and *Sarda sarda* respectively.

The group recognised that in some cases (i.e. *Xiphias gladius*) the figures for landing data were very low and might not reflect the real figures. The group suggests MS to check carefully the landings data and provide the exact figures in the next RCM Med&BS 2009.

In the same RCM Med&BS (Italy, 2009) this exercise could be completed and the sampling intensity of each member state in 2010 could be determined and agreed by the Group. PGMed recommends to perform this exercise not only for the collection of stock related variables (age, weight, sex and maturity) but, following the ICCAT Rec. 08-05, to finalise this exercise also for the collection of length frequency data.

In order to determine accurately the precision level for each stock-related variables, PGMed recommends also that the data gathered in 2009 should be provided to the PGMed meeting of 2010. This will enable PGMed to calculate the precision level and the minimum number of samples required to achieve the required precision. This will also enable the

group to adjust the sampling intensity at regional level and for each member state according to the results of the analysis.

Table 5: Number of *Xiphias gladius* specimens proposed for ageing in the NP 2009/2010 by each MS and number of specimens to be collected for biological variables, on the basis of 2005-2007 total production, proposed by PGMed.

| | n. of fish proposed in NP | Landing 2005 | Landing 2006 | Landing 2007 | Mean values | % | n. to be collected |
|----------|---------------------------|--------------|--------------|--------------|-------------|-------|--------------------|
| Cyprus | 10 | 53 | 43 | 67 | 54 | 0.52 | 0 |
| España | 75 | 910 | 1462 | 1697 | 1356 | 13.03 | 170 |
| France | 0 | 8.2 | 3.9 | 14 | 9 | 0.08 | 0 |
| Greece | 280 | 1311 | 1358 | 1887 | 1519 | 14.59 | 200 |
| Italy | 900 | 7460 | 7626 | 6518 | 7201 | 69.17 | 1100 |
| Malta | 250 | 362 | 239 | 213 | 271 | 2.61 | 45 |
| Slovenia | 0 | 0 | 0 | 0 | 0 | 0.00 | |
| Total | 1515 | 10104 | 10732 | 10396 | 10411 | 100 | 1515 |

Table 6: Number of *Thunnus alalunga* specimens proposed for ageing in the NP 2009/2010 by each MS and number of specimens to be collected for biological variables, on the basis of 2005-2007 total production, proposed by PGMed.

| | n. of fish proposed in NP | Landing 2005 | Landing 2006 | Landing 2007 | Mean values | % | n. to be collected |
|----------|---------------------------|--------------|--------------|--------------|-------------|------|--------------------|
| Cyprus | 50 | 425 | 507 | 712 | 548 | 10.9 | 60 |
| España | 45 | 189 | 382 | 516 | 362 | 7.2 | 45 |
| France | 0 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| Greece | 40 | 623 | 402 | 448 | 491 | 9.8 | 55 |
| Italy | 440 | 2248 | 4584 | 4017 | 3616 | 72.0 | 415 |
| Malta | 0 | 15 | 0 | 1 | 5 | 0.1 | 0 |
| Slovenia | 0 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| Total | 575 | 3500 | 5875 | 5694 | 5023 | 100 | 575 |

Table 7: Number of *Coryphaena hippurus* specimens proposed for ageing in the NP 2009/2010 by each MS and number of specimens to be collected for biological variables, on the basis of 2005-2007 total production, proposed by PGMed.

| | n. of fish proposed in NP | Landing 2005 | Landing 2006 | Landing 2007 | Mean values | % | n. to be collected |
|----------|---------------------------|--------------|--------------|--------------|-------------|-------|--------------------|
| Cyprus | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 |
| España | 0 | 17 | 36 | 21 | 25 | 0.90 | 0 |
| France | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 |
| Greece | 0 | 0 | 3.6 | 4 | 3 | 0.09 | 0 |
| Italy | 1000 | 2200 | 2308 | 2247 | 2252 | 82.12 | 1000 |
| Malta | 500 | 447 | 559 | 383 | 463 | 16.89 | 500 |
| Slovenia | 0 | 0 | 0 | 0 | 0 | 0.00 | |
| Total | 1500 | 2664 | 2907 | 2655 | 2742 | 100 | 1500 |

Table 8: Number of *Sarda sarda* specimens proposed for ageing in the NP 2009/2010 by each MS and number of specimens to be collected for biological variables, on the basis of 2005-2007 total production, proposed by PGMed.

| | n. of fish proposed in NP | Landing 2005 | Landing 2006 | Landing 2007 | Mean values | % | n. to be collected |
|----------|---------------------------|--------------|--------------|--------------|-------------|------|--------------------|
| Cyprus | 0 | 4 | 3 | 0 | 2 | 0.1 | 0 |
| España | 84 | 215 | 429 | 531 | 392 | 13.0 | 84 |
| France | 0 | 0 | 0 | 15 | 5 | 0.2 | 0 |
| Greece | 200 | 1390 | 845 | 1123 | 1119 | 37.1 | 200 |
| Italy | 70 | 1356 | 1543 | 1601 | 1500 | 49.7 | 248 |
| Malta | 0 | 0 | 0 | 2 | 1 | 0.0 | 0 |
| Slovenia | 0 | 0 | 0 | 0 | 0 | 0.0 | 0 |
| | | | | | | | |
| Total | 354 | 2965 | 2820 | 3272 | 3019 | 100 | 532 |

7) Common template on landing data.

In accordance with 2007 RCM recommendation (4th RCM Med Report - Cyprus, 2007), MS provided landings data of the previous 3 years (2005-2007) of the species presented in Appendix VII of the Commission Decision 2008/949/EC. A common template was circulated before the PGMed meeting to collate all landings data per country, for the years 2005-2007, as a reference for the selection of species to be included in the biological sampling. Results are presented in [Figures 1 and 2](#).

| Species (Appendix VII EC 949/08) | Cyprus | Greece | France | Malta | Italy | Spain | Slovenia | Total Landing (Tons) |
|-----------------------------------|--------|--------|--------|-------|-------|-------|----------|----------------------|
| <i>Anguilla anguilla</i> | 0 | 6 | 2 | 0 | 0 | 1 | 0 | 9.0 |
| <i>Aristeomorpha foliacea</i> | 0 | 0 | 1 | 23 | 2361 | 1 | 0 | 2387.0 |
| <i>Aristeus antennatus</i> | 0 | 0 | 0 | 0 | 845 | 799 | 0 | 1644.6 |
| <i>Boops boops</i> | 233 | 7964 | 135 | 24 | 3199 | 128 | 2 | 11687.2 |
| <i>Coryphaena hippurus</i> | 0 | 4 | 0 | 383 | 2247 | 25 | 0 | 2658.7 |
| <i>Coryphaena equiselis</i> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| <i>Dicentrarchus labrax</i> | 8 | 145 | 267 | 0 | 110 | 55 | 1 | 586.1 |
| <i>Eledone cirrhosa*</i> | 0 | 1005 | 1498 | 0 | 2963 | 157 | 0 | 5622.3 |
| <i>Eledone moschata*</i> | 0 | 0 | 0 | 0 | 4543 | 0 | 31 | 4573.2 |
| <i>Engraulis encrasicolus</i> | 0 | 20481 | 2939 | 0 | 66730 | 3494 | 409 | 94052.7 |
| <i>Eutrigla gurnardus</i> | 0 | 0 | 17 | 0 | 462 | 7 | 0 | 485.4 |
| <i>Illex spp., Todarodes spp.</i> | 0 | 1752 | 48 | 1 | 4077 | 103 | 0 | 5981.8 |
| <i>Istiophoridae</i> | 0 | 0 | 0 | 2 | 150 | 0 | 0 | 152.5 |
| <i>Loligo vulgaris</i> | 24 | 1072 | 294 | 8 | 1915 | 271 | 9 | 3594.1 |
| <i>Lophius budegassa*</i> | 0 | 2578 | 387 | 1 | 997 | 1165 | 0 | 5126.8 |
| <i>Lophius piscatorius*</i> | 0 | | 0 | 0 | 1072 | 0 | 0 | 1071.7 |
| <i>Merluccius merluccius</i> | 25 | 12386 | 1116 | 7 | 15578 | 3563 | 4 | 32681.3 |
| <i>Micromesistius poutassou</i> | 0 | 400 | 23 | 0 | 1458 | 5793 | 3 | 7677.6 |
| <i>Mugilidae</i> | 3 | 141 | 338 | 0 | 2825 | 66 | 12 | 3384.9 |
| <i>Mullus barbatus*</i> | 50 | 4048 | 211 | 9 | 9014 | 1590 | 4 | 14926.0 |
| <i>Mullus surmuletus*</i> | 132 | 2458 | 0 | 4 | 3912 | 0 | 0 | 6505.1 |
| <i>Nephrops norvegicus</i> | 0 | 1007 | 1 | 1 | 4289 | 332 | 0 | 5630.1 |
| <i>Octopus vulgaris*</i> | 137 | 4853 | 0 | 35 | 3817 | 1827 | 0 | 10668.4 |
| <i>Pagellus erythrinus</i> | 25 | 1487 | 111 | 5 | 1585 | 193 | 5 | 3411.1 |
| <i>Parapenaeus longirostris</i> | 3 | 4206 | 1 | 8 | 11369 | 126 | 0 | 15713.3 |
| <i>Penaeus kerathurus</i> | 0 | 2832 | 2 | 0 | 575 | 170 | 0 | 3578.9 |
| <i>Raja clavata*</i> | 0 | 378 | 15 | 6 | 357 | 1 | 0 | 757.0 |
| <i>Raja miraletus*</i> | 0 | | 0 | 0 | 40 | 111 | 0 | 151.1 |
| <i>Sarda sarda</i> | 4 | 1316 | 10 | 7 | 1524 | 391 | 1 | 3252.0 |
| <i>Sardina pilchardus</i> | 7 | 20388 | 10983 | 1 | 13126 | 26376 | 273 | 71154.8 |
| <i>Scomber spp.</i> | 1 | 4148 | 1382 | 13 | 3480 | 6339 | 11 | 15374.4 |
| <i>Sepia officinalis</i> | 41 | 3553 | 102 | 11 | 9490 | 320 | 32 | 13548.8 |
| Shark-like Selachii | 19 | 636 | 9 | 22 | 1704 | 184 | 2 | 2575.4 |
| <i>Solea vulgaris</i> | 0 | 1460 | 178 | 0 | 2231 | 50 | 7 | 3927.3 |
| <i>Sparus aurata</i> | 6 | 101 | 307 | 2 | 0 | 242 | 3 | 661.2 |
| <i>Spicara smaris</i> | 269 | 4816 | 7 | 5 | 2048 | 94 | 5 | 7245.1 |
| <i>Squilla mantis</i> | 0 | 116 | 34 | 0 | 6520 | 283 | 5 | 6957.3 |
| <i>Thunnus alalunga</i> | 538 | 236 | 0 | 10 | 3680 | 362 | 0 | 4826.6 |
| <i>Thunnus thynnus</i> | 80 | 159 | 24 | 305 | 4364 | 2764 | 0 | 7696.0 |
| <i>Trachurus mediterraneus*</i> | 12 | 0 | 0 | 7 | 762 | 0 | 0 | 780.6 |
| <i>Trachurus trachurus*</i> | 0 | 7047 | 534 | 0 | 4334 | 7708 | 7 | 19630.5 |
| <i>Trigla lucerna</i> | 0 | 81 | 26 | 4 | 341 | 4 | 0 | 457.3 |
| <i>Veneridae</i> | 0 | 0 | 0 | 0 | 24316 | 6 | 0 | 24321.8 |
| <i>Xiphias gladius</i> | 54 | 1192 | 9 | 229 | 7202 | 620 | 0 | 9305.2 |
| <i>Sprattus sprattus</i> | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4.3 |
| <i>Psetta maxima</i> | 0 | 0 | 12 | 0 | 0 | 5 | 0 | 17.3 |
| <i>Squalus acanthias</i> | 0 | 0 | 2 | 0 | 0 | 10 | 0 | 11.9 |

Figure 1: Average landing values (in tons) for each species and for each Mediterranean Member States(2005-2007).

* see further comments below

| Species (Appendix VII EC 949/08) | Cyprus | Greece | France | Malta | Italy | Spain | Slovenia | tot % |
|-----------------------------------|--------|--------|--------|-------|-------|-------|----------|-------|
| <i>Anguilla anguilla</i> | 0.0 | 67.5 | 20.9 | 0.0 | 0.0 | 11.5 | 0.1 | 100 |
| <i>Aristeomorpha foliacea</i> | 0.0 | 0.0 | 0.1 | 1.0 | 98.9 | 0.1 | 0.0 | 100 |
| <i>Aristeus antennatus</i> | 0.0 | 0.0 | 0.0 | 0.0 | 51.4 | 48.6 | 0.0 | 100 |
| <i>Boops boops</i> | 2.0 | 68.1 | 1.2 | 0.2 | 27.4 | 1.1 | 0.0 | 100 |
| <i>Coryphaena hippurus</i> | 0.0 | 0.1 | 0.0 | 14.4 | 84.5 | 0.9 | 0.0 | 100 |
| <i>Coryphaena equiselis</i> | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| <i>Dicentrarchus labrax</i> | 1.4 | 24.7 | 45.5 | 0.0 | 18.7 | 9.4 | 0.2 | 100 |
| <i>Eledone cirrhosa*</i> | 0.0 | 17.9 | 26.6 | 0.0 | 52.7 | 2.8 | 0.0 | 100 |
| <i>Eledone moschata*</i> | 0.0 | 0.0 | 0.0 | 0.0 | 99.3 | 0.0 | 0.7 | 100 |
| <i>Engraulis encrasicolus</i> | 0.0 | 21.8 | 3.1 | 0.0 | 70.9 | 3.7 | 0.4 | 100 |
| <i>Eutrigla gurnardus</i> | 0.0 | 0.0 | 3.5 | 0.0 | 95.1 | 1.3 | 0.0 | 100 |
| <i>Illex spp., Todarodes spp.</i> | 0.0 | 29.3 | 0.8 | 0.0 | 68.2 | 1.7 | 0.0 | 100 |
| <i>Istiophoridae</i> | 0.0 | 0.0 | 0.0 | 1.5 | 98.5 | 0.0 | 0.0 | 100 |
| <i>Loligo vulgaris</i> | 0.7 | 29.8 | 8.2 | 0.2 | 53.3 | 7.5 | 0.2 | 100 |
| <i>Lophius budegassa*</i> | 0.0 | 50.3 | 7.6 | 0.0 | 19.4 | 22.7 | 0.0 | 100 |
| <i>Lophius piscatorius*</i> | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100 |
| <i>Merluccius merluccius</i> | 0.1 | 37.9 | 3.4 | 0.0 | 47.7 | 10.9 | 0.0 | 100 |
| <i>Micromesistius poutassou</i> | 0.0 | 5.2 | 0.3 | 0.0 | 19.0 | 75.5 | 0.0 | 100 |
| <i>Mugilidae</i> | 0.1 | 4.2 | 10.0 | 0.0 | 83.5 | 2.0 | 0.3 | 100 |
| <i>Mullus barbatus*</i> | 0.3 | 27.1 | 1.4 | 0.1 | 60.4 | 10.7 | 0.0 | 100 |
| <i>Mullus surmuletus*</i> | 2.0 | 37.8 | 0.0 | 0.1 | 60.1 | 0.0 | 0.0 | 100 |
| <i>Nephrops norvegicus</i> | 0.0 | 17.9 | 0.0 | 0.0 | 76.2 | 5.9 | 0.0 | 100 |
| <i>Octopus vulgaris*</i> | 1.3 | 45.5 | 0.0 | 0.3 | 35.8 | 17.1 | 0.0 | 100 |
| <i>Pagellus erythrinus</i> | 0.7 | 43.6 | 3.3 | 0.2 | 46.5 | 5.7 | 0.1 | 100 |
| <i>Parapenaeus longirostris</i> | 0.0 | 26.8 | 0.0 | 0.1 | 72.4 | 0.8 | 0.0 | 100 |
| <i>Penaeus kerathurus</i> | 0.0 | 79.1 | 0.0 | 0.0 | 16.1 | 4.8 | 0.0 | 100 |
| <i>Raja clavata*</i> | 0.0 | 50.0 | 2.0 | 0.8 | 47.1 | 0.1 | 0.0 | 100 |
| <i>Raja miraletus*</i> | 0.0 | 0.0 | 0.0 | 0.0 | 26.3 | 73.7 | 0.0 | 100 |
| <i>Sarda sarda</i> | 0.1 | 40.5 | 0.3 | 0.2 | 46.9 | 12.0 | 0.0 | 100 |
| <i>Sardina pilchardus</i> | 0.0 | 28.7 | 15.4 | 0.0 | 18.4 | 37.1 | 0.4 | 100 |
| <i>Scomber spp.</i> | 0.0 | 27.0 | 9.0 | 0.1 | 22.6 | 41.2 | 0.1 | 100 |
| <i>Sepia officinalis</i> | 0.3 | 26.2 | 0.8 | 0.1 | 70.0 | 2.4 | 0.2 | 100 |
| Shark-like Selachii | 0.7 | 24.7 | 0.4 | 0.8 | 66.2 | 7.1 | 0.1 | 100 |
| <i>Solea vulgaris</i> | 0.0 | 37.2 | 4.5 | 0.0 | 56.8 | 1.3 | 0.2 | 100 |
| <i>Sparus aurata</i> | 0.9 | 15.3 | 46.5 | 0.2 | 0.0 | 36.6 | 0.5 | 100 |
| <i>Spicara smaris</i> | 3.7 | 66.5 | 0.1 | 0.1 | 28.3 | 1.3 | 0.1 | 100 |
| <i>Squilla mantis</i> | 0.0 | 1.7 | 0.5 | 0.0 | 93.7 | 4.1 | 0.1 | 100 |
| <i>Thunnus alalunga</i> | 11.1 | 4.9 | 0.0 | 0.2 | 76.2 | 7.5 | 0.0 | 100 |
| <i>Thunnus thynnus</i> | 1.0 | 2.1 | 0.3 | 4.0 | 56.7 | 35.9 | 0.0 | 100 |
| <i>Trachurus mediterraneus*</i> | 1.5 | 0.0 | 0.0 | 0.9 | 97.6 | 0.0 | 0.0 | 100 |
| <i>Trachurus trachurus*</i> | 0.0 | 35.9 | 2.7 | 0.0 | 22.1 | 39.3 | 0.0 | 100 |
| <i>Trigla lucerna</i> | 0.0 | 17.8 | 5.7 | 1.0 | 74.6 | 0.8 | 0.1 | 100 |
| <i>Veneridae</i> | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100 |
| <i>Xiphias gladius</i> | 0.6 | 12.8 | 0.1 | 2.5 | 77.4 | 6.7 | 0.0 | 100 |
| <i>Sprattus sprattus</i> | 0 | 0 | 0 | 0 | 0 | 100 | 0.0 | 100 |
| <i>Psetta maxima</i> | 0 | 0 | 69.7 | 0 | 0 | 30.3 | 0.0 | 100 |
| <i>Squalus acanthias</i> | 0 | 0 | 18.3 | 0 | 0 | 81.7 | 0.0 | 100 |

Figure 2: Percentage contribution (%) of EU Member States to Mediterranean landings for each species.

* see further comments below

***Comments to figure 1 and figure 2**

Notes on Cyprus landings:

Octopus vulgaris is grouped with *Eledone moschata* and *Octopus macropus* (in lesser extent).

Trachurus mediterraneus is grouped with *Trachurus trachurus*

Shark-like Selachii is grouped with *Raja clavata* and *Raja miraletus*

Parapenaeus longirostris is grouped with *Plesionika spp* and *Aristeomorpha foliacea*.

Notes on Greece landings:

Landing data are an average of 2005 and 2006.

E. cirrhosa is grouped with *E. moscata*

R. clavata is grouped with *R. asterias*

Lophius budegassa is grouped with *L. piscatorius*

Trachurus trachurus is to be considered as *Trachurus spp.*

Notes on Spain landings:

E. cirrhosa is grouped with *E. moscata*

R. clavata is grouped with *R. asterias*

L. budegassa is grouped with *L. piscatorius*

Trachurus mediterraneus is grouped with *Trachurus trachurus*

Mullus barbatus is grouped with *M. surmuletus*

Squalus acanthias is *Squalus spp*

Notes on France landings:

L. budegassa is grouped with *L. piscatorius*

Octopus vulgaris is grouped with *Eledone moschata* and *Octopus macropus* (in lesser extent).

M. barbatus is grouped with *M. surmuletus*

Notes on Malta landings:

Eledone moschata, *Eledone cirrosa* and *Octopus macropus* is grouped with *Octopus vulgaris*.

Trachurus mediterraneus is grouped with *Trachurus trachurus*

Raja spp. is grouped with *Raja clavata*.

Lophius piscatorius is grouped with *Lophius budegassa*

The Group recognised that the data collected for some species (i.e. *Mullus spp*, *Trachurus sp.*, *Lophius spp.*, *Raja spp.*, *Eledone spp.*), were compromised by inaccurate species identification and recommended MS to provide the necessary supporting information to ensure the correct species identification.

The chairman, highlighting the exemption rules of Decision 2008/949/EC*, stressed the importance of providing landings data by species as required by the DCF (Decision 2008/949/EC), and not by group of species.

*Exemption rules of Decision 2008/949/EC “for stocks in the Mediterranean Sea, the landings by weight of a Mediterranean Member State for a species corresponding to less than 10 % of the total Community landings from the Mediterranean Sea, or to less than 200 tonnes, except for Bluefin tuna.”

PGMed after reviewing the results, acknowledged the usefulness of the landings exchange data as a reference for the Mediterranean and agreed to continue this exercise.

8) Review the areas/stocks mentioned in the Appendix VII (Mediterranean and Black sea) of Commission 2008/949/EC.

PGMed reviewed Appendix VII of Decision 2008/949/EC and agreed that in this case the definition reported under Area/Stock for each species, does not represent the distribution of the stocks but the areas where the species might occur.

PGMed recognized that stock area boundaries (with the exception of *Thunnus thynnus*, *Thunnus albacores*, *Xiphias gladius*, *Coryphaena hippurus*, *Sarda sarda*, and possible other large pelagic species) must be clearly identified in the Mediterranean for all the listed species, and for the time being the Group cannot proceed to analyse correctly the Area/Stock as it is defined.

The Group suggests the insertion of a note in Appendix VII of the Decision 2008/949/EC, for the Mediterranean and Black Sea table, clarifying that under the column Area/Stock what is reported is the FAO statistic division (Level 3 of Appendix I, Decision 2008/949/EC), which does not reflect the stock area.

PGMed also agreed to take into account any changes that may be suggested by GFCM (General Fisheries Commission for the Mediterranean) regarding the stock boundary units.

9) Review maturity scales used by different Mediterranean member states, both for biological sampling and surveys, in order to suggest a common approach.

PGMed reviewed the maturity scales used by different Mediterranean member states both for the scientific survey (Medit) and the biological sampling.

PGMed recognised that there is, in a regional view, a clear need to establish correspondence between old and new scales, to convert time series, and to find out a regional harmonisation and standardization of maturity data. The expectation is to have a common scale for maturity stage, with a common set of criteria to classify each stage, to be used by Mediterranean MS.

Biological sampling - Concerning biological sampling, several discrepancies have been found among MS. Actually, in the frame of DCF, maturity stages are collected according to different macroscopic scales used locally in the different countries (i.e. Nikolsky, 1963 or a modified ones; Fontana, 1969; Holden and Raitt, 1974; Medits maturity scales; output of hake maturity workshop WKMSHM; output of maturity workshop on mackerel WKMSMAC; output of maturity workshop on small pelagic specie WKSPMATs)

PGMed, considering the hard task which has been done on maturity staging by the Medits partners, recognised that the only maturity scale used at Mediterranean level is the Medits ones. In a Regional view, PGMed suggests MS to be able to adapt/convert the maturity scales, used in the different countries, to the Medits ones and following also the output of the European maturity workshops.

Regarding the biological sampling of large pelagics, PGMed recommends that all MS involved in the biological sampling of tuna, swordfish and dolphin fish should use the ICCAT references (http://www.iccat.int/Documents/SCRS/Manual/CH4/CH4_8-ENG.pdf). The maturity scales adopted by ICCAT for large pelagic species are provided in Table 9.

Table 9: maturity scales used by ICCAT for large pelagic species

| Stage | Criteria | |
|-------|---|---|
| | Males | Females |
| 1 | Gonads small ribbon-like, not possible to determine sex by gross examination | Gonads small ribbon-like, not possible to determine sex by gross examination |
| 1 | Immature ; testes extremely thin, flattened and ribbon-like, but sex determinable by gross examination | Immature ; gonads elongated, slender, but sex determinable by gross examination |
| 2 | Enlarged testes, triangular in cross section, no milt in central canal | Early maturing ; gonads enlarged but individual ova not visible to the naked eye |
| 3 | Maturing ; milt flows freely if testes pinched or pressed | Late maturing ; gonads enlarged, individual ova visible to the naked eye |
| 4 | Ripe ; testes large, milt flows freely from testes | Ripe ; ovary greatly enlarged, ova translucent, easily dislodged from follicles or loose in lumen of ovary |
| 5 | Spent ; testes flabby, bloodshot, surface dull red, little or no milt in central canal | Spawned ; includes recently spawned and post-spawning fish, mature ova remnants in various stages of resorption, and mature ova remnants about 1.0mm in diameter |

Scientific survey (Meditis) - Concerning the Medits survey all the MS participating to the survey should use the ones included in the Medits manual 2007 (Meditis, 2007 - Instruction Manual Version 5). However, PGMed recognised that MS involved in the Medits survey follow different approaches: adopting the Medits scale used before Kavala meeting in 2006, the new stages, or a mix, distinguishing when it is the case, in 4a and 4b (see as an example the [Table 10](#)).

The Group ask to the incoming Medits Working group (Cyprus, 2009) to clarify this aspect.

Moreover, the Group was informed that in the case a specific workshop has been conducted for certain species (e.g. hake maturity workshop, WKMSHM; maturity workshop on mackerel, WKMSMAC; maturity workshop on small pelagic species, WKSPMAT), MS should consider and follow the output of these WSs. Also for this latter point, the Group ask to the incoming Medits Working group (Cyprus, 2009) to take into account this aspect.

Table 10: Medits 2007, Instruction Manual Version 5 - Code of sexual maturity for bony fish. On the right columns are reported the Medits scale used before 2006 Kavala meeting (yellow ones) and the new stages (blue ones).

bony fish

| SEX | GONAD ASPECT | MATURATION STATE | STAGE | MEDITS |
|-----|---|---------------------|-------|--------|
| U | Sex not distinguished by naked eye. Gonads very small and translucent, almost transparent. Sex undetermined. | UNDETERMINED | 0 | 0 |
| F | Small pinkish and translucent ovary shorter than 1/3 of the body cavity. Eggs not visible by naked eye. | IMMATURE = VIRGIN | 1 | 1 |
| M | Thin and whitish testis shorter than 1/3 of the body cavity. | | | |
| F | Small pinkish/reddish ovary shorter than 1/2 of the body cavity. Eggs not visible by naked eye. | VIRGIN-DEVELOPING * | 2a | 2 |
| M | Thin whitish testis shorter than 1/2 of the body cavity. | | | |
| F | Pinkish-reddish/reddish- orange and translucent ovary long about 1/2 of the body cavity. Blood vessels visible. Eggs not visible by naked eye. | RECOVERING * | 2b | |
| M | Whitish/pinkish testis, more or less simmetrical, long about 1/2 of the body cavity. | | | |
| F | Ovary pinkish-yellow in colour with granular appearance, long about 2/3 of the body cavity. Eggs are visible by naked eye through the ovaric tunica, which is not yet translucent. Under light pressure, eggs are not expelled. | MATURING | 2c | |
| M | Whitish to creamy testis long about 2/3 of the body cavity. Under light pressure, sperm is not expelled. | | | |
| F | Ovary orange-pink in colour, with conspicuous superficial blood vessels, long from 2/3 to full length of the body cavity. Large transparent, ripe eggs are clearly visible and could be expelled under light pressure. In more advanced conditions, eggs escape freely. | MATURE/SPAWNER | 3 | 3 |
| M | Whitish-creamy soft testis long from 2/3 to full length of the body cavity. Under light pressure, sperm could be expelled. In more advanced conditions, sperm escapes freely. | | | |
| F | Reddish ovary shrunk to about 1/2 length of the body cavity. Flaccid ovaric walls; ovary may contain remnants of disintegrating opaque and/or translucent eggs. | SPENT | 4a | 4 |
| M | Bloodshot and flabby testis shrunken to about 1/2 length of the body cavity. | | | |
| F | Pinkish and translucent ovary long about 1/3 of the body cavity. Eggs not visible by naked eye. | RESTING * | 4b | |
| M | Whitish/pinkish testis, more or less simmetrical, long about 1/3 of the body cavity. | | | |

 **Adult specimens**

* : WARNING ! Be careful. These stages could be confused each other.

10) Discuss and analyse effort variables presented in Appendix VIII of the Commission Decision 2008/949/EC.

Background: The Liaison Meeting in 2009 has requested to the Planning Groups (PGMed and PGCCDBS) to clearly define the methodological issues regarding the common understanding of fishing effort definition, following requests by the Northern RCM and RCM Med&BS. The outcomes of both Planning Groups should be considered by STECF/SGRN/SGECA (Barcelona, May 2009) to ensure that this topic is addressed in a similar way following both biological and economic perspectives.

Variables listed in Appendix VIII of Decision 2008/949/EC ([Table 11](#)) have been reviewed by the PGMed. A common template (see [Annex VIII](#)) was circulated and fulfilled by each MS during the meeting to:

- analyse the data source/methodologies proposed by each MS for the collection of the capacity, effort and landing variables;
- ensure that all the relevant metiers/fleet are covered;
- verify if some metiers are excluded and if the MS request any derogation.

Table 11: List of Transversal variables (Appendix VIII of Decision 2008/949/EC)

| Heading | Variable | Specification | Unit | Gear (Level 2 in the matrix) | Disaggregation Level ⁴ | Reference period |
|----------|---|-----------------------------|---------------|------------------------------|-----------------------------------|-------------------|
| Capacity | | | | | | |
| | Number of vessels | | | | C3 | Annually |
| | GT, kW, Vessel Age ¹ | | | | C3 | Annually |
| Effort | | | | | | |
| | Number of vessels | | | | B1 | Monthly |
| | Days at sea | See definition in Chapter I | Days | All gears | B1 and C3 | Monthly |
| | Hours fished ² | | Hours | Dredges and Trawls | A1 ⁶ | Monthly |
| | Fishing days | See definition in Chapter I | Days | All gears | All cells ⁶ | Monthly |
| | kW * Fishing Days | | | Dredges and Trawls | All cells ⁵ | Monthly |
| | GT * Fishing days | | | Dredges and Trawls | All cells ⁶ | Monthly |
| | Number of trips ² | | Number | All gears | All cells ⁶ | Monthly |
| | Number of rigs ² | | Number | Multi rig (level 4) | A1 ⁶ | Monthly |
| | Number of fishing operations ² | | Number | Purse Seines | A1 ⁶ | Monthly |
| | Number of nets / Length ² | | Number/meters | Nets | A1 ⁶ | Monthly |
| | Number of hooks, Number of lines ² | | Number | Hook and Lines | A1 ⁶ | Monthly |
| | Numbers of pots, traps ² | | Number | Traps | A1 ⁶ | Monthly |
| | Soaking time ² | | Hours | All Passive gears | A1 ⁶ | Monthly |
| Landings | | | | | | |
| | Value of landings total and per commercial species ³ | | Euro | | B1 and C1 | Monthly |
| | Live Weight of landings total and per species | | Tonnes | | A1 ⁶ | Monthly |
| | Prices by commercial species ⁵ | | Euro/kg | | B2 and C2 | Monthly, Annually |
| | Conversion factor per species | | | | | Annual update |

PGMed recognised that capacity and landings variables do not present any problems of interpretation, whereas for the estimations of the effort variables (i.e. number of nets/length, number of hooks, number of lines) the Group decided to focus on three basic issues:

1) Common understanding of the definition of some effort variables.

2) Which effort variables are relevant/priority for the Mediterranean (i.e. assessment: mapping effort)?

3) Possible flexibility on the collection of some of the effort variables required, especially for the métiers not selected by the ranking system.

1) Common understanding of the definition of some variables.

- The effort variable “Number of vessels” should refer to active vessels (see Commission Decision 2008/949/EC).

- The capacity variable “Number of vessels” should refer only to the number of vessels in the Fleet Vessel Register that are able to conduct commercial fisheries.

Example: vessels with activity other than fishing (for example aquaculture feeding, etc) should be excluded from the capacity variable.

- Concerning the effort variable “Number of nets/Length” PGMed was concerned whether this variable refers to the number of units and the length of each unit or the number of units and the total length of the net (the summed length of all units).

PGMed recommends that only the total length (in meters) of the nets should be provided.

- Concerning the effort variable “Number of hooks, number of lines” PGMed recommends that only the total number of hooks should be provided.

2) Which variables are relevant/priority for the Mediterranean (i.e. assessment; mapping effort)?

- The Group recognised that the estimation of effort variable “Number of rigs”, which refers to “Multi-rig” is not relevant for the Mediterranean area.

- The Group recognised that for the effort variable “Number of nets/Length” only the total length (in meters) of the nets is relevant for the Mediterranean area.

- The Group recognised that for the effort variable “Number of hooks, Number of lines” only the total number of hooks is relevant for the Mediterranean area.

3) Possible flexibility on the collection of some of the variables required, especially for the métiers not selected by the ranking system.

PGMed recommends that for the métiers that have not been selected by the ranking system the following effort variables should be excluded from the collection of effort data:

- Hours fished (required for Dredges and Trawls)
- Number of rigs (required for Multi-rig)
- Number of fishing operations (required for Purse Seines)
- Number of nets, Length (required for Nets)
- Number of hooks, Number of lines (required for Hook and Lines)
- Numbers of pots, traps (required for Traps)
- Soaking time (required for all passive gears)

STECF/SGRN/SGECA (Barcelona, May 2009) is invited to address this point and advice MS on how to proceed.

11) Review the Bulgaria and Romania cooperation on the sampling intensity for turbot, sprat, anchovy and horse mackerel.

Due to the absence of participants from Black Sea, PGMed was only able to examine the Report of the Sofia meeting between Bulgaria and Romania, European Commission and RCM Med&BS chair.

The Group checked the intensities proposed by both MS in their National Program ([Table 12](#)) and considered the proposed intensities quite high

Table 12: planned minimum n. of fish (for age and length) proposed by Black Sea MS in their NP 2009/10.

| Length | Planned minimum No of fish to be measured at a national level | |
|---|---|----------|
| | Romania | Bulgaria |
| <i>Engraulis encrasicolus</i> | 1000 | 5000 |
| <i>Psetta maxima maeotica</i> | 100 | 600 |
| <i>Sprattus sprattus</i> | 6500 | 25000 |
| <i>Squalus acanthias</i> | 30 | 0 |
| <i>Trachurus mediterraneus ponticus</i> | 500 | 4000 |

| Age | Planned minimum No of fish to be measured at a national level | |
|---|---|----------|
| | Romania | Bulgaria |
| <i>Engraulis encrasicolus</i> | 500 | 1500 |
| <i>Psetta maxima maeotica</i> | 50 | 400 |
| <i>Sprattus sprattus</i> | 2500 | 300 |
| <i>Trachurus mediterraneus ponticus</i> | 250 | 1500 |

However, given the lack of historical harmonized information sets from both MS and the lack of the precision level associated to the proposed sampling intensities, the suggestion of the Group for 2009 is to implement the proposed sampling intensity and to bring the results to the next PGMed.

The implementation of the programmes in 2009 will provide elements to eventually adjust the sampling intensity in 2010.

12) Workshops, studies, projects

12.1 Studies

PGMed, following the output of the RCM Med&BS, proposed the following study:

Title: “*Multidisciplinary identification of stock boundaries for stock assessment purposes (through DCR data and other sources) for the most relevant species in the Mediterranean Sea*”.

Budget: 600.000 €

Duration: 18 months

Correct stock unit definition is crucial and considered a prerequisite for any scientific stock assessment approach and reliable fisheries advice from it. Especially in the Mediterranean sea definition of unit stocks has been largely absent and information is even more scarce.

The aim of this study is to assess the stock structure of some demersal and small pelagic species, which are important target species in many Mediterranean fisheries and to evaluate the status of the different populations.

Furthermore, it will provide knowledge of stock structures of the species considered (see below) in order to allow an enhanced management of the resources in Mediterranean waters in the short, medium and long term.

The study will be focused on life history traits such as growth, reproduction, spawning areas and seasonal distribution patterns (data available from surveys, biological sampling etc), and will be also integrating with the results from several techniques such as genetic markers, other biological tags like morphometric studies and the use of parasites, physical tagging.

Species on which the study will focalise the attention:

Merluccius merluccius

Parapenaeus longirostris

Mullus barbatus

Nephrops norvegicus

Aristeus antennatus

Aristaeomorpha foliacea

Engraulis encrasicolus

Sardina pilchardus

12.2 Workshops

The Group proposed two workshops:

- Workshop on Sexual Maturity Staging of Elasmobranchs [WKMSSEL]
- Workshop on Sexual Maturity Staging of Cephalopods [WKMSCEPH]

Workshop on Sexual Maturity Staging of Elasmobranchs [WKMSEL]

A Workshop on Sexual Maturity Staging of Elasmobranchs [WKMSEL] (sharks and rays) (CO-Chairs: Fabrizio Serena and Mark Dimech) will be established and take place in Malta, 11-15th October 2010, to:

- a) agree on a common maturity scale for Elasmobranchs (sharks and rays) across laboratories comprising a comparison of existing scales and standardization of maturity determination criteria
- b) reduce sources of error on maturity determination validating macroscopic staging,
- c) establish correspondence between old and new scales to convert time series
- d) propose optimal sampling strategy to estimate accurate maturity ogives.
- e) address the generic ToRs adopted for maturity staging workshops (see 'PGCCDBS Guidelines for Workshops on Maturity Staging')

A list of species will be defined by PGCCDBS and PGMed 2010 after receiving response by participants.

WKMSEL will report to RCMs, PGMed and PGCCDBS.

Supporting Information

| | |
|----------------------------------|--|
| PRIORITY: | The maturity stage is an important biological parameter to be used in the calculation of maturity ogives (and therefore of Spawning Stock Biomass), for the definition of the spawning season of a species, for the monitoring of long-term changes in the spawning cycle, and for many other research needs regarding the biology of fish. |
| SCIENTIFIC JUSTIFICATION: | <p>The identification and macroscopic classification of maturity stages can play a key-role in the assessment fishery resources and there is an urgent need for reliable and up-to-date information on the maturity parameters for all assessed species to improve the quality of these estimates.</p> <p>To set a sustainable fishery policy and regulations it is necessary to obtain data and information on the sexual maturity to compute maturity ogives, for discriminating life phases (juveniles, adults) and for the estimation of Spawning Stock Biomass. Moreover, the identification and classification of maturity stages can be used for the best determination of spawning period according to different geographical and environmental areas and to study the relationship between length at maturity and fishery exploitation on a temporal scale. Actually, in the frame of DCR, maturity stages are collected according to different macroscopic scales used locally in the scientific Institutions. The need of a common and standardized system for identification and macroscopic classification of maturity stages in fish resources have to be considered as an important priority to optimize DCR.</p> <p>In order to get this aim, several Mediterranean countries already made an effort to build up a <i>Maturity Photo database</i> (Report of the DCR MEDITS Working group, Nantes, France, 15-18 March 2005: wgmedits2005-wgreport-final.doc) and developed standard operational procedure to calibrate and classify the description of the maturity stages per fishery resources (fish, crustaceans and cephalopods). This group should be aware the recommendation of the Medits workshop.</p> <p>The expectation of the TORs is that the Workshop produces a comparative description of the scales used in the different labs and set off standard operational procedures and methodologies to facilitate the validation and classification of the different maturity stages.</p> |

| | |
|--|--|
| RESOURCE REQUIREMENTS: | <p>Before the Workshop the organising institute will setup a sampling plan for collecting samples for to be used during workshop. The sampling will be carried out during 2009/10.</p> <p>Guidelines on how to prepare the Workshop, as well for collecting maturity data and histological analysis for the Workshop have been prepared and available on PGCCDBS 2009 report .</p> |
| PARTICIPANTS: | <p>In view of its relevance to the DCR, the Workshop is expected to attract wide interest from both Mediterranean EU and ICES Member States.</p> |
| SECRETARIAT FACILITIES: | |
| FINANCIAL: | <p>Attendance to the Workshop is eligible under the 2009/10 DCF</p> |
| LINKAGES TO ADVISORY COMMITTEE: | |
| LINKAGES TO OTHER COMMITTEES OR GROUPS: | <p>There is a direct interest from several international (ICES, NAFO, GFCM, ICCAT) advisory committee for a common effort toward the standardization of assessing procedures</p> |
| LINKAGES TO OTHER ORGANIZATIONS: | <p>There is a direct link with the EU DCR</p> |

Workshop on Sexual Maturity Staging of Cephalopods [WKMSCEPH]

A Workshop on Sexual Maturity Staging of Cephalopods [WKMSCEPH] (CO-Chairs: Paola Belcari and Danila Cuccu) will be established and take place in Livorno/Pisa, XX-XX October/November 2010, to:

- a) agree on a common maturity scale for Cephalopods across laboratories comprising a comparison of existing scales and standardization of maturity determination criteria
- b) reduce sources of error on maturity determination validating macroscopic staging,
- c) establish correspondence between old and new scales to convert time series
- d) propose optimal sampling strategy to estimate accurate maturity ogives.
- e) address the generic ToRs adopted for maturity staging workshops (see 'PGCCDBS Guidelines for Workshops on Maturity Staging')

WKMSCEPH will report to RCMs, PGMed and PGCCDBS.

Supporting Information

| | |
|----------------------------------|---|
| PRIORITY: | The maturity stage is an important biological parameter to be used in the calculation of maturity ogives (and therefore of Spawning Stock Biomass), for the definition of the spawning season of a species, for the monitoring of long-term changes in the spawning cycle, and for many other research needs regarding the biology of species. |
| SCIENTIFIC JUSTIFICATION: | <p>The identification and macroscopic classification of maturity stages can play a key-role in the assessment fishery resources and there is an urgent need for reliable and up-to-date information on the maturity parameters for all assessed species to improve the quality of these estimates.</p> <p>To set a sustainable fishery policy and regulations it is necessary to obtain ,data and information on the sexual maturity to compute maturity ogives, for discriminating life phases (juveniles, adults) and for the estimation of Spawning Stock Biomass. Moreover, the identification and classification of maturity stages can be used for the best determination of spawning period according to different geographical and environmental areas and to study the relationship between length at maturity and fishery exploitation on a temporal scale. Actually, in the frame of DCR, maturity stages are collected according to different macroscopic scales used locally in the scientific Institutions. The need of a common and standardized system for identification and macroscopic classification of maturity stages in cephalopod resources have to be considered as an important priority to optimize DCR.</p> <p>In order to get this aim, several Mediterranean countries already made an effort to build up a <i>Maturity Photo database</i> (Report of the DCR MEDITS Working group, Nantes, France, 15-18 March 2005: wgmedits2005-wgreport-final.doc) and developed standard operational procedure to calibrate and classify the description of the maturity stages per fishery resources (fish, crustaceans and cephalopods). This group should be aware the recommendation of the Medits workshop.</p> <p>The expectation of the TORs is that the Workshop produces a comparative description of the scales used in the different labs and set off standard operational procedures and methodologies to facilitate the validation and classification of the different maturity stages.</p> |

| | |
|--|---|
| RESOURCE REQUIREMENTS: | Before the Workshop the organising institute will setup a sampling plan for collecting samples for to be used during workshop. The sampling will be carried out during 2009-2010. Guidelines on how to prepare the Workshop, as well for collecting maturity data for the Workshop have been prepared and available on PGCCDBS 2009 report . |
| PARTICIPANTS: | In view of its relevance to the DCR, the Workshop is expected to attract wide interest from both Mediterranean EU and ICES Member States. |
| SECRETARIAT FACILITIES: | |
| FINANCIAL: | Attendance to the Workshop is eligible under the 2009/10 DCF |
| LINKAGES TO ADVISORY COMMITTEE: | |
| LINKAGES TO OTHER COMMITTEES OR GROUPS: | There is a direct interest from several international (ICES, NAFO GFCM) advisory committee for a common effort toward the standardization of assessing procedures |
| LINKAGES TO OTHER ORGANIZATIONS: | There is a direct link with the EU DCR |

13) A.O.B

Mark Dimech (Malta) was proposed as chairman of the future PGMed for a duration of three years (2010-2012).

Annex I – List of Participants

| First_name | Last_name | Institute | email | Country |
|-------------|------------------|--|--|----------|
| Paolo | Carpentieri | MIPAAF - Technical Coordination Group | paolo.carpentieri@uniroma1.it | Italy |
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Annex II - Terms of References PGMED 2009

- 1) Review and follow up of last year's PGMed recommendations (Cyprus, March 2008).
- 2) Collate information on mesh and hook size in order to suggest a common level 6 of the matrix (Appendix IV - Commission Decision 2008/949/EC).
- 3) Review list of finalised metier at level 6 for Mediterranean & Black Sea.
- 4) Métier variables: Updating the matrix (miscellaneous gears).
- 5) Collate information for the classification of vessel category at level 5 (Appendix IV of the Commission Decision 2008/949/EC), in order to suggest common thresholds for the allocation of the target assemblages.
- 6) Collate all the necessary information to share the sampling effort of *Thunnus thynnus*, *Xiphias gladius*, *Thunnus alalunga*, *Sarda sarda* and *Coryphaena hippurus*, among Mediterranean member states.
- 7) Common template on landing data.
- 8) Review the areas/stocks mentioned in the Appendix VII (Mediterranean and Black sea) of the EC 949/2008.
- 9) Review maturity scales used by different Mediterranean member states, both for biological sampling and surveys, in order to suggest a common approach.
- 10) Discuss and analyse effort variables presented in Appendix VI of the Commission Decision 2008/949/EC.
- 11) Review the Bulgaria and Romania cooperation on the sampling intensity for turbot, sprat, anchovy and horse mackerel.
- 12) Workshops, studies and projects proposal.
- 13) A.O.B.

ANNEX III - Guidelines for collecting maturity data and estimating proportion mature

These guidelines should be regularly evaluated based on research developments and the experience from maturity staging workshops.

| DATE | DETAILS OF CHANGES, PERSON/GROUP MAKING THEM, REFERENCE |
|--------------|---|
| 19 Jan 2007 | Guidelines initially developed at WKMAT (ICES 2007). |
| 6 June 2008 | Reviewed and extended to include estimating proportion mature at WKMOG (ICES 2008). |
| 6 March 2009 | reviewed and updated at PGCCDBS (ICES 2009) to include the number of samples or hauls sampled (point 15 below). |

For survey data to be used in maturity index of the spawning stock, the survey must be conducted at the right time compared to the spawning period and have adequate coverage. If survey data are not available at the right time then histologically validated maturity data obtained outside spawning season can be used, although this should be confirmed on a stock-by-stock basis.

Where valid (see 3) maturity data are available from market samples they can be used to estimate maturity. This is mainly the case for species with a protracted spawning season where survey data do not cover the whole spawning season or stock area. Also, if survey and market data do not show systematic differences they can be used together.

Maturity data from market samples should be collected during the whole prespawning (for determinate species¹) or spawning (for indeterminate species²) season on a métier based sampling programme, and cover the whole stock distribution area. As with market samples, on-board samples should be collected on a métier basis to avoid gear and fleet selectivity effects and collected from the correct time and spatial frame compared to spawning.

If possible, maturity staging should be done on board the survey vessel.

A comprehensive illustrated manual should be available for all stocks requiring maturity observations.

Macroscopic maturity scales used should be validated, either histologically or by another appropriate way.

Plot and map the data collected to assess differences by source, strata, location and time.

Length stratified maturity data should be weighted by the length distribution. If samples are collected from a random sampling scheme or the stock is assessed on a length basis, no weighting according to the length distribution is required.

1 Determinate fecundity species. Number of oocytes to be released in the spawning season (potential fecundity) is defined prior of the onset of the spawning.

2 Indeterminate fecundity species. Number of oocytes to be released in the spawning season are not defined prior of the onset of the spawning, i.e oocyte recruitment continues after the commence of the spawning.

If the fish maturation process is dependent on age and/or sex as well as length then a Sex-Maturity-Age-Length-Key (SMALK) should be used. Age reading precision is important in this context.

If the stock shows a sexual difference in maturity a female maturity ogive should be used, or the effect of combining both sexes considered in detail.

If the maturity data are modelled, a Binomial GLM with logit link is current standard practice. Alternative approaches should be compared against this baseline approach.

Check appropriate model diagnostics.

Report the number of maturity staged fish used to calculate the estimates. If length classes are used, report the width of length classes.

Report the number of samples or hauls that the maturity staged fish came from. This is likely to be more representative of the effective sample size.

When maturity estimates (as proportions) are reported to DCR specifications (Commission Decision 2008/949/EC), calculate the mean confidence interval width for the age and/or length range which correspond to a 20 % and 90% of mature fish. Convert this to a precision level using:

- if half confidence interval width is less than 0.4 then the precision level is 1
- if half confidence interval width is less than 0.25 then the precision level is 2
- if half confidence interval width is less than 0.05 then the precision level is 3

Optionally, report the range of precision levels achieved as well as the mean level.

ANNEX IV - Minimum Sampling Protocol for Age Calibration

A minimum sampling protocol for age calibration has been developed based on the EFAN/TACADAR outcome (see PGCCDBS 2006 report).

1. Written Protocol

Develop a written protocol for each type of Calcified Structure (CS) preparation and species.

2. Fish Sampling

Define measurements, e.g. total length to 0.5 cm below, whole weight +/- 5g.

Specify all the required additional information, e.g. species, area, date, fishing gear, sex, maturity, etc. (minimum = species, area and date of capture).

3. Selection of CS

Determine which calcified structures are to be used e.g., otoliths, illicia.

Identify the preferred method of otolith removal for the fish species.

4. Collecting CS Samples

Specify cleaning method, e.g. removing blood/tissue before drying.

Transport and storage must prevent damage and deterioration.

Moisture content should be controlled, e.g. store in a cool dry place.

5. CS Preparation

Identify the most appropriate preparation, e.g. sectioning, burning/staining.

6. Equipment Maintenance and Set Up

Ensure equipment is serviced regularly and correctly maintained.

Set up microscope for each individual reader before age reading.

Ensure work position is comfortable and there is sufficient time read the CS.

7. Calibrated Image of CS

Use a computer connected to a digital camera fitted on a binocular microscope.

Define a standard set-up for each species. Make sure light settings, magnification and equipment are standardised to the highest degree possible.

Prepare images for each otolith and for each viewing method used (using reflected light and/or transmitted light).

Calibrate each image by adding a scale bar (e.g. 2mm for *Pollachius virens* otoliths) and save the image using the unique CS sample ID number in the file name.

8. Age Reading

Log on to the database if using electronic data storage.

Follow the protocol. Check sample ID and otolith ID.

Define growth rings (translucent or opaque) and reading axes.

Apply criteria for rejection of CS, e.g. badly damaged or crystalline otoliths.

Apply criteria for the identification of false rings, e.g., juvenile growth.

Apply criteria for counting the valid annual rings (growth zones).

Apply birthday criteria for estimating age, usually 01 January, e.g. quarter 3 'pre-birthday' annuli in young fish, missing annulus in quarter 1 if protocol requires counting of opaque bands).

Apply criteria to recognise incomplete growth rings in older fish.

Consider an initial 'blind' reading before looking at the biological data, (e.g. length, sex, maturity etc.). This may help to increase age reader precision.

Annotate the calibrated images with the positions of the annuli.

Record the age, otolith edge growth and level of difficulty in reading the otolith.

The integrity of the links between the data and original CS material must be maintained.

Data edits must be backed-up and traceable. Keep original records.

Quality Assurance

Develop a written protocol.

Ensure age readers follow the written protocol.

Allow adequate time for readings and re-readings.

Provide advice on other potential age reading problems.

Provide advice on using length, weight & maturity when reading CS.

Use a glossary (e.g. EFAN/TACADAR).

Develop and implement a training programme.

Back up all electronic data and edits. Keep all paper records.

Quality Control

Good conservation of CS is essential: Some CS will be re-read at intervals to monitor age reader precision. If the condition of the CS has deteriorated significantly compared with a previous reading, the two readings cannot be compared to measure change in age reader precision.

Monitor age reading precision. If there is only one reader for the species, they can as a minimum, monitor changes in their own precision by regularly re-reading a sample of the CS. Return statistics on precision to age readers.

Material of known age (usually from mark/recapture experiments) is rare. Ensure that age readers have the opportunity to take part in CS exchanges and Age Calibration Workshops (WACWK).

Revise the written protocol as new information becomes available, e.g. mark and recapture information from new research, or experience gained at an ACWK.

Review methodology: A wide variety of techniques are used across European institutes for the preparation and age reading of otoliths of the same fish species. Fig. WG2-7 from the final TACADAR Report shows some of the methods used to prepare and observe the otoliths of flatfish species (Pleuronectiformes), for age reading.

ANNEX V – Working Group on Maturity Stages of Small Pelagic (*Engraulis encrasicolus* and *Sardina pilchardus*)

During the meeting all the WKSPMAT tor's were addressed and fulfilled jointly with the participants producing a new common to all institutes classification scale for macroscopic maturity stages for anchovy (*Engraulis encrasicolus*) and sardine (*Sardina pilchardus*). A conversion table from the other used scales (old) to the new common scale was also provided. Common problems in macroscopic stage assignment were outlined and possible solutions were also provided. A reference images collection was build up thanks to the contribution of all the participants institutes. Laboratory exercises were carried out to uniform the staging criteria among different labs, and results and comments are also added to the present report. Frozen images collection was also presented as annex because many times no other changes are available than work with frozen specimens. Histological validation and stages description scales were also addressed outlining the differences/similarities among the two analysed species. All participants feel to overcame all the aims of the workshop and suggested future activity or meetings in order to improve standardizing among scientists which work in this field.

| New Stage N° | Status | Name of the New Stage ⁽¹⁾ | FRIS ^{(2)*} | ISMAR ^{(3)****} | AZTI | | IEO ^{(6)*} | COC-IEO ^{(7)**} | IFREMER ⁽⁸⁾ | IAMC ⁽⁹⁾ |
|--------------|----------|--------------------------------------|----------------------|--------------------------------------|-------------------------|------------------------------------|-----------------------------|-------------------------------|------------------------|-----------------------|
| | | | | | (E. E.) ⁽⁴⁾ | (S. P.) ^{(5)***} | | | | |
| 1 | Inactive | IMMATURE OR RESTING | Immature-Virgin | Immature | Immature or Rest | Immature | Virgin and Rest | Virgin | Virgin/Immature | Virgin and Resting |
| | | | Virgin-developing | | Beginning of maturation | | | | Resting | |
| 2 | | DEVELOPING | Recovering | Maturing Virgin and Recovering Spent | In Maturation | Early Ripening | Developing | Maturing and Recovering Spent | Developing/Maturing | Developing |
| 3 | Active | IMMINENT SPAWNING | Maturing | Ripening | Pre-spawning | Late Ripening/Partly Spent (Early) | Pre-spawning and Recovering | Pre-spawning | Pre-spawning | Pre-spawning |
| 4 | | SPAWNING | Mature/Spawner | Ripe | Spawning | Ripe | Spawning | Spawning | Spawning | Spawning |
| 5 | | PARTIAL POSTSPAWNING | Spent | Ripe | Partly Spent | Partly Spent (Late) | Partial Postspawning | Post-Spawning | Partial Postspawning | Partial Postspawning |
| 6 | Inactive | SPENT | Resting | Spent | Full Spent and Resting | Spent/ Recovering | Ultimate Postspawning | - | Degenerating | Ultimate Postspawning |

Table - Anchovy and Sardine Maturity Stage Key used by different Institutes, protocol maturity stage key and maturity stage key proposed by WKSPMAT.

⁽¹⁾ Annex 4 - WKSPMAT Maturity Stage key; ⁽²⁾ Annex 4 - Anchovy maturity Stage key from FRIS; ⁽³⁾ Anchovy - Sardine maturity Stage key from ISMAR; ⁽⁴⁾ Annex 4 - Anchovy maturity Stage key from AZTI (anchovy); ⁽⁵⁾ Annex 4 - Anchovy maturity Stage key from AZTI (sardine); ⁽⁶⁾ Annex 4 - Anchovy maturity Stage key from IEO; ⁽⁷⁾ Annex 4 - Anchovy maturity Stage key from COC-IEO; ⁽⁸⁾ Annex 4 - Anchovy maturity Stage key from IFREMER; ⁽⁹⁾ Annex 4 - Anchovy maturity Stage key from AZTI (PIL); *Modified Pinto&Andreu (1957) scale; ** Key of Arriaga et al., 1983; *** Walsh scale (1992); **** Holden and Raitt (1974).

The final report of the Workshop on Small Pelagics (*Sardina pilchardus*, *Engraulis encrasicolus*) Maturity Stages 2008 (WKSPMAT) can be found at

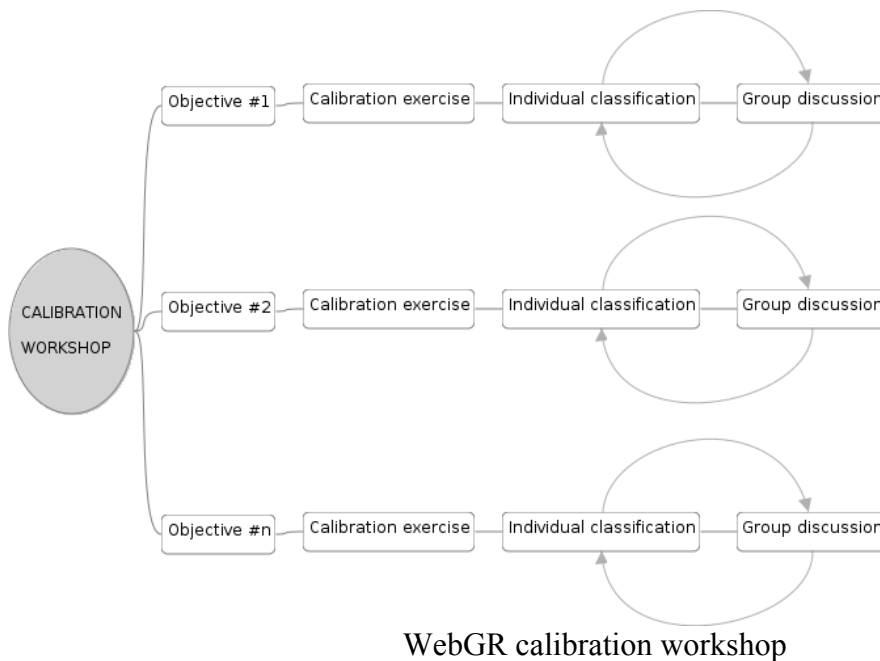
http://www.ices.dk/reports/ACOM/2008/WKSPMAT/wkspmat_2008.pdf

ANNEX VI - WebGr project

The objective of the WebGR project is to develop a set of web services to support the organization and data analysis of calibration workshops, both for age and maturity information, implemented in a coherent tool installable as a website. The website consists of a repository of images, a set of web forms to run a calibration exercise online, a reporting module with the most common statistical analysis and import/export modules to manage images and results. The software has a creative commons license (Open Source) to promote transparency, technology transfer and peer review; and allow the scientific community to get involved in further developments, like linkage to statistical analysis engines, or any other specific features.

Under the scope of WebGR, a workshop contains several calibration exercises and each calibration exercise contains individual and group calibrations, that are carried out in a loop until the objectives are achieved (Figure 2.1.7.1).

The core of the WebGR workshop paradigm is based on the hierarchical structure of the workshop, seen as a operational unit, where several objectives like age or gonad calibration of several stocks may exist simultaneously and require the comparison of readers at distinct levels (e.g. institute, experts, stock assessment input providers, etc.). Each objective must be clearly identified and defined and a specific calibration exercise is then carried out following a statistically sound design. Each calibration exercise is organized in a sequence of individual and group classifications that can be carried out for as long as necessary. In some cases the first individual exercise is sufficient, as is the case of stocks without problems regarding criteria interpretation, or it may be very complex and require several group discussions followed by individual exercises to make sure the interpretation is correct.



ANNEX VII – Cost project (Common Open Source Tool for raising and estimating properties of statistical estimates derived from the Data Collection Regulation)

The objective of the study is to develop a Common "Open Source" Tool (COST) for assessing the accuracy of the biological data and parameters estimates collected for stock assessment purposes within the framework of the Data Collection Regulation. The tool consists of R libraries allowing to import and handle fisheries data (COSTcore), to explore the data (COSTeda), to estimate the parameters and related precision (COSTdesign & COSTbayes) and finally to do simulation (COSTsim). The R libraries and manuals will be available on the Deliverables page as and when they are developed.

The project will be finished in May 2009 and the tools will then be available for use.

<http://wwz.ifremer.fr.cost>

Objectives

As a response to the lot N°2 of the call for tenders FISH/2006/15, the common "open source" tool-box will consist of different packages that will develop validated methods to investigate and estimate parameters for (i) discard volume, (ii) length and age structure of catches and landings, and (iii) biological parameters such as growth, maturity and sex-ratio. Where appropriate, the estimates will be calculated according to one out of a fixed number of agreed raising procedures, based on the methods already developed by some Institutes. Linkage with ICES end-users will be consolidated in close cooperation with ICES in order to facilitate their use by the stock assessment working groups. The definitions and methods will be in line with those described and summarised in the report of the ICES Workshop on Sampling Design for Fisheries Data (ICES, 2005).

According to the tender document, the packages should include:

- Data administration;
- Exploratory data analysis;
- Parameter estimation and associated precision;
- Simulations.

The main tasks should be as follows:

1. Propose a common format of datasets comprising all the variables needed to raise the data to the population level and estimate statistical properties (existing formats such as Fishframe will be considered)
2. Based on the common format, propose exploratory analysis of the most disaggregated data to enable the search for outliers, misallocated data and allocation of samples per strata
3. Based on the common format, develop algorithms and implement software programs to estimate the statistical properties at a strata level and at the population level
4. Based on the common format, develop algorithms and implement software programs to account for missing data and account for external errors
5. Based on the common format, develop algorithms and implement software programs to enable the investigation of the number of samples and the number of individuals to sample to achieve a target precision

The development of the common "open source" tool-box should take into account the recommendations from the 2006 ICES Planning Group on Commercial Catches Discards and Biological Sampling (ICES 2006) and from the 2005 ICES Workshop on Sampling Design for Fisheries Data (ICES 2005).

The outcomes of the project should include:

- Report summarising the data

- Graphs of the Exploratory analysis results
- Raised estimates (volume of discards raised by trips, by total landings and/or by an auxiliary variable, length and age structure of catches, biological parameters) by agreed strata associated with their precision estimates
- Report summarising precision estimates and quality indicators
- Simulation analysis to investigate the optimal sampling intensity to achieve a target precision
- Manuals (COST reference manual, COST Tutorial and COST User Manual)

Methodology

Constitution of a core team

To answer such a technical call for tenders involving very precise expertise, there were two alternatives, namely (i) chose a very compact core team and developers or (ii) open the door to a variety of expertise from different geographical regions. The first alternative would have been an easy and efficient way to carry out the work but it is the second alternative that has been chosen to guarantee (i) that all the country and/or regional specificities would be considered, (ii) ensure that the methods developed correspond to the needs of those countries and (iii) ensure the widest dissemination of knowledge. The counterpart of this choice is that the management package including the work of the core team and the beta-testing of the methods takes a substantial part of the overall budget.

Area coverage

The COST methods will develop validated methods to investigate and estimate sampling indicators for (i) discards, (ii) length and age structure of catches and landings, and (iii) biological parameters such as growth, maturity and sex-ratio from all the geographical regions covered by the DCR. In COST, there are experts from the Baltic, the North Sea, the Atlantic and the Mediterranean, in order to ensure the complete coverage of the European continental waters.

ANNEX VIII – Transversal variables

Templates circulated during the meeting and fulfilled by each country to:

- analyse the data source/methodologies proposed by each MS for the collection of the capacity, effort and landing variables;
- ensure that all the relevant metiers/fleet are covered;
- verify if some metiers are excluded and if the MS request any derogation.

Spain “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant metiers/fleet segments? | Which metiers are excluded? | Did you ask for a derogation? |
|----------|--|--|---|-----------------------------|-------------------------------|
| Capacity | | | | | |
| | Number of vessels | on board diaries/landings declarations/sales notes/fleet census/sampling | yes | none | no |
| | GT, kW, Vessel Age | on board diaries/landings declarations/sales notes/fleet census/sampling | yes | none | no |
| Effort | | | | | |
| | Days at sea | on board diaries | yes | none | no |
| | Hours fished | on board diaries | yes | none | no |
| | Fishing days | on board diaries | yes | none | no |
| | kW * Fishing Days | fleet census/on board diaries | yes | none | no |
| | GT * Fishing days | fleet census/on board diaries | yes | none | no |
| | Number of trips | on board diaries | yes | none | no |
| | Number of rigs | | | | |
| | Number of fishing operations | on board diaries | yes | none | no |
| | Number of nets, Length | | | | |
| | Number of hooks, Number of lines | | | | |
| | Numbers of pots, traps | | | | |
| | Soaking time | on board diaries | yes | none | no |
| Landings | | | | | |
| | Value of landings total and per commercial species | | | | |
| | Live Weight of landings total and per species | on board diaries/landings declarations/sales notes/fleet census/sampling/observers | yes | none | no |
| | Prices by commercial species | | | | |

Malta “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant metiers/fleet segments? | Which metiers are excluded? | Did you ask for a derogation? |
|----------|--|--|---|-----------------------------|-------------------------------|
| Capacity | | | | | |
| | Number of vessels | fleet register (is reported if a vessel is active or inactive) | yes | none | no |
| | GT, kW, Vessel Age | fleet register | yes | none | no |
| Effort | | | | | |
| | Number of vessels | fleet register (is reported if a vessel is active or inactive) | yes | none | no |
| | Days at sea | Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | Hours fished | Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | Fishing days | Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | kW * Fishing Days | Fleet register + Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | GT * Fishing days | Fleet register + Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | Number of trips | Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | Number of rigs | N/A | | | |
| | Number of fishing operations | Logbook + Sales Vouchers > 10 m (Census); Port Sampling + Sales Vouchers < 10 m vessels | yes | none | no |
| | Number of nets, Length | Questionnaire | yes | none | no |
| | Number of hooks, Number of lines | | yes | none | no |
| | Numbers of pots, traps | | yes | none | no |
| | Soaking time | | yes | none | no |
| Landings | | | | | |
| | Value of landings total and per commercial species | sample | yes | none | no |
| | Live Weight of landings total and per species | sample | yes | none | no |
| | Prices by commercial species | sample | yes | none | no |

Greece “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant metiers/fleet segments? | Which metiers are excluded? | Did you ask for a derogation? |
|--------------|--|--|---|-----------------------------|-------------------------------|
| Capacity | Number of vessels | fleet register | yes | none | no |
| | GT, kW, Vessel Age | fleet register | yes | none | no |
| Effort | Number of vessels | | | | |
| | Days at sea | sample (from register vessel/field survey) | yes | none | no |
| | Hours fished | sample (from register vessel/field survey) | yes | none | no |
| | Fishing days | sample (from register vessel/field survey) | yes | none | no |
| | kW * Fishing Days | sample (from register vessel/field survey) | yes | none | no |
| | GT * Fishing days | sample (from register vessel/field survey) | yes | none | no |
| | Number of trips | sample (from register vessel/field survey) | yes | none | no |
| | Number of rigs | sample (from register vessel/field survey) | | | |
| | Number of fishing operations | sample (from register vessel/field survey) | yes | none | no |
| | Number of nets, Length | sample (from register vessel/field survey) | yes | none | no |
| | Number of hooks, Number of lines | sample (from register vessel/field survey) | yes | none | no |
| | Numbers of pots, traps | sample (from register vessel/field survey) | yes | none | no |
| Soaking time | sample (from register vessel/field survey) | yes | none | no | |
| Landings | | | | | |
| | Value of landings total and per commercial species | sample (from register vessel/field survey) | yes | none | no |
| | Live Weight of landings total and per species | sample (from register vessel/field survey) | yes | none | no |
| | Prices by commercial species | sample (from register vessel/field survey) | yes | none | no |

Cyprus “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant metiers/fleet segments? | Which metiers are excluded? | Did you ask for a derogation? |
|--------------|--|---|---|-----------------------------|-------------------------------|
| Capacity | Number of vessels | FVR | yes | none | no |
| | GT, kW, Vessel Age | FVR | yes | none | no |
| Effort | Number of vessels | FVR, Fishing licenses | yes | none | no |
| | Days at sea | VMS, Logbooks, Surveys | yes | none | no |
| | Hours fished | logbook | yes | none | no |
| | Fishing days | VMS, Logbooks, inshore reports and surveys for <12m | yes | none | no |
| | kW * Fishing Days | Logbooks & FVR | yes | none | no |
| | GT * Fishing days | Logbooks & FVR | yes | none | no |
| | Number of trips | VMS, Logbooks, inshore reports and surveys for <12m | yes | none | no |
| | Number of rigs | NA | NA | NA | NA |
| | Number of fishing operations | logbook | yes | none | no |
| | Number of nets, Length | Length: From logbooks, inshore reports and port sampling for <12m. Number of nets: From port sampling for <12m | yes | none | no |
| | Number of hooks, Number of lines | Number of hooks for longlines: From logbooks, production reports and port sampling for <12m. Number of lines for handlines: From production reports and port sampling for <12m. | yes | none | no |
| | Numbers of pots, traps | Logbooks (? - optional), production reports and port sampling for <12m | yes | none | no |
| Soaking time | Production reports and port sampling for <12m, Logbooks (? - optional) | yes | none | no | |
| Landings | | | | | |
| | Value of landings total and per commercial species | Survey, sales notes | yes | none | no |
| | Live Weight of landings total and per species | Logbooks, production reports and port sampling for <12m | yes | none | no |
| | Prices by commercial species | Survey, sales notes | yes | none | no |

Italy “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant metiers/fleet segments? | Which metiers are excluded? | Did you ask for a derogation? |
|----------|--|------------------------------------|---|-----------------------------|-------------------------------|
| Capacity | | | | | |
| | Number of vessels | fleet register/field survey/sample | yes | none | no |
| | GT, kW, Vessel Age | fleet register/field survey | yes | none | no |
| Effort | | | | | |
| | Number of vessels | | | | |
| | Days at sea | sample | yes | none | no |
| | Hours fished | sample | yes | none | no |
| | Fishing days | sample | yes | none | no |
| | kW * Fishing Days | sample | yes | none | no |
| | GT * Fishing days | sample | yes | none | no |
| | Number of trips | sample | yes | none | no |
| | Number of rigs | not applicable | | | |
| | Number of fishing operations | derogation | yes | none | yes |
| | Number of nets, Length | sample | yes | none | no |
| | Number of hooks, Number of lines | sample | yes | none | no |
| | Numbers of pots, traps | sample | yes | none | no |
| | Soaking time | derogation for 2009 | | | yes |
| Landings | | | | | |
| | Value of landings total and per commercial species | sample | yes | none | no |
| | Live Weight of landings total and per species | sample | yes | none | no |
| | Prices by commercial species | sample | yes | none | no |

Slovenia “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant metiers/fleet segments? | Which metiers are excluded? | Did you ask for a derogation? |
|----------|--|-------------------------|---|-----------------------------|-------------------------------|
| Capacity | | | | | |
| | Number of vessels | logbook | yes | none | no |
| | GT, kW, Vessel Age | fleet register | yes | none | no |
| Effort | | | | | |
| | Days at sea | logbook | yes | none | no |
| | Hours fished | logbook | yes | none | no |
| | Fishing days | logbook | yes | none | no |
| | kW * Fishing Days | | | | |
| | GT * Fishing days | | | | |
| | Number of trips | logbook | yes | none | no |
| | Number of rigs | | | | |
| | Number of fishing operations | logbook | yes | none | no |
| | Number of nets, Length | logbook | yes | none | no |
| | Number of hooks, Number of lines | logbook | yes | none | no |
| | Numbers of pots, traps | logbook | yes | none | no |
| | Soaking time | | | | |
| Landings | | | | | |
| | Value of landings total and per commercial species | | | | |
| | Live Weight of landings total and per species | logbook | yes | none | no |
| | Prices by commercial species | | | | |

France “transversal variables table”:

| Heading | Variable | Data source/methodology | Do you cover all the relevant meters/fleet segments? | Which meters are excluded? | Did you ask for a derogation? |
|----------|--|---|--|----------------------------|--|
| Capacity | | | | | |
| | Number of vessels | Fleet register Crossing with Effort surveys and Harbour trips surveys | Yes | none | no |
| | GT, kW, Vessel Age | Fleet register Crossing with Effort surveys and Harbour trips surveys | Yes | none | no |
| Effort | | | | | |
| | Days at sea | Logbooks Activity calendar (exhaustive), VMS data Auction data - Sale notes (1 trip = 1 day) Harbour trip surveys (<12m) | Yes | none | no |
| | Hours fished | Logbooks Activity calendar (exhaustive), VMS data Auction data - Sale notes (1 trip = 1 day) Harbour trip surveys (<12m) | Yes | none | no |
| | Fishing days | Logbooks Activity calendar (exhaustive), VMS data Auction data - Sale notes (1 trip = 1 day) Harbour trip surveys (<12m) | Yes | none | no |
| | kW * Fishing Days | Logbooks Activity calendar (exhaustive), VMS data Auction data - Sale notes (1 trip = 1 day) Harbour trip surveys (<12m) | Yes | none | no |
| | GT * Fishing days | Logbooks Activity calendar (exhaustive), VMS data Auction data - Sale notes (1 trip = 1 day) Harbour trip surveys (<12m) | Yes | none | no |
| | Number of trips | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Corsica in 2009 ? Nb of trips as pilot study. Derogation request for restitution at level 5 of the matrix. |
| | Number of rigs | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Pilot study regarding the precision target to achieve. Derogation request for restitution at level 5 of the matrix. |
| | Number of fishing operations | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Pilot study regarding the precision target to achieve. Derogation request for restitution at level 5 of the matrix. |
| | Number of nets, Length | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Pilot study regarding the precision target to achieve. Derogation request for restitution at level 5 of the matrix. |
| | Number of hooks, Number of lines | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Pilot study regarding the precision target to achieve. Derogation request for restitution at level 5 of the matrix. |
| | Numbers of pots, traps | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Pilot study regarding the precision target to achieve. Derogation request for restitution at level 5 of the matrix. |
| | Soaking time | Activity calendar (exhaustive) Gear and effort surveys (40% of the fleet/year) Harbour trips surveys (3600/year on SSF vessels) | Yes | none | Pilot study regarding the precision target to achieve. Derogation request for restitution at level 5 of the matrix. |
| Landings | | | | | |
| | Value of landings total and per commercial species | Logbooks Activity calendar (exhaustive) Auction data - Sale notes Harbour trip surveys (<12m) | Yes | none | Derogation request for restitution at level 5 of the matrix. |
| | Live Weight of landings total and per species | Logbooks Activity calendar (exhaustive) Auction data - Sale notes Harbour trip surveys (<12m) | Yes | none | Derogation request for restitution at level 5 of the matrix. |
| | Prices by commercial species | Logbooks Activity calendar (exhaustive) Auction data - Sale notes Harbour trip surveys (<12m) | Yes | none | Derogation request for restitution at level 5 of the matrix. |

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