Ministero delle politiche alimentari agricole e forestali

DIPARTIMENTO DELLE POLITICHE EUROPEE E INTERNAZIONALI
DIREZIONE GENERALE DELLA PESCA MARITTIMA
E DELL'ACQUACOLTURA

Italian Annual Report on the activities performed in 2013 under the National Data Collection Programs under Council Regulation (EC) N° 199/2008 and Commission Regulation (EC) N° 665/2008

National Program 2011-2013
Reference year 2013

Version May 2014

I General framework

In accordance with the Community Regulations concerning the collection of fishery data, the present annual report illustrates the activities performed in pursuance of national program 2013[1] by providing a detailed description of the progress attained with a view to the accomplishment of the objectives established upon definition of the minimum program and of the extended one.

There have been no major changes in approach compared to the year before. In implementing the 2013 NP, consistency with data and time series collected under the previous years has been ensured. A particular attention has been given to the regional approach and compliance with RCMMed&BS recommendations has been ensured.

In compiling the present report, we have applied the "Guidelines for the amendment of National Programmes 2011-13 for the year 2013" (EC Commission Ref. Ares(2012)847827 - 11/07/2012), in particular regarding the Reference Years, for which the guidelines state that: "MS can choose whether or not to update the reference years in the text and tables of the amended NP. If a Member State updates the reference years, they do not need to resubmit their amended National Programme to the Commission, but should report on this in their Annual Report".

The following table provides the list of derogations.

Short title of derogation	NP proposal section	Type of data – Variables	Region	Derogation approved or rejected	Year of approval or rejection	Reason/justification for derogation
Metièr: Hand and pole line for cephalopods (LHP_LHM_CEP_0_0_0) in the GSA 19	III.C	Metier related variables	Mediterranean Sea	A	2009	Pilot study in 2011 to assess the low and sporadic impact of the fishery
Discards: Trammel net for demersal species (GTR_DES_>=16_0_0)	III.C	Discards	Mediterranean Sea	A	2009	Pilot studies in 2005 and 2011 Pilot study in 2011 to assess the low and sporadic impact of discards
Discards: Set gillnet for demersal fish (GNS_DEF_>=16_0_0)	III.C	Discards	Mediterranean Sea	A	2009	Pilot studies in 2005 and 2011 Pilot study in 2011 to assess the low and sporadic impact of discards
Discards: Purse seine for small pelagic fish (PS_SPF_>=14_0_0)	III.C	Discards	Mediterranean Sea	A	2009	Pilot studies in 2005 and 2011 Pilot study in 2011 to assess the low and sporadic impact of discards
Discards: Beach and boat seine for demersal species (SB_SV_DES_0_0_0)	III.C	Discards	Mediterranean Sea	A	2009	Pilot studies in 2005 and 2011 Pilot study in 2011

[1] Italian National Programme 2011-2013, English version of December 2010

						to assess the low and sporadic impact of discards
Discards: Set longline for demersal fish (LLS_DEF_0_0_0)	III.C	Discards	Mediterranean Sea	A	2009	Pilot studies in 2005 and 2011 Pilot study in 2011 to assess the low and sporadic impact of discards
Discards: Drifnets for small pelagic fish (GND_SPF_0_0_0)	III.C	Discards	Mediterranean Sea	A	2009	Pilot studies in 2005 and 2011 Pilot study in 2011 to assess the low and sporadic impact of discards
Stock: Mugilidae	III.E	Stock related variables	Mediterranean Sea	A	2009	< 200 tons, it is a complex of species and it is mostly caught in lagoons
Coryphaena equiselis	III.E	Stock related variables	Mediterranean Sea	A	2009	< 200 tons
Stock: *Sparus aurata*	III.E	Stock related variables	Mediterranean Sea	A	2009	< 200 tons over the last 5 years period The production is very variable from one year to another. It is mostly caught in lagoons. Only a small fraction is by catch of demersal trawlers and small scale fishery
Stock: *Dicentrarchus labrax*	III.E	Stock related variables	Mediterranean Sea	A	2009	< 200 tons
Stock: Collection of “Stock variables” related to all shark species	III.E	Stock related variables	Mediterranean Sea	A	2009	As agreed at Regional Level shark species have been collected concurrently only for length. No stock-based sampling has been added if metier based sampling fails to provide the appropriate precision for length distributions (see paragraph III_E_2)

Number of fishing operations for purse seiners	III.F (Effort)	EFFORT	Mediterranean Sea	A	2009	This information is not required in the logbooks and it is also very difficult to be obtained through questionnaires. Fisherman does not record this information because it does not affect in any way nor the production or the operating costs.

Insert ‘a’ for approved or ‘r’ for rejected

II National data collection organisation

II A National correspondent and participating institutes

The Italian national correspondent pursuant to Article 6(3) of the implementing regulation for the year 2013 has been:

Plinio Conte

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Ministero Politiche Agricole e Forestali

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According to article 9 of the Commission Regulation 1078/2008, laying down detailed rules for the implementation of Council Regulation (EC) No 861/2006, the Italian administration has been assisted by partners for the implementation of the national programme.

A call for tender has been lunched on the August 2010 to select institutes with the necessary experience and qualification to assist the Ministry of Agriculture and Forestry Policies in the implementation of the National Program 2011-2013[2].

The institutes and the related activities implemented in 2013 are reported in the following table:

[2] Selezione pubblica per la scelta di organismi aventi i requisiti idonei per assistere il Ministero delle politiche agricole alimentari e forestali nell’esecuzione del Programma Nazionale 2011 – 2013, avviso pubblicato sulla Gazzetta Ufficiale della Repubblica Italiana n. 196 del 21 agosto 2010.

Institute	Activity
CIBM Viale Nazario Sauro, 4, 57128 – LIVORNO deranieri@cibm.it	MEDIT GSA 9 Biological sampling GSA 9 Ecosystem indicators GSA 9 Economic data processing industry
COISPA Via dei Trulli, 18/20, 70045 –Torre a Mare – BARI lembo@coispa.it	MEDIT GSA 10 and GSA 18 Biological sampling GSA 10 and GSA 19 Biological sampling demersal species, GSA 18 Ecosystem indicators, GSA 10 and GSA 18
Università di Cagliari Dip.to di Biologia Animale ed Ecologia (GSA 11) Viale Poetto, 1, 09126 – CAGLIARI cau@unica.it	MEDIT GSA 11 Biological sampling GSA 11 Ecosystem indicators GSA 11
CNR IAMC Via Vaccara, 61, 91026 – Mazara del Vallo (TP) fabio.fiorentino@iamc.cnr.it	MEDIT GSA 16 Biological sampling, GSA 16 MEDIAS GSA 16, GSA 10 and GSA 9 Ecosystem indicators, GSA 16 Economic data fishing fleet
Laboratorio Fano Università di Bologna, Viale Adriatico, 1/N, 61032 – FANO (PS) corrado.piccinetti@unibo.it	MEDIT GSA 17
Università di Bari Università di Bologna, Viale Adriatico, 1/N, 61032 – FANO (PS) corrado.piccinetti@unibo.it	MEDIT GSA 19 Ecosystem indicators, GSA 19
CNR ISMAR Largo Fiera della Pesca, 60125 – ANCONA a.santojanni@ismar.cnr.it	Biological sampling, GSA 17 Biological sampling, small pelagics, GSA 18 MEDIAS GSA 17 and GSA 18 Ecosystem indicators GSA 17
Unimar Via Montebello 8, 00185 Roma unimar@unimar.it	Biological sampling large pelagics Recreational fishery, blue fine tune (BFT) Economic data aquaculture sector Economic data fishing fleet (part) Transversal data
Università Roma Tor Vergata Dipartimento di Biologia Lesa	Eel data collection (biological sampling and recreational fishery)

dell’Università degli Studi di Roma Via Della Ricerca Scientifica 133, 00100 Roma cataudell@uniroma2.it	Ecosystem indicators 5, 6 e 7 (VMS)

One national meeting for co-ordination have been organised in 2013 (Rome, 18 December 2013). Research institutes taking part of the implementation of the national program attended the meeting. The coordination meeting discussed the following issues:

- Implementation of 2013 NP, problems and activities carried out
- Compilation of data sets for meeting data calls requests and revision of time table for sending the data to the administration
- State of art of the revision of the DCF: new data collection framework for the period 2014-2020
- Mediterranean Regional Database, roadmap
- Participation to international DCF meetings
- Marine Strategy Framework Directive (MSFD): interactions with the DCF
- Financial issues

During the Meeting each institute, involved in the Italian data collection, has presented, and thereafter have been discussed, the activities carried out during the 2013 (i.e. surveys, collection of economic, biological and transversal data, recreational fisheries etc. etc.), the results achieved and the main problems encountered during the data collection. It has been discussed the situation for 2014, both in terms of administrative issues and technical ones (e.g. sampling activities, methodology, stratification etc etc).

It has been discussed the situation of the Med&BS Regional database with the role of the surveys (Medits and Medias) database, and future developments.

Finally, it has been discussed the possible utilization of the DCF data for the development of the Marine Strategy Framework Directive (MSFD), particularly for what concern the Descriptor 3, “Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.”An ad hoc scientific Committee manages the National program for the collection of fisheries data. This Committee is composed by the national correspondent and other expert members in the fields of biology, economy and statistics. The scientific Committee is entrusted with the task of co-ordinating the data collection program, monitoring the entire process, proposing adjustments aimed at improving the methodologies of data collection and approval of pilot studies to be conducted within the present national program.

The website “raccolta dati” (http://raccoltadati.irepa.org/) is the central point of the system. It presents the data collection framework and activities carried out within this framework to external users (article 8, Commission Regulation 665/2008). The web site is also a web platform for exchange/management of data for the actors involved in the data collection. It is linked with a database storing the aggregated information transmitted by the main institutes responsible for DCF.

II B Regional and International coordination

II B 1 Attendance of International meetings

Standard table II.B.1 indicates which meetings have been attended by Italy.

II B 2 Follow-up of regional and international recommendations

The list of recommendations made by the RCM and LM and actioned by the MS is reported in the following table:

RCM Recommendations 2012	
RCMMed&BS and RCM Long Distance Fishery 2012 Recommendations	**Actions**
RCMMed&BS, recalling its 2011 recommendation and also the STECF EWG 11-20 recommendation on a harmonized time period required for data to be available for transmission to end-users, recommends that the time period of 6 months following the end of the collection of transversal and biological data is respected by the data calls and the end users. In case this time period of 6 months continues not being respected by the data calls, the Group stresses the importance that the National Correspondents follow a common approach requesting the respect of this time period and NOT submit the data.	Italy agrees with this approach
The Group agreed that the Med&BS RDB will include biological and transversal data. It was decided that economic and survey data will be excluded for the time being from the RDB, following the decision by PGECON to develop one European Database for including economic and transversal data from all supra-regions. The Group agreed that the Mediterranean & Black Sea regional database could be hosted by GFCM and that the Steering Committee for the development of the RDB will include 1 person per MS, 2 economists for the transversal data, the Chairs of Medias and Medits and a GFCM representative. It was further agreed that the RDB steering group will be represented at the planned GFCM Workshop for the finalization of GFCM Task 1 and Task 2.	Italy agrees with this approach
The RCM Med&BS recalls its 2008 recommendation and recommends MS to investigate the accuracy of the geographical origin of landings and effort data (using the VMS data where possible). This information should be reviewed during the next RCM Med & BS.	Italy agrees with this approach
Stock variables: Methodology on biological sampling In the absence of a maturity scale for CECAF stocks, the RCM-LDF recommends for the time being to use the maturity scale established in the ICES WKSPMAT 2008 Workshop.	Italy agrees with this approach

III Module of the evaluation of the fishing sector

III A General description of the fishing sector

No major changes affected the Italian fishing sector in 2013.

III B Economic variables

Supra region: Mediterranean Sea

III B 1 Achievements: results and deviation from NP proposal (Mediterranean Sea and Black Sea)

The purpose of the present module is to attain a statistically significant estimate of the economic parameters in order to analyse the economic situation of the fishery sector in Italy.

The reference period is year 2012. Pursuant to what was established by the agreement between the responsible institute and the Directorate-General of Fisheries and Aquaculture of the Ministry of Agricultural and Forestry Policies, the results pertaining to the period January –December 2012 have been delivered in September 2013. Results of 2013 will be delivered no later than September 2014.

The estimate of the economic parameters was conducted through a specific sample survey. Conversely, the value of fixed assets was calculated by processing records derived from the Vessel Register.

The target population is the Vessel Register (including vessels less than 12 m.).

The number of sample units per stratum and the coverage rate is reported in table III.B.1.

The sample survey was conducted on a sample of 382 boats and 163 strata. The reduced amount of data available compared to previous years has resulted in the integration of cost data for the strata missed through an analysis of the functional relationships between the major items of aggregate cost and the main structural and transversal variables in the 2008-2011 period . The advantage of this estimation method is that it is possible to estimate temporal variations in costs based on the temporal variations occurring in other known variables , mainly related to the physical characteristics of the vessels , the size of the fleet in terms of numbers and fishing effort.

Data were collected by using a computerised questionnaire specifically designed for the survey (see National Programme).

Standard tables III.B.1, III.B.2 and III.B.3 have been updated with the information collected during the sampling year.

Italy is collecting economic and transversal data regarding the fishing fleet for all fishing vessels in the vessel register during the reference year.

Clustering of fleet segments

In this section clustering of fleet segments is described and information is given on the segments that have been clustered, as required by the DCF and following STECF recommendations.

Standard Table III.B.2 reports the segments that have been clustered. Clusters are named after the biggest segment in terms of number of vessels.

Segments have been distinguished in: important segments with distinct characteristics; segments similar to other segments; non-important segments with distinct characteristics. Importance of fleet segments has been assessed in terms of landings (value and volume). Similarity is explained in the following text using expert knowledge on fishing patterns and on available data on capacity structure.

Important segments with distinct characteristics have not been clustered. No confidentiality reasons for reporting emerged.

No clustering of “non-important segments with distinct characteristics” has been necessary.

Only “segments similar to other segments” have been clustered for sampling purposes and not for confidentiality reasons. The criteria used to select segments to be merged as well as the approach to determine similarity are explained and described below.

The clustering of dredgers is justified by the fact that dredgers are based almost exclusively in central-north Adriatic coast. Vessels are very specialised targeting only clams and smooth-callista (*Venus gallina* and *Callista chione*) and they are homogenous in terms of size, gears and fishing practises. Vessels have an average LOA of 13.4 meters and 81% of them belong to the class 12-18 meters. Therefore, the split into the class <12 m and > 12 meters is not statistical reliable for this segment. Moreover, it is demonstrated that revenues are not correlated with the LOA of the vessels and this fact proves the high level of homogeneity of the vessels.

Regarding the segment “Vessels using hooks 12 -18 m”, the clustered segment “Vessels using hooks 6 - 12 m” is composed by only 8 vessels and the clustering was necessary in order to design the sampling plan.

The third case is that of Purse seiners 12-18 m. Also in this case vessels are concentrated near the average value. The clustered segment (purse seiners 12-18 m*) is composed by 109 vessels with an average LOA of 13.5 m. The clustered segment is highly homogenous from a statistical point of view.

The last case is that of vessels using polyvalent "passive" gears only 12 - 18 m *. The clustering of the 17 vessels >18 m into the lower LOA class is necessary in order to design the sampling plan. In fact these vessels are scattered along the Italian coast (GSA 9, GSA 10, GSA 11, GSA 17, and GSA 19). The average length of these 20 vessels is 19.6 meters, therefore very close to the upper limit of the 12-18 m class.

Capital value and capital cost

The value of fixed assets and the capital costs are estimated processing data of the Vessel Register and according to the methodology suggested by the study on “evaluation of the capital value, investments and capital costs in the fisheries sector” (No FISH/2005/03).

According to the capital study, the estimation of the capital value (GCS) consisted of three steps:

1. Specification of the composition of the active fleet by age

2. Estimation of price per unit of capacity (e.g. per GT)

3. Calculation of the value of each vintage (year of construction) of the fleet and either converting values of all vintages to current prices or to historic prices using price indices.

The specification of the composition of the active fleet by age has been done by processing the fleet register (which reports the year of construction for each vessel).

More details are given in the table below which refers to specific information required by the Commission guidelines on AR presentation.

Questions	*Answers*
1. Which are the reference values taken into account for the estimation of the Price per Capacity Unit, PCU (e.g. book value, second hand market, etc…)?	The current price (historical value) per unit of capital has been estimated using the RINA construction index. In order to apply the PIM (perpetual inventory method) and in absence of other possibilities, as initial benchmark of the gross capital stock, the RINA (Italian Naval Register) construction index has been used.
2. Which estimation methods and/or models have been used to estimate the PCU?	The construction index taken from the RINA survey was used as initial benchmark of the estimated price

	per capacity of the gross capital stock of 1992
3. If a net value has been used, what is the method used to calculate the gross value? (e.g. formula, figures from the balance sheets, etc..)?	digressive (replacement) formula := historical value/ (1-depreciation rate of each asset)^age of the asset
4. What type of index price series have been used (e.g. heavy machinery index, etc..)?	Italian heavy machinery index
5. What depreciation rates? From where do they come (e.g. national legislation, general scheme excel spreadsheet, etc…)?	From assumptions made in the study No. FISH/2005/03: Hull (7%), Engine (25%), Electronics (50%), other equipment (35%)
6. Which age schedule (service life time) has been used?	Hull (25), Engine (10), Electronics (5), other equipment (7)
7. What is the share of each asset on the total value of the capital?	Hull (46%), Engine (25%), Electronics (2%), other equipment (27%)

Inactive vessels have been included in the evaluation of capital value and capital costs.

FTE and engaged crew

Employment (total and FTE) is estimated according to the methodology suggested by the study on "calculation of labour including FTE (full-time equivalent) in fisheries" (No FISH/2005/14).

In order to trace the reality of labour input in fishing as closely as possible, the study proposes to follow a 'métier' approach, where 'métier' is defined as a "specific activity of a segment or the use of a specific fishing gear within a segment" (as defined by the DCF regulation).

The output of the methodology adopted is the number of engaged crew, i.e. the number of persons employed and the number of FTE in each métier.

The estimation of the employment in terms of FTE has been made by assuming a FTE threshold (representing the standard working time for the fishing sector) expressed in terms of yearly hours per man.

The FTE threshold for the estimation of Italian employment data has been determined on the average days at sea per vessel over the last 6 years. The FTE threshold used is the average of the FTE by fishing segments. It is equal to 1,600 hours per year. It has been also assumed that:

- each crewman working annually 1,600 hours or more is counted as one FTE
- each crewman working less than 1,600 hours per year is counted as a percentage of an FTE according to the number of hours worked in relation to the threshold of 1,600 hours
- working time is the time spent on fishing and related activities on board or on shore. This means that working time is only a part of the duration of a fishing trip.

III B 2 Data quality: results and deviation from NP proposal (Mediterranean Sea and Black Sea)

Table III.B.3 gives details on the sampling methods used (column 'Sampling strategy') and on the achieved values of the accuracy indicators.

Information on data quality is given in terms of achieved precision levels (cv) and in terms of coverage rate. The estimation of the variance for the calculation of the CV in the case of statistical sample is explained in the NP (methodology for the estimation of economic variables). Specific software for calculation of cv has been developed in previous years. The instrument is an application developed in Visual Basic for Excel associated with the R environment for statistical computing but no specific knowledge is required for using it. The application is provided with a user manual.

The data sources for estimation of variables in Appendix VI are homogenous, therefore data are consistent. This guarantees that economic indicators on profitability (gross cash flow, gross value added, net profit) are not biased by the use of different data sources.

In case of derived indicators, as FTE, the information about calculation procedures is reported in the previous paragraph. Accuracy indicators of based data collected are presented in Table III.B.3.

III B 3 Follow-up of Regional and international recommendations (Mediterranean Sea and Black Sea)

The list of recommendations made by the RCM and LM and actioned by the MS is reported in the following table:

RCM Recommendations, 2012	Actions
No specific recommendations on economic issues were addressed by RCM 2012	

III B 4 Actions to avoid shortfalls (Mediterranean Sea and Black Sea)

The project activities were specified in agreement with the reports foreseen by the national program. All parameters have been evaluated as requested and precision levels have been calculated.

The activities of data processing related to 2012 were carried out in accordance with the National Programme. However, the low achieved sample number compared to the sample size planned , involved the use of methods of integration of the data for the strata in which the sample data were not available .

As for the collection of data pertaining 2013, the phase of receiving the data has been completed at the date of preparation of this report.

SUPRA-REGION: Other Regions

III B 1 Achievements: results and deviation from NP proposal (Other Regions)

At 1st of January 2012, 14 vessels are included in the vessel register as vessels operating outside the Mediterranean Sea. Only 5 vessels actually operated in 2012.

The economic variables listed in Appendix VI have been collected through a non-probability survey. 3 fishing vessels have been contacted and these have been selected on the basis of the availability to cooperate. Primary data collected on these vessels refers mainly to activity (day at sea), fishing area and target species landed; additional information gained from official balance sheets have been elaborated in order to estimate the following parameters: income, personnel costs, energy costs, repair and maintenance costs, other operational costs, investments, financial position.

Capital costs and capital value have been estimated according to the methodology suggested by the study on “evaluation of the capital value, investments and capital costs in the fisheries sector” (No FISH/2005/03).

Employment (in terms of engaged crew, FTE National, FTE harmonised) have been estimated according to the methodology suggested by the study on “calculation of labour including FTE (full-time equivalent) in fisheries” (No FISH/2005/14).

III B 2 Data quality: results and deviation from NP proposal (Other Regions)

Achieved sample rate and response rate are reported in table III.B.3.

III B 3 Follow-up of Regional and international recommendations (Other Regions)

No specific recommendations by RCM LDF 2012.

III B 4 Actions to avoid shortfalls (Other regions)

No shortfalls occurred.

III C Metier-related variables

Region: Mediterranean Sea

III C 1 Achievements: results and deviation from NP proposal (Mediterranean Sea and Black Sea)

Sampling has been performed in order to evaluate the quarterly length distribution of species in the catches, and the quarterly volume of discards. Data have been collected by métier referred to level 6 of the matrix defined in Appendix IV of the DCF and agreed at Regional Level (RCMMed&BS 2009 and 2010).

The GFCM/FAO geographical disaggregation (Geographical Sub Areas, GSA) has been applied for the sampling procedure. For most of the Mediterranean species (except for large pelagic and eel) a species in a GSA represent a single stock. In tables III.C, the fishing ground is represented by the GSA. For this reason, with the exception of the métier targeting large pelagic and eel, all the collection and analysis of data (i.e. métier sampling for demersal and small pelagic species) has been performed and reported in the appropriate Tables, at GSA level.
For sampling purposes, only the major métiers have been considered. In order to identify the métiers to be sampled, the ranking system at GSA level (for a total of 7 GSA around Italian waters), as described in the DCF EU Dec. 93/2010, has been applied. For each GSA, metiers which contribute for less than 10% in terms of total effort, landing or values have been excluded from the sampling plan (Table III.C.1).
The official version of the NP has been submitted in November 2010, the ranking system, for the sampling program 2013, has been updated with 2011-2012 landing, value and effort data.
As mentioned in the Guidelines for the amendment of National Programmes 2011-13: “*Regarding Reference Years, MS can choose whether or not to update the reference years in the text and tables of the amended NP. If a Member State updates the reference years, they do not need to resubmit their amended National Programme to the Commission, but should report on this in their Annual Report*”. Following this issue, the NP has not been resubmitted, and the Tables of the present AR 2013 report the updates values (2011-2012).

The total number of fishing days to be sampled has been defined proportionally to the effort (number of days at sea for each métier) and the landings. According to the regulation, the minimum number of fishing days to be sampled has been at least 1 fishing day (one day= one trip) per month during the fishing season. Sampling strategies in each GSA have been a mix of concurrency-at-sea (sampling directly on board by observers and scientists) and concurrency-at-landing site (sampling directly on landing site, at market, by observers and scientists). The Italian fishing fleet is characterized by vessels of small or medium size that perform their activities mostly within the 12 miles. Fishing trips last about 12 hours on average. This is true for most of the fleet in all geographical areas. Bigger trawlers, mostly in Sicily Channel (GSA 16), and long liners > 24 meters mostly in Ionian Sea (GSA 19) and Sicily Channel (GSA 16), perform fishing trips of more than one day. All these vessels represent only 2% of the total fleet. In these cases, the biological sample has considered this specificity and the fishing trip have been sampled accordingly. The number of fishing-days/trips that has been sampled by métier and GSA is reported in Table III.C.3.

Metier targeting demersal and small pelagic species
Biological sampling, for demersal and small pelagic species, has covered all the main fishing activities for a total period of 1216 sampling days. The whole survey covered a one-year period; the time has been subdivided in quarters, in order to detect likely seasonal differences in the demographic structure and composition of the landings. The number of fishing-days (on board and at landing/market place) that have been sampled by metier in each GSA is reported in table III.C.3.

The length composition by species has been sampled in order to derive the length frequency distribution (LFD) by species and fishing day. Length measures, approximate to the half centimetre lower, have been collected for finfish, cephalopods and crustaceans. Fish: total length (TL) from the head to the end of the caudal fin for all demersal and small pelagic species. Cephalopoda: mantle length (LM), expressed in millimetres, from the virtual median line that goes through the eyes reaching the end of the mantle. Crustaceans: carapax length (LC), in millimetres, from the back margin of the orbit to the median margin of the carapax.

Table III.C.4 summarized the sampling effort that has been adopted for the different fishing activities. Overall, the total number of trips to be sampled *"% achieved number of trips*" showed consistencies with the sampling program. Only in few cases there were slightly deviations from the planned activity and both the *"% achieved number of trips at sea*" and *"% achieved number of trips on shore*". Lowest métier coverage has been achieved in the GSA 16 and GSA 18 for purse seine and pelagic pair trawls targeting small pelagic species (PS_SPF_>=14_0_0 and PTM_SPF_>=20_0_0). The sampling activities of the demersal trawlers targeting red shrimps (OTB_DWS_>40_0_0) in the GSA 19, also couldn't fit completely with the planned ones. These small differences were mainly related to a slight delay in the 2013 sampling activity, due to bureaucratic and administrative problems.

In the table III.C.5, are reported the species of G1 and G2 present in the Appendix VII of the EU Decision 93/2010 (including all the shark species) plus the species of G3 agreed at Regional Level (see RCMMed&BS 2010 report, Slovenia). In the table III.C.5, following the described sampling strategy, all the achievements have been reported at GSA level (see also Notes at the end of this section). Concerning the oversampling activities, Italy has carried out the activities without any consequences on the planned costs (i.e. no additional cost have been requested in the NP 2011-13).

Concerning discards, as agreed at Regional level (see RCMMed&BS 2009 "Discards template"), the survey has covered all the following trawlers activity:
- bottom otter trawl for demersal species OTB_DES_>=40_0_0
- bottom otter trawl for deep water species OTB_DWS_>40_0_0
- bottom otter trawl for mixed demersal and deep water species OTB_MDD_>40_0_0
- pelagic pair trawl for small pelagic species PTM_SPF_>=20_0_0
- beam trawl for demersal species TBB_DES_0_0_0

For the above selected métiers, discards have been monitored for the Group 1 and Group 2 species, as defined in the Commission Decision 93/2010 Chapter III. Data on the quantities of the target discarded species has been collected directly on board. The length composition by discarded fraction has been also sampled in order to derive LFDs by species and fishing day.

Moreover, following the output of the RCMMed&BS 2009 ("Discards template"), discards for:

- Boat dredge for molluscs DRB_MOL_0_0_0
- Pots and traps for demersal species FPO_DES_0_0_0

- Fyke nets for demersal species FYK_DES_0_0_0
- Hand and pole line for cephalopods LHP_LHM_CEP_0_0_0

it has been considered negligible (see report RCMMed&BS 2009 section 3.3.4 "*Sampling of discards*"). These metiers have been considered not mandatory for discards sampling and have not been monitored.

For the other métiers (even not selected by the ranking system), as suggested by STECF EWG 11-19, in 2011, Italy has conducted another pilot study (after the one conducted in 2005 "*Discards biological sampling* – SIBM, 171 pp.") to investigate the discards behavior. These métier were:

Set gillnets for demersal fish	GNS_DEF_>=16_0_0
Driftnets for small pelagic fish	GND_SPF_0_0_0
Set trammel nets for demersal species	GTR_DES_>=16_0_0
Purse seine for small pelagic fish	PS_SPF_>=14_0_0
Beach and boat seine for demersal species	SB_SV_DES_0_0_0
Set longlines for demersal fish	LLS_DEF_0_0_0
Set gillnets for small and large pelagic species	GNS_SLP_>=16_0_0

The object of the study was to estimate the discards, in weight and number of the species G1 and G2 in the Appendix VII (Commission Decision 93/2010 and EU Reg. 949/2008). Data on the quantities of the discarded species have been collected directly on board.

Outputs of the pilot study, confirming the results of the other studies conducted in 2005, has showed no discards behaviour for mostly of the metiers above mentioned.
Only the metier GNS_DEF_>16_0_0, in the GSA 9 and GSA 17, showed discard behaviour for some target species (i.e. *Merluccius merluccius*). So during 2013 sampling programme, only for this metier (GNS_DEF_>16_0_0), and in the two GSAs considered (GSA 9 and 17), has been continued the analysis of the discards.

Metier targeting large pelagic species
Regarding metier targeting the large pelagics species, the metier covered selected for the sampling program have been: Drifting longlines [LLD_LPF_0_0_0] and Miscellanea [MIS] (harpoon, FADs). No métier coverage has been achieved for purse seine targeting *Thunnus thynnus* (PS_LPF_0_0_0). On the basis of the recent ICCAT Recommendations (2010/04 and 2012/03) and the EU Reg. 500/2012, the observer on board of the PS_LPF, can be only appointed by ICCAT. Following this issue, was impossible to cover the planned days at sea (there is no landing or market observations for this métier due to the fact that tuna are transferred alive in the cages). Observations have been intensified for the other large pelagic métiers (i.e. longline LLD_LPF_0_0_0).

Data have been collected following the ICCAT recommendation and the agreements reached at Regional level (RCMMed&BS 2010 and 2011 - Table III.C.2). Methodologies and sampling strategies have been applied at national scale.

In Table III.C.6, following the agreement reached at Regional level, have been reported the results achieved to métier level 7:

LLD_LPF_0_0_0 SWO

LLD_LPF_0_0_0 BFT

LLD_LPF_0_0_0 ALB

The survey for estimating length distribution covered a one-year period. The planned specimens (agreed at Regional level during the PGMed 2013) to be used for estimating the LFDs for large pelagic, were collected during a total number of 221 sampling fishing days (see table III.C.3 for disaggregation of sampling intensities among different métier). Discards have been monitored during the sampling days on board, but for the mentioned métier they can be considered negligible (Tables III.C.5 and III.C.6). The length composition by species has been sampled in order to derive the length frequency distribution (LFD) by species: length to the fork (FL) for all the species have been collected, with the exception of swordfish for which the length of the lower jaw (LJFL) was also considered.

Metier targeting shark species
Regarding sharks, as reported in the NP 2011-2013, collection of “sharks” biological variables (i.e. length frequency distribution) has been associated to the Metier-related variables following the concurrent sampling approach. Should be underlined that most of the proposed species in the Appendix VII (actually the list presents 47 species of sharks and rays) of the Commission Decision 93/2010, are rare and with a sporadic and not confirmed presence in the Mediterranean area. For this issue, some cells were labelled as NP (Not Planned) since the minimum number of sharks’ specimens to be sampled cannot be fixed ‘*a priori*’. Furthermore, as agreed at Regional Level (RCMMed&BS 2010) no precision target is associated with the collection of sharks variables. During the three annual period 2011-2013 all shark species have been collected concurrently only for length. Moreover, no stock-based sampling has been added if metier-based sampling failed to provide the appropriate precision for length distributions. In tables III.C.5 and III.C.6 the shark species that have been sampled during the 2013 are included.

Overall, for all the group of metier and species above mentioned (demersal, small and large pelagic species, and sharks) tables III.C.3, III.C.4, III.C.5 and III.C.6 report all the information (i.e. achieved number of trips at sea/on shore per metier and GSA, number of fish measured, CV achieved etc etc) collected during the sampling year.

Notes:
Table III.C.3 - Italy, for the preparation of the NP 2011-2013, has strictly followed the DCF Guidelines (“*Guidelines for the submission of National Programme Proposals on the National Data Collection Programmes under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2008/949/EC, Version 2009*”). In these Guidelines, under fields Description for table III.C.3 it is clearly reported that *“MS states the sampling strategy: concurrent sampling at markets”, “concurrent sampling at sea” or “other”. If “other” is used (e.g. “other [Market stock specific sampling]”), the strategy should be described in section III.C.1 (c) and scientific evidence should be provided to ensure that the sampling strategy does not conflict with the objectives of concurrent sampling. If more than one sampling strategy is applied to a metier then* <u>*separate rows*</u> *should be used for each strategy that is used*.”
So, following these rules, Italy reported separately, both in the rows and in the column of the table III.C. 3, the kind of sampling strategy followed: at sea or at market.
The expected number of trips in Table III.C.3, is not doubles, but it is the sum of the total n of trips at sea + the total number of trips at market/landing. Obviously it could be appears as a repetition but it is a problem of the structure of the table that for the future should be redrafted accordingly.
Concerning the few differences related to the number of trips or the presence/absence of some metiers between NP and AR, it is due to the fact that the NP ranking version has been updated with 2011-2012 set of data. Those changes have been considered as “minor changes” and the NP has not been re-submitted to the Commission. These “minor changes” have been reported only in the AR.

Table III.C – Concerning the few differences related to the number of trips or the presence/absence of some metiér, comparing the NP (submission November 2010) and the AR 2013, this issue is related to the fact that the 2013 sampling program has been updated with the most recent set of data (i.e. ranking system with years 2011-2012). Those changes have been considered as “minor changes” and the NP has not been resubmitted to the Commission. These minor changes have been reported only in the AR.

Table III.C.5 - As requested by the NP Guidelines Version 2009, under the column “*Planned minimum no. of fish to be measured at national level*”, the planned specimens to be collected are reported at National level. However, in the present AR the achieved number of specimens is reported at GSA level in order to be consistently with sampling strategy and due to the fact that all the analysis are carried out at geographical sub area level (as requested also by the EU Dec. 93/2010). Following this issue, the column “*Achieved no of fish measured at a national level*” reports the number of specimens collected in each GSA.

Table III.C.6 – Also in this table under the column “*Achieved no of fish measured at a national level by metier*” data are reported at GSA level.

III C 2 Data quality: results and deviation from NP proposal (Mediterranean Sea and Black Sea)

CV for length of demersal and small pelagic species has been calculated annually for each métier, for all métier combined and per GSA. CV for single species (Table III.C.5) has been calculated on the basis of 2013 set of data. CV has been calculated annually for each species and GSA separately (as reported in the approved version of the NP 2011-2013)

The method used to calculate the CV has been developed by Vigneau and Mahevas (2004). This method allows estimating the precision for each length class and for the whole length frequency distribution (LFD) at métier level. The low values of CV estimated for some species and for some métier, could be associated to some major problems caused by using this method: the low representativeness of the sample; the requirement of a good coverage of all length classes, that for some species and for the entire range of the LFD in a particular métier is almost impossible to obtain. To avoid this problem in the future the sampling effort for some metiers will be intensified and the stock based sampling will be associated if métier based sampling fails to provide the appropriate precision for length distributions. Thereafter the estimates of precision obtained for each métier will be summed up for the métier targeting the same stock.

For few demersal and small pelagic species, in some GSA, it has been not possible to achieve a good CV, due to the seasonality of the metier activities and/or to the low catch rates of the mentioned species for that particular métier in the GSA. For other species (e.g. *Lophius piscatorius, Eutrigla gurnardus*) the sampling level and the CV has been low due to the difficulties of sampling these species (mainly Group 2 and 3) at the landing sites, due to the seasonality of the species, and due to the fact that most of these species are not considered target for the selected metier (e.g. *Spicara smaris, Aspitrigla cuculus*).

For some valuable species (i.e. some shrimps like *Aristaeomorpha foliacea, Aristeus antennatus, Nephrops norvegicus, Parapenaeus longirostris* etc.) the discard is negligible, and for this reason the CV couldn't be estimated. Generally, the landing, is composed by different fish categories starting from the most valuable ones (all shrimps are usually in the first category) to the low quality (third or fourth category). Shrimps even if small or damaged are sold as third or fourth category and for this reason discards is absent.

Regarding the large pelagic species Italy followed the RCMMED&BS recommendation. At Regional Level an agreement was reached for the sampling intensities needed to achieve precision levels on a Mediterranean-wide basis for the large pelagic species included in group 1 list (*Thunnus thynnus, Xiphias gladius*) and group 2 list (*Sarda sarda, Coryphaena hyppurus, Thunnus alalunga*). The CV for length of large pelagic species has been approached at Regional level during the PGMed 2013 (Report PGMed 2013, Belfast, Ireland). The precision, in terms of Coefficient of Variation (CV) of the Length Frequency Distributions (LFDs) was assessed using COST tools (packages in R), following RCMMed&BS 2011 recommendation. This method allows estimating the precision, in terms of coefficient of variation (CV) for each length class and for the whole LFD at stock level.

Concerning sharks, as agreed at Regional Level (RCMMed&BS 2009 recommendation), shark species have been collected concurrently only for length and not CV has been associated. For this reason during the RCMMed&BS has been decided that no minimum number or sampling strategy (and as a consequence no estimation of CV) should be associated to the collection of all the "sharks" species reported in the Appendix VII (EU Dec 93/2010). However, even if it was not planned in the NP 2011-2013, an attempt to estimate the CV related to the metier variables for some sharks' species has been performed.

All the data collected under this Module have been sent, in due time and following the quality control, to the different data calls (i.e. STECF-SGMED) and, on request, to the different end-users (e.g. GFCM, ICCAT etc.).

III C 3 Follow-up of Regional and international recommendations (Mediterranean Sea and Black Sea)

In 2013, for all the large pelagic fish, included both in group 1 and in group 2 list, the sampling plan (i.e. number of individuals to sample) has been performed at national level following the Regional agreement (RCMMed&BS reports 2011, 2012). The minimum number of large pelagic fish to be sampled, that has been set at Regional level with the relatively sampling intensity needed to achieve precision levels on a Mediterranean-wide basis, will be revised annually and monitored during the different Regional Coordination Meeting.

For some species has been impossible to collect the expected number of samples because the difficult to foreseen the catch of the species (Istiophoridae) or the very high number of samples established at Regional level (i.e. *Coryphaena hyppurus).* For Bluefin tuna the difficulty is that the observer on board of the purse seine can be only appointed by ICCAT and that no fish is landed. In 2013 the fisheries of *Thunnus alalunga* was very low.

RCMMed&BS and RCM Long Distance Fishery 2012 Recommendations	Actions
The RCM Med&BS recalls its 2008 recommendation and recommends MS to investigate the accuracy of the geographical origin of landings and effort data (using the VMS data where possible). This information should be reviewed during the next RCM Med & BS.	Italy supports this recommendation and will try to better investigate the origin of the landing and effort data
RCM Med&BS recommends that in the future NPs the planned minimum no. of fish to be measured for métier related variables will not be required. Since the métier related variables are required to be collected during concurrent sampling, the Group considers that only the proposed and actual number of trips for concurrent sampling should be requested.	Italy supports this recommendation
RCM Med&BS 2012 reiterates the 2011 recommendation by RCM Med&BS and RCM LDF on a joined workshop among ICCAT representatives, scientists involved in large pelagic sampling, as well as representatives from RCM LDF and RCM MED&BS for harmonising the biological sampling issues on large pelagic and specifying additional data or modifications that should be included in the future DCMAP, taking into account the ICCAT requirements for stock assessment.	Italy supports this recommendation
EWG 12-01/02 Recommendation:	**Actions**
STECF-EWG 12-01 recommends that predefined sampling procedures, such as concurrent sampling, should not be dictated, but the applied sampling methods should comply with guidelines of good practice (to be referred to in the DCF) and be fully justified and documented in the Annual Work Plans.	Italy supports this recommendation
Reconsider the geographical scope of the RCMs in the light of new tasks and scope under the new DCF.	Italy supports this recommendation

According to Commission Decision 93/2010, all MS performing the ranking system should use the average values of the 2 previous years. EWG 11-19 recommends that MS (even if they submitted or not a revised version of the National Program) use the most update set of values (i.e. landing values, tons, fishing days) in order to select the métiers to be sampled.	Italy has followed this recommendation and the years used for the implementation of the NP are 2009-2010. Whereas, in the official version of the NP, submitted in October 2010, the reference years were 2007 and 2008.

III C 4 Actions to avoid shortfalls (Mediterranean Sea and Black Sea)

The project activities were specified in agreement with the reports foreseen by the national program, following also the agreement reached at Regional level by the RCMMed&BS and the PGMed.

Concerning the large pelagic species, in order to collect the number of individuals provided by the program, Italy has increased the observation for some metier. The number of days of sampling is higher than the planned ones for the longlines. However, considering the periods of interruption by law, it is still difficult to reach the number of measurements established for some species. Italy, during the next RCMMed&BS and PGMed, will try to harmonize and improve the sampling activty with the other Mediterranean countries involved in the fisheries of large pelagic, in order to optimize the sampling “coverage” at regional level.

Region: Other regions

III C 1 Achievements: results and deviation from NP proposal (Other Regions)

No data are reported because no biological sampling has been carried out in Other Regions. According to the data provided by Italy to the RCM LDF (Constanta, 2013), the Italian fleet operates in the outside community waters (CECAF Region), targeting shrimps and cephalopods (OTB_CEP_>=70_0_0 and OTB_CRU_>=40_0_0), consists of around 5 active vessels fishing around Mauritania waters (FAO Area 34.1).

Data available to the RCMLDF showed that the Italian activity in CECAF area represents 18% of landings and 9% of effort for the métier OTB_CEP_>=70_0_0 and 10% of landings and 5% of fishing effort for the métier OTB_CRU_>=40_0_0. Based on these information and providing that these proportions of landings and effort for the above métiers do not significantly change over the next years, RCM LDF suggested that there was not requirement for Italy to sample these fisheries, as they are sufficiently covered by the Spanish sampling program (RCMLDF Report 2013, Constanta, Romania).

No Italian vessel operates in the IOTC Region.

III C 2 Data quality: results and deviation from NP proposal (Other Regions)

In the NP proposal has been specified that biological sampling would have been carried out following a program coordinated in the CECAF area by RCM LDF. For the future Italy will continue to collaborate with the RCM LDF in order to monitor the situation o the fishing activity in the CECAF.

III C 3 Follow-up of Regional and international recommendations (Other Regions)

No specific recommendation from 2012 LDF RCM to be addressed.

III C 4 Actions to avoid shortfalls (Other Regions)

No shortfalls incurred.

III D Recreational fisheries

III D 1 Achievements: results and deviation from NP proposal

Recreational fisheries of bluefin tuna

The main basis of the data collection program has been the overall census of recreational and sport fisheries that will cover all the Italian coast line and islands that means more than 800 ports and landing sites. Starting from this census, information on fleet and type of activities per administrative region has been obtained. Total catches have been reported in official sheets that recreational fishermen are obliged to compile and send to port authorities. There was no deviation from the provisions of the national program. Since with the census survey is not provided the calculation of CV.

Moreover, has been analysed the register of boats authorized to fish for sport and recreation bluefin catch reports and data, both provided by Regulation (EC) No. 302/2009.

Recreational fisheries of eels

Recreational fishery of eel in Italy is carried out exclusively in inland waters (rivers, lagoons and lakes) and without the use of any kind of boats.

In 2009, during the first phase of the project, the data on spatial distribution of eel on the national territory had been checked in order to draw a map of the whole distribution of the fishing activities. In addition, a census was carried out with the aim of estimate the number of recreational fisheries operating in national territory, which was estimated in 2009 at 549,118 units.

During 2010, a program of interviews has been implemented, involving the National Sport-fishing Associations. In order to identify a sample considered representative of recreational fishermen, the Italian Federation of Sport Fishing and Diving (FIPSAS) was used as reference list. This Federation includes 227,000 members which are distributed over almost all the Italian provinces. From 2011, and hence also for the years 2012 and 2013, it was possible to enlarge the sample of recreational fishermen, by adding to FIPSAS another Federation, ARCI FISA, thus increasing the representativeness of the interviews. Ad-hoc questionnaires (prepared and tested in 2009) have been used in order to acquire the information on catches of eels. Questionnaires also included information on specific features of eel fishery like the gears used and the seasonality. This methodology has been applied since 2011. During 2013, in the provinces surveyed, only a fraction showed the presence of eel catches, which indicates a rather not homogenous distribution of the activity.

In the remaining provinces, capture of eel by recreational fishermen resulted absent or sporadic. In many provinces it was stressed, by the interviewees, the gradual contraction of the presence of the species in recent years.

Information has been gathered concerning fishing effort, i.e. gear used and days/year, and about frequency and consistency of the catch.

Preliminary analysis of data showed that about 6-7 % of the fishermen, registered in the provincial offices of FIPSAS ARCI FISA, in 2013 have been fishing eel (with an average of 4 months per year) with a mean catch value between 1 kg and 5 kg per year (whit a maximum of 50 kg per year).

In the meanwhile, the GFCM is developing a data collection framework for recreational fisheries that will include procedures for providing recreational catch records for small demersal and coastal sharks and rays.

Recreational fisheries of sharks

Since 2011, Italy is implementing the project: SHARKLIFE - Urgent actions for the conservation of cartilaginous fish in Italy, LIFE10 NAT/IT/000271.

In line with the European Plan of Action for Cartilaginous Fishes, which was approved in 2009, this project aims to contribute to the conservation of cartilaginous fishes, particularly basking sharks and pelagic stingrays in Italian seas by reducing the mortality rate caused by commercial and leisure fishing.

The project "Shark Life" started in 2011 and will last 3 years. Among its objectives, the project is aimed at collecting all information and data on sharks in fishing competitions through the use of a specific questionnaire. In particular, the project has implemented a ‘tag and release’ policy for fishing tournaments.

The expected results is a 100% reduction of the catching of sharks and rays in the national fishing competitions through the implementation of a tag and release policy. FIPSAS (Federazione Italiana Pesca Sportiva e Attività Subacquee) has already issued a ban on shark catches during tournaments.

Moreover, recreational catch data for large pelagic sharks in the Mediterranean can be submitted to ICCAT and/or to MEDLEM (Mediterranean Large Elasmobranchs Monitoring), either online or using the data sheets provided. So far, no data on sharks recreational fisheries have been collected and have been stored in both databases.

In the meanwhile, the GFCM is developing a data collection framework for recreational fisheries that will include procedures for providing recreational catch records for small demersal and coastal sharks and rays.

III D 2 Data quality: results and deviation from NP proposal

Recreational fisheries of bluefin tuna

Concerning the Recreational fisheries of bluefin tuna, as required by the regulation, data related to annual estimates of the catches in volumes will lead to a precision of level 1. Data on capacity has been collected exhaustively. Continuity and consistency of the series collected is assured by the methodology applied that will be the same as in previous programs.

Data have been collected following the methodologies reported in the NP with no discrepancies with activities planned in the NP

Recreational fisheries of eels

As reported in the NP regarding the Eel Recreational Fishery eel the methodology foresees the implementation of interviews through forms specifically prepared. The sample has been statistically chosen according to the relative importance of the different regions. Sample data has been raised to the universe of the Italian fishermen practising eel fishing through statistical techniques. Interviews, according to what requested by Reg. 199/2008, gave information on the distribution and consistency of the activity, different gears used and on reasonable estimate of the amount of catches.

During 2013, the collection of data on recreational fishery of *Anguilla anguilla* has proceeded with remarkable efficiency.

For these reasons, there are no discrepancies with activities planned in the NP.

III D 3 Follow-up of Regional and international recommendations

No specific recommendation from 2012 RCM to be addressed.

III D 4 Actions to avoid shortfalls

The project activities were specified in agreement with the reports foreseen by the national program.

III E Stock-related variables

REGION: Mediterranean Sea and Black Sea

III E 1 Achievements: results and deviation from NP proposal (Mediterranean Sea and Black Sea)

The present project, conducted by Italy under the Module E of the NP 2011-2013, concerned the sampling of organisms exploited by commercial fisheries. Data collected allowed the evaluation of the composition of the Italian landings by size related to age, weight, sex and maturity. The 2013 biological sampling has been conducted by the scientific institutions designated by the relevant Italian Administration separately for each Geographical sub-area (GSA) and by major groups of species: small pelagic species and demersal species. Also for large pelagic species, following the agreement at Regional level, the results of the collection of stock related variables (sex, age, weight, maturity) is reported in the present AR (see sampling plan Table III.E.2).

The structure of the biological sampling program was very complex due to the number of species examined, the type of fishing techniques and the Geographical Sub Area (a total of 7 GSA) involved. The sampling scheme has been designed taking into account the spatial and temporal (quarterly) variability of the landings.

The GFCM/FAO geographical disaggregation (Geographical Sub Areas, GSA) has been applied for the sampling procedure. As defined in Commission Decision 2010/93/EU, the requested precision level shall be targeted at the stock level for both Group 1 and Group 2 species. In the Mediterranean Sea the stock level is mostly defined at GSA level (with the exclusion of the large pelagic species defined at Regional scale). Following this issue, in the table III.E.3 all the achievements CV have been reported at GSA level.

Biological parameters (sex, weight, maturity) have been collected both from survey and from commercial fisheries (i.e. landing, market place, on board sampling) following each stratum. In each stratum, the sampling fishing days has been the primary sampling units and the commercial fishing vessels the secondary sampling units. The survey has covered a one-year period, subdividing the whole time in quarters, in order to detect seasonal differences in the demographic structure and composition of the landings.

Stocks included in the sampling scheme are presented in Table III.E.I of the NP. Regarding the Reference Years, following the "*Guidelines for the amendment of National Programmes 2011-13 for the year 2013, July 2012*", Italy has updated the reference years, without resubmit the amended National Programme to the Commission, but reporting the modifications in the present Annual Report.
For 2013, the stock biological sampling has covered all the main Group 1 and Group 2 species (e.g. *Merluccius merluccius*, *Mullus barbatus*, *Mullus surmuletus*, *Solea vulgaris*, *Engraulis encrasicolus*, *Sardina pilchardus*, *Aristeus antennatus*, *Aristaeomorpha foliacea*, *Parapenaeus longirostris* and *Nephrops norvegicus*), large pelagic species and some shark species (Table III.E.2).

Demersal and small pelagic species

In table III.E.3 is reported the sampling intensity by demersal and small pelagic species for each GSA, and the number of samples achieved to calculate CV for the related stock related variables (sex ratio, length at age, weight and sexual maturity). Generally, the total number of specimens achieved at National level resulted higher than the planned ones. Many observations have been conducted on board of commercial vessels, so following the concurrent sampling approach was possible to measure and to collect data on different species and specimens without any additional cost. No financial implications there have been in the NP 2013.

For few species (e.g. *Lophius piscatorius*, *Eutrigla gurnardus*, *Chamelea gallina*, *Spicara smaris*) and some GSAs was not possible to reach a "consistent" number of specimens due to the seasonal availability of the species, to the seasonal activity of the selected metier, to the low catches of the species, and in some cases to other "bureaucratic" problems linked to the possibility to have observers on board.

Shark species

Concerning the sharks sampling, most of the proposed species in the Appendix VII (actually the list presents 47 species of sharks and rays) of the Commission Decision 93/2010, are rare and with a sporadic and not confirmed presence in the Mediterranean area. As agreed at Regional Level shark species have been collected concurrently only for length (with no CV estimation). No stock-based sampling has been added if metier based sampling fails to provide the appropriate precision for length distributions. For this reason during the RCMMed&BS 2009 has been decided that no planned minimum number, sampling strategy and calculation of CV should be associated to the collection of all the “sharks” species reported in the Appendix VII. Moreover, should be also underlined that the landings of most of the shark species represent less than 200 tons at National Level. The stock related variables (sex, maturity weight) that have been collected during the sampling period have been reported in Table III.E.3.

Large pelagic species

For large pelagic species, following the agreement at Regional level, the collection of biological variables (sex, age, weight, maturity) was carried out during 2011, 2012 and 2013 and the results reported in the present AR (see sampling plan Table III.E.2 and achieved data in Table III.E.3). The strata were only the *metier*. The sampling scheme has been designed taking into account the spatial and temporal variability of the landings for each species and the sampling reference periods (three years). The expected number of samples for each species has been complied. The total achieved number of specimens at Regional level was not available before the compilation of the AR and the related column has left blank (the total number will be available during the RCMMed&BS 2014).

III E 2 Data quality: results and deviation from NP proposal (Mediterranean Sea and Black Sea)

CV for stock related variables of demersal and small pelagic species has been calculated annually for all métiers combined and for each GSA. CVs have been calculated on the basis of 2013 data collected.

The method used to calculate the CV has been developed by Vigneau and Mahevas (2004). This method allows estimating the precision for each length class and for the whole length frequency distribution (LFD) at metier level. The low values of CV estimated for some species could be associated to some major problems caused by using this method: the low representativeness of the sample. The method requires a good coverage of all length classes, that for some species and for the entire range of the LFD is almost impossible to obtain. To avoid this problem in the future the sampling effort will be intensified for some stocks. Moreover, for few species (e.g. *Lophius piscatorius, Chamelea gallina* and *Spicara smaris*) the sampling level and the CV has been low because of the difficulties of sampling these species at the landing sites, the seasonality of the species, and the problems related to the catch-ability of the selected metier.

Problem relating to the estimation of the CV for large pelagic species have been approached at Regional level (RCMMed&BS 2011, 2012). PGMed 2013 continued the exercise for calculating the CV figures for stock related variables for large pelagics, trying to standardize and optimize the methodology at Regional Level.

Concerning the sharks sampling, even if the estimation of the CV% was not planned in the NP 2011-2013, for some GSA (where the number of the specimens caught was consistent), an attempt to estimate the CV has been performed and the results have been reported in the table.

Concerning the oversampling, as already stated in the previous paragraph, must be clarified that no financial implications there have been in the NP 2013.

All the data collected under this Module have been sent, in due time and following the quality control, to the different data calls (i.e. STECF-SGMED) and, on request, to the different end-users (e.g. GFCM, ICCAT etc.).

III E 3 Follow-up of Regional and international recommendations (Mediterranean Sea and Black Sea)

No specific recommendation from 2012 RCM to be addressed.

III E 4 Actions to avoid shortfalls (Mediterranean Sea and Black Sea)

The project activities were specified in agreement with the reports foreseen by the national program. Italy will continue to investigate at National and Regional level the best approach to estimate CV.

Concerning the “Regional” problems related to the estimation of the CV for stock related variables of large pelagic species, Italy is actively participating to the regional meeting (RCMMed&BS and PGMed) in order to find out the best approach to standardize and optimize the methodology at Regional Level.

III E 5 Monitoring of commercial eel

Data on commercial fishery of eel have been collected for the year 2013 by a sample survey, based on the census of all fishers on the whole national territory performed in 2011.

The aim of the sample survey was the statistically significant estimation of catch per unit effort (CPUE), defined as weight (kg) per fisherman (Castelnaud & Beaulaton, 2008). This parameter has been considered the most important in order to extrapolate the total catch at the national level and for each stratum.

The survey took into account all commercial fisheries operating in Italy. The sampling design was at one stage-stratified. The sample units (catches) were selected without replacement and with equal probability. The stratification was designed to take into account the level of disaggregation of the information required by Regulation 199/2008, and was based on two auxiliary variables:

- The first stratification variable was the Region, as this is the UG (management unit) defined for the management of eel fisheries, as implemented in the National Eel Management Plan (Regulation 1100/2007).
- The second variable regards the habitat typology, also used in the context of national and regional management plans to distinguish the type of environment in which the fishing activity is carried on (lake, lagoon, managed lagoon, river) .

On the basis of Regulation 100/2007, there are 9 management units (Regions) were eel fisheries are at present allowed, on the basis of their participation to the eel recovery programme implemented through the eel National Management Plan. Therefore, the sample survey considered only these 9 regions. Considering the presence or absence of the different typologies described in the 9 Italian regions, 24 strata have been identified.

During 2013, the interviews have been carried out by interviewers, using questionnaires prepared ad hoc. Data concerning catches and fishing effort (time and gears) were requested on a seasonal basis and for each different stage of the eel (“glass eel”, “yellow eel” and “silver eel”), as required by EU Reg. 199/2008.

The results, checked and validated, have been stored into a database and then processed for the extrapolations necessary to characterize the fishing activities in the different management units (UG).

Biological samplings of catches have been carried out to evaluate their composition by length, maturity stage, age and sex. Samplings have been carried out on a management unit/typology basis (“yellow eel” and “silver eel”).

During 2013, eel biological sampling has been completed for the management units (UG) where it was possible to carry out this work. Analyses carried out on each individual of the sample (in total more than 900 individuals have been analyzed for total length and weight, sex, precise characterization of the stage (yellow eel/argentine eel), age. All methodologies used are those currently validated and intercalibrated by international working groups.

As requested from the EU Regulation, samples were part of commercial catches. Unfortunately, it was not possible to carry out all the planned sampling activities due to several problems that affected the fishing activities. In the North-East Regions, due to bad weather conditions and/or stop of the fishing activity, it was not possible to perform the biological sampling as planned.

Table: Number of individuals (yellow eels and eel Argentina), and stratum sampled for each Management Unit (Regional).

Region	Stratum	yellow eel	Silver eel
Lombardia	Lago	-	-
Friuli V.G.	Laguna	-	-
Veneto	Laguna	56	34
Emilia R.	Laguna	102	100
Toscana	Laguna	99	100
Umbria	Lago	-	-
Puglia	Laguna	103	94
Sardegna	Laguna	50	40
Lazio	Laguna	40	105

Data quality

During 2013, the collection of catch data has proceeded with remarkable efficiency.

Even if in some regions it was not possible to achieve the planned number of specimens for the biological samplings, due to the problems above mentioned, a good representation of the whole sector has been achieved at National Level. It should be mentioned that ICES highlighted the opportunity to reduce the number of samples that resulted oversized. (ICES, 2011. Report of the 2010 session of the Joint EIFAC/ICES Working Group on Eels WGEEL, 9–14 September 2010 Hamburg, Germany. ICES CM 2010/ACOM: 18, 201 pp.). This and other important aspects were also discussed at the ICES WKESDCF - Workshop on Eel and Salmon DCF Data that met in Copenhagen from 3 to 6 July 2012, under the co-chairmanship of Ted Potter (UK) and Alan Walker (UK). Discussion on DCF requirements for eel also took place at the 2012 meeting of the Working Group on Eel will take place in ICES HQ, Copenhagen Monday 3rd - Sunday 9th, September 2012.

Actions to avoid shortfalls

Peculiarities of eel fisheries are due to the life cycle of the species, to its distribution and to the different and extremely heterogeneous exploitation typologies. The management, as well as the collection of data concerning the eel fisheries is therefore rather complex.

Major problems in the data collection process can be summarized as follows:

- eel distribution limited to inland waters, where the species is caught both from recreational and commercial fishery. This requires the need for interaction with multiple administrations, since the jurisdiction over inland fisheries, including fishing for eels, is attributed to the Regions (DPR n. 11, January 15 1972 and July 24, 1977, n. 616).

- inadequacy of the current system of fishery statistics in inland waters, for the same problem mentioned above, and absence of a system of registration of fishing catches both at regional and provincial level.

- inadequacy of the systems in force in relation to the necessities imposed by the EU Regulations 1100/2007 and 199/2008 to provide data according to specific requirements (catch per stage, fishing effort, etc..).

- extreme fragmentation of the fishing activities on the national territory, and heterogeneity of the fishing methods, that makes very difficult to establish contacts with the fishermen.

- scarce awareness of both sport and commercial fishers of the eel stock present situation, of the need of a recovery plan and of the involvement at the national and local levels in Management Plans. This makes them extremely diffident when confronted with the necessity to answer questions, to compile logbooks, to collaborate in collecting biological samples.

- problems related to the coordination at European level. The eel Fisheries Data Collection under Reg. 199/2008 is not yet operational in many States for all compartments. For recreational fisheries, in some countries it is still at early stages of development (e.g. methodological issues)

- marked seasonality of the fishing activities linked to the migration patterns of the different stages of the eel: most of the fishing activities take place in the last days of December of the calendar, also linked to the market demand for Christmas. This implies that the interviews with fishers, sampling and examination of samples may need to be moved to the following year, creating considerable difficulties both from technical-scientific and administrative points of view.

The above mentioned aspects make the census of commercial fishing activities in inland waters and lagoons very expensive in terms of time and investment and for these issues there are considerable difficulties in coordinating the activities carried out within this module.

Region: Other regions

III E 1 Achievements: results and deviation from NP proposal (Other regions)

No data are reported because no biological sampling has been carried out in Other Regions. According to the data provided by Italy to the RCMLDF (Constanta, 2013), the Italian fleet operates in the outside community waters (CECAF Region), targeting shrimps and cephalopods (OTB_CEP_>=70_0_0 and OTB_CRU_>=40_0_0), consists of around 5 vessels fishing around Mauritania waters (FAO Area 34.1).

Data available to the RCMLDF showed that the Italian activity in CECAF area represents 18% of landings and 9% of effort for the métier OTB_CEP_>=70_0_0 and 10% of landings and 5% of fishing effort for the métier OTB_CRU_>=40_0_0. Based on these information and providing that these proportions of landings and effort for the above métiers do not significantly change over the next years, there is no requirement for Italy to sample these fisheries, as they are sufficiently covered by the Spanish sampling program (RCMLDF Report 2013, Constanta, Romania). No Italian vessel operates in the IOTC Region.

III E 2 Data quality: results and deviation from NP proposal (Other regions)

No sampling activity has been carried out.

III E 3 Follow-up of Regional and international recommendations (Other regions)

No specific recommendation from 2012 RCM to be addressed.

III E 4 Actions to avoid shortfalls

No sampling activity has been carried out. Italy will attend the RCM Long Distant Fishery and will participate to any coordinated program that will be proposed.

III F Transversal variables

III F 1 Capacity

III F 1 1 Achievements: results and deviation from NP proposal

The following parameters have been estimated for capacity:

- number of vessels

- GT, kW, Age (as defined in Regulation (EC) No 26/2004)

Parameters are given annually, per fleet segments (Appendix III) and per supra-regions (Mediterranean & Black Seas and Other regions).

The basic data source is the fleet register at the 1st of January.

III F 1 2 Data quality: results and deviation from NP proposal

Data are collected exhaustively from the vessel register.

III F 1 3 Actions to avoid shortfalls

The project activities were specified in agreement with the reports foreseen by the national program.

III F 2 Effort

III F 2 1 Achievements: results and deviation from NP proposal

Effort has been estimated according to the variables and disaggregation levels listed in Appendix VIII.

Effort data are collected for all the métiers. From a methodological point of view, the major problem in respecting the required disaggregation is given by the disaggregation by métier (Level 6 of Appendix IV, 4). Compulsory information for all the fleet is not available. In Italy, there is no obligation for vessels to indicate the type of activity they practice along the year. Each vessel can utilize all the gears indicated in the licence. More than 70% of the Italian fishing-vessel licences allow the use of more than one fishing system, and therefore gears. This framework is also more complex if we consider the high number of existing métiers actually practised by Italian vessels, with differences in seasonality and geographical areas.

In order to estimate fishing effort per métier and GSA, different data sources have bee used:

- logbook information. Logbook is compulsory in the Mediterranean only for a minority of fleets (vessels of overall length exceeding 10 metres) and will contain production information only where vessels retain on board quantities exceeding 50 kg live-weight equivalent of some species (Reg. CE 1224/09).
- field survey to detect the prevalent fishing activity
- sample survey to estimate the monthly distribution of activity by métiers.

In 2013, the sample survey was based on a panel of 936 vessels (7.3% of the fleet), including the small scale (vessels < 12 m). Survey takes place every week on a continuous basis. Data on fishing effort, vessel activity and fishing area are recorded by gear and species using purposely formulated questionnaires. Results for each area, by month and by métier are obtained by applying raising factors to the sampled data. Statistical methods described in the 2011-2013 NP have been applied.

Table III.F.1 reports the information collected during the sampling year.

III F 2 2 Data quality: results and deviation from NP proposal

Elementary and aggregated data have been checked to verify their reliability. Consistency among different variables has been analysed.

Precision levels have been calculated in terms of CV at the level of fleet segment.

Table III.F.1 reports the values of the accuracy indicators.

III F 2 3 Follow-up of Regional and international recommendations

The list of recommendations made by the RCM and actioned by the MS is reported in the following table:

RCMMed&BS 2012 Recommendations	Actions
Metier-related variables: on the accuracy of geographical origin of landings and effort data. The RCM MED&BS recalls its 2008 recommendation and recommends MS to investigate the accuracy of the geographical origin of landings and effort data (using the VMS data where possible). This information should be reviewed during the next RCM MED&BS	Italy is implementing suitable approaches to detect the geographical origin of landings and effort data. VMS data and information reported on the logbook are cross checked.

III F 2 4 Actions to avoid shortfalls

The project activities were specified in agreement with the reports foreseen by the national program.

III F 3 Landings

III F 3 1 Achievements: results and deviation from NP proposal

Landings have been estimated according to the variables and disaggregation levels listed in Appendix VIII.

Commercial landings have been assessed on the basis of a sampling procedure. In particular, monitoring of the activities of fishing vessels less than 10 meters requires the definition of a specific sample program.

The methodology of the survey for estimation of landings per species was approved by Eurostat during the meeting of the working group “fishery statistics” held in Luxembourg, 18-19 February 2002.

In 2013, the survey was based on a sample of 936 vessels that corresponds to 7.3% of the total fleet. The sample is stratified according to fishing segments and geographical areas. Elementary data are collected through questionnaires filled by data collectors, which are scattered along the Italian coast. Survey takes place every week on a continuous basis. Data on landings (weight and prices) and fishing area are recorded by gear and species. This allows post-stratifying the final estimates according to the métiers level (Level 6, Appendix IV, 4). Annual average prices per species are calculated using weighted averages.

The sample survey covers the entire Italian fleet which operates in the Mediterranean Sea. Landing data of vessels fishing beyond the straits (“Other regions”) are recorded on a census basis and taken from the compulsory documentation.

Data related to BFT landings (including tuna farming) are provided by a specific data collection implemented by the national administration in accordance with ICCAT procedures and, as such, are excluded from the sample survey.

Table III.F.1 reports the information collected during the sampling year.

III F 3 2 Data quality: results and deviation from NP proposal

Precision levels have been calculated in terms of CV at the level of fleet segments. The sample size has been fixed according to this precision target. Estimates of variance to calculate CV are reported in table III.F.1.

III F 3 3 Follow-up of Regional and international recommendations

With respect to the landings, RCM Med&BS commented that in some cases the landings data are still reported by mixed species and that this creates problems in calculating the actual percentage of landings of each species by MS. This is not the case for Italy because landings data are available per single species.

RCMMed&BS 2012 Recommendations	Actions
Metier-related variables: on the accuracy of geographical origin of landings and effort data. The RCM MED&BS recalls its 2008 recommendation and recommends MS to investigate the accuracy of the geographical origin of landings and effort data (using the VMS data where possible). This information should be reviewed during the next RCM MED&BS	Italy is implementing suitable approaches to detect the geographical origin of landings and effort data. VMS data and information reported on the logbook are cross checked.

III F 3 4 Actions to avoid shortfalls

The project activities were specified in agreement with the reports foreseen by the national program.

III G Research surveys at sea

III G 1 Achievements: results and deviation from NP proposal

According to appendix IX of DCF (EU Dec. 93/2010), the Italian National Program for the period 2011-2013 included two surveys:

- MEDITs, MeDiterranean International bottom trawl survey
- MEDIAS, Pan-Mediterranean pelagic survey

<u>MEDITs</u>

The Medits Program aims to conduct coordinated surveys from bottom trawling in the Mediterranean Sea. Parameters have been evaluated since 1994 so as to provide comparable results for all Italian seas and for the surveys conducted within the Medits projects in other Mediterranean countries.

The Medits survey program produces basic information on benthic and demersal species, on the basis of an annual survey, in terms of population distribution, abundance, and size composition of an aggregate of around 38 species found in an area with a depth ranging from 0- to 800 m within the seas adjacent to Italy (around the 7 Italian GSA – maps of the MEDITS surveys conducted in each Geographical Sub-Areas GSA are provided in Annexes at the end of the Annual Report).

The 2013 Italian data collection program retained the Medits project with no technical modifications with respect to the standard protocol survey (MEDITS-Handbook. Revision n. 6, April 2012, MEDITS Working Group: 92 pp.). The experimental design of sampling followed the modalities and the operational procedure set by the Medits project, updated to the current National Program. The only problem was related to the period of the scientific survey in the GSA 16. Due to administrative and bureaucratic difficulties the activity, only in that GSA, started in September.

752 hauls, in agreement with the Italian National Program, has been carried out during the period of the survey (see Table III.G.1). Hauls have been allocated within the following bathymetrical strata: 0-50 m, 50-100 m, 100-200 m, 200-500 m and 500-800 m. All the planned hauls have been performed (Table 1).

Data, both on hauls (date, timings, latitude, longitude and so on) and relating to the processing of biological samples have been collected following the relevant procedures. The information have been registered on paper-based documents and subsequently computerized.

Table 1 -Number of hauls required and performed from the different GSA during the Medits 2013

GFCM Geographical sub areas (GSA)	*N. of hauls required*	*N. of hauls achieved*
9 Ligurian Sea/Upper Tyrrhenian Sea,	120	120
10 Lower Tyrrhenian Sea	70	69
11 Sardinian	100	101
16 Sicilian Channel	120	120
17 Upper and Middle Adriatic	180	182
18 Lower Adriatic	90	90
19 W. Ionian Sea	70	70
Total	**750**	**752**

<u>MEDIAS</u>

MEDIAS survey (Figure 1) has been carried out annually since 2009 for the assessment of the abundance and spatial distribution of small pelagic species in the Mediterranean Sea by means of acoustic methodology. Demographic structure in terms of size, age and sex of the pelagic populations has been derived from pelagic trawls. For an ecosystem based approach, synoptically to the acoustic survey an environmental monitoring has been performed.

In 2013 the surveys have been conducted following the methodologies and protocols agreed by the MEDIAS steering committee (MEDIAS-Handbook Common protocol for the Pan-MEDIterranean Acoustic Survey, 2013, 20 pp. in MEDIAS Steering Committee Report, 73 pp.)

The 2013 MEDIAS survey in the Adriatic Sea (GSA 17 and GSA 18 – Figure 2) and Sicilian Channel (GSA 16 – Figure 3) have been carried out without any problems.

Overall a total of 2589 nautical miles (GSA 17= 1507, GSA 18=503, GSA 16= 579), 77 midwater pelagic hauls (GSA 17= 43, GSA 18=15, GSA 16= 19 and 226 stations using the CTD sonde (GSA 17= 101, GSA 18=46, GSA 16= 79) have been performed (Table III.G.1).

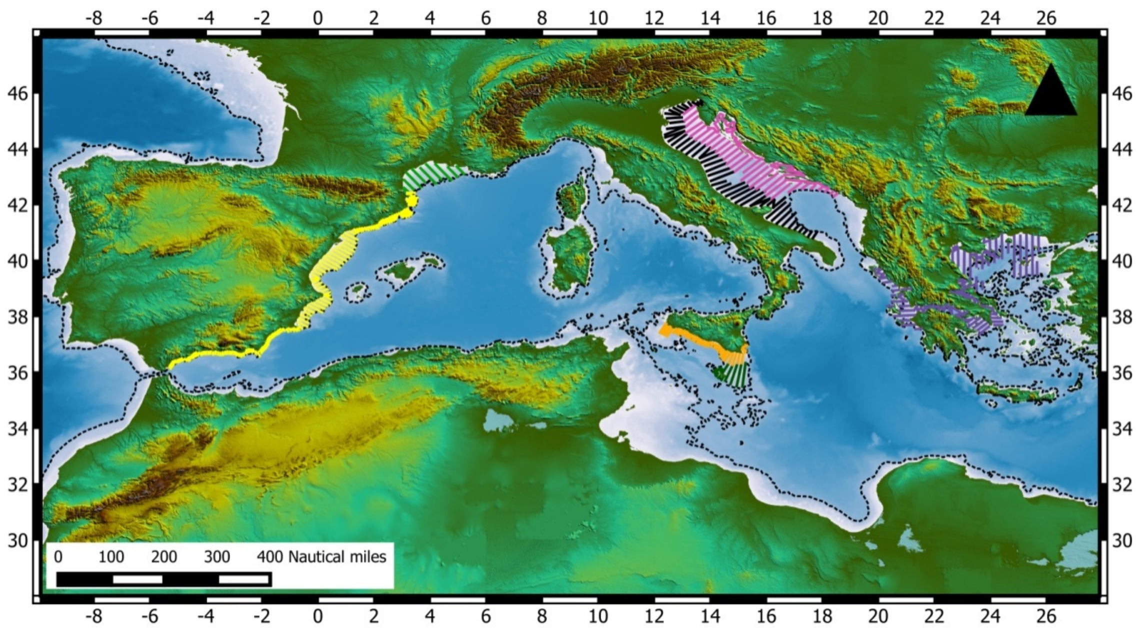

Figure 1 - MEDIAS acoustic surveys design.

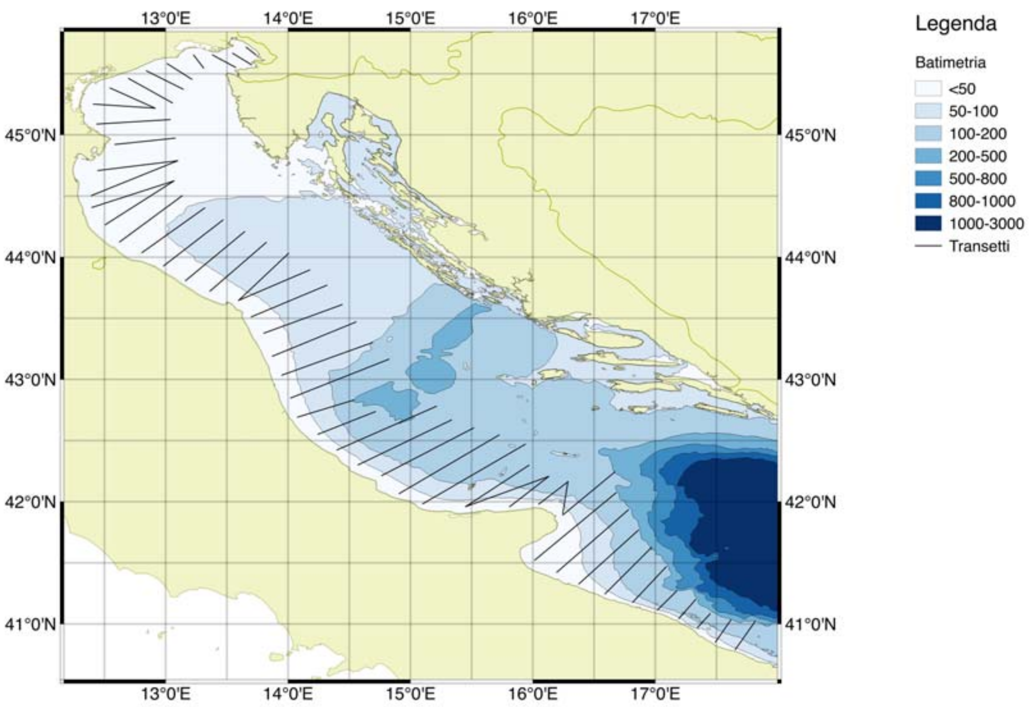

Figure 2 - MEDIAS in the GSA 17 (North-western Adriatic) and in the GSA 18 (South-western Adriatic)

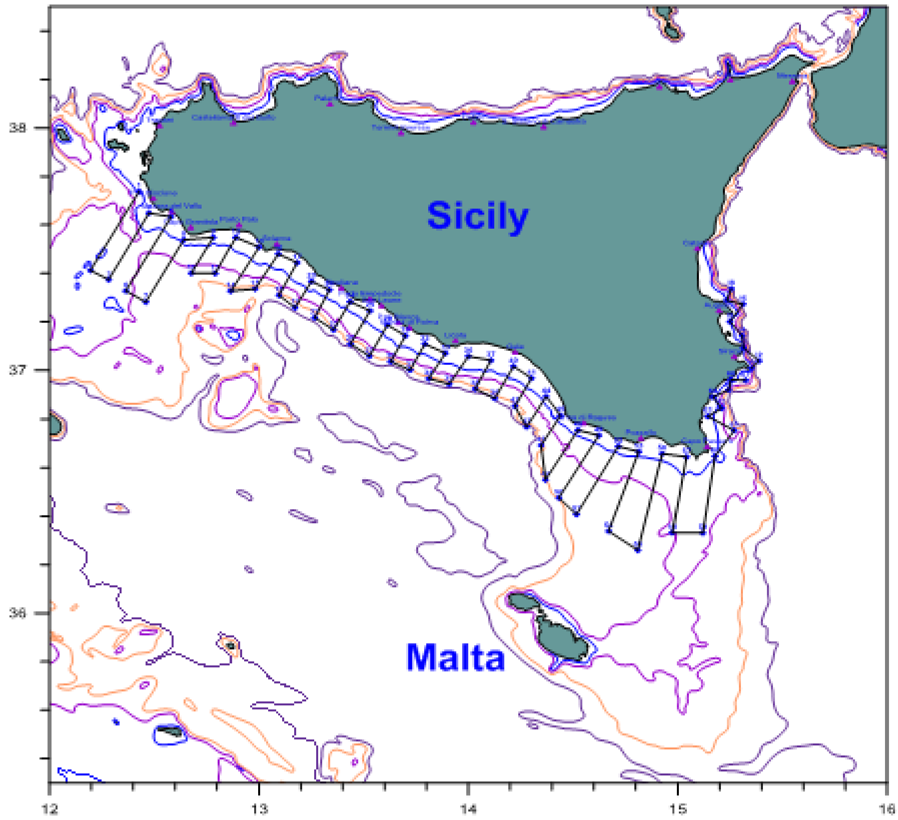

Figure 3 -MEDIAS in the GSA 16 (Sicily Channel)

III G 2 Data quality: results and deviation from NP proposal

Both Steering Group MEDITS and MEDIAS are working in order to finalize a database for each specific survey.

Medits: the Medits database it is under texting. Following the recommendations of the Regional Coordination Meeting of the Mediterranean and Black Sea, progresses were made towards the implementation and finalization of a common data base. The key concepts of the DB system under texting are: Open source software, spatial data base, Reliable R-routines, Web based system. This is developed as a web-GIS-based information system, according to the most modern development standards for the web (HTML5, web service, scripting server-side, relational database, etc.). The system is composed of two main entities: a Relational DataBase Management System (R-DBMS) for storage, retrieval and updating of MEDITS surveys data and a multi-component software, performing data acquisition and data analysis. Open source software is used for the implementation of all the components (not excluding proprietary file formats).

The main characteristics of the MEDITS common are:

- a simple database structure that can accommodate a wide range of data types, related to scientific surveys, easily linkable with GIS applications;
- capability to store, retrieve, update, manipulate and analyze trawl survey data, including spatially referenced information;
- capability to import and export data (or to download and upload data) in the consolidated format of TA, TB, TC, etc.

The system includes check routines allowing extensive quality control of data (internal and cross checks between tables) and data analysis and elaboration for different tasks linked to the DCF objectives, such as the estimation abundance and biomass indices, maps and ecosystem indicators throughout the Mediterranean.

MEDIAS: concerning the MEDIAS database, the steering committee group had been working in the framework of the Acousmed project (Contract MARE/2009/09 SI2.557652) in the "Standardization of a common format for an acoustic data database". The aim of this task was the proposal of fields and algorithms for a common database that will serve the needs of acoustic surveys in order to fulfill DCF requirements and standardize the output of surveys estimations. For that reason, MEDIAS group revised the format of existing databases related to acoustic surveys per study area and MEDIAS partners.

All the data collected under this Module have been sent, in due time and following the quality control, to the different data calls (i.e. STECF-SGMED) and, on request, to the different end-users (e.g. GFCM, ICCAT etc.).

III G 3 Follow-up of Regional and international recommendations

EWG 12-01 Recommendations	Actions
STECF-EWG 12-01 recommends that the different RCMs during 2015 should complete a list of all the research surveys carried out within each the region and at the same time conduct a review of these surveys.	Italy agreed with this recommendation

III G 4 Actions to avoid shortfalls

MEDIAS project activities were specified in agreement with the reports foreseen by the national program. Concerning the problems related to the delay of the MEDITS activity in the GSA 16, Italy will try to overpass these administrative and bureaucratic difficulties in the incoming years.

IV Module of the evaluation of the economic situation of the aquaculture and processing industry

IV A Collection of data concerning the aquaculture

IV A 1 Achievements: results and deviation from NP proposal

During 2013 (reference year 2012) data related to the production of the different aquaculture segments, in marine waters and fresh waters, have been collected. In addition, structural data have been also collected as foreseen by EU Reg. 762/2008 which requires to update structural data every three years (the first census was related to the reference year 2008 and the second one has covered the reference year 2011).

In 2013 the sampling design was unchanged from the previous year, as it has not changed the size of the sample of firms for production segment. In the following table, all the segments included in the census are reported.

Code	Segment
2.2	Trout_on growing
2.3	Trout_combined
2.4	Trout_cages
3.1	Sea bass & Sea bream_hatchery nursey
3.2	Sea bass & Sea bream_on growing
3.3	Sea bass & Sea bream_combined
3.4	Sea bass & Sea bream_cages
4.2	Carp_on growing
5.2	Other freshwater fish_on growing
5.3	Other freshwater fish_combined
5.4	Other freshwater fish_cages
6.2	Other marine fish_on growing
6.4	Other marine fish_cages
7.2	Mussel_Long line
8.2	Oyster_Long line
9.3	Clam_Bottom

The minimum number of units required to consider a segment in the sampling plan has been set at 5 units. The companies in the segments 2.4, 3.1, 5.3, 5.4, 6.4, 8.2 were, therefore, excluded from the universe of reference as auto-representative of the same segment. In addition, companies in the segment 4.2 have been aggregated to the segment 5.2 because homogeneous from the point of view of the type of farming used. Following this approach, a total population of 598 units have been defined.

For the extraction of the sample of aquaculture farms for the year 2012, as for 2011, a stratified sampling plan was applied. The population was subdivided into subpopulations or strata, on the basis of some stratification variables. The choice of the stratification variables is aimed at minimizing the size of the sample; in fact the goal is to get segments internally homogeneous and heterogeneous between them.

Companies have been stratified according to classes of total production defined by the quartiles of companies in the 2011 Census.
The methodology adopted for the allocation of sampling units among stratum has been the Bethel method that is an extension of Neyman approach for multivariate sample surveys.
The final number of sampling enterprises has been 180 units. The sampling plan is presented in table IV.A.2.
The sampling companies have been randomly extracted from the population.

IV A 2 Data quality: results and deviation from NP proposal

National Program considered a sample of 180 companies on a total population of 598 units (2011 data). At present, data on economic variables have been completed.

Parameters in table IV.A.3 are available and indicators were processed.

Discrepancies in achieved sample rate with respect to the NP are due to the necessity to monitor only companies operating exclusively in the segment foreseen in the sampling plane. Very often, national companies operate in different segments, with different technologies including also activities like processing and commercialization.

IV A 3 Follow-up of Regional and international recommendations

No RCM recommendations

IV A 4 Actions to avoid shortfalls

In the implementation of the NP, several actions have been undertaken to solve some problems encountered in previous years. These actions can be summarized as follows:

- Updating of the population of aquaculture companies on the basis of EUROSTAT Census, in order to better represent the sector in relation to the collection of economic data.
- Selection of companies for each segment with balance sheets that are referred to only one economic activity and not cumulated with other economic activities as for instance processing and commercialization of other products. On the basis of a random selection, companies not under this principle are substituted.
- Collection of economic parameter on the basis of the balance sheets and further investigation with each company. For these reasons companies with short balance sheets have not been monitored. For some segments, due to non-availability of financial statements, the sample surveyed was lower than predicted.
- Greater attention has been placed on the collection of the economical and productive data, by segment, so as to optimize the controls between the data of the 199 and those of the aquaculture sector by Eurostat.

IV B Collection of data concerning the processing industry

IV B 1 Achievements: results and deviation from NP proposal

The collection of data related to the fish processing sector during the year 2013 (reference year 2012) has been carried out in conformity with what planned in the National Programme 2011-2013.

The collection of the data required by Annex XII of the DCF regulation has been carried out by mean of a specific sampling survey.

The reference list for the selection of the survey has been the list of all the firms declaring to exert the NACE economic activity now 10.20, updated at May 2013. The survey has been carried out in a double way:

1. for capital companies data have been collected by mean of queries on the database of the Chamber of Commerce in order to obtain the balance sheets and financial accounts of the sampled enterprises;
2. for firms constituted as partnerships (limited, ordinary or general partnerships) or individual firms – not subject to the commitment of publishing the balance sheets and financial statements - the survey has been carried out by mean of questionnaires sent by mail or face-to-face interviews.

The survey has allowed to estimate the following parameters as required by Commission Decision 93/2010, Appendix XII:

- Turnover
- Subsidies
- Other income
- Labour costs
- Energy costs
- Raw material costs
- Other running costs
- Depreciation
- Financial costs, net
- Extraordinary costs, net
- Capital value
- Net investments
- Debts
- Employment
- Number of enterprises

Table IV.B.1 gives details on the sample size and on the sampling strategy.

IV.B.2 Data quality: Results and deviation from NP proposal

No deviations.

IV.B.3 Follow-up of Regional and international recommendations

No regional co-ordination has been planned and realised.

IV.B.4: Actions to avoid shortfalls

The current data collection methodology for the processing industry has allowed to overcome some lacks founded in the SBS survey - (number of firms, number employed, turnover, value added, gross investment, etc ...) performed by Italian Statistical Office (ISTAT) in compliance with the reg. (EC) 58/97 2701/98 recently updated by reg. (EC) 295/2008 reg. (EU) 251/2009. Under these regulations, ISTAT has provided data for the processing sector (as well as for other economic activities), but for confidentiality problems these statistics have not been published for the period 2003-2007. With the new classification of economic activities, ATECO 2007 (Italian version of the NACE Rev.2), the confidentiality problems have disappeared and this has made possible the public use of SBS related to the fish processing sector starting from the year 2008 and 2009, recently published.

In light of this, during 2013 (as well as in the previous years 2011 and 2012) were carried out actions aimed to:

1. compare the two types of data collection (DCF and SBS);
2. investigate the possible use of SBS data and the possibility of integration of data required by DCF but not present in the Eurostat statistics.

In the light of this comparison it was decided to continue to use the approach described by the NP as far as 2012 data.

V Module of evaluation of the effects of the fishing sector on the marine ecosystem

V 1 Achievements: results and deviation from NP proposal

Environmental indicators listed in appendix XIII of the DCF have been estimated. During 2012, Italy has created a specific working group dealing with the implementation and the evaluation of appropriate methodology to calculate/estimate the ecosystem indicator and to propose a common approach. The outputs of this working groups has been applied during the sampling periods 2012 and 2013 in order to standardize at GSA level the calculation of the indicators reported in the following table (where is indicated also the data sources used for each indicator):

Code specification	Indicator	Definition	Source
1	Conservation status of fish species	Indicator of biodiversity to be used for synthesizing, assessing and reporting trends in the biodiversity of vulnerable fish species	MEDITs/MEDIAS
2	Proportion of large fish	Indicator for the proportion of large fish by weight in the assemblage, reflecting the size structure and life history composition of the fish community.	MEDITs/MEDIAS
3	Mean maximum length of fishes	Indicator for the life history composition of the fish community	MEDITs/MEDIAS
4	Size at maturation of exploited fish species	Indicator of the potential "genetic effects" on a population	MEDITs/Biological sampling of catches
5	Distribution of fishing activities	Indicator of the spatial extent of fishing activity. It would be reported in conjunction with the indicator for 'Aggregation of fishing activity'.	VMS data Vessel Register
6	Aggregation of fishing activities	Indicator of the extent to which fishing activity is aggregated. It would be reported in conjunction with the indicator for 'Distribution of fishing activity'.	VMS data Vessel Register
7	Areas not impacted by mobile bottom gears	Indicator of the area of seabed that has not been impacted by mobile bottom fishing gears in the last year. It responds to changes in the distribution of bottom fishing activity resulting from catch controls, effort controls or technical measures (including MPA established in support of conservation legislation) and to the development of any other human activities that displace fishing activity (e.g. wind farms).	VMS data Vessel Register Other sources
8	Discarding rates of commercially exploited species	Indicator of the rate of discarding of commercially exploited species in relation to landings.	Biological sampling of catches
9	Fuel efficiency of fish capture	Indicator of the relationship between fuel consumption and the value of landed catch. It will provide information on trends in the fuel efficiency of different fisheries.	Economic data, see chapter III B of the NP

V 2 Actions to avoid shortfalls

The 2013 project activities were specified in agreement with the reports foreseen by the national program.

VI. Module for management and use of the data

VI 1 Achievements: results and deviation from NP proposal

Management of the data

In order to comply with the provisions contained in Reg. (EU) 199/2008 and subsequent Reg. (EU) 665/2008, the NP 2009-2010 included the implementation of a Databank for the fishing sector directed toward the collection, storage, management and systemisation of data of an economic and biological nature pertaining to the sector, coming from different sources and intended for differentiated users.

During 2013, the databank for the fishing sector finalized in 2012 has been managed. The databank works with a Web platform that, in addition to allowing the updating and loading of data directly by the suppliers, permits different degrees of access in compliance with the requirements of the Commission and the Central Administration, as well as providing for a level of less detailed data available for general use. The address of the Italian DCF website is: http://raccoltadati.irepa.org/.

In addition, activities of verification, review and validation of the database have been carried out.

Development of procedures aimed at quality control and testing of consistency of distributed data for the types of fishing technique was also implemented.

The "raccolta dati" website is hosted on a Linux (Ubuntu operating system) server with Apache Web Server for service. The database for aggregated data is a Postgres database. The website is in Italian only.

Different levels of access are possible. The public part of the "raccolta dati" website gives access to information on institutions participating in the data collection in Italy, documentation regarding the data collection regulations, national program, national reports, annual reports, RCMED meeting, STECF reports, international working group /workshops reports on future of the DCF, reports published using DCF data and finally methodological notes.

In addition to that public part, registered users (having then a login and password - The user's password is encrypted -) can run other functions and see more documents and data. Each user registered is associated to a given profile which can be:

- "Viewer": can view economic and biological data and documents loaded on the website.
- "Focal point": can use in addition, functions allowing updating data from the aggregated database.
- "Documents manager": is in charge of updating the sections referring to documentation and can upload/Delete documents.
- "Administrator": has access to all functions with all rights.

The database management system (DBMS) of the 199 database is Postgres, an object-relational database management system. It is designed with the PL/pgSQL, a loadable procedural language that can be used to create functions and trigger procedure.

Two documents were elaborated to describe the kind of data files the focal point should provide: « Vol 1_ Codifiche_Parametri_Data_Collection_Reg_199_2008 Versione 2012 » for biological information and the "Vol 2_ Codifiche_Parametri_Data_Collection_Reg_199_2008 Versione 2012" for economic, transversal, aquaculture and processing industry data. Each data file structure will correspond exactly to the structure of a specific storage table in the database. Therefore it will be easy to identify the table to be uploaded and to perform checks regarding the rights of the focal point to load the type of data.

The two documents contain also the dictionaries (Meta data) used for referencing coded information (ex: GSA, species coding).

In all database's tables for a given chapter (ex: Annex 1:"Codifiche per Pesca_dati economici" for economic data), there are some common fields (ex: nation, GSA, supra region, year, prevalent fishing gear, length class) which makes it possible to apply specific queries for combining different kinds of information stored in the tables related to the chapters. This data warehouse system is not optimal in terms of space but it presents the advantage of easily collecting the information and retrieving the most common request leaving nevertheless the possibility to apply more advanced queries allowing performing ad hoc aggregations.

Use of the data

Table VI.1 reports the information collected during the sampling year.

VI 2 Actions to avoid shortfalls

The project activities were specified in agreement with the reports foreseen by the national program.

VII Follow-up of STECF recommendations

According to recommendation from EWG 11-08, only previous year recs. should be reported. We followed this recommendation, so that in the following table we present recommendations from the following 2012 STECF WG:

- Review of Proposed DCF 2014-2020 Part 1 (STECF-12-07)
- Review of the Revised 2012 National Programmes and on the Future of the DCF (STECF-12-02)

Several recommendations are addressed to EC, STECF, end users and so on. Only recommendations addressed to MS and RCM, and pertaining to the sampling year (2013) are reported in the following table.

We would like to notice that these recommendations are not easily accessible and sometime they are also redundant. It would be very helpful to receive a full list of recommendations to be taken into account or to publish this list on data collection web site to have a correct reference.

All relevant recommendations are listed below:

EWG 12-01 Recommendation (Review of Proposed DCF 2014-2020 Part 1):	Actions
STECF-EWG 12-01 recommends that the different RCMs during 2015 should complete a list of all the research surveys carried out within each the region and at the same time conduct a review of these surveys.	Italy fully support this recommendation and will consider this activity together with the other Mediterranean countries in the next RCMMed6BS
STECF-EWG 12-01 recommends that a web based storage space for reference documents and tables is being created in order to facilitate the application of best practices in designing Annual Work Plans.	Italy support this recommendation
STECF-EWG 12-01 recommends that MS scientific institutions involved in data collection have online access to VMS and logbook data, as well as data collected under the Control Regulation.	Italy will follow the outputs of this recommendation
STECF-EWG 12-01 recommends that the roles	Italy support this recommendation

of the institutions involved in the collection and analysis of transversal data should be discussed and clearly defined in a dialogue between all relevant parties, i.e. research institutes, control & enforcement agencies and fishing industry representatives. The roles and tasks of these parties have to be described in the relevant legislation or at least in the MS Operational Programmes.	
STECF-EWG 12-01 recommends that the EU DC MAP (Data Collection Multi-Annual Plan) should define the general rules for the selection, on a regional basis, of fisheries to be sampled and data quality requirements and refer to the RCMs for the detailed technical planning of sampling. This includes RCMs to identify the metiers that are the priority for work at the EU level within a region, and those should be the priorities for work in Member States.	Italy support this recommendation
Reconsider the geographical scope of the RCMs in the light of new tasks and scope under the new DCF.	Italy support this recommendation
For RCM activities to be given greater authority in determining regional sampling programmes.	Italy support this recommendation
EWG 12-01 endorses the recommendation from RCM NS&EA in 2009 to make submission of the following Transversal Variables optional The need for collecting data on such indicators and their aggregation level are to be discussed and agreed upon on a regional level: number of trips / hours fished for RCM Med&BS number of rigs number of fishing operations number of nets/length number of hooks/number of lines number of pots, traps soaking time.	Italy support this recommendation
Review of the Revised 2012 National Programmes and on the Future of the DCF (STECF-12-02)	**Actions**
According to Commission Decision 93/2010, all MS performing the ranking system should use the average values of the 2 previous years. EWG 11-19 recommends that MS (even if they submitted or not a revised version of the National Program) use the most update set of values (i.e. landing values, tons, fishing days) in order to select the métiers to be sampled.	Italy has followed this recommendation and for the preparation of this AR has used the most updated set of data (2011 and 2012).
EWG 11-19 recommends that any revision of the NP should include recommendations from RCMs. However, the group considers that in some cases these recommendations refer to minor adjustments	Italy support and has followed this recommendation

in the sampling scheme with no impact on the budget forecast. In all these cases, the MS should be aware that they can adjust the NP by simply reporting the adjustments in the Annual Report.	
EWG 11-19 recommends that revisions in the text of the NP proposals within the programme period should be done in a way allowing the reader to follow the development in the MS. This means that all information valid for the first years of the triannual programme should be kept and not deleted. For example, if a pilot study was carried out in 2011 and the NP for 2012 was revised in accordance with the result from the pilot study, information about the pilot study should be kept in the text of the NP, specifying that this was the situation in 2011, and description of the related modifications should be added, specifying that this 18 was the revised situation for 2012.	Italy will follow this recommendation
EWG 11-19 recommends that for on-shore sampling, MS should continue to sample the metiers and make sure to cover all the species/stocks where a demand is formulated by an end-user (or listed in Appendix VII of the Comm. Dec.), but the methodology used to achieve the goals remains at the discretion of the MS, provided that it is fully documented and approved within their NP proposal.	Italy will follow this recommendation

VIII List of acronyms and abbreviations

ALP	Archivio Licenza Pesca – Vessel Register
ASIA	statistical archives of active companies
ATECO code	Codification for sectors of economic activities
CPUE	Catch per Unit of Effort
DCR	Data Collection Regulation
DGPA	Direzione Generale Pesca e Acquacoltura
GFCM	General Fishery Commission for the Mediterranean
GRT	Gross Registered Tonnage
GSA	Geographical Sub Areas
ICCAT	International Commission for the Conservation of Atlantic Tunas
ISTAT	National statistical institute
MEDIAS	Pan-Mediterranean pelagic survey
MEDITS	Mediterranean International Trawl Survey
MIPAF	Ministry of Agricultural and Forestry Policies
RINA	Registro Italiano Navale
SAC	Scientific Advisory Committee of GFCM

IX Comments, suggestions and reflections

None

X References

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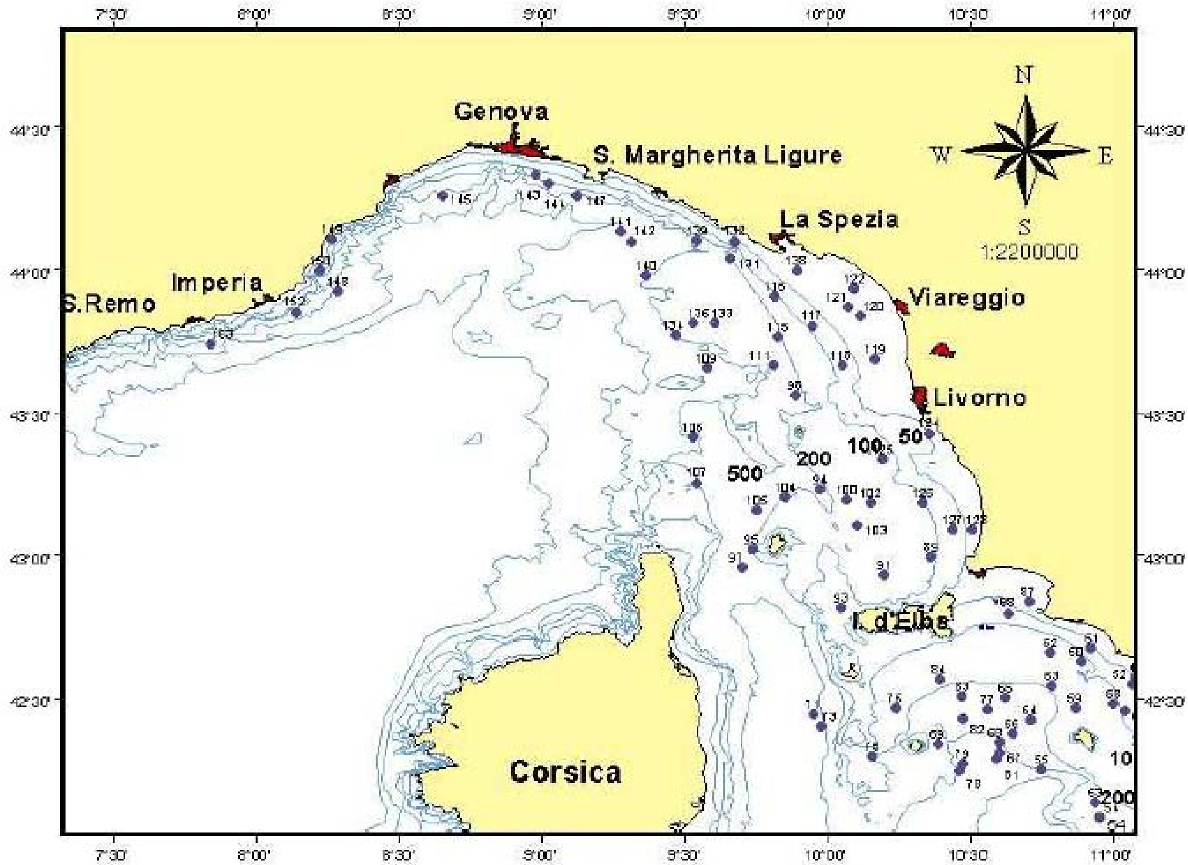
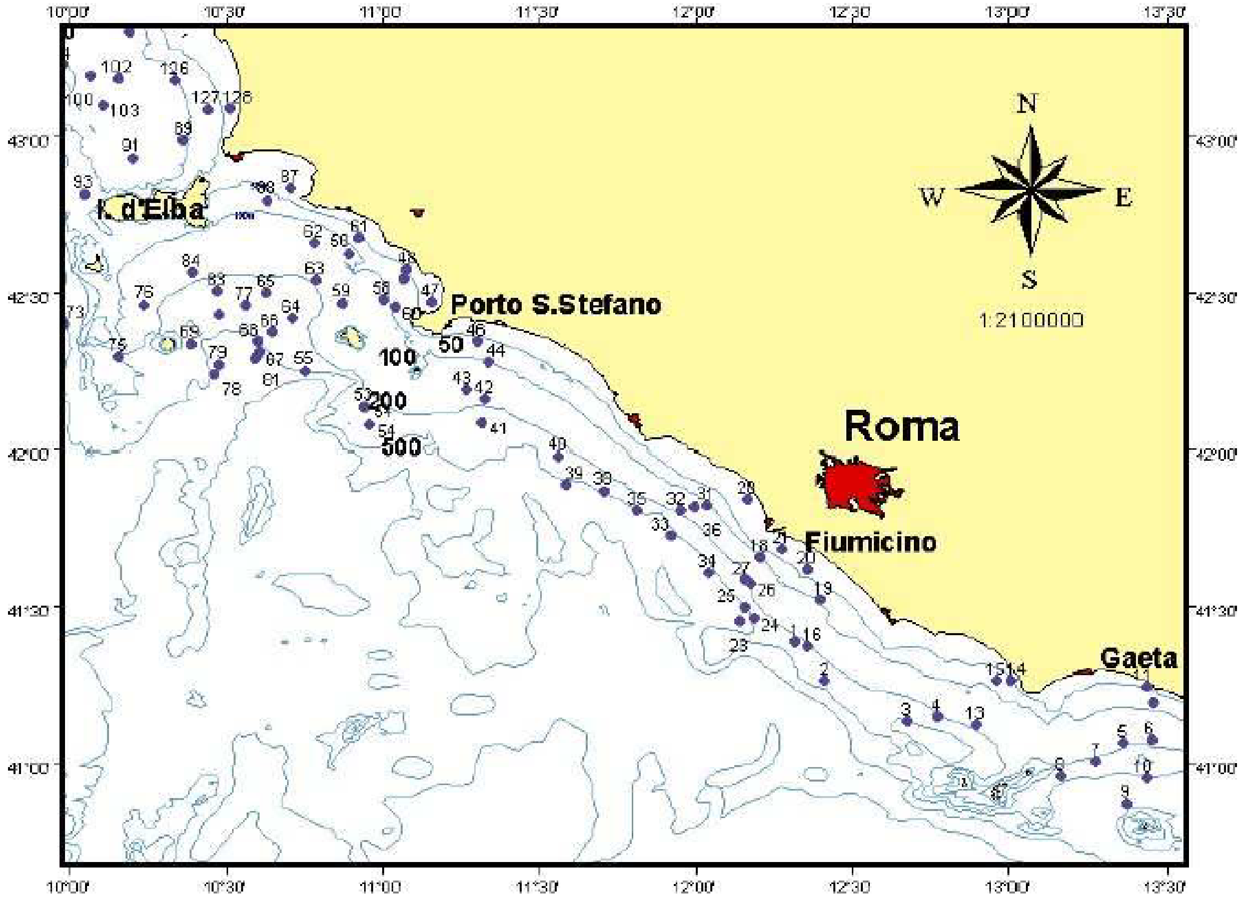
ANNEX I - MEDITS SURVEYS: POSITION OF THE HAULS IN THE DIFFERENT ITALIAN GEOGRAPHICAL SUB-AREAS (GSA)

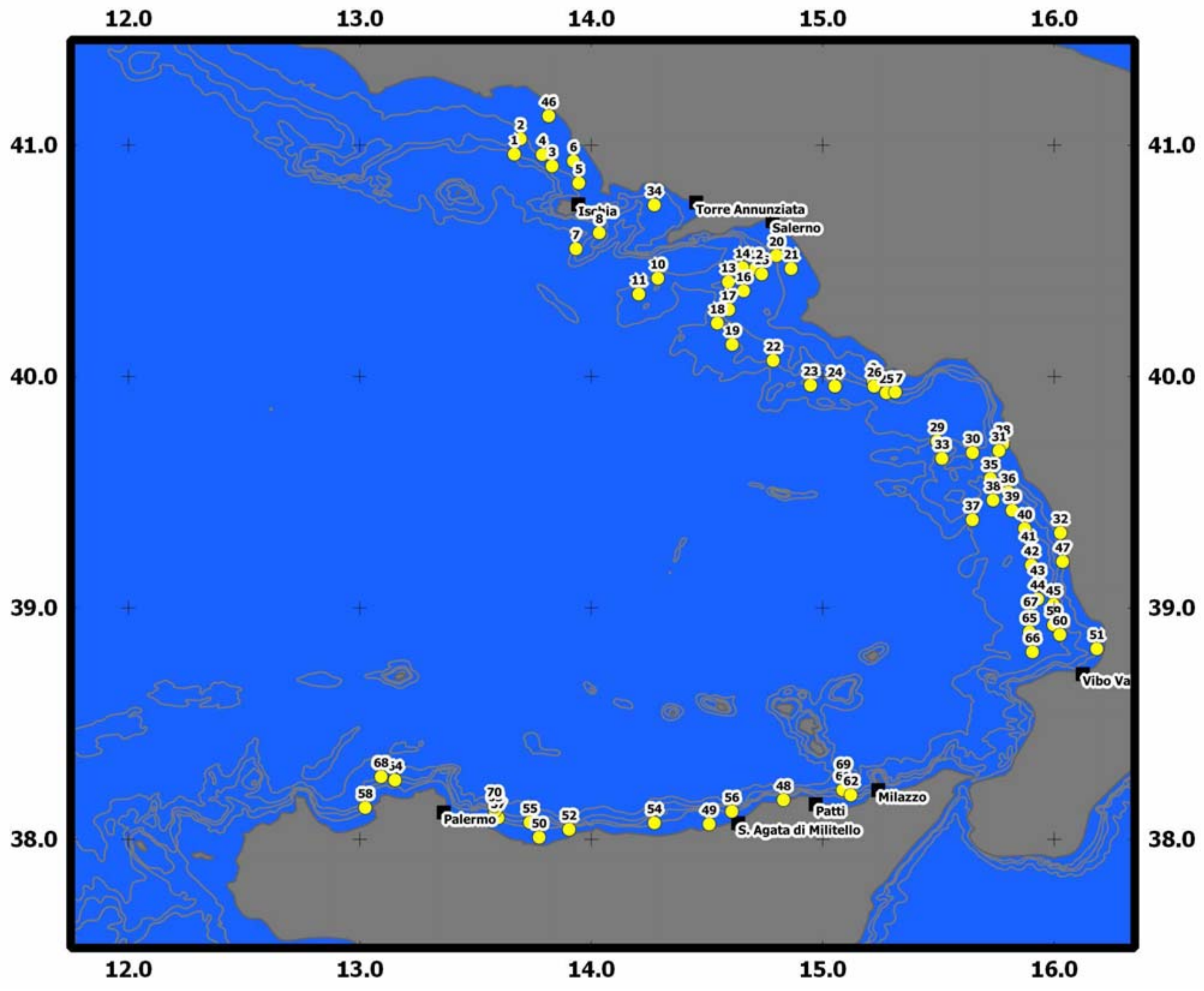
<u>GSA 9/1 (Ligurian Sea/Upper Tyrrhenian Sea)</u>



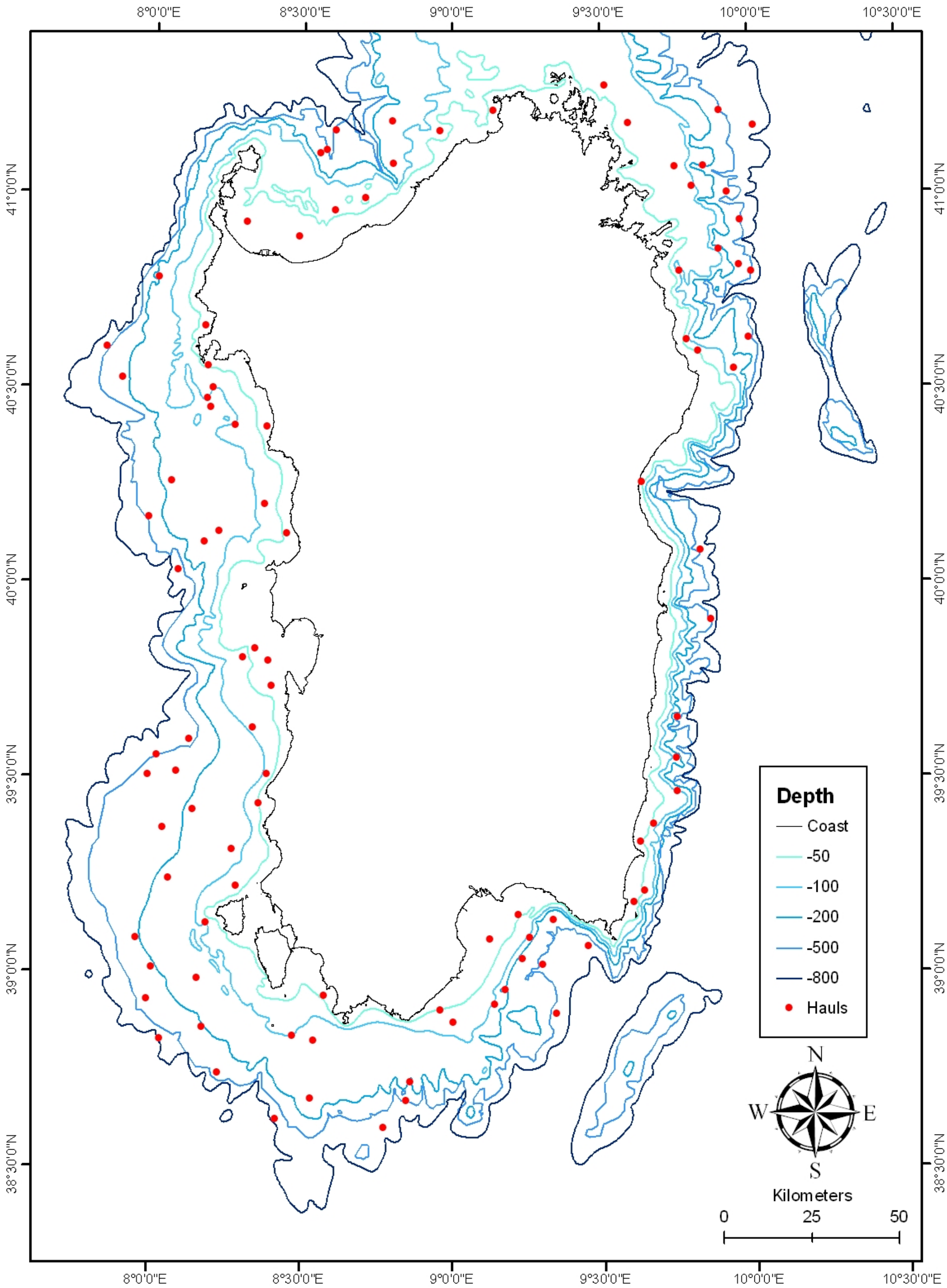
GSA 9/2 (Ligurian Sea/Upper Tyrrhenian Sea)



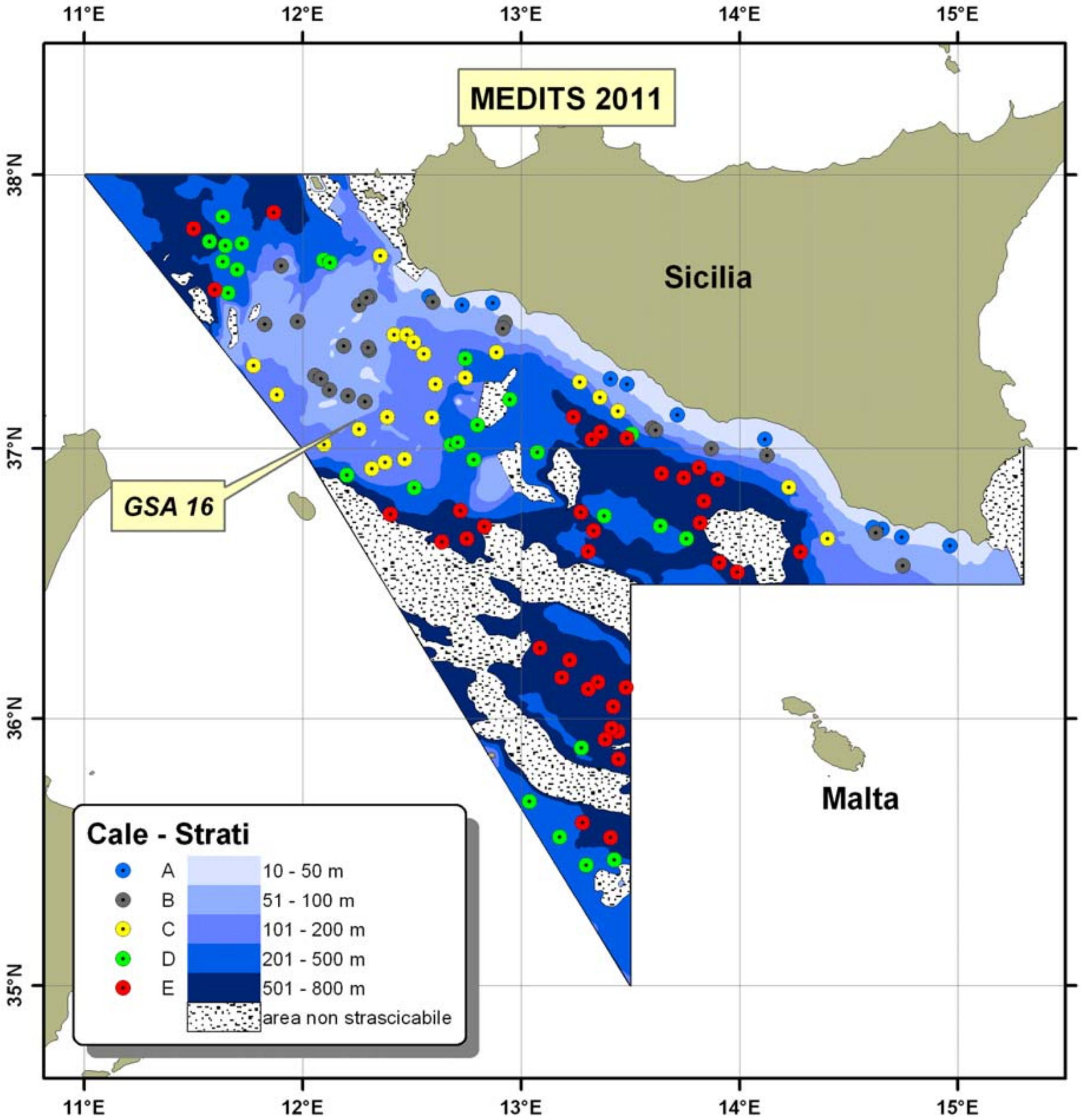
GSA 10 (Lower Tyrrhenian Sea)



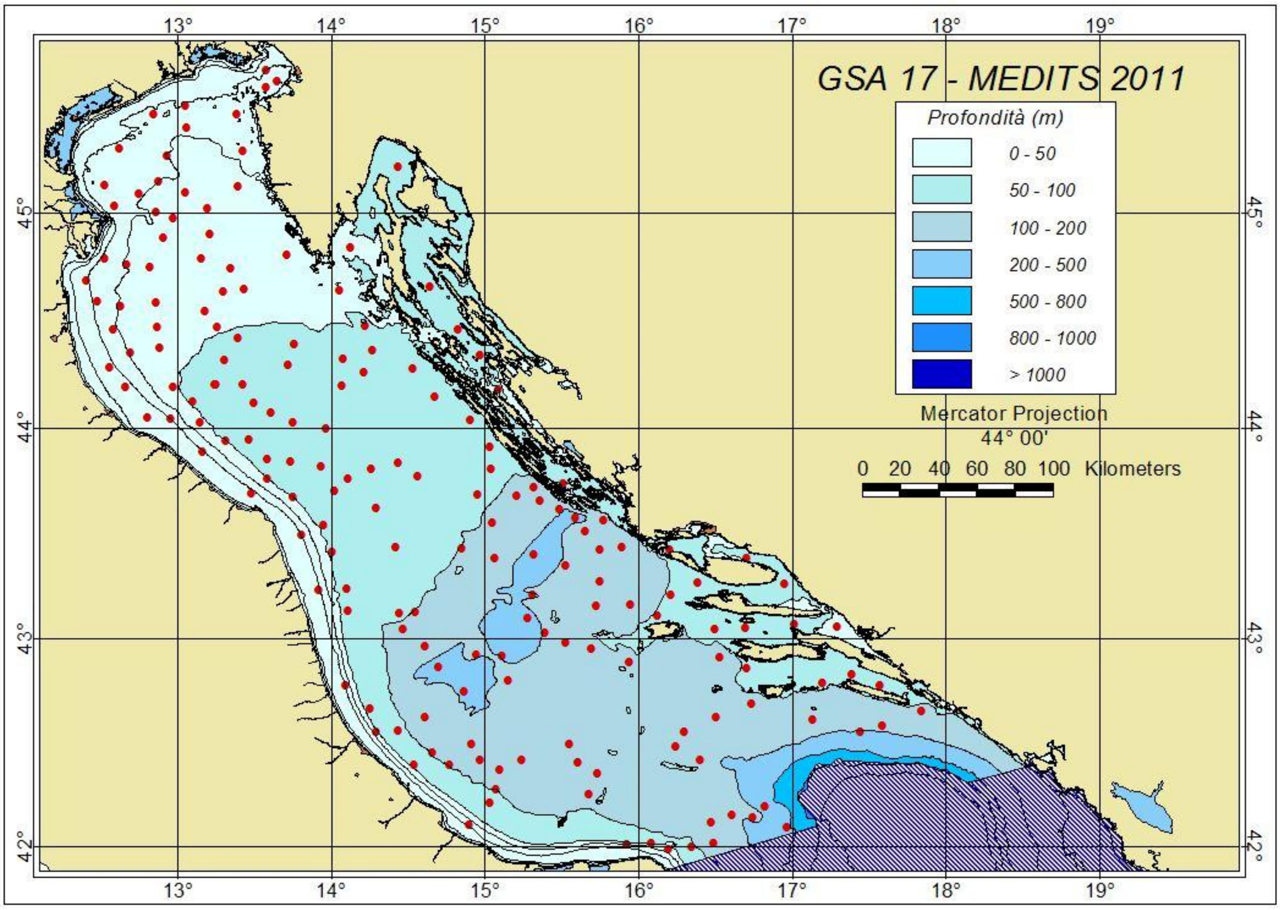
GSA 11 Sardinian seas



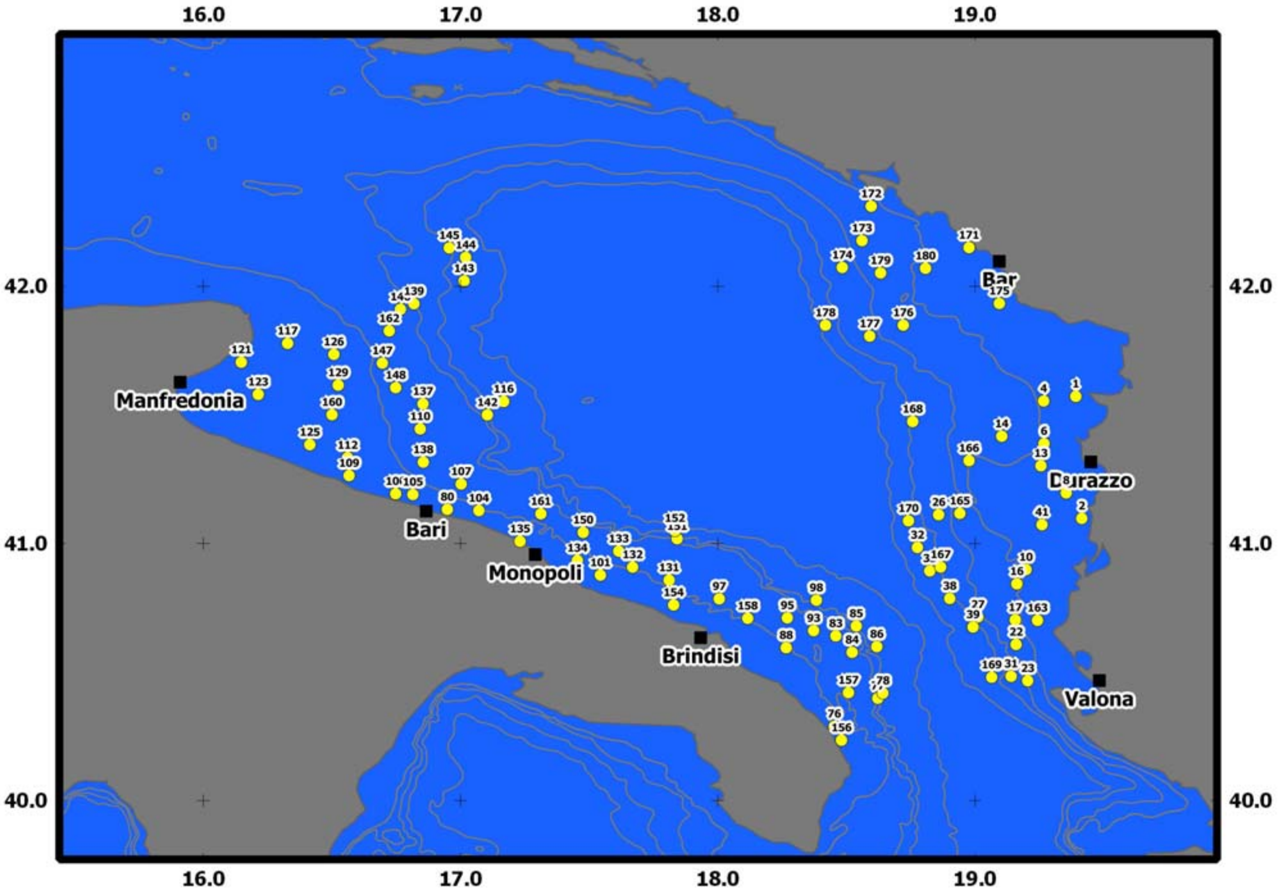
GSA 16 Sicilian Channel



GSA 17 Upper and Middle Adriatic



GSA 18 Lower Adriatic



GSA 19 Western Ionian Sea