

Agenda

Opening of session

Arrangements for the session and adoption of the agenda

Intersessional activities

- Review of the decisions adopted at the thirty-third session of GFCM concerning the management of fisheries
- Report by the Chairperson: overview of SAC activities, including:
 - SCSI/SCSA transversal Working Group on GFCM logbook;
 - SCMEET/SCSA/SCSS Transversal Working Group on Selectivity Improvement and Bycatch Reduction;
 - Sub-Committees meetings including working groups and transversal session.
- Meeting of the Coordinating Meeting of the Sub-Committees (CMSC)
- Major activities of the FAO Regional Projects and initiatives
 - EastMed project
 - MedSudMed project
 - AdriaMed project
 - CopeMedII project
 - MedFisis project
 - GEF
 - ArtfiMed
 - Other projects or initiatives

Salient research activities by member countries

Formulation of advice in the field of fishery management and research

- Conclusions and recommendations of the SCMEET, including follow up on Selectivity improvement and bycatch reduction.
- Conclusions and recommendations of the SCSA.
- Conclusions and recommendations of the SCSS.
- Conclusions and recommendations of the SCSI, including follow up on the GFCM logbook.
- Conclusions of the meeting of the CMSC.

Progress on updating the SAC glossary

Follow up on the issue of climate change and its impact on fisheries

Progress on updating the reference frame of SAC and establishing a strategic workplan for the future

Review of SAC preliminary workplan for 2010 including on small-tuna fisheries and elasmobranchs

Election of the SAC bureau and endorsement of nomination of the Sub-Committees coordinators

Any other matters

Date and place of the next session

Adoption of the report

Ordre du jour

Ouverture et de la session

Organisation de la session et adoption de l'ordre du jour

Activités intersessions

- Examen des décisions adoptées à sa trente-troisième session de la Commission générale des pêches pour la Méditerranée concernant la gestion des pêches
- Rapport du Président: aperçu des activités du CSC, notamment:
 - Groupe de travail du SCSI/SCSA transversal sur le journal de bord de la CGPM
 - Groupe de travail transversal du SCME/SCSA/SCSS sur l'amélioration de la sélectivité et la réduction des prises accessoires
 - Réunions des sous-comités, y compris les groupes de travail et les sessions transversales.
- Réunion de coordination des sous-comités (CMSC)
- Principales activités des projets régionaux de la FAO et initiatives:
 - Projet EastMed
 - Projet MedSudMed
 - Projet AdriaMed
 - Projet CopeMedII
 - Projet MedFisis
 - Projet ArtfiMed
 - Autres projets ou initiatives

Principales activités de recherche entreprises par les États Membres

Formulation de recommandations dans le domaine de la gestion des pêches et de la recherche halieutiques

- Conclusions et recommandations du SCME, y compris suivi de l'amélioration de la sélectivité et de la réduction des prises accessoires.
- Conclusions et recommandations du SCSA.
- Conclusions et recommandations du SCSS.
- Conclusions et recommandations du SCSI, y compris suivi du journal de bord de la CGPM.
- Conclusions de la Réunion de coordination des sous-comités.

Suivi concernant la question des changements climatiques et de leur impact sur les pêcheries

Mise à jour du glossaire du CSC

Progrès de la mise à jour du cadre de référence du CSC et de l'établissement d'un plan de travail stratégique pour l'avenir

Examen du Plan de travail préliminaire du CSC pour 2010

Élection du bureau du CSC et approbation des nominations des coordonnateurs des Sous-Comités

Autres questions

Date et lieu de la prochaine session

Adoption du rapport

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List of documents

GFCM:SAC12/2010/1	Provisional Agenda and Timetable
GFCM:SAC12/2010/2	Review of the activities carried out by the Scientific Advisory Committee (SAC) during the intersessional period
GFCM:SAC12/2010/3	Conclusions and recommendations of the four SAC Sub-Committees (Malaga, Spain, 30 November–3 December 2009)
GFCM:SAC12/2010/4	SAC Preliminary Workplan for 2010
GFCM:SAC12/2010/Inf.1	Provisional list of documents
GFCM:SAC12/2010/Inf.2	Provisional list of participants
GFCM:SAC12/2010/Inf.3	Report of the thirty-third Session of the General Fisheries Commission for the Mediterranean (GFCM) (Tunis, Tunisia, 23–27 March 2009)
GFCM:SAC12/2010/Inf.4	Report of the eleventh Session of the Scientific Advisory Committee (SAC) (Marrakech, Morocco, 1–5 December 2008) (bilingual)
GFCM:SAC12/2010/Inf.5	Report of the tenth session of the Sub-Committee on Marine Environment and Ecosystems (SCMEE) (Malaga, Spain, 30 November–3 December 2009) (available only in English)
GFCM:SAC12/2010/Inf.6	Report of the tenth session of the Sub-Committee on Statistics and Information (SCSI) (Malaga, Spain, 30 November–3 Dec. 2009) (available only in English)
GFCM:SAC12/2010/Inf.7	Report of the tenth session of the Sub-Committee on Economic and Social Sciences (SCESS) (Malaga, Spain, 30 November–3 December 2009) (available only in English)
GFCM:SAC12/2010/Inf.8	Report of the eleventh session of the Sub-Committee on Stock Assessment (SCSA) (Malaga, Spain, 30 November–3 December 2009) (available only in English)
GFCM:SAC12/2010/Inf.9	Report of the Coordinating Meeting of the Sub-Committees (CMSC) (Malaga, Spain, 4 December 2009) (available only in English)
GFCM:SAC12/2010/Inf.10	Salient research activities in Member Countries
GFCM:SAC12/2010/Inf.11	Report of the SCSI/SCSA Transversal Working Group on GFCM Logbook (Rome, 29 June–1 July 2009) (available only in English)
GFCM:SAC12/2010/Inf.12	Report of the SCMEE/SCSA/SCESS Transversal Working Group on Selectivity Improvement and Bycatch Reduction (Tunis, 23–25 September 2009) (available only in English)

GFCM:SAC12/2010/Inf.13	Report of the SCSA Working Group on Stock Assessment of Demersal Species (Ancona, Italy, 19–23 October 2009)
GFCM:SAC12/2010/Inf.14	Report of the SCSA Working Group on Stock Assessment of Small Pelagic Species (Ancona, Italy, 26–30 October 2009)
GFCM:SAC12/2010/Inf.15	Major activities of the FAO regional projects
GFCM:SAC12/2010/Inf.16	Draft glossary of scientific terms of interest for the SAC (available only in English)
GFCM:SAC12/2010/Inf.17	Draft document on updating the SAC reference frame and establishing a medium-term strategic plan for the future (by J.J. Maguire) (available only in English)
GFCM:SAC12/2010/Inf.18	Draft paper: Addressing the issue of climate change and its impact on the Mediterranean fisheries and ecosystems (by M. Camilleri and C. de Young)
GFCM:SAC12/2010/Dma.1	Draft paper on the alien species in the Mediterranean and the Black Sea (by O. Bayram) (available only in English)
GFCM:SAC12/2010/Dma.2	Draft compendium of GFCM decisions (by GFCM Secretariat (available only in English)
GFCM:SAC12/2010/Dma.3	Climate change implications for fisheries and aquaculture: overview of current scientific knowledge. <i>FAO Fisheries and Aquaculture Technical Paper</i> . No. 530. Rome, FAO. 2009. 212p (Cochrane, K., De Young, C., Soto, D. and Bahri, T.) (available only in English)

Liste des documents

CGPM:CSC12/2010/1	Ordre du jour et calendrier provisoires
CGPM:CSC12/2010/2	Examen des activités réalisées par le Comité scientifique consultatif (CSC) durant la période intersessions
CGPM:CSC12/2010/3	Conclusions et recommandations des réunions des quatre Sous-Comités (Malaga, Espagne, 30 novembre-3 décembre 2009)
CGPM:CSC12/2010/4	Programme de travail préliminaire du CSC pour 2010
CGPM:CSC12/2010/Inf.1	Liste provisoire des documents
CGPM:CSC12/2010/Inf.2	Liste provisoire des participants
CGPM:CSC12/2010/Inf.3	Rapport de la trente-troisième session de la Commission générale des pêches pour la Méditerranée (CGPM) (Tunis, Tunisie, 23-27 mars 2009)
CGPM:CSC12/2010/Inf.4	Rapport de la onzième session du Comité scientifique consultatif (CSC) (Marrakech, Maroc, 1-5 décembre 2008) (bilingue)
CGPM:CSC12/2010/Inf.5	Rapport de la dixième session du Sous-Comité de l'environnement et des écosystèmes marins (SCMEE) (Malaga, Espagne, 30 novembre-3 décembre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.6	Rapport de la dixième session du Sous-Comité des statistiques et de l'information (SCSI) (Malaga, Espagne, 30 novembre-3 décembre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.7	Rapport de la dixième session du Sous-Comité des sciences économiques et sociales (SCESS) (Malaga, Espagne, 30 novembre-3 décembre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.8	Rapport de la dixième session du Sous-Comité de l'évaluation des stocks (SCSA) (Malaga, Espagne, 30 novembre-3 décembre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.9	Rapport de la réunion de coordination des Sous-Comités (CMSC) (Malaga, Espagne, 4 décembre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.10	Principales activités de recherche des États Membres
CGPM:CSC12/2010/Inf.11	Rapport du Groupe de travail transversal du SCSI/SCSA sur le journal de bord de la CGPM (Rome, 29 juin-1 juillet 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.12	Rapport du Groupe de travail transversal du SCMEE/SCSA/SCESS sur l'amélioration de la sélectivité et la réduction des prises accessoires (Tunis, Tunisie, 23-25 septembre 2009) (en anglais uniquement)

CGPM:CSC12/2010/Inf.13	Rapport du Groupe de travail du SCSA sur l'évaluation des stocks des espèces démersales (Ancône, Italie, 19-23 octobre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.14	Rapport du Groupe de travail du SCSA sur l'évaluation des petits pélagiques (Ancône, Italie, 26-30 octobre 2009) (en anglais uniquement)
CGPM:CSC12/2010/Inf.15	Principales activités des Projets régionaux
CGPM:CSC12/2010/Inf.16	Projet de glossaire de termes scientifiques ayant un intérêt pour le CSC (en anglais uniquement)
CGPM:CSC12/2010/Inf.17	Projet de document sur la mise à jour du cadre de référence du CSC et sur la mise en place d'un plan stratégique de moyen terme pour le futur (par J.J. Maguire) (en anglais uniquement)
CGPM:CSC12/2010/Inf.18	Projet de document: S'intéresser à la question du changement climatique et à ses impacts sur les pêcheries et écosystèmes de la Méditerranée (par M. Camilleri et C. de Young)
CGPM:CSC12/2010/Dma.1	Projet de document sur les espèces non indigènes en Méditerranée et en mer Noire (par O. Bayram) (en anglais uniquement)
CGPM:CSC12/2010/Dma.2	Projet de compendium des décisions de la CGPM (par le Secrétariat de la CGPM) (en anglais uniquement)
CGPM:CSC12/2010/Dma.3	Les implications du changement climatique sur les pêches et l'aquaculture: vue d'ensemble des connaissances scientifiques actuelles. <i>Document technique de la FAO sur les pêches et l'aquaculture</i> . No. 530. Rome, FAO. 2009. 212p. (Cochrane, K., De Young, C., Soto, D. and Bahri, T.) (en anglais uniquement).

APPENDIX/ANNEXE D

Opening Address of his Excellency Milutin Simović Minister of Agriculture, Forestry and Water management of Montenegro/Discours d'ouverture de son excellence Milutin Simović ministre de l'agriculture, des forêts et de la gestion de l'eau du Monténégro
(In English only/en anglais seulement)

Honourable Chairman,
 Honourable Executive Secretary a.i. of GFCM,
 Distinguished Delegates,
 Ladies and gentlemen,

I am honoured to have the opportunity to address you today on behalf of the Government of Montenegro and the Ministry of Agriculture, Forestry and Water Management, and to welcome you here in Budva – the ancient Mediterranean town and the metropolis of Montenegro's tourism. I would also like to express my satisfaction with the fact that Montenegro has been honoured with hosting the institutions of such importance as well as the delegations of 23 friendly Mediterranean countries at the twelfth Session of the Scientific Advisory Committee of the General Fisheries Commission for the Mediterranean. I would like to remind you that Montenegro, as an independent state, has become a member of the GFCM at the end of January 2008, with significant support received from the Secretariat of the organization and in particular of our great friend, Mr Alain Bonzon who, unfortunately, is no longer with us.

In accordance with the requirements of the integration processes and development of a sustainable and efficient sector that would be competitive at the wider market, Montenegro has started the process of redefining the fisheries policy through development of new legal framework and implementation of its main strategic guidelines. With great effort invested by the Ministry of Agriculture, the support from the EU, scientific and technical support from the Institute of Marine Biology, as well as with full and efficient involvement of professional fishermen in the decision-making process and development of legislation, we are trying to raise the fishery to an enviable level, creating a policy of a sustainable and responsible use of living marine resources.

In August 2009, the Parliament of Montenegro passed the new Law on Marine Fisheries and Mariculture, which is, to a large extent, harmonized with the EU legislation and the GFCM recommendations. We are aware that, though small, our sea has significant fishery resources; the healthy food resources that we would like to make available to our citizens, taking seriously into account the fact that the resources are very sensitive and that they are not inexhaustible. All other Mediterranean countries share the same goal and for that reason we all should be focused on the same task – the task of preserving these resources for the future generations. This goal is attainable only if we share the resources, knowledge and technology – that is the only way to achieve our joint progress. Only the concrete and joint actions of ours can preserve and contribute to the development of the progress and coastal communities.

I would like to use this opportunity to underline that we owe particular gratitude to the FAO AdriaMed Project that has, in the best way possible, provided administrative and scientific support to our staff and researchers in order to tackle the issues related to the fisheries of the Adriatic and of the Mediterranean in general, to gain the knowledge, exchange experiences with their colleagues and to jointly create the policy of sustainable use of the so-called shared stocks.

We are facing major challenges. Considering the global climatic changes, industrial pollution, fast growth of the population, the living sea and ocean resources are our major opportunity and we have to identify the ways to use them responsibly and on a long term.

We are all expected to take an active part in the process of making decisions based on all important aspects of the biological, technological, economic and social development of the Mediterranean basin. We cannot accomplish all that on our own. We need to be partners. It should be a challenge for all of us and I do hope that we would respond to it adequately and that we will implement all the decisions efficiently.

I believe and I am certain that this, twelfth Session of the Scientific Advisory Committee of the General Fisheries Commission for the Mediterranean (GFCM) would give its full contribution to solving the issue of sustainable fisheries.

Ladies and gentlemen,

I wish you success in your work in the next couple of days and I do hope that you will take with you a good impression about Montenegro and that you will come to visit us again. As your hosts, we will make every effort to make it so.

**Summary table of national reports/Tableau de résumé des rapports nationaux
(In English only/en anglais uniquement)**

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Algeria (not updated)	▪ Fleet: about 4 000 vessels ▪ Production: 150 000 tonnes	▪ Demersal species at critical level of exploitation ▪ Pelagic species exploited at optimum level	▪ National statistical scheme covers landing sites ▪ A new database is being established	▪ Main research projects are related to: – Biology, fisheries studies, estimation of exploitable biomass of major demersal, pelagic and large pelagic species – Processing and value-adding techniques for fish products. – Marketing of fishery products; – The coastal environment; – Physico-chemical characteristics and quality of the environment	▪ Study on the household consumption of fisheries products was completed	▪ Quality and classification of aquaculture zones ▪ Study on the environment of the Bay of Bou-Ismaïl ▪ Research on biological indicators for pollutants	▪ Seasonal closure for highly migratory species ▪ Establishment of minimum marketing size for exploited species	▪ Development of artisanal fisheries ▪ The effect of the economic crisis on the development of fisheries activities in the Mediterranean ▪ Comparative study on fish prices in Mediterranean countries
Bulgaria (not updated)	▪ Fishing activities exclusively in the Black Sea ▪ Fleet: 2 537 vessels ▪ Production of main species: 7 830 tonnes	▪ Exploitation biomass of turbot in the north region of the Black Sea is: 1. 938.18 tonnes for autumn and winter period of 2007 2. 1 251.55 tonnes for spring season 2008	▪ National Agency of Fisheries and Aquaculture (NAFA) is responsible for registers of: licences for commercial and recreational fisheries, persons engaged in fishfarming, fishing vessels, fish markets/	▪ Trawl surveys since 2005			▪ The Fisheries and Aquaculture Act (FAA) was adopted in 2001 (amended in 2006 and 2008) and determines the management, exploitation, and	

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
		- Exploitation biomass of turbot in the southern region of the Black Sea is: 958.38 tonnes for autumn and winter period of 2007 714.63 tonnes for spring season 2008 - The stock of sprat is not overexploited (current biomass is 32 718.246 tonnes)	centres, registered customers, organisations of fish producers, trade and processing, licences for catching fish for scientific purposes				conservation of the fish resources and the trade with fish and other aquatic organisms	
Cyprus (updated 2010)	- Fleet (2008): 540 vessels - Production (2008): 1 827 tonnes; - Total working days in 2008: 100.270 - Fleet operates in GSA 25 and 26 and international waters of the central and eastern Mediterranean	- Monitoring of demersal and large pelagic species in GSA 25, as part of the Cyprus National Fisheries Data Collection Programme, performed under the framework of the Community Data Collection Framework - In 2009 the status of <i>Mullus barbatus</i> in GSA 25 was	The Cyprus National Database for the collection and storage of data in the fisheries sector is comprised of the following databases: i) the Data Collection Network System (Data Transmission), ii) the Central Database and iii) the Fishing Vessel Fleet Register (FVR)	- National Fisheries Data Collection Programme: biological sampling for the evaluation of length and age composition of landings, the estimation of biological parameters (growth, maturity) for a number of species, discards sampling from the bottom otter trawls, Medits trawl survey - Project to collect information on the alien species <i>Lagocephalus sceleratus</i> - EU Oceanographic research projects	Socio-economic surveys through: Inshore Fishery Production Reports, Logbooks, the Fishing Licences and the Sales Notes, interviews	Projects on: marine ecology and biodiversity, anthropogenic effects on the marine ecosystem, marine invasive alien species, eutrophication, endangered aquatic species, MPAs, monitoring of environmental parameters, Ecological Quality Status of coastal waters, ecology and monitoring of the	- The National and Community legislation provide for a number of management measures for the regulation of the Cyprus fisheries - During the intersessional period amendments of the National Fisheries Law were	None

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
		evaluated using VPA – pseudocohort and Y/R analysis; stock is overexploited	▪ A new database developed to address the incorporation of biological and economic information, the creation of an administrative mechanism and data transmission of the fisheries data, became fully operational in 2009			environmental parameters of the Larnaca Salt Lake complex and Akrotiri wetlands, implementation of the Water framework Directive and Habitats Directive	made, specifically for extending the implementation of the VMS in vessels less than 15m, and for removing national seasonal closures of the swordfish fishery ▪ Furthermore, the ICCAT recommendation on the prohibition of fishing for swordfish from 1 October to 30 November 2009, endorsed by GFCM, was implemented	

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Croatia (not updated)	- Activities in GSAs 17 and 18: mainly trawling and small passive gears. - External waters and fishing grounds: both trawling and purse seines, with bottom-set longlines - Fleet: 3 710 units - Production: 37 387 tonnes	Demersal and small pelagic resources: situation relatively stable and positive for some stocks in comparison with the previous years	- National fisheries statistics system in Croatia based on logbook data - Harmonization of statistical data gathering in Croatia with the EU Fisheries Data Collection Regulation (EC 1543/2000) - Setting up of an EU-compliant fleet register	- Scientific efforts are centered around the national monitoring activities - The Institute of Oceanography and Fisheries (IOF) Split participates in the MEDITS survey as well as in the AdriaMed-initiated activities; - Specific research projects are taking place, funded directly by the Ministry of Science and Technology	- Study on market organization possibilities - Socio-economical study on certain aspects of fisheries	- Ecosystem research undertaken in the framework of the project “JADRAN” - Environmental monitoring of pelagic ecosystem in the eastern part of GSA 17 within the framework of the PELMON Project - Numerous projects on environmental impact of fish farming, impact assessments of activities	- The main resource management measures include minimum landing sizes, mesh sizes, closed seasons for numerous species, temporal and spatial restrictions for gears - GFCM recommendations were considered in the national legislation	- Validation and interpretation of the results obtained through different scientific methods of stock assessment - Development of indicators and reference points - Research on status of resources in the Jabuka pit - Identification of criteria for shared stocks
Egypt (Updated 2010)	- Fleet (motorized and sail): 4 509 vessels - Production (2008): 88 882 tonnes	<i>Mullus barbatus</i> resource in the Egyptian Mediterranean waters is overexploited with spawner biomass-per-recruit at 26 percent of pristine levels - For <i>Pagellus erythrinus</i> and <i>Lithognathus mormyrus</i> yield per recruit estimate suggested reduction of the	- GAFRD collects fisheries data by two methods (whole survey and sampling): This system not computerized yet and depends on registering every fishing unit in a special Logbook - The statistics collection procedures have recently been upgraded and monitoring, control and surveillance	- Seasonal survey for demersal fishes along the Mediterranean coast of Egypt was conducted during 2008 - Studies on <i>Euthynnus alletteratus</i>, <i>Diplodus</i> spp. and <i>Eutrigla gurnardus</i>	Limited data is available for socio-economic evaluation of the fishing sector	In 2008 a study was conducted on the effect of sewage on the Egyptian Mediterranean coast	- The fisheries of Egypt are essentially unregulated - Specific management regulations are limited to (a) a closed season for all fishing methods from 1 May to 30 June and (b) a freeze on the issue of additional fishing vessel	- Training and upgrading of the fisheries workforce - Training on the various aspects of fisheries management administration and technology - Management of small-scale fisheries within territorial waters - New technological and commercial alternatives

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
		fishing effort by 29.34% of current effort and 20 cm as optimum fishing length for both species ▪ <i>Solea aegyptiaca</i> is suffering from high fishing pressure ▪ <i>Boops boops</i> : optimum level of fishing effort without causing recruitment overfishing ▪ <i>Siganus rivulatus</i>: overexploited	activities have been improved				licences ▪ Where they exist, minimum mesh sizes for marine fisheries are often set at very small sizes	▪ Assimilation of scientific and technological knowledge for the sustainable development of fisheries ▪ Environmental, economic and social integration of fisheries sector

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
France (not updated)	▪Not available	▪Anchovy: increase in biomass ▪Sardine: return of biomass to lower values (83 000 tonnes) in comparison to 2003–2005 (231 000 tonnes); ▪Demersal resources: 2006 analyses show an increase in the number of populations with small-sized individuals in the Gulf of Lion and in general in the north-western Mediterranean	▪Regular sampling in landing ports; ▪Sampling of commercial fleet landings (measurement of biological parameters) within the framework of the Data Collection Regulation of the EU	▪Programme MEDITS, evaluation of the status of the resources and the impact of fisheries on ecosystems; ▪MERLUMED Projet: chemical contamination of the trophic web of hake in the Gulf of Lions ▪CAFE Projet: analysis of the relationship between capacity and fishing mortality in the hake trawl fishery ▪PELMED Projet: Direct assessment of stocks of small pelagic species in the Gulf of Lions ▪SARDONE Projet: Studies on anchovy and sardine stocks in the north-western Mediterranean, Adriatic and Aegean	▪None	▪Research on fishing techniques and selectivity	▪None	▪None

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Greece (not updated)	▪Fleet: 17 580 vessels ▪Production: 93 639 tonnes	▪GSA 22: Anchovy stock is fully exploited ▪The stock of sardine is fully exploited or overexploited	▪Fishery statistical data are collected by Administration under various Ministries ▪Fisheries data are also collected in the framework of the Greek National Fisheries Data Collection Programme ▪National fisheries data collection programme 2002–2006: in application of regulation EC 1543/2000	▪Assessment of small pelagic species (SARDONE) ▪Capacity fishing mortality and effort (CAFÉ) ▪A framework for fleet and area based fisheries management (acronym AFRAME) ▪Operational Evaluation Tools for Fisheries Management Options (EFIMAS) ▪Fisheries independent survey based operational assessment tools (FISBOAT) ▪NECESSITY: research in fishing gear technology, selectivity and by-catch reduction ▪PRONE: Precautionary risk methodology in fisheries ▪MADE: Mitigating adverse ecological impacts of open ocean fisheries ▪FISH: Framework contract for the promotion of the dissemination of Scientific information ▪CoralFISH: Assessment of the interactions between corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem	▪None	▪MOFI: Monk Seal and Fisheries: mitigating the conflict in Greek seas ▪Critical interactions between species and their implications for a precautionary fisheries management in a variable environment ▪Developing Indicators of Environmental Performance of the Common Fisheries Policy (INDECO) ▪MEECE: Marine Ecosystem Evolution in a Changing Environment	▪In addition to EC fisheries management measures, Greece has adopted several national measures for managing fishing effort: minimum landing sizes, fishing gear restrictions, seasonal and local closures, distance from coast and depth restrictions ▪Regarding large pelagics, such as bluefin tuna, albacore and swordfish, fishery is regulating by issuing special permits valid for one year ▪Seasonal closure for swordfish during October to January, with	▪None

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
				based management in the deep waters of Europe and beyond ▪ Status of ray population in the Mediterranean Sea ▪ Dynamic behavior of longline and static nets in deep waters. Experimental trial in the region of Southern Aegean ▪ Dynamic behavior of long line and static nets in deep waters. Experimental trial in the region of Southern Aegean ▪ MONOFILAMENT: Investigation of the possibility to use more selective gears targeting the same fish catch. ▪ Fish Population Structure and Traceability ▪ Management and control of terms of access of trawlers in the region of Northern Aegean ▪ Management and control of terms of access of trawlers in nursery of the species <i>Merluccius merluccius</i> in Thracian Sea			a minimum fish size of 120 cm	

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Italy (not updated)	▪Fleet: 13 583 ▪Production: 267 368 tonnes	▪The available information is included in the report of the Stock Assessment Sub-Committee	▪The production of Italian fisheries statistics is carried out by Irepa on behalf of the Ministry of agriculture and forestry policies and is included in the ISTAT National Statistic Programme ▪The Fleet Register of the General Directorate for Fisheries and Aquaculture of the Ministry of Agriculture and Forestry Policies, managed on the basis of EU Re. 1438/2003 and 1277/2007 ▪Statistics are produced on the basis of a sample of national fishing fleet, yearly updated, and their reliability is guaranteed by specific validation software	▪Fisheries data have been collected in the framework of the Italian National Data Collection Program, which is supported both from the Italian Government and the EU (Regulation 1543/00, 1639/01 and 1581/04) ▪Research activities on marine living resources have been carried out in Italy by several bodies, both private and public, among which are mainly involved University Departments and Research Institutes	▪None	▪Spatio-temporal identification of nursery area in the Italian seas ▪Guidelines and technical measures for the management of Fishery Restricted Areas ▪Fishery and marine pollution: studies on the effects of pollutants on marine fishery	▪ Technical measures were adopted in order to ensure exploitation and conservation of living aquatic resources or the protection of marine ecosystems ▪ Fishing activities (i.e. trawlers) have been temporarily banned ▪ Biological stop changed among regions in order to improve the marine environment and to avoid to the depletion of certain stocks	▪Suggestions include research / studies on: population dynamics and genetics, data collection methods, EAF, oceanography – fisheries interactions, revision of GSA boundaries, stock-recruitment interactions, spawning areas and essential fish habitats, echo surveys, climate change effects on fisheries, spatial management measures

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Lebanon (updated 2010)	▪ Fleet :2 662 vessels ▪ Vessels operate in GSA 27	▪ Not available	▪ University of Balamand (IOE-UOB) has been collecting commercial fisheries data in the Mohafaza (district) of North Lebanon and Akkar on a regular basis since August 2005 ▪ Data is then entered into a software application FLOUCA – Fish Landing Operational Utility for Catch Assessment	▪ Biology and ecology of Lessepsian species along the Lebanese coast ▪ Biology of two species of shores crabs along the rocky coast ▪ Freshwater fish diversity in inland waters of Lebanon	▪ Not available	▪ Current scientific research focuses on Lessepsian species and ecosystem management	▪ Minister Decision 20/1 on 1 January, 2009, Defining the types of marine fishing gear	▪ None

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Libya Arab Jamahiriya (not updated)	▪Fleet: 4 026 vessels ▪Production: 33 106 tonnes	▪ Biological and morphometric characteristics of at least seven commercially exploited fish species, namely: <i>Mullus</i> spp., <i>P. erythrinus</i> and <i>M. sermatus</i>; <i>Balistes carolinensis</i>, <i>Lithognathus mormyrus</i>, <i>Merluccius marlusius</i> and <i>Scorpaena</i> sp. are being studied during the intersessional period	▪None	▪Biological and morphometric characteristics of at least seven commercially exploited fish ▪Small pelagic species caught by Lampara ▪Biological data on large pelagic species ▪MedSudMed project ▪Genotype and distribution of the commercially exploited exotic <i>Siganus</i> sp.	▪The data of the socio-economic study based on a regional standardized questionnaire covering all fishing gears and boats, according to size-classes of the artisanal fleet which has been collected last year	▪Monitoring of exotic and/or alien marine species ▪Turtle (<i>Caretta caretta</i>) nesting sites.	▪Trawl fishing for demersal fish species was prohibited during the period June through July 2008 ▪Fishing for the Dolphin fish (<i>Coryphaena hippurus</i>) is prohibited by law from 1 January to 14 August of each year ▪ Fishing for sponges in Libyan waters is being forbidden from 1 November to 30 May of each year	▪Regional project aimed to assess the stocks and distribution of Elasmobranch fish species ought to be attempted ▪Bycatch regional assessment is also worth studying by SAC
Malta (not updated)	▪Fleet: 2 685 vessels ▪Total production of main species: 952.48 tonnes	▪Stocks of <i>Thunnus thynnus</i> and <i>Xiphas gladius</i> are overexploited ▪The stock of <i>Merluccius merluccius</i> is overexploited ▪Trawled areas within the 25 nautical mile	▪Malta collects data on catch and effort for each segment by species, by quarter and by geographical origin ▪Catch figures are based on exhaustive data reported in	▪National programme to routinely collect fleet, catch, effort, economic, biological, resources abundance and processing industry data (EC1639/2001 and 1581/2004) ▪FAO MedSudMed Project ▪EU projects on dynamics and stock	▪Routine economic survey for fisheries as part of the EC Data Collection Programme	▪FAO MedSudMed project ▪EU funded LIFE project on the impacts of fisheries practices on sea bird populations	▪Malta implemented the management measures in line with EU regulations and according to the recommendations by	▪None

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
		zone the stocks are overexploited however in non-trawled areas within the zone the stocks are in a virgin state	logbooks (for vessels over 10 m LOA), by sampling the small scale fishery in ports (for vessels under 10 m LOA) and on sales notes from the official fish market ▪The MaltaStat database and information system is developing into an integrated system.	status			ICCAT and GFCM	
Montenegro (updated 2010)	▪Fleet: 213 vessels operating in GSA 18 ▪As from 2010, 10 more trawlers and 20 purse seiners	▪10 stations sampled during trawl survey. collecting population dynamic parameters of commercially important species	▪New fisheries information system developed: Fleet register and catch logbook ▪Other information systems to be developed are related to: VMS, sales notes and EU reporting	▪Activities within the framework of ADRIAMED ▪Biological samples of eighteen economically important species were taken from all vessels in three fishing ports ▪Data collecting of population parameters for juvenile anchovy and sardine from small scale fishery ▪New technology for mussel (European mussels) <i>Mytilus galloprovincialis</i> growing	▪Collection of socioeconomic data of the marine fishery will be implemented in due course	▪ADRICOSM STAR Project - influence of river Bojana inputs on coastal marine environment ▪Studies on the impact of invasive algal species planned ▪Work on the management plan for the first marine protected zone in the Montenegro is ongoing	▪The Law on Marine Fishery and Mariculture was adopted by Parliament in August 2009 ▪The document “National program of Fisheries Development (NFP) from 2009 to 2013” was adopted by the Government of Montenegro in February	▪None

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
							2009	
Morocco (not updated)	▪Fleet: 3 355 vessels ▪Production: 21 190 tonnes	▪<i>Mullus barbatus</i>: overexploited ▪<i>Merluccius merluccius</i>: a reduction in fishing mortality and an increase spawning stock biomass ▪Small pelagic species: fully exploited ▪Stock assessment of large pelagic tunas is carried out at regional level by ICCAT	▪ Three Institutions (INRH, ONP and MPM) are involved in the national statistical system which comprises biological, statistical and fishing effort data collection	▪Study on the selectivity of trawls with a 40-mm mesh size ▪Survey of red coral to estimate its abundance ▪Monitoring and assessment of exploited resources ▪Monitoring of trawling, longlining, sardine fishery and artisanal fishery ▪Monitoring of fisheries of large pelagic species ▪Parasitology of highly valuable species ▪Study on marine biodiversity	▪Socio-economic evaluation and analysis of artisanal fisheries in the Jebha – Larache region ▪Monitoring of the establishment of socio-economic indicators of fisheries in the Nador lagoon ▪Characterization of artisanal fisheries in the zone between Jebha and Saïdia	▪Biodiversity studies ▪ Monitoring of threats to cetaceans and marine turtles	▪Measures based on effort control and protection of juveniles ▪Seasonal closure for bluefin tuna and swordfish	▪Selectivity of fishing gears ▪Biological study on small tunas ▪Stock structures ▪Interactions between fisheries and cetaceans ▪Study on spawning and nursery areas

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Slovenia (updated 2010)	▪ Fleet (in GSA 17): 184 vessels ▪ production: 687 tonnes	▪ Sardine (<i>Sardina pilchardus</i>) : overexploited ▪ Anchovy (<i>Engraulis encrasicolus</i>): fully exploited	▪ Information system InfoRib contains several modules. The modules are stored in a centralized database in the Ministry of Agriculture, Forestry and Food ▪ Currently the IS is undergoing improvements for cross-checking and automatically correcting logbook data ▪ Improvements in the IS reporting system underway and plans also to include Task 1 reporting. ▪ VMS fully operational since June 2009	▪ National monitoring of pelagic fish resources ▪ SOLEMON project (Evaluation of the stock of <i>Solea vulgaris</i> in the Central and Northern Adriatic and estimation of the impact of different gear) ▪ MEDITS trawl survey programme (since 1996). ▪ MEDIAS echosurvey (since 2007)	▪ Three studies on the basis of Council Regulation (EC) No 199/2008 and of Appendix VI to the Commission Decision: (1) Module of evaluation of the fishing sector; (2) module of the evaluation of the economic situation of the aquaculture sector and (3) module of the evaluation of the economic situation of the processing industry	▪ None	▪ Management measures in the Slovenian seas follow the Council Regulation (EC) No 1976/2006 which contains principles and rules relating to the conservation and management of the living resources of the seas ▪ Ministry of Agriculture, Forestry and Food on the basis of the expert opinion of Fisheries Research Institute of Slovenia temporary stopped issuing new fishing permits for trawlers ▪ In May 2008 Slovenia adopted the regulation on monitoring of catches and selling of fisheries products	▪ Support for the 2nd MEDITS trawl survey (i.e. bi-annual) ▪ Further development of the SOLEMON project within the framework of the EC Data Collection Regulation

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Spain (not updated)	▪Fleet: Operates mainly in GSA 1, GSA 2, GSA 5, GSA 6. 3 826 vessels ▪Production of main species: 67 694 tonnes	▪GSA 01 – <i>Engraulis encrasicolus</i> has a low biomass level – <i>Sardina pilchardus</i>: fully exploited ▪GSA 05 – <i>Aristeus antennatus</i>:s fully exploited – <i>Nephrops norvegicus</i> fully exploited – <i>Mullus surmuletus</i>: fully exploited – <i>Mullus barbatus</i> is moderately exploited to fully exploited – <i>Merluccius merluccius</i>: fully exploited at above a sustainable level ▪GSA 06 –<i>Parapenaeus longirostris</i>: depleted – <i>Mullus barbatus</i> is overexploited – <i>Merluccius merluccius</i>: overexploited – <i>Engraulis encrasicolus</i>: low biomass	▪Data of landings by species, commercial categories, prices, fishery vessel identification, fishing grounds, landing ports and dates are recorded on a daily basis ▪IEO collects length and biological data of main commercial species (Reg. (EC) 1543/2000 and Reg (EC) 1639/2001) ▪Data is stored and managed by the SIRENO database developed by the IEO ▪Secretariat of Maritime Fisheries is developing a global tool to compile the different sources of information in a common database	▪IEO ensures the scientific monitoring of the fisheries of the main commercial species at the principal landing sites ▪Studies on growth and reproduction of demersal and small pelagic objective species are routinely carried out ▪<i>Octopus vulgaris</i> artisanal fishery: fishing effort and on the selectivity of the employed gears ▪In 2006, several tagging surveys on lobsters (<i>Palinurus elephas</i>) were carried out in two Marine Protected Areas ▪IEO research project on the Red Seabream (<i>Pagellus bogaraveo</i>) fishery in waters off the Strait of Gibraltar ▪Mediterranean tuna research program of the IEO ▪A National Research project on BFT biology and migration patterns has been initiated in 2007-2008 - International bottom trawl survey MEDITS ▪Research activities on Albacore (<i>Thunnus alalunga</i>, ALB) were	▪None	▪Quarterly surveys monitoring oceanographic conditions off Málaga (GSA 1), Murcia (GSA 6) and Mallorca (GSA 5) ▪Research activities are related to Marine Protected Areas ▪In each of the 7 Spanish Mediterranean Marine Reserves, several studies are carried out on fisheries enhancement, biodiversity (mapping of sea grasses, maërl and others), effect of climatic change ▪Studies on interactions between birds, cetaceans and fisheries	▪The Spanish ministerial order ORDEN APA/254/20 08, of 31 January, that establishes an integral management plan for fisheries resource conservation in the Mediterranean n is currently enforced ▪The General Secretariat for the Sea keeps on managing the seven Spanish Mediterranean n Marine Reserves existing at present, with enforcement through guards on the spot, follow up, awareness programs, etc.	▪The impact of environmental changes (climatic variability, increase of gelatinous plankton, etc.) on the early life stages of exploited species ▪Studies on the influence of environmental factors affecting catchability and fleet efficiency ▪The study of survival of specimens in the escapements through the trawl meshes

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
		– <i>Sardina pilchardus</i> : high fishing mortality		developed on board recreational and long-line fishery vessels targeting ALB - Small tuna species, mainly Atlantic bonito (<i>Sarda sarda</i>), Atlantic little tuna (<i>Euthynnus alletteratus</i>), and bullet tuna (<i>Auxis rochei</i>) were monitored and sampled in tuna traps - Biological sampling of <i>Xiphias gladius</i>				
Tunisia (updated 2010)	- Fleet: about 11 800 vessels - Production: about 100 578 tonnes - Fishing operations in GSAs 12, 13 and 14		- The national Data collection system is managed by the “Direction générale de la pêche et de l’aquaculture” - Improvements to the system developed in 1995 are foreseen in the coming years - Data collection is through logbooks and port inspections - Databases for biological and environmental data are in place	- Assessment of marine resources in Tunisian waters (1996-2002); - Research programmes ESREB, ESSATEL and ERACHID (2002–2006) - BIHARE Project: Biology of pelagic and demersal exploited species (2007–2010) - LAMPAROS Projet: Eggs and larvae, abundance and migration of pelagic species (2007-2010); - CHANCHOUL Projet: Selective pelagic trawling (2007–2010)	- Socio-economic indicators of the fisheries of the Gulf of Gabès and of the north and east regions of the country - Use of bioeconomics models for the king prawn fishery in the Gulf of Gabes - Study on the profitability of vessels targeting small pelagic species	- Bycatch reduction of marine turtles through changes in the bait of surface longline fisheries - Interaction of marine turtles with entangling nets - Catches of elasmobranchs in trawlers operating in the Gulf of Gabes - Interaction of <i>Tursiops truncatus</i> with fishing nets around the Kerkennah Islands - Inventory of <i>Posidonia</i> meadows and benthos in the Gulf of Gabes	Trawling ban in GSA 14 between 1 July 2009 and 30 September 2009	

Member country	Description of the fisheries	Status of stocks of priority species	Status of the statistics and information system	Status of research in progress	Status of the social sciences studies in progress	Marine environmental studies in progress	National management measures	Research suggestions for consideration by SAC
Turkey (updated 2010)	▪ Fleet: 17 816 units ▪ Production: 453 113 tonnes in 2008 ▪ Fishing operations in GSAs 22, 24, 28, 29	▪ Scientific stock assessment studies are currently not in place in Turkey	▪ An integrated web-based Fisheries Information System (FIS) has been developed and is able to collect, process, transmit and disseminate data ▪ MARA is planning to shift the paper-based logbook into the electronic one; ▪ A VMS has been started in 2008 with the vessels involved into bluefin tuna fishing (about 200 vessels) ▪ As from 2010, fishing vessels over 15 metres (about 1 250 vessels) will be under an obligation to have Automated Identification System (AIS) installed		▪ None	▪ Ongoing project (partly funded by GEF) entitled: <i>Strengthening Protected Area Network of Turkey</i>	▪ New technical regulation on fishing and landing of anchovy has been issued	▪ None

LOG SHEET No

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Country
3-alpha code 7 digit number
(unique reference to the logsheet)



GFCM Logbook



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► VESSEL(S)
DETAILS⁽¹⁾

	NAME ⁽²⁾	RADIO CALL SIGN (if any) ^(2a)	EXTERNAL IDENT. ^(2a)	GFCM UNIQUE IDENT. ^(2a)	No CREW ⁽²⁾	FUEL CONS. ⁽¹⁰⁾
1						
2						

► MASTER(S) DETAILS⁽²⁾

	NAME ^(2a)	ADDRESS ^(2a)
1		
2		

► TRIP AND LANDING DATES⁽²⁾Year^(2a):

2	0		
---	---	--	--

	DAY	MONTH	HOUR	LOCATION
Departure ^(2a)				From:
Return ^(2a)				To:
Landing ^(2a)				At:

► GEAR USED⁽²⁾

	GEAR CODE ^(2a)	DIMENSION 1 ^(2a)	DIMENSION 2 ^(2a)	MESH/HOOK SIZE ^(2a)	CHARACTERISTICS ^(2a)
1					
2					
3					

► TRANSHIPMENT⁽²⁾*Details of recipient vessel*

NAME ^(2a)	RADIO CALL SIGN (if any) ^(2a)	EXTERNAL IDENTIFICATION ^(2a)	NATIONALITY ^(2a)	DATE OF TRANSHIPMENT ^(2a)
				day month

► FISHING ACTIVITY⁽²⁾

FISHING DATE ^(2a)	GEAR				Area	
	GEAR CODE ^(2a)	GEAR UNITS ^(2a)	Number of fishing operations ^(2a)	Fishing duration ^(2a)	GSA ^(2a)	GFCM Statistical Grid* ^(2a)

*optional

► CATCH INFORMATION⁽²⁾*Mark the box inside the cell if target species*

T C O A T T A C H L H ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	Species name ^(2a)	D T O T A L R O S ^(2a)
	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	Code ^(2a)	

► COMMENTS⁽¹⁰⁾
► LANDING DECLARATION⁽²⁾

WHL																
G																
GG																
FIL																
HD																
Transshipment ^(2a) ►																

AGENT ⁽²⁾	Name and address ^(2a)	
	Signature ^(2a)	

GFCM Logbook fields

Ref.	FIELD NAME	CODE	DESCRIPTION
1	Vessel details		
1a	Name	-	Name of vessel(s).
1b	Radio call sign (if any)	-	Name of radio call sign if present on the vessel(s).
1c	External identification	-	National registration number or other identification displayed on hull of vessel(s).
1d	GFCM unique identifier	ISO Flag code + 9 digits	Unique vessel identifier for the life of the vessel, composed of the ISO code of the flag country + 9 digits.
1e	Number of crew	-	Number of crew onboard vessel(s) during fishing trip.
1f	Fuel consumption	-	Fuel consumed during the fishing trip.
2	Master details		
2a	Name	-	Name of master(s).
2b	Address	-	Address of master(s).
3	Trip and landing dates		
3a	Year	-	Year of fishing trip and landing.
3b	Departure	-	Day, month, hour and port of departure.
3c	Return	-	Day, month, hour and port of return.
3d	Landing	-	Day, month and port of landing (if different from 3c).
4	Gear used		
4a	Gear code	ISSCFG	Code of the gear(s) used during the fishing trip according to the International Standard Statistical Classification of Fishing Gear (ISSCFG).
4b	Dimension 1	-	First dimension of gear used: <i>Trawls: warp length; Nets: length of one set; Longlines: length of one set; Dredge: mouth width</i>
4c	Dimension 2	-	Second dimension of gear used: <i>Trawls: bridle length; Nets: height; Longlines: number of hooks per line</i>
4d	Mesh/Hook size	-	Mesh size of net (codend for trawls). Hook size.
4e	Characteristics	-	Specific characteristics of gear used: <i>Mesh type: diamond / square; Hook type: circle / J-type; Name of selective device: specify; Other: describe</i>
5	Transshipment (if applicable)		
5a	Name	-	Name of recipient vessel.
5b	Radio call sign (if any)	-	Radio call sign of recipient vessel (if present).
5c	External identification	-	National registration number or other identification displayed on hull of recipient vessel.
5d	Nationality	-	Nationality of recipient vessel.
5e	Date of transshipment	-	Day and month of the transshipment.
6	Fishing activity		
6a	Fishing date	-	Date (day and month) of fishing activity.
6b	Gear code	ISSCFG	Code of the gear (as reported in 4a) according to the International Standard Statistical Classification of Fishing Gear (ISSCFG).
6c	Gear units	-	Total gear units deployed: <i>Number of Traps (NTRP), Number of Hooks (NHKS), Length of Net (m) (LNET), Number of trawl nets (NTRN), Number of FADs fished (NFAD).</i>
6d	Number of fishing operations	-	Number of fishing sets, hauls or encircling operations (per FAD in the case of an FAD fishery)
6e	Fishing duration	-	Fishing duration in hours (soaking time for passive gears).
6f	GSA	GFCM GSA number (1-30)	The GFCM Geographical Sub-Area (<i>Resolution GFCM/33/2009/2</i>) in which the fishing activity took place (see Annex E).
6g	GFCM Statistical Grid (SG)	GFCM SG code	GFCM grid 30" x 30" in which the fishing activity took place (see Annex E)
7	Catch information		
7a	Total catch	-	Total weight of the entire catch (all species) of fishing operation to be reported in kg
7b	Species name	-	Common name of the species caught.
	Species code	ASFIS 3-Alpha code	ASFIS 3-Alpha code of each species specified in 7b (see Annex D).
	Catch by species	-	Weight of catch by species to be reported in kg.
7c	Total discards	-	Total weight of discards (all species) to be reported in kg.
8	Landing declaration		
8a	Presentation of landings	-	Landing weight in kg by species and type of presentation: <i>Whole (WHL), Gutted (G), Gilled and Gutted (GG), Filleted (F), Headed (HD).</i>

8b	Transhipment	-	Weight of transhipped catch by species to be reported in kg.
9	Agent		
9a	Name and address	-	Name and address of agent (if applicable).
9b	Signature	-	Signature of agent (if applicable).
10	Comments		

APPENDIX/ANNEXE G

SAC list of priority species (2010)/Liste des espèces prioritaires du CSC (2010)

Scientific name	3 Alpha Code	English common name
<i>Acipenser gueldenstaedtii</i>	APG	Danube sturgeon (=Osetr)
<i>Acipenser stellatus</i>	APE	Starry sturgeon
<i>Acipenser sturio</i>	APU	Sturgeon
<i>Anguilla anguilla</i>	ELE	European eel
<i>Aristaeomorpha foliacea</i>	ARS	Giant red shrimp
<i>Aristeus antennatus</i>	ARA	Blue and red shrimp
<i>Auxis rochei</i>	BLT	Bullet tuna
<i>Boops boops</i>	BOG	Bogue
<i>Coryphaena hippurus</i>	DOL	Common dolphinfish
<i>Eledone cirrosa</i>	EOI	Horned octopus
<i>Eledone moschata</i>	EDT	Musky octopus
<i>Engraulis encrasicolus</i>	ANE	European anchovy
<i>Euthynnus alletteratus</i>	LTA	Little tunny(=Atl.black skipj)
<i>Huso huso</i>	HUH	Beluga
<i>Isurus oxyrinchus</i>	SMA	Shortfin mako
<i>Katsuwonus pelamis</i>	SKJ	Skipjack tuna
<i>Lamna nasus</i>	POR	Porbeagle
<i>Loligo vulgaris</i>	SQR	European squid
<i>Lophius budegassa</i>	ANK	Blackbellied angler
<i>Lophius piscatorius</i>	MON	Angler(=Monk)
<i>Merlangius merlangus</i>	WHG	Whiting
<i>Merluccius merluccius</i>	HKE	European hake
<i>Micromesistius poutassou</i>	WHB	Blue whiting(=Poutassou)
<i>Mullus barbatus</i>	MUT	Red mullet
<i>Mullus surmuletus</i>	MUR	Surmullet
<i>Nephrops norvegicus</i>	NEP	Norway lobster
<i>Octopus vulgaris</i>	OCC	Common octopus
<i>Orcynopsis unicolor</i>	BOP	Plain bonito
<i>Pagellus bogaraveo</i>	SBR	Blackspot(=red) seabream
<i>Pagellus erythrinus</i>	PAC	Common pandora
<i>Palinurus elephas</i>	SLO	Common spiny lobster
<i>Palinurus mauritanicus</i>	PSL	Pink spiny lobster
<i>Parapenaeus longirostris</i>	DPS	Deepwater rose shrimp
<i>Pecten jacobaeus</i>*	SJA	Great Mediterranean scallop
<i>Pomatomus saltatrix</i>	BLU	Bluefish
<i>Prionace glauca</i>	BSH	Blue shark
<i>Psetta maxima</i>	TUR	Turbot
<i>Raja alba</i>**	RJA	White skate
<i>Sarda sarda</i>	BON	Atlantic bonito
<i>Sardina pilchardus</i>	PIL	European pilchard(=Sardine)
<i>Sardinella aurita</i>	SAA	Round sardinella
<i>Scomber scombrus</i>	MAC	Atlantic mackerel
<i>Sepia officinalis</i>	CTC	Common cuttlefish
<i>Solea solea</i>	SOL	Common sole
<i>Sprattus sprattus</i>	SPR	European sprat
<i>Squatina squatina</i>**	AGN	Angelshark
<i>Thunnus alalunga</i>	ALB	Albacore

Scientific name	3 Alpha Code	English common name
<i>Thunnus thynnus</i>	BFT	Atlantic bluefin tuna
<i>Trachurus mediterraneus</i>	HMM	Mediterranean horse mackerel
<i>Trachurus trachurus</i>	HOM	Atlantic horse mackerel
<i>Xiphias gladius</i>	SWO	Swordfish

* proposed by SAC-SCSA (Malaga 2009)

** from RAC-SPA Annexes as proposed by SAC-SCMEE (Malaga 2009)

Draft terms of reference for selected meetings

A – Workshop on Data Collection Methods Applied to All Segments of the Fleet and their Coherence with the Requirements of the GFCM Task 1

The terms of reference proposed are :

- a) to review the different methodologies and data collection programmes in place within GFCM Member countries;
- b) to review the problems arising from the submission of Task 1 data;
- c) for each of the problems raised in the point above, to exchange experience from other countries on the same field;
- d) to agree on methods to address the problems raised;
- e) to anticipate problems related to the submission of Task 1.3.

B – Proposal of a short working programme to improve the knowledge and assess the state of the red coral in the Mediterranean

The terms of reference proposed are :

- a) to undertake an inventory of red corals including a review of the available information of each country on biology, fishery and regulations;
- b) to gather the existing scientific literature on the distribution of the red coral, protection patterns, management plans when adopted and restocking; and
- c) to find synergies with RAC/SPA activities and other initiatives on this issue.

C – Workshop on Algal and Jelly Fish Blooming

The workshop will aim to:

- a) provide updated information on the cases of algal and jelly fish blooming reported in the Mediterranean and Black Sea;
- b) review the different mitigating management measures/approaches taken in relation to algal and jelly fish bloomings;
- c) review the effects of algal and jelly fish blooming on fisheries;
- d) review methodologies and data collection programmes developed in relation to bloomings;
- e) develop a scientific framework in support of management instruments towards eliminating and/or mitigating the bloomings;
- f) review the human health-related problems caused or associated with the bloomings.

Projet de termes de référence pour certaines réunions

A – Atelier sur les méthodes de collecte de données appliquées aux segments des flottilles et leur cohérence avec les besoins de la Tâche 1 de la CGPM

Les termes de références proposés sont les suivants:

- a) revoir les différentes méthodologies et programmes de collecte de données en place dans les Pays membres de la CGPM;
- b) revoir les problèmes découlant de la transmission de donnée de la Tâche 1;
- c) pour chacun des problèmes soulevés aux points ci-dessus, partager l'expérience des autres pays dans ce domaine;
- d) convenir des méthodes pour aborder les problèmes soulevés;
- e) anticiper les problèmes concernant la transmission de la Tâche 1.3.

B – Proposition d'un court programme de travail pour améliorer la connaissance et évaluer le statut du corail rouge en Méditerranée

Les termes de références proposés sont les suivants:

- a) entreprendre un inventaire du corail rouge, y compris une revue des informations disponibles pour chaque pays en matière de biologie, pêche et réglementations;
- b) rassembler la littérature scientifique existante concernant la distribution du corail rouge, les modèles de protection, les plans de gestion lorsque adoptés et le repeuplement; et
- c) trouver des synergies avec les activités du RAC/SPA et les autres initiatives à ce sujet.

C – Atelier sur la prolifération des algues et des méduses

Cet atelier visera à:

- a) fournir des informations mises à jour sur les cas de prolifération d'algues et de méduses reportés en Méditerranée et en mer Noire;
- b) revoir les différentes mesures/approches de gestion palliatives prises en relation avec la prolifération d'algues et de méduses;
- c) revoir les effets de la prolifération d'algues et de méduses sur les pêcheries;
- d) revoir les programmes de méthodologies et de collecte de données développés en relation avec les proliférations;
- e) développer un cadre scientifique en soutien aux instruments de gestion visant à éliminer et/ou pallier les proliférations; et
- f) revoir les problèmes liés à la santé de l'homme causés ou associés aux phénomènes de prolifération.

APPENDIX I

Proposal of a medium working programme to improve knowledge and asses the status of elasmobranches in the Mediterranean and the Black Sea

Background

Many species of elasmobranches are living in the Mediterranean (about 47 sharks and 38 rays). They are mostly caught as bycatch of commercial fisheries targeting bony fishes; but usually all specimens are marketed. Few fisheries are targeting sharks. The landing of elasmobranches increased from 10 000 to 25 000 tonnes between 1970 and 1985, and then slowly decreased to 15 000 tons in 2002.

There is evidence that the elasmobranches of the Mediterranean are declining in abundance, diversity and range due to the intense fishing activity. Their biological characteristics (low fecundity, late maturity and slow growth rates) make also elasmobranches vulnerable to fishing pressure. Some species are already threatened. In addition, there is a lack of aggregated knowledge on the biology and fishery of elasmobranches in many parts of the Mediterranean.

Taking into account the vulnerability of elasmobranches fishes and in frame of a protection and stock management strategy of this group, many action plans were elaborated on this issue (FAO IPOA-Shark, the Action Plan for the conservation of the cartilaginous fishes in the Mediterranean (UNEP-RAC/SPA, 2003), the EC Action Plan for the Conservation and Management of Sharks). The GFCM addressed the issue by organizing a transversal working group on bycatch/incidental catches (Italy, September 2008) and a transversal workshop on selectivity improvement and bycatch reduction (Tunisia, September 2009) where major concern for elasmobranches were well manifest.

These last meetings concluded that there is a lack of knowledge on the biology and fishery of elasmobranches in many parts of the Mediterranean and strongly encouraged more studies on population dynamics (population size, structure and demographics) on species of conservation concern (also in terms of fishery management) in parallel to mitigation measure in those cases where protected species are involved.

The above mentioned workshop held in Tunisia suggested to setup a medium term working program to identify and fill gaps in the current knowledge that exist in elasmobranches fisheries, in order to assess and manage the Mediterranean stocks. With a view of elaborating this regional program, it is proposed to carry the following activities:

1. Undertake an inventory of elasmobranches including a review of the available information on taxonomy and species distribution in the area as well as on the status of these species in the Mediterranean and the Black Sea. A working document updating this information will be prepared.
2. Gather and compile data and information on fishing activities targeting elasmobranches including the potential impact on habitat Loss and Degradation as well as on bycatch of elasmobranches species, in particular those of concern. The main Indicative data shown below is needed in relation to the fisheries and the biology of species following a standard protocol:
 - description of the fisheries,
 - catch estimates/bycatch,
 - catch by unit effort,
 - fishing areas,
 - sex and sizes composition of the catches,

- reproductive biology,
 - age and growth,
 - feeding habits.
3. Update the available information on studies on mitigation measures for bycatch reduction. It is proposed to test mitigation measures and technologies that have been developed outside the Mediterranean and that are currently used and employed by the regional fisheries management organizations.
 4. Gather the available information on critical habitats (nursery grounds) and species distribution, mainly for those at high risk needing special management or protection measures.
 5. Organize an expert meeting in 2010 (3–4 days) to assess and analyse the outcome from the above mentioned activities (1 to 4) and identify appropriate methodologies and approaches to assess the stocks of selected commercial species and required action for the following years. This meeting will also consider the possibility to establish a regional network of expert dealing with this issue.
 6. Organize in 2010 a training course on age reading and growth parameters of the main elasmobranch species. The available guidelines and other tools will also be used as documentation for the training.
 7. Organize a meeting in 2011 on stock assessment (5–7 days) of selected elasmobranch species with particular attention to the species listed on annex 2 and 3 of SPA/BD protocol of Barcelona convention.
 8. Finalize a GFCM publication on the results obtained through this medium term.

Scheduling

Actions 1 to 4:	May to October 2010
Action 5:	November–December 2010
Follow up (if any) of the action 5:	May–September 2010
Action 6:	2010 (date to be defined)
Action 7:	September–October 2011
Action 8:	February 2012

Requirements

- a. Designation of a general coordinator¹ of the mediumterm working programme with the following terms of reference:
 - coordination of activities aiming to collect data and information as well as preparing working documents for the expert meetings including the elaboration of required terms of reference;
 - organization of the expert meetings (agenda, identification of the key speakers, finalization of the report, etc.);
 - organization of the training course
 - elaboration of the programme,
 - facilitation of the training,
 - elaboration of the report of the training course.

¹ **Qualifications:** Advanced university degree in marine sciences; extensive experience in the field of elasmobranchs biology, ecology and population dynamic and familiarity with the GFCM's structures and procedures.

- b. Designation of an expert in the field of stock assessment of sharks to prepare and moderate the relevant expert meeting.

Budget estimates

General coordinator and consultancy:	24 000 dollars
Travels/coordinators and experts:	40 000 dollars
Training (5 days, 20 trainees):	30 000 dollars
Expert in the field of stock assessment:	12 000 dollars
Reports and publication:	14 000 dollars
<u>Total:</u>	<u>120 000 dollars</u>

The SC requested the SAC for identifying sources of funding.

Proposition de programme de travail à moyen terme pour améliorer la connaissance des élasmobranches et évaluer l'état de leurs stocks en Méditerranée et dans la mer Noire

Généralités

De nombreuses espèces d'élasmobranches vivent en Méditerranée (environ 47 requins et 38 raies). Elles sont le plus souvent capturées dans le cadre de pêches commerciales visant des poissons osseux; néanmoins, tous les spécimens sont généralement commercialisés. Seules quelques pêcheries ciblent les requins. Les débarquements d'élasmobranches ont augmenté entre 1970 et 1985, passant de 10 000 à 25 000 tonnes, pour retomber doucement à 15 000 tonnes en 2002.

Il apparaît clairement que les élasmobranches de la Méditerranée sont en déclin quant à leur abondance, leur diversité et leur aire de répartition géographique, par suite d'une intense activité de pêche. Leurs caractéristiques biologiques (basse fécondité, maturité tardive et faible taux de croissance) les rend vulnérables à la pression de pêche. Certaines espèces sont déjà menacées. On constate, par ailleurs, un manque de connaissances agrégées sur la biologie et la pêche des élasmobranches dans plusieurs zones de la Méditerranée.

Face à la vulnérabilité des élasmobranches et dans le cadre d'une stratégie de protection et de gestion des stocks de ce groupe, divers plans de gestion ont été mis en place, notamment le PAI-Requins de la FAO, le Plan d'action pour la conservation des poissons cartilagineux en Méditerranée (PNUE-CAR/ASP, 2003), et le Plan d'action de la CE pour la conservation et la gestion des requins. La CGPM s'est occupée de la question en organisant un groupe de travail transversal sur les prises accessoires/accidentelles (Italie, septembre 2008) et un atelier transversal sur l'amélioration de la sélectivité et la réduction des prises accessoires (Tunisie, septembre 2009), dans le cadre desquels de vives préoccupations ont été exprimées concernant les élasmobranches.

Ces dernières réunions ont conclu que les connaissances relatives à la biologie des élasmobranches et à leur pêche dans plusieurs zones de la Méditerranée étaient insuffisantes, et il a été fortement recommandé d'entreprendre de nouvelles études sur la dynamique des populations (taille des populations, structure et démographie) pour les espèces dont la conservation était menacée (y compris en termes de gestion des pêches) en association avec des mesures d'atténuation lorsqu'il s'agissait d'espèces protégées.

L'atelier organisé en Tunisie a suggéré la mise en place d'un programme de travail à moyen terme pour identifier et combler les lacunes dans la connaissance actuelle des pêches d'élasmobranches, et pouvoir ainsi évaluer et gérer les stocks de la Méditerranée. Pour la mise au point de ce programme régional, les activités suivantes ont été proposées:

1. Dresser un inventaire des élasmobranches, en procédant notamment à un examen des informations disponibles sur la taxonomie, la répartition géographique des espèces et leur état en Méditerranée et dans la mer Noire. Un document de travail contenant une mise à jour de ces informations sera élaboré;
2. Recueillir et compiler des informations et données sur les activités de pêche ciblant les élasmobranches, y compris leur incidence potentielle sur la perte et la dégradation des habitats, et les prises accessoires des espèces d'élasmobranches, notamment de celles qui suscitent des préoccupations. Les principales données indicatives ci-après concernant les pêches et la biologie des espèces, sont à recueillir selon un protocole normalisé:
 - description des pêches,

- estimations des captures/prises accessoires,
 - captures par unité d'effort,
 - zones de pêche,
 - composition des captures par sexe et par taille,
 - biologie de la reproduction,
 - âge et croissance,
 - comportement alimentaire.
3. Mettre à jour les informations disponibles relatives aux études sur les mesures de réduction des prises accessoires. Il est proposé de mettre l'essai les mesures et les techniques de réduction mises au point hors Méditerranée et qui sont actuellement adoptées et utilisées par les Organisations régionales de gestion des pêches.
 4. Recueillir les informations disponibles sur les habitats critiques (lieux de reproduction) et la répartition géographique des espèces à haut risque nécessitant des mesures de gestion ou de protection spéciales.
 5. Organiser en 2010 une réunion d'experts (3 à 4 jours) pour évaluer et analyser les résultats des activités indiquées ci-dessus (1 à 4), et identifier des méthodes et des approches appropriées pour l'évaluation des stocks de certaines espèces commerciales, ainsi que les mesures à prendre pour les années suivantes. Cette réunion étudiera également la mise en place éventuelle d'un réseau régional d'experts s'occupant de ces questions.
 6. Organiser en 2010 un cours de formation sur la détermination de l'âge et les paramètres de croissance des principales espèces d'élaémobranches. Les directives et autres outils disponibles seront également utilisés à des fins de documentation dans le cadre de cette formation.
 7. Organiser en 2011 une réunion (5 à 7 jours) sur l'évaluation des stocks de certaines espèces d'élaémobranches, notamment de celles inscrites aux annexes 2 et 3 du protocole ASP/BD à la Convention de Barcelone.

Mettre au point une publication de la CGPM sur les résultats obtenus dans le cadre de ce programme de travail à moyen terme.

Calendrier

Activités 1 à 4	mai à octobre 2010
Activité 5:	novembre-décembre 2010
Suite donnée à l'activité 5 (le cas échéant):	mai-septembre 2010
Activité 6:	2010 (date à définir)
Activité 7:	septembre-octobre 2011
Activité 8:	février 2012

Conditions requises

- a. Désignation d'un coordonnateur général¹ du programme de travail à moyen terme, dont le mandat sera le suivant:

¹ **Qualifications requises:** Diplôme universitaire de niveau supérieur en sciences de la mer; vaste expérience dans le domaine de la biologie, de l'écologie et de la dynamique des populations d'élaémobranches, et bonne connaissance des structures et des procédures de la CGPM.

- coordination des activités de collecte de données et d'informations, et de préparation des documents de travail pour les réunions d'experts, y compris l'établissement des termes de référence connexes;
 - organisation des réunions d'experts (ordre du jour, identification des principaux intervenants, mise au point finale du rapport, etc.);
 - organisation du cours de formation:
 - élaboration du programme,
 - animation de la formation,
 - établissement du rapport du cours de formation.
- b. Désignation d'un spécialiste de l'évaluation des stocks de requins, chargé de préparer et de superviser la réunion d'experts correspondante.

Prévisions budgétaires

Coordonnateur général et consultants	24 000 dollars
Voyages /coordonnateur et experts:	40 000 dollars
Formation (5 jours, 20 participants):	30 000 dollars
Spécialiste de l'évaluation des stocks:	12 000 dollars
Rapports et publication	14 000 dollars
Total:	<u>120 000 dollars</u>

Le Sous-Comité a demandé au CSC d'identifier des sources de financement.

APPENDIX J**Proposal related to a population dynamics expert position within GFCM Secretariat****Duties and responsibilities**

Under the overall guidance of the GFCM Executive Secretary and the general supervision of the Deputy Executive Secretary, to be responsible for the development and maintenance of procedures for quality assurance of stock assessments and related scientific advice to the Commission.

Specific duties include:

- To establish review mechanisms to benefit both the individual scientists involved in the GFCM/ Scientific Advisory Committee (SAC) Sub-Committee and specialized Working groups on stock assessments and to foster consistency in approach and assumptions made for various assessments of the Mediterranean fisheries as well as in the scientific advice provided to the Commission.
- To guide and conduct performance evaluations of the available assessment models, clarify the implicit assumptions, establish rules and guidelines on their appropriate use and normalize the methods, and maintain at the Secretariat, the software accepted for use by the various Working Groups. This guidance would, in turn, be available to all scientists interested in the assessment work carried out and would give more transparency to the results of assessment analysis.
- Active participation in the Secretariat scientific work in the following areas:
 - the maintenance and dissemination of appropriate and approved software for analyses of GFCM fish stocks and maintenance and archives of previous assessments data and analytical methodology;
 - participation in multidisciplinary teams and committees to develop quality control procedures for GFCM assessment methodologies and databases;
 - the review, in collaboration with the GFCM biostatistician, of fishery data collection proposals and advice on their technical feasibility and the soundness of proposed institutional arrangements;
 - the contribution to the organization and improvement of the data management system of the GFCM data base and preparation of data for stock assessments, including the development of specific software to facilitate such work;
 - the review of the limitation of the quality of data and their variability;
 - assistance to scientific groups in drafting and/or finalizing their reports;
 - maintain close collaboration with regional projects for the stock assessment carried out at sub-regional level;
 - regularly update the stock assessment forms and similar tools;
 - perform other related duties as described.

Qualifications and experience – Essential

- High degree in Fisheries, or a closely related field.
- Various years of progressively responsible experience in quantitative analysis of fisheries stock assessments and the development of management advice based upon scientific studies, including the planning and implementation of review processes, substantial experience in the development of procedures for fisheries assessment, and the generation of management advice.
- Familiarity with fisheries biology, environmental and assessment science methodologies including statistical/mathematical modelling methods in which population models are statistically matched to fisheries/biological/environmental observational data.
- Demonstrated ability to make judicious choices as to the appropriateness of models based upon available data experience in utilizing fishery databases for use in assessments.
- Experience in leading and participating in multidisciplinary teams for fisheries biology and assessment.
- Demonstrated experience in computer modelling technology as it pertains to fisheries assessment and environmental databases.
- Demonstrated capacity to conceptualize and quantify scientific problems associated with fisheries assessment and management and to communicate these orally and in writing.
- Ability to work well under pressure and to work effectively and harmoniously with people of different national and cultural backgrounds.
- Excellent working knowledge of English with limited knowledge of French.

Qualifications and experience – Desirable

- A high degree in fisheries or a related field.
- Experience in developing new mathematical modelling techniques for fisheries stock assessment.
- Experience in designing and developing fishery databases for multiple users.

Proposition concernant un poste d'expert en dynamique des populations auprès du Secrétariat de la CGPM

Obligations et responsabilités

Sous la direction générale du Secrétaire exécutif de la CGPM, l'expert en dynamique des populations est responsable du développement et de la maintenance des procédures d'assurance de la qualité des avis scientifiques fournis à la Commission.

Ses responsabilités spécifiques sont les suivantes:

- Établir des mécanismes d'examen pour le bénéfice soit des scientifiques travaillant au sein de la CGPM/Sous-comités du Comité Scientifique Consultatif (CSC) soit des groupes de travail spécialisés dans l'évaluation des stocks et promouvoir la cohérence dans les démarches et les postulats formulés pour diverses évaluations des pêches en méditerranée, ainsi que dans l'avis scientifique fourni à la Commission.
- Orienter et réaliser des évaluations des performances des modèles d'évaluation disponibles, clarifier les postulats implicites, établir des règles et des directives sur leur utilisation appropriée et normaliser les méthodes, et maintenir au Secrétariat le logiciel dont l'emploi a été convenu au sein des divers groupes de travail. Cette orientation serait, à son tour, disponible pour tous les scientifiques qui s'intéressent aux travaux d'évaluation menés aux réunions des groupes de travail et donnerait plus de transparence aux résultats des analyses d'évaluation.
- Participation active aux travaux scientifiques du Secrétariat dans les domaines suivants:
 - maintenance et dissémination du logiciel approprié et approuvé pour les analyses des stocks de poissons de la CGPM et maintenance et archivage des données d'évaluation antérieures et méthodologie analytique;
 - participation à des équipes et comités pluridisciplinaires afin d'établir des procédures de contrôle de la qualité pour les méthodologies d'évaluation et les bases de données de la CGPM;
 - examen des propositions en matière de collecte des données halieutiques et formulation d'avis sur leur faisabilité technique et la solidité des accords institutionnels proposés en collaboration avec les Biostatisticiens de la CGPM.
 - organisation et amélioration du système de gestion des données de la base de données de la CGPM et préparation des données pour les évaluations de stocks, y compris le développement d'un logiciel spécifique afin de faciliter ce travail;
 - examen des limitations de la qualité des données et de leur variabilité;
 - aide aux groupes scientifiques dans la rédaction et/ou finalisation de leurs rapports;
 - maintenir une collaboration serrée avec les projets régionaux sur l'évaluation de stocks à un niveau sous-régional;
 - mise à jour régulière des formulaires d'évaluation de stock et outils similaires;
 - réalisation de toute autre tâche apparentée en tant que de besoin.

Qualifications et expérience indispensables

- Licence et maîtrise en sciences halieutiques ou domaine y relatif.
- Plusieurs années d'expérience et de responsabilité en matière d'analyse quantitative d'évaluations des stocks halieutiques et développement d'avis de gestion basés sur les études scientifiques, y compris la planification et la mise en œuvre des processus d'évaluation, expérience considérable dans le développement des procédures d'évaluation des pêcheries, et formulation d'avis de gestion.
- Connaissances de la biologie halieutique et des méthodologies des sciences d'évaluation et de l'environnement, y compris les méthodes de modélisation statistique/mathématique dans lesquelles les modèles de population sont statistiquement assortis aux données d'observation halieutiques/biologiques/environnementales.
- Capacité prouvée de faire des choix judicieux en ce qui concerne le caractère approprié des modèles en se fondant sur les données disponibles et l'expérience en matière d'utilisation des bases de données des pêcheries aux fins de leur emploi dans les évaluations.
- Expérience en matière de direction et de participation à des équipes pluridisciplinaires aux fins de la biologie et de l'évaluation des pêcheries.
- Expérience démontrée en matière de technologie de modélisation informatique liée aux bases de données environnementales et d'évaluation des pêcheries.
- Aptitude démontrée à concevoir et quantifier les problèmes scientifiques associés à l'évaluation et la gestion des pêcheries et à les communiquer oralement et par écrit.
- Capacité à travailler sous pression et à travailler efficacement et en harmonie avec des gens de différentes origines nationales et culturelles.
- Excellente maîtrise de l'anglais et maîtrise limitée du français.

Qualifications et expérience souhaitables

- Doctorat en sciences halieutiques ou domaine y afférant.
- Expérience en matière de développement de nouvelles techniques de modélisations mathématiques pour l'évaluation des stocks des pêcheries.
- Expérience dans la conception et le développement des bases de données sur les pêches pour de multiples utilisateurs.

APPENDIX K

Proposal related to the scientific editor position within GFCM Secretariat

Duties and responsibilities

The Commission has four official languages (Arabic, English, French and Spanish), and its publications are produced mostly in English and French. Since 2009, the Arabic is also a working language but only for the annual session of the Commission. Under the overall guidance of GFCM's Executive Secretary, the Editor's main responsibility will be to oversee the preparation of all the publications produced by GFCM. These consist of:

- Annual Reports of the Commission. These contain Commission meeting proceedings, reports of technical subsidiary bodies such as the Scientific Advisory Committee (SAC) and the Committee on Aquaculture (CAQ), National Reports prepared by Commission Members, and administrative reports.
- The “GFCM Studies and Reviews publications”: This is a GFCM publication written by scientists associated with GFCM and by Consultants.
- Documents and books produced by Secretariat staff. These generally contain summaries of statistics or other relevant information produced in support of the various Working Groups. The Secretariat produces about 25 working documents annually, including the Compendium of GFCM's Decisions.

The position also includes responsibility for follow up on the notifications of decisions to the Members.

Other duties may be assigned by the Executive Secretary if the need arises.

Specific duties will include:

- Provide editorial review of meeting reports.
- Provide editorial review of scientific documents.
- Liaise directly with authors regarding requirements and revisions to documents.
- Strengthen quality-control mechanisms for scientific publications.
- Review and maintain layout standards for the publications.
- Coordinate the adoption of meeting reports by correspondence.
- Coordinate peer-review of selected scientific documents.
- Coordinate the translation of publications and meeting documents.
- Coordinate the copying and distribution of documents.
- Maintain a bibliographic database of GFCM publications and documents, including the preparation of inputs to regional databases.
- Prepare XML versions of the summaries of stock status reports for web-based publishing in the Fishery Resources Monitoring System (FIGIS-FIRMS).
- Maintain current publications in electronic form.
- Develop efficient electronic publication options for GFCM documents.
- Perform the tasks related to maintaining and elevating the quality of the Commission's publications, as assigned.

Essential qualifications

- High degree of XXXX with fluent knowledge of Marine Science.
- Excellent written and verbal communication skills.

- Experience with editing and collation of publications and/or reports according to FAO/GFCM style.
- Experience with word-processing software, formatting and layout tools.
- Familiarity with the terminology used in fisheries research and management.
- Excellent working knowledge of English and French.
- Ability to work under pressure and to work effectively and harmoniously with people of different national and cultural backgrounds.

Other desirable qualifications

- Knowledge of Internet publishing.
- Good knowledge of International and Regional Organizations responsible of fisheries and in particular GFCM regulations and protocols.

Proposition concernant un poste d'éditeur/trice du Secrétariat de la CGPM

La Commission a quatre langues officielles (arabe, anglais, français et espagnol), et la plupart de ses publications sont élaborées en anglais et français. Depuis 2009, l'arabe est devenue aussi une langue de travail, mais uniquement pour la session annuelle de la Commission sous la direction générale du Secrétaire exécutif, l'Éditeur(trice) sera avant tout responsable du contrôle de la préparation de toutes les publications produites par la CGPM, à savoir :

- Rapports annuels de la Commission. Ceux-ci comprennent les comptes rendus des réunions de la Commission, les rapports des organes subsidiaires de la Commission, tels que le Comité Scientifique Consultatif (CSC) et le Comité de l'Aquaculture (CAQ), les Rapports nationaux élaborés par les membres de la Commission, ainsi que les rapports administratifs.
- La série de publication de la CGPM «Études et Revues». Il s'agit d'une publication de la CGPM élaborée par les scientifiques associés à la CGPM et par des consultants.
- Les documents et les ouvrages élaborés par le Secrétariat. Il s'agit en général de résumés de statistiques ou toute autre information pertinente présentée à l'appui des divers groupes de travail. Le Secrétariat génère environ 25 documents de ce type par an, y compris le Recueil des Décisions de la CGPM.

L'Éditeur(trice) des publications est également chargé(e) du suivi des notifications aux pays Membres.

D'autres responsabilités pourront être assignées par le Secrétaire exécutif, en cas de nécessité.

Les tâches spécifiques suivantes devront être assumées :

- Éditer les rapports de réunion.
- Éditer les documents scientifiques.
- Contacter directement les auteurs en ce qui concerne leurs documents (conditions spécifiques et révisions).
- Renforcer les mécanismes de contrôle de la qualité des publications scientifiques.
- Examiner et maintenir les normes de mise en page des publications.
- Coordonner l'adoption par correspondance des rapports des réunions.
- Coordonner la révision par des pairs de documents scientifiques sélectionnés.
- Coordonner la traduction des publications et des documents des réunions.
- Coordonner la reproduction et la diffusion des documents.
- Tenir à jour une base de données bibliographiques des publications de la CGPM, y compris la préparation des entrées à la base de données régionales
- Élaborer des versions XML des rapports récapitulatifs sur l'état des stocks aux fins de leur publication sur le site Web du système de suivi des ressources halieutiques (FIGIS-FIRMS).
- Tenir à jour les publications actuelles sous format électronique sur le site Internet.
- Mettre au point des options efficaces de publication électronique pour les documents de la CGPM.
- Mener à bien toute tâche susceptible de maintenir et d'élever la qualité des publications de la Commission, selon les besoins.

Qualifications indispensables

- Maîtrise en XXXX et une bonne connaissance des sciences halieutiques.
- Excellentes capacités de communication écrite et orale.

- Expérience en matière d'édition et de collation de publications et/ou rapports en accord avec les procédures FAO/CGPM.
- Expérience en matière de logiciel de traitement de texte, d'outils de formatage et de mise en page.
- Bonne connaissance de la terminologie liée à la recherche et à la gestion des pêcheries.
- Excellente connaissance de l'anglais et du français.
- Capacité de travailler sous pression et de collaborer efficacement et harmonieusement avec des personnes de nationalités et de cultures différentes.

Autres qualifications souhaitables

- Connaissances en matière de publication sur Internet.
- Bonne connaissance des organisations internationales et régionales chargées de la pêche et particulièrement des réglementations et protocoles de la CGPM.

APPENDIX/ANNEXE L

**EU Statement on new assessment for small pelagic in GSA 17/Déclaration de l'UE sur une
nouvelle évaluation des petits pelagiques dans la GSA 17
(In English only/en anglais seulement)**

Concerning the assessments for sardine and anchovy stocks in the northern Adriatic we notice the substantial change with respect to what has been regularly presented until the last SAC session.

Science improvements are always welcome and we strongly appreciate the effort done by the research teams and the AdriaMed project to overcome possible incompleteness, and biases that most probably had been concealed in the regular assessments of small pelagic in the Adriatic as recurrently presented and published in the last 10 years.

In fact, the assessment had been carried out in a consistent manner year after year while sharing all the relevant data considered adequate by the same international teams of experts under the aegis of FAO-AdriaMed project.

It is however necessary to put into the right perspective this event also to improve the working procedure, robustness and reliability of future SAC analysis and deliberations.

Therefore, we consider that the changes introduced in the assessment needs to be more clearly and thoroughly presented and their impact on the accuracy and reliability of the new assessment needs to be more formally evaluated and presented in the forthcoming SAC session (i.e. graphic and numeric presentation, comparison and validation of the new data for the eastern and western side inserted in the assessment; undertake a sensitivity analysis for changes in observations and parameters; carry out a retrospective analysis under both past and new assessment scenarios).

As a general comment to improve the working procedure of SAC, both in terms of soundness, transparency and scientific reproducibility, we would like to underline that the assessments presented and discussed at SAC shall be fully documented and present the input and output tables of the assessments together with the diagnostic of the model(s). Lacking these data makes impossible to have a thoroughly discussion on the scientific soundness of the analysis.

National reports by countries
Rapports nationaux par pays
(in the original /dans leur langue d'origine)

- ❖ Algeria/Algérie
- ❖ Croatia/Croatie
- ❖ Cyprus/Chypre
- ❖ France
- ❖ Greece/Grèce
- ❖ Italy/Italie
- ❖ Lebanon/Liban
- ❖ Libyan Arab Jamahiriya/Jamahiriya arabe libyenne
- ❖ Morocco/Maroc
- ❖ Montenegro/Monténégro
- ❖ Spain/Espagne
- ❖ Slovenia/Slovénie
- ❖ Tunisia/Tunisie
- ❖ Turkey/Turquie

ALGERIA/ALGÉRIE

La production globale enregistrée pour l'année 2007 avoisine les 148 000 tonnes, dont 400 tonnes de produits aquacoles (on constate une légère diminution par rapport à l'année 2006 qui a été de l'ordre de 150 000 tonnes). Cette production est répartie comme suit:

- poissons démersaux 11 000 tonnes,
- poissons pélagiques 130 000 tonnes,
- crustacées et mollusques: 3400 tonnes.

La flottille se compose d'un peu plus de 4 000 unités, avec une puissance allant de 39 cv à 430 cv, une TJB de 2,30 à 50 et dont les dimensions (longueurs) varient entre 5,76 m et 19,12 m.

1. ÉTAT DES STOCKS DES ESPÈCES PRIORITAIRES

Se basant sur les débarquements des produits et sur les résultats des campagnes d'évaluation précédentes, il a été considéré que l'exploitation des poissons démersaux a atteint la limite critique et que l'effort de pêche doit être maintenu à ce niveau jusqu'à l'actualisation des données sur les différents stocks.

S'agissant du poisson pélagique, son exploitation est considérée comme étant optimale, avec une certaine marge de manœuvre qui permettrait, éventuellement, une légère augmentation de l'effort de pêche.

2. ÉTAT DU SYSTÈME D'INFORMATION ET STATISTIQUE

Le dispositif de collecte des données statistiques nationales des pêches couvre essentiellement les lieux de débarquements. Quotidiennement, des agents relèvent la production totale de tous les senneurs et partielle (échantillonnage) de quelques chalutiers et petits métiers. En l'absence qualitative et quantitative des agents statisticiens, ces informations sont récoltées, indirectement, auprès des professionnels ou des mandataires. Les données relatives à l'effort de pêche (flottille, collectif marin) sont obtenues auprès de l'autorité maritime locale et du Service national des Gardes côtes (SNCG).

Les données récoltées sont transmises aux Directions des Pêches de Wilaya qui, à leur tour, les transmettent sur une double base périodique (canevas décadaire, canevas mensuel, semestriel) à la Direction centrale où un service effectue le traitement et l'analyse de ces données.

En vue d'une amélioration du système, la mise en place d'une nouvelle base de données au niveau de la centrale et des Directions des pêches de Wilaya, les modalités d'intervention des agents statisticiens, l'élaboration de documents et formulaires de collecte et de transmission des informations statistiques, l'installation de réseaux intra et extranet, la construction et l'aménagement de halles à marées ainsi que le recensement général des activités de la pêche maritime permettront la mise en place d'un système national des statistiques efficace et fiable, et aboutira à une meilleure estimation et par conséquent, une meilleure régulation de l'effort de pêche.

Les deux projets suivants, en cours de réalisation au niveau du Ministère de la pêche et des ressources halieutiques (MPRH) vont contribuer énormément à la fiabilité des données du système national des statistiques :

- Système de suivi et de contrôle des navires de pêches par satellite (SSN),
- Observatoire socioéconomiques des pêches (PCT FAO/Algérie)

Les données collectées sont transmises annuellement à certains organismes internationaux, notamment la production des thonidés pour la CICTA, les captures par espèces et la production aquacole pour la FAO.

3. ÉTAT DE LA RECHERCHE

Les travaux de recherche dans le domaine marin et les activités liées à la pêche sont menés par différentes équipes rattachées aux trois départements ministériels suivants :

- i **Ministère de la pêche et des ressources halieutiques (MPRH),**
- ii **Ministère de l'enseignement supérieur et de la recherche scientifique (MESRS),**
- iii **Ministère de l'aménagement du territoire, de l'environnement et du tourisme (MATET)**

Différents travaux de recherche tant académiques qu'appliqués sont menés au niveau de ces institutions. Parmi lesquels les projets ci-après sont effectués ou sont en cours de réalisation.

3.1 Projets MPRH entrepris par l'Unité de recherche du Centre national de recherche et de développement de la pêche et de l'aquaculture (CNRDPA)

- Biologie et estimation de la biomasse exploitable de la sardine (*Sardina pilchardus*) et de la sardinelle (*Sardinella aurita*) le long des côtes algériennes.
- Maîtrise des techniques de transformation et de valorisation des produits de la pêche à faible valeur marchande.
- Commercialisation des produits de la pêche.
- Étude des déplacements de l'espadon (*Xiphias gladius*) le long de la côte algérienne (inscrit à long terme - 2005 à 2009).
- Étude de la Faune ichthyologique accessible aux filets maillants dans la région de Bou Ismail.
- Étude de l'état d'exploitation de quelques espèces de petits pélagiques dans la zone et de la côte algérienne.
- Essai de reproduction artificielle et élevage larvaire des espèces marines.
- Étude comparative des stocks, de la biologie (reproduction, croissance..), et de la qualité des mollusques bivalves issues de deux sites (baie de Bou Ismail, baie d'Alger).
- Sélection des espèces locales de micro algues et optimisation des conditions de culture des souches d'intérêt industriel.

3.2. Projets MESRS

3.2.1 *Entrepris par le Laboratoire halieutique de la faculté des sciences biologiques de l'université des sciences et de la technologie Houari Boumediene (USTHB):*

- Systématique, écologie, biologie et exploitation de certaines espèces de poissons et crevettes fréquentes, abondantes et d'intérêt économique (2007-2009), en continuité aux projets antérieurs (Biologie, écologie et exploitation des espèces démersales pêchées sur la côte algérienne (2000-2003) et Biologie et exploitation de certaines espèces démersales de poissons et crustacés fréquentes et abondantes sur les côtes algériennes (2004-2006)), cible un certain nombre d'espèces dont *Pagellus acarne*, *Lithognathus mormyrus*, *Boops boops*, *Mullus barbatus*, *Helicolenus dactylopterus*, le genre *Spicara*, la famille des *Mugilidae* et l'ordre des *Pleuronectiformes* (poissons plats) pour les Téléostéens, quelques espèces de raies et de requins pour les sélaciens, *Aristeus antennatus* et *Parapenaeus longirostris* pour les crevettes.

3.2.2 *Projets entrepris par le Laboratoire bio-ressources marines de l'Université d'Annaba*

Les travaux réalisés par les équipes du laboratoire s'inscrivent dans le cadre de programmes nationaux et internationaux dans lesquels les chercheurs sont engagés. Les actions vont de l'analyse de l'environnement côtier à l'étude et l'évaluation des ressources biologiques, animales et végétales, dans différents types de milieux aquatiques, marins et continentaux.

Axes de recherche:

- environnement littoral;
- biodiversité;
- ressources halieutiques;

- valorisation aquacole.

Projets de recherche:

- Recherches sur le mérou *E. marginatus* en Méditerranée (Projet GEM (Groupe d'étude du mérou, partenaire: Parc national de Port-Cros [France] depuis 1993).
- Ichtyofaune côtière du golfe d'Annaba: diversité génétique et biologie halieutique (Accord-Programme de coopération algéro-français, partenaire: Laboratoire de systématique évolutive, Université de Provence [France], 2004-2008).
- Environnement marin et santé publique: réseau de surveillance du littoral d'Annaba (Projet Agence nationale pour le développement de la recherche en santé [ANDRS]).
- Biologie, dynamique et évaluation des ressources ichthyologiques côtières de l'Est-algérien (Projet Ministère de l'enseignement supérieur et de la recherche scientifique [MESRS]).
- Bases scientifiques de l'élevage des sparidés et des soléidés : biologie, génétique et parasitologie (Projet Ministère de l'enseignement supérieur et de la recherche scientifique [MESRS]).

3.2.3 Entrepris par le Laboratoire de Recherche EMMAL (Écobiologie des milieux marins et littoraux) de l'Université Badji Mokhtar de Annaba

Axes de recherche:

- écologie;
- biologie et physiologie des organismes aquatiques;
- pathologie des organismes aquatiques;
- parasitologie et pathologie.

Thèmes de recherche:

- Connaissance des ressources biologiques marines et littorales de l'Est Algérien.
- Évaluation des stocks d'organismes à intérêt économique.
- Cartographie des milieux et habitats marins et littoraux.
- Étude des flux et des échanges au niveau de l'interface littorale.
- Étude de l'influence des apports telluriques (nutrients, sédiments, polluants sur la zone néritique.
- Cartographie et évolution des fronts de pollution organique et minérale en milieu marin.
- Incidence et prévalence du parasitisme chez les espèces animales et végétales à intérêt économiques.
- Transfert et accumulation des cyanotoxines dans la chaîne alimentaire.
- Mise en valeur des stocks halieutiques par la conception et mise en oeuvre des techniques aquacoles en mer et en eau douce (lacs et barrages).
- Les pathologies bactérienne et virale : détermination des foyers et mise en place de traitements curatif et préventif.
- Biologie, dynamique et évaluation des ressources ichthyologiques côtières de l'Est algérien (2003-2007).
- Ichtyofaune côtière du golfe d'Annaba: diversité génétique et biologie halieutique. (2004-2008).
- Bases scientifiques de l'élevage des sparidés et des soléidés: biologie, génétique et parasitologie. (2006-2008).

3.2.4 Projets entrepris par l'Ecole nationale des sciences de l'aménagement du littoral (ENSMAL)-(l'ex-ISMAL):

Axes de recherche :

- Connaissance de la diversité biologique marine et côtière.
- Gestion et exploitation rationnelle des ressources aquatiques.
- Conservation et surveillance du milieu marin et littoral.
- Facteurs d'évolution du milieu marin.
- Caractéristiques physico-chimiques et qualité du milieu.
- Morpho dynamique côtière et sous marine.
- Système d'informations.

- Mécanismes institutionnels et réglementaires de l'occupation du littoral et de l'exploitation des ressources vivantes et non vivantes.

Projet de recherches:

- Biologie et dynamique des poissons démersaux et pélagiques (ENSMAL).
- Connaissance des ressources halieutiques des grandes et des petits pélagiques : aspects biologiques et exploitation (ENSMAL).
- Identification, inventaire et cycle annuel de l'ichtyofaune de la baie de Bou Ismail.
- Fonds meubles des côtes algériennes: bionomie benthique, biodiversité et biosurveillance.
- Exploitation et biologie des ressources accessibles aux engins de pêches des petits métiers et développement de la pêche artisanale.
- Inventaire taxonomique et évaluation de l'ichtyofaune continentale algérienne.

4. ÉTUDES EN SCIENCES SOCIALES ACHEVÉES OU EN COURS (ÉCONOMIE, LÉGISLATION, SOCIOLOGIE, ETC.).

Au niveau du Ministère de la pêche et des ressources halieutiques, il a été procédé à:

- La finalisation de l'Étude portant Schéma Directeur de la Pêche et de l'Aquaculture (SDDAPA) à l'horizon 2025. Ce dossier a été finalisé et approuvé par le Conseil du Gouvernement en octobre 2007.
- Finalisation de l'Étude portant Plan d'aménagement des pêcheries algériennes.
- Étude portant évaluation et cartographie des ressources corallifères dans les eaux sous juridiction nationale, finalisée.
- Étude sur la consommation des ménages en produits de la pêche a été finalisée.

Par ailleurs, il a été procédé à l'élaboration et à la publication de plusieurs textes réglementaires subséquents à la loi sur la pêche et l'aquaculture, notamment:

Textes réglementaire publiés durant la période intersession 2007-2009

Année 2007

- Arrêté du 10 Safar 1428 correspondant au 28 février 2007 fixant la période de fermeture de la pêche des grands migrateurs halieutiques dans les eaux sous juridiction nationale (JORA n° 28-2007).
- Arrêté interministériel du 3 Rabie El auoel 1428 correspondant au 22 mars 2007 précisant les conditions et les modalités d'intervention des contrôleurs à bord des navires étrangers pratiquant la pêche des grands migrateurs halieutiques dans les eaux sous juridiction nationale (JORA n° 44-2007).
- Arrêté interministériel du 28 Chaâbane 1427 correspondant au 21 septembre 2006 fixant le modèle type de contrat d'engagement du personnel navigant à la pêche (JORA n° 12-2007).
- Arrêté du 17 Ramadan 1427 correspondant au 10 octobre 2006 fixant le contenu du livre professionnel du pêcheur, ses caractéristiques techniques ainsi que les conditions et modalités de son établissement et de sa délivrance (JORA n° 12-2007).
- Arrêté du 16 Rajab 1428 correspondant au 31 juillet 2007 fixant les modalités d'intervention des agents statisticiens relevant du secteur de la pêche et des ressources halieutiques (JO n° 79- 2007).
- Décret exécutif n° 07-401 du 14 Dhou El hidja 1428 correspondant au 23 décembre 2007 modifiant et complétant le décret exécutif n° 02-419 du 23 Ramadan 1423 correspondant au 28 novembre 2002 fixant les conditions et modalités d'intervention des navires de pêche dans les eaux sous juridiction nationale (JO n° 80- 2007).

Année 2008:

- Arrêté du 16 Rajab 1429 correspondant au 31 juillet 2008 fixant les différentes catégories de documents et formulaires de collecte et de transmission des informations statistiques ainsi que la périodicité de leur établissement et de leur transmission (JO n° 55- 2008).
- Arrêté du 9 Safar 1429 correspondant au 17 février 2008 fixant les conditions et modalités d'entreposage et de stockage des géniteurs et produits de la pêche et de l'aquaculture n'ayant pas atteint la taille minimale réglementaire (JO n° 25- 2008).
- Arrêté du 4 Rajab 1429 correspondant au 7 juillet 2008 fixant le dossier de demande d'autorisation d'exploitation des ressources biologiques marines a la plongée sous marine professionnelle ainsi que les modalités de son octroi (JO n° 54- 2008).
- Arrêté du 13 Rajab 1429 correspondant au 16 juillet 2008 définissant les engins utilisés pour la pêche à pied professionnelle ainsi que les espèces à pêcher, les dates d'ouverture et de fermeture de la pêche a pied professionnelle ainsi que les zones d'exercice de cette pêche (JO n°54- 2008).
- Arrêté du 13 Dhou El Kaada 1429 correspondant au 11 novembre 2008 fixant la liste nominative des membres du conseil d'administration du Centre national de recherche et de développement de la pêche et de l'aquaculture (CNRDPA) (JO n° 72- 2008).
- Arrêté du 13 Dhou El Kaada 1429 correspondant au 11 novembre 2008 fixant la liste nominative des membres du conseil scientifique du centre national de recherche et de développement de la pêche et de l'aquaculture (CNRDPA) (JO n° 72- 2008).
- Arrêté du 14 Ramadhan 1429 correspondant au 14 septembre 2008 portant désignation des membres du conseil d'orientation de l'institut national supérieur de pêche et d'aquaculture (JO n° 73- 2008).

Année 2009:

- Décret exécutif n° 09-17 du 14 Moharram 1430 correspondant au 11 janvier 2009 portant création d'une école de formation technique de pêche et d'aquaculture à Ghazaouet (JO n° 03- 2009).
- Arrêté interministériel du 5 Joumada Ethania 1429 correspondant au 9 juin 2008 portant organisation pédagogique de l'Institut national supérieur de pêche et d'aquaculture (I.N.S.P.A) (JO n° 03- 2009).
- Décret exécutif n° 09-17 du 14 Moharram 1430 correspondant au 11 janvier 2009 portant création d'une école de formation technique de pêche et d'aquaculture à Ghazaouet. (JO n° 03- 2000).
- Arrêté du Aouel Rabie Ethani 1430 correspondant au 28 mars 2009 fixant la liste nominative des membres du conseil d'orientation de l'institut de technologie des pêches et de l'aquaculture d'Oran (ITPA d'Oran) (JO n° 35- 2009).
- Arrêté du 14 Moharram 1430 correspondant au 11 janvier 2009 fixant les éléments constituant les dépenses et charges communes entre l'armateur et le personnel naviguant lors des opérations de pêche (JO n° 43- 2009).
- Décret exécutif n° 09-312 du 4 Chaoual 1430 correspondant au 23 septembre 2009 modifiant et complétant le décret exécutif n° .04-18 du 3 Dhou El Hidja 1424 correspondant au

25 janvier 2004 fixant l'organisation, le fonctionnement et les missions du Conseil national consultatif de la pêche et de l'aquaculture (JO n° 56- 2009).

- Arrêté interministériel fixant les modalités de fonctionnement du Comité de suivi et de surveillance des activités d'exploitation des lacs Oubeira et Mellah (JO n° 75- 2009).
- Arrêté du 2 Rabie El Aouel 1429 correspondant au 10 mars 2008 fixant les conditions et le contenu de l'autorisation de capture, de transport, de commercialisation et d'introduction dans les milieux aquatiques des géniteurs et produits de la pêche et de l'aquaculture n'ayant pas atteint la taille minimale réglementaire, destinés à l'élevage, à la culture ou à la recherche scientifique (JO n° 29- 2008).
- Décret exécutif n° 08-118 du 3 Rabie Ethani 1429 correspondant au 9 avril 2008 modifiant et complétant le décret exécutif n° 04-86 du 26 Moharrem 1425 correspondant au 18 mars 2004 fixant les tailles minimales marchandes des ressources biologiques (JO n° 20- 2008).
- Décret exécutif n° 08-128 du 24 Rabie Ethani 1429 correspondant au 30 avril 2008 portant transformation du Centre national d'études et de documentation pour la pêche et l'aquaculture (CNDPA) en Centre national de recherche et de développement de la pêche et de l'aquaculture (CNDPA) (JO n° 23- 2008).

5. ÉTUDES DANS LE DOMAINE DE L'ENVIRONNEMENT MARIN

5.1 Études menées par le MPRH

- Étude de salubrité et classification des zones de pêches et d'aquaculture: identification et classification des zones productives marines, évaluation du degré de pollution marine dans les baies et les bassins (des zones de pêche), identification des sources et des types de pollution sur le milieu et les ressources halieutiques, évaluation sanitaire des produits de la mer, étude de l'impact de l'activité de la pêche et de l'aquaculture sur le milieu marin et continental, classification des sédiments et des eaux des ports et abris de pêche selon le degré de pollution, conception et réalisation de la cartographie des zones salubres et insalubres marines.

5.2 Études MPRH menées par le Centre national de recherche et de développement de la pêche et l'aquaculture (CNRDPA)

- Étude environnemental de la baie de Bou-Ismaïl :
 - 1) Études de cas 1: Suivi de la salubrité de la zone d'installation de la filière conchylicole en baie de Bou Ismail.
 - 2) Études de cas 2: Évaluation de la pollution au niveau du littoral et des ports de pêche de la wilaya de Tipaza.
- Recherche Indicateurs biologiques d'exposition à des polluants;
- Mise au point d'un intégrateur des contaminants chimiques dans les eaux côtières. Étude de la faisabilité d'un réseau de surveillance utilisant la transplantation de moules:
 - 1) Études de cas 1: Contribution à l'étude du degré de pollution au niveau de la moule *Mytillus galloprovincialis* en baie de Bou Ismail à travers des stations artificielles de moules.
- Étude systématique des parasites trématodes endogènes:
 - 1) Étude de cas 1: Contribution à l'étude systématique des parasites chez deux espèces de clupéidés *Sardina pilchardus* et *Sardinella aurita* dans la baie de Bou-Ismaïl.
 - 2) Étude de cas 2: Contribution à l'étude systématique des parasites chez deux espèces de clupéidés *Sardina pilchardus* et *Sardinella aurita* dans la région de Béni Saf (W. Ain Temmouchent).

5.3 Études menées par le MESRS

- Étude de la pollution et de la fertilité des côtes algériennes.
- La pollution dans les ports algériens.
- Formes naturelles et anthropisation du littoral ouest-algérois.

- Analyse de la pollution et des polluants organiques et inorganiques dans l’environnement marin.
- Étude d’aménagement et de pollution des sédiments des ports algériens.
- Aménagement du littoral: Érosion, dynamique et gestion des zones côtières.
- Aspects juridiques de la gestion de l’environnement côtier.
- Écosystème à *Posidonia oceanica* : approche structurale, fonctionnelle et appliquée.
- Évaluation de la qualité du milieu marin par la mise en place d’un réseau de surveillance des herbiers à *Posidonia oceanica*.
- Inventaire, conservation et gestion de la biodiversité marine et littoral.
- Études sur la mise en place de réserves marines.

5.4 Études menées par le MATET

- Étude de classement des îles Habibas (secteur ouest-algérien, Wilaya d’Oran) et de l’île de Rechgoune (secteur ouest algérien, Wilaya de Aïn Témouchent) en réserve naturelle marine.
- Plan d’aménagement côtier pour les trois secteurs algériens (ouest, centre et est).
- Étude d’aménagement de la zone naturelle Chenoua et Anse de Kouali (secteur centre algérien, Wilaya de Tipaza) et de la réserve naturelle marine des îles Habibas et de l’île Rechgoune.
- Étude de réalisation de trois musées marins (ouest: Oran; centre: Tipaza; est: Annaba).

6. PROPOSITIONS DE RECHERCHE POUR LE CSC

- Développer des thèmes liés au développement de la pêche artisanale tels que l’amélioration des techniques de pêche, l’amélioration des technologies existantes, la valorisation des productions de la pêcherie artisanale.
- Étude des effets induits par la crise économique sur le développement des activités des pêches en Méditerranée.
- Étude comparative des prix du poisson au niveau des pays méditerranéens.
- Développer d’autres thèmes liés à l’économie des pêches tels que:
 - mises à jour et analyse des formes sociales de production dans le domaine de la pêche;
 - conception et mise en place d’un système d’information;
 - développement des techniques d’aide à la décision en matière de politique de pêche et alimentaire;
 - économie des biotechnologies appliquées à la pêche;
 - économie des ressources halieutiques.

CROATIA/CROATIE

1. DESCRIPTION OF THE FISHERIES

Croatian fisheries are carried out within the GSA 17 – Northern Adriatic and GSA 18 – Southern Adriatic. Majority of catches are realized within the GSA 17. Fisheries are divided in several main segments – small pelagic (purse seine and pelagic trawls) fishery, bottom trawl and other towed fishery, fixed gear fishery, bluefin tuna fishery and coastal (artisanal) fishery.

Total landings by main targeted species (in tonnes) in 2008:

<i>Sardina pilchardus</i>	24 906.0
<i>Engraulis encrasicolus</i>	15 334.6
<i>Osteichthyes – mixed</i>	2 357.9
<i>Scomber japonicus</i>	995.3
<i>Mullus barbatus</i>	797.4
<i>Merluccius merluccius</i>	626.7
<i>Eledone</i> spp.	503.6
<i>Trachurus</i> spp.	435.0
<i>Nephrops norvegicus</i>	360.4
<i>Spicara</i> spp.	136.3
<i>Octopus vulgaris</i>	135.9
<i>Solea solea</i>	133.3
<i>Boops boops</i>	130.6
Loliginidae	113.6
<i>Sprattus sprattus</i>	88.1
<i>Parapenaeus longirostris</i>	71.6
<i>Oblada melanura</i>	58.2
<i>Loligo</i> spp.	51.8
<i>Pagellus erythrinus</i>	44.3
<i>Sarpa salpa</i>	42.9
Triglidae	40.2

Note: Total landings in 2008 in Croatia were 48 939 tonnes.

Fleet

number of vessels	3820	
LOA (range and average)	number	average
< 6 metres	1 264	4.75
6-12 metres	1 919	8.16
12-24 metres	515	15.88
more than 24 metres	122	28.35
Total kW + GT	4 2243.38 GT	294 355.23 kW

Note: The data provided are preliminary, as the fleet register is still being cross-checked and verified. There are some 11 000 subsistence fishermen in Croatia in addition to the aforementioned figure. They operate vessels less than 6 metres.

2. STATUS OF STOCKS OF PRIORITY SPECIES

Small pelagic

Despite large annual changes in abundance indices of small pelagic (anchovy, sardine and sprat) evaluated by means of fishery independent methods (i.e. echosurvey), no significant trend in abundance change for any of these species has been detected over period from 2003 to 2008 in the eastern part of GSA 17. In addition, a joint Virtual Population Analysis (VPA) assessment has been performed within AdriaMed Project framework and presented to Sub-Committee on Stock Assessment (SCSA) in Malaga 2009. Outputs of these VPA assessments demonstrated that sardine and anchovy stocks in GSA 17 have not been overexploited. Sardine and anchovy stocks in GSA 17 have been evaluated as fully exploited and moderately exploited respectively.

Demersal resources

Assessment of common sole (*Solea solea*) stock in GSA 17 has been performed and presented to SCSA (Malaga). According to this assessment, recent state of stock is characterized as “overfishing”. Management advice is reduction of fishing effort by introduction of “closed area” and temporally restriction for fisheries using the beam trawlers (rapido) along Adriatic western coast to protect juveniles. Documents of stock assessment for other demersal species have not been finalized yet. According to the scientific surveys MEDITS and FAO AdriaMed Trawl Survey, long-term trends in biomass index in Croatian fishing sea shows high fluctuation with no negative trends for the most important stocks as hake and red mullet, but negative trend is evident for stock of Norway lobster, as well as for majority of Selachian species.

3. STATUS OF THE STATISTICS AND INFORMATION SYSTEM

Croatian Fishing Fleet Register is an electronically-kept register, now Web-based, in which relevant data on vessels and vessel activities are registered. At the moment, data are being entered and cross-checked. The Fleet Register functions as a centralized structure, where field offices enter the data which are all immediately recorded and stored in a central database. Data on the vessels (GT, kW, technical elements) are obtained from official documents issued by other relevant institutions (Ministry of Sea, Transport and Infrastructure – Croatian Register of Shipping and Croatian Register of Boats).

Fleet Register contains the data on each vessel. These include the Community Fleet Register (CFR), event code, event date, vessel name or registration, outer markings, date of registration, type of vessel, port of registration, port of operation, base port, activity status, area of operation. The Register also contains the data on the licence (valid through, serial number), data on gears (main gear, additional gears, structural characteristics of the vessel (length, height, GT, construction material), engine characteristics (kW, type, auxiliary engine if available), electronic equipment (IRCS, IRCS no if applicable, VMS, navigational equipment, communication equipment, fish finding equipment), deck equipment, data on the owner, crew number and data on equipment for storage and processing of the catch.

Republic of Croatia has established links between responsible authorities (Croatian Bureau of Statistics and the Ministry of Agriculture Fisheries and Rural Development [MAFRD]) in order to meet the relevant requirement and secure the delivery of statistical data in a unified manner.

Croatia has since 2000 been implementing the obligation of all licence holders to keep and submit the logbooks on fishing activities. According to the provisions of the national regulation, all licence holders operating with fishing vessels equal to or longer than 10 m have to keep and submit the logbook. Logbook contains the data on catch and landing per species and quantity. Data on catches over 10 kg has to be entered into the logbook for all species. Species caught in quantities of less than 10 kg are registered as *other catch* in the logbook. Exceptionally, there are 16 species that have to be entered into the logbook regardless of the quantity caught. These are the following: *Spicara sp.*, *Lophius sp.*, *Homarus gammarus*, *Engraulis encrasicolus*, *Palinurus elaphas*, *Zeus faber*, *Arca noae*, *Eledone sp.*, *Merluccius merluccius*, *Sprattus sprattus*, *Maja squinado*, *Sardina pilchardus*, *Mullus barbatus*, *Mullus surmuletus*, *Nephrops norvegicus* and *Scorpaena sp.* Each license holder is obliged to submit the logbook to the MAFRD no later than 48 hours upon landing. It is possible to submit the

logbook via mail, fax or a scanned copy. The landing declaration is an integrated part of the logbook, and contains information on catch landed per species and quantities (same rules of data entry apply as for the logbook). MAFRD staff (in field offices of the Department of Fisheries) has to enter all landing declaration data in the database. Database is kept per licence holder and per vessel (linked with the fleet register).

First sales of catches have to be made at places designated as points of first sales. Exceptionally, first sales may take place in a place that is not a designated point of first sales, but only under the condition that the first buyer is a recognized first buyer and submits the information within 48 hours. In cases where the first sales take place in a non-designated place, the first buyer has to submit these information to the MAFRD before placing the goods into further circulation and by no means later than 48 hours upon first sales.

All sales data are reported via a Web-based application in an electronic form. The sales note/sales declaration form contains data on producer/fishermen (name and address), CFR of the vessel that caught the fish, registration or name of the vessel, date and place of landing, serial number of landing declaration or serial number of catch report (for vessel less than 10 m), data on first buyer (name, address), registration number of the buyer (number under which the licensed first buyer is registered with the Register of first buyers), date and place of the first sales, number of storage declaration (entered in cases when catch was stored with the fishermen for more than 48 hours and hence was not put on the market within 48 hours upon landing), number of the transport declaration (form that has to follow the fish from the point of landing to the point of first sales), data on species sold per species, catch area, category (size, presentation, preservation, freshness), destination, quantity (in kg), price (in kn).

4. STATUS OF RESEARCH IN PROGRESS

Monitoring of small pelagic stock by acoustic survey (PELMON) and VPA stock assessment

Monitoring of small pelagic stocks is based on annual fishery independent evaluations of stocks abundance by acoustic surveys, through collection of environmental data related to pelagic ecosystem (continuing PELMON Project). In addition, collection of fishery-related data as needed for fishery dependent assessments (i.e. VPA) has also been undertaken.

Project “DEMMON” Monitoring of commercial demersal (bottom trawl) fisheries

Monitoring of demersal stocks has been continued, as a part of annual project for status evaluation of demersal resources in the Croatian Fishing Sea and preparation of recommendation for stock assessment and management. Fisheries data collection includes on board sampling and laboratory analysis, sampling on the landing ports and gathering basic socio-economic data.

Project “MEDITS” Mediterranean International Bottom Trawl Survey is EU project for assessment of demersal resources in the Mediterranean and Adriatic Sea during spring–summer period. Croatian scientists are included in this project permanently from 1996.

Project “FAO AdriaMed Trawl survey”

This project is monitoring project of demersal stocks in the Adriatic sea (along eastern side of Adriatic, including Slovenia, Croatia, Monte Negro and Albania) in the autumn–winter period. Sampling methodology is complementary with the MEDITS project

Project “SOLEMON” Evaluation of stock of Common Sole (Solea solea) and other flatfish in the Adriatic sea is an international project under umbrella of FAO AdriaMed for evaluations of common sole and other flatfish using “beam trawl” (rapido).

Project “DEEP SEA” is an international project started in 2008 year under framework of FAO AdriaMed. The aim of the project is investigation of distribution and status of biological resources in the deep south Adriatic

Project “UWTV Survey” is an international project under umbrella of FAO AdriaMed for alternative assessment of biomass stock of Norway lobster in the Jabuka/Pommo pit using underwater camera.

5. STATUS OF THE SOCIAL SCIENCES STUDIES IN PROGRESS OR ACHIEVED DURING THE INTERSESSIONAL PERIOD (ECONOMY, RELEVANT LEGISLATION, SOCIOLOGY, ETC.)

One part of socio-economic data gathering is organized through Demmon project. Data collection is done by using national methodology and it is not fully complaining EU DCR rules. Social and economical studies are currently being developed.

6. MARINE ENVIRONMENTAL STUDIES IN PROGRESS

Croatia has been conducting a permanent national monitoring project “Systematic exploration of the Adriatic Sea as basis for sustainable resources management” (Project Jadran) which includes monitoring of biotic and abiotic parameters relevant to the marine environmental and renewable resources. Monitoring of fishery resources (both pelagic and demersal) also provide environmental data related to the marine ecosystems.

7. MANAGEMENT MEASURES

All recommendations on bluefin tuna and swordfish in Mediterranean sea as adopted by ICCAT and GFCM are fully incorporated in Croatian legislation and have been implemented in the intersessional period.

8. RESEARCH SUGGESTIONS FOR CONSIDERATION BY SAC

Support from Regional FAO AdriaMed Project related to fisheries research and management within Adriatic Sea (GSA 17&18) has been very important. It is deemed necessary to continue with the activities in this framework.

Consideration should be given to international monitoring of demersal resources in Jabuka Pit. Jabuka/Pommo Pit is a principal fishing ground in the Adriatic Sea for Croatian and Italian bottom trawl fisheries fleet. At the same time, it is the most important spawning and nursery area for majority of demersal species. Recent state of resources in this area show negative changes in communities and population structures, as well as, negative trends in biomass indices and demographic structure of the most important populations. It is considered necessary to establish restrictive fisheries regulation measures to adjust fishing effort to the recent state of stock. Also it is important to organized permanent international monitoring of status of the stocks and fishing effort in this area as the principal tools for responsible fisheries management.

CYPRUS/CHYPRE

1. DESCRIPTION OF THE FISHERIES

The Cyprus capture fisheries consist of the small-scale inshore fishery (artisanal fishery), the trawl fishery and the polyvalent fishery.

The small-scale inshore fishery fleet consists of small wooden vessels with length ranging between 6 to 12 m (OAL), and an average length of 8.2 m. It operates within the territorial waters of Cyprus (Geographical Sub Area 25-Cyprus). Fishing gears used are mainly passive gears (bottom set nets and bottom longlines), targeting demersal species.

The Polyvalent fishery fleet consists of vessels with length ranging between 12–26 m Overall Length (OAL) and an average length of 16 m. The fleet operates with passive polyvalent gears, both in the territorial waters of Cyprus and international waters of the Eastern Mediterranean, mainly in GSA 26-South Levant. Polyvalent vessels target highly migratory species, such as bluefin tuna (*Thunnus thynnus*), swordfish (*Xiphias gladius*) and albacore (*Thunnus alalunga*) with surface longlines and handlines. Demersal species are also targeted in a lesser extent.

The bottom trawl fishery consists of vessels with length ranging between 21.4 to 26.8m (OAL) and are categorized into trawlers fishing in Cyprus waters (GSA 25) and trawlers fishing in International waters (Central and Eastern Mediterranean), according to their licence.

Thus the fishing grounds where the Cyprus fleet operates are distinguished as “Cyprus waters” and “International waters”. For the purpose of this report the term “Cyprus waters” is used to describe the marine area under the effective control of the Government of Cyprus. It is known that, since 1974, the most important fishing grounds of Cyprus are not accessible to the Government of the Republic of Cyprus. From the 846 squared nautical miles of continental shelf and the total coastline of 773 km, only about 60 percent and 45 percent respectively are effectively controlled by the Government of Cyprus.

Table 1 presents information on fishing effort (number of licensed vessels, working days and total kW and GT) per fleet category for the year 2008.

Table 1: Cyprus Fishery 2008

year 2007	Production (metric tonnes)	Effort (working days)	Number of vessels	Fleet total kW	Production working day/kg
Artisanal Fishery	1 043	96 725	498	20 944	10.8
Bottom Trawl Fishery Cyprus Waters	264	773	4	1 229	3 471.5
Bottom Trawl Fishery International waters	108	523	8	2 421	208
Polyvalent Fishery	412	2 249	30	3 917	183.57

In 2008 the most significant species landings (in weight) for Cyprus were: *Thunnus alalunga* (albacore) 240 tonnes; *Spicara* spp. (Picarel) 243 tonnes, *Boops boops* (boque) 2 338 tonnes, *Mullus surmuletus* (stripped red mullet) 112 tonnes, Octopuses nei 1 129.1 tonnes, *Xiphias gladius* (swordfish) 56 tonnes and *Mullus barbatus* (red mullet) 49 tonnes. Almost half (44%) of the landed Cypriot catch is classified by species, the rest of the catch is grouped at family or higher level.

2. STATUS OF STOCKS OF PRIORITY SPECIES

During the intersessional period Cyprus continued with the monitoring of demersal and large pelagic species in GSA 25, as part of the Cyprus National Fisheries Data Collection Programme, performed under the framework of the Community Data Collection Framework (Regulations [EC] 199/2008 and [EC] 665/2008, Decision 2008/949/EC).

The GFCM demersal priority species for which biological sampling was performed (for collecting length, age, maturity and sex data) are: *Boops boops*, *Mullus barbatus*, *Mullus surmuletus*, *Pagellus erythrinus*. Sampling was also conducted for *Spicara smaris*, which is of great national commercial importance. Furthermore, systematic length sampling was performed for an additional number of species: *Sparisoma cretense*, *Siganus rivulatus*, *Siganus luridus*, *Merluccius merluccius*, *Pagrus pagrus*, *Diplodus sargus*, *Diplodus vulgaris* and *Spicara maena*.

Biological sampling was also conducted for the ICCAT and GFCM priority species *Thunnus alalunga*, *Thunnus thynnus* and *Xiphias gladius*. Data have been submitted to ICCAT, for contributing to the assessment of the status of the stocks.

In 2009 the status of *Mullus barbatus* in GSA 25 was evaluated using VPA–pseudocohort and Y/R analysis. The data used covered the period 2005–2008 and included data from both management units exploiting the stock: trawls targeting demersal shelf species (by vessels 12–24 metres) and gillnets and entangling nets targeting demersal shelf species (by vessels 6–12 metres). The results of the stock assessment were submitted and evaluated by the Sub-Committee on Stock Assessment (Malaga, 2009). Based on the results the stock is overexploited, with high fishing mortality and low abundance.

3. STATUS OF THE STATISTICS AND INFORMATION SYSTEM

The authority responsible for the collection and management of fishery statistics in Cyprus is the Department of Fisheries and Marine Research of the Ministry of Agriculture, Natural Resources and Environment.

The data collected by the fishery statistical system are used to fulfil the following objectives:

- a) To serve as a guide for management purposes, i.e. to direct the DFMR to decide on the introduction of measures and regulations for the fishery.
- b) To provide statistical information to other bodies: the data are transmitted to the International Organizations and Agencies, where Cyprus has the legal obligation to send, i.e. FAO, GFCM, ICCAT and the European Union.
- c) To be analysed for scientific purposes: along with length distributions collected by sampling, the data are used to evaluate the stocks of the five most important commercial demersal fish species.

The Cyprus National Database for the collection and storage of data in the fisheries sector is comprised of the following databases: i) the Data Collection Network System (Data Transmission), ii) the Central Database and iii) the Fishing Vessel Fleet Register (FVR).

In 2009, the database developed in 2008 was fully operational fulfilling requirements such as:

- Incorporation of biological and economic information.
- Creation of an administrative mechanism providing permanent observation and collection of data in real time, which will be supported by a registration and analysis system.
- Web-based data transmission of the fisheries data to the competent international organizations as well as the EC.

All the data collected by the National database are dealt with confidence. Data access is limited to authorized personnel.

4. STATUS OF RESEARCH IN PROGRESS

Within the framework of the National Fisheries Data Collection Programme, which is implemented since 2005, Cyprus performs annually biological sampling for the evaluation of length and age composition of landings, and the estimation of biological parameters (growth, maturity) for a number of species. Discards sampling is also performed annually for the evaluation of the discard rates from the bottom otter trawl.

Furthermore, the National Programme includes the implementation of the International Bottom Trawl Survey in the Mediterranean (MEDITS) around Cyprus waters (GSA 25). The aim of the survey is to collect biological data from the Cyprus demersal species and creating time series of abundance and biomass indices and length frequency distributions. The trends of these data will provide information on the status of the Cyprus fishery resources, which may contribute to their management.

It is worth mentioning that during 2009 a national project was carried out for collecting information concerning the alien species *Lagocephalus sceleratus*, specifically on its distribution, biology, feeding behaviour and interaction with fishing gears. It is expected that this project will continue in 2010.

Other research activities: The DFMR participates in many EU Oceanographic research projects, most of them aiming to develop the operational Oceanography in the Mediterranean Sea. Finally, research in Aquaculture is being done in the Department's experimental stations. The research projects of Aquaculture include reproduction, development of brood stock populations and good quality and quantity of eggs and larvae of species cultured.

5. STATUS OF THE SOCIAL SCIENCE STUDIES IN PROGRESS

The DFMR carries out socio-economic surveys to assess the economic situation of the fisheries sector in Cyprus. The sources for collecting the socio-economic data are the Inshore Fishery Production Reports, Logbooks, the Fishing Licences and the Sales Notes from the fishmongers for verifying the quantities of production and the value of production of the Inshore Fishery. Moreover, an important tool used for the economic analysis is the face-to-face interviews. Some of the target variables are income, gross value of landings, production cost, financial position of fishermen, investments, live/weight prices per species and number of persons employed.

6. MARINE ENVIRONMENTAL STUDIES IN PROGRESS

Marine ecological research is undertaken through various national and EU-funded projects and includes:

- Research on marine ecology with a particular emphasis on marine biodiversity.
- Studies on the effects on the marine ecosystem from various anthropogenic activities, such as aquaculture, desalination, breakwaters, sewage, etc.
- Monitoring studies on the appearance and expansion of invasive alien species in the marine environment of Cyprus.
- Monitoring of eutrophication events by nuisance macroalgae.
- Protection and conservation programmes for endangered aquatic species and their habitats, e.g. programme for the conservation of marine turtles (*Chelonia mydas* and *Caretta caretta*), monk seal (*Monachus monachus*), *Posidonia* seagrass meadows (*Posidonia oceanica*), etc.
- Studies in the framework of the establishment of marine protected areas, including the development of artificial reefs. The first artificial reef (AR) has been deployed and a protected area around the AR has been already declared.
- Monitoring of marine ecological and environmental parameters, as well as estimation of pollutants in marine organisms.
- Assessment of the ecological quality status of coastal waters.
- Study of the ecology and monitoring of the environmental parameters of the Larnaca Salt Lake complex and Akrotiri wetlands.

- Implementation of the Water Framework Directive (2000/60/EC) and the Habitats Directive (92/43/EEC) as regards coastal waters.

7. MANAGEMENT MEASURES

The National and Community legislation provide for a number of management measures for the regulation of the Cyprus fisheries, including:

- Restrictive access to the fisheries (limited number of licences for each fleet segment).
- Effort control: Restrictions on the use of fishing gears (quantities, soaking time, depth and distance offshore) and regulation of fishing capacity (scrapping, assignment for other uses than fishing, engine restrictions, ceiling of the fleet vessel register).
- Market restriction measures: minimum landing sizes.
- Technical conservation measures: minimum mesh sizes.
- Seasonal and area closures.

During the intersessional period, amendments of the National Fisheries Law were made, specifically for extending the implementation of the VMS in vessels less than 15 m, and for removing national seasonal closures of the swordfish fishery.

Furthermore, the ICCAT recommendation on the prohibition of fishing for swordfish from 1 October to 30 November 2009, endorsed by GFCM, was transposed to Community Legislation and was implemented.

8. RESEARCH SUGGESTIONS FOR CONSIDERATION BY SAC

At this point Cyprus has no research suggestions for consideration by SAC.

FRANCE

En France, les travaux de recherche halieutique pour la Méditerranée sont essentiellement réalisés au sein du laboratoire «ressources halieutiques» et du service «Technologie des pêches» de l'IFREMER, regroupés au sein du Centre de recherche méditerranéen et tropical de Sète.

1. DESCRIPTION DES PÊCHERIES

1.1 Description des zones de pêche et GSA

Les pêcheries françaises de Méditerranée sont réparties entre deux GSA: la GSA 07 qui regroupe les zones de pêche du golfe du Lion et celles des côtes continentales françaises du golfe de Gênes et la GSA 08 couvrant les zones de pêche de Corse. A ces pêches maritimes, littorales, côtières et du semi-large, s'ajoutent d'une part une activité de pêche lagunaire intéressant plus d'une vingtaine de lagunes dont la majeure partie borde le littoral du golfe du Lion et d'autre part une activité hauturière couvrant l'ensemble de la Méditerranée, la pêche du thon rouge à la senne tournante. À l'exception de cette dernière, le golfe du Lion, grâce à son plateau continental (15 000 km²) et l'importance de ses lagunes (49 734 ha) regroupe la majeure partie de l'activité halieutique française en Méditerranée et de sa production. Les différents métiers peuvent se définir en trois grands groupes: le chalutage, la pêche des pélagiques à la senne tournante et un ensemble de métiers divers pratiqués d'une façon polyvalente et à petite échelle, principalement à la côte et dans les lagunes. Ces flottilles et leur production se répartissent de la manière suivante :

▪ GSA 07 – golfe du Lion et côtes provençales¹

Flottilles	Nbre	LHT moy (m)	puissance totale (kW)	Tonnage totale (Tx)
Chalutiers	113	22,6	34312	7207
thoniers senneurs	33	36	23 064	8113
Senneurs sardiniens	10	17,8	2460	345
petits métiers	1041	8,7875	69578	1938
Total	1197		129414	17603

Production des 10 principales espèces vendues (GSA07)²

Espèces	Tonnage (T)	%
<i>Sardine</i>	13340	49%
<i>Anchois</i>	4135	15%
<i>Merlu</i>	1318	5%
<i>Poulpe</i>	1360	5%
<i>Bar</i>	267	1%
<i>Sole</i>	188	1%
<i>Dorade royale</i>	236	1%
<i>Maquereau</i>	1648	6%
<i>Baudroies</i>	213	1%
<i>Calmars</i>	140	1%
<i>Autres</i>	4311	16%
Total	27155	100%

1.2 GSA 08 (Corse)

L'activité de pêche en Corse est répartie sur l'ensemble de son littoral (1 043 km) avec 50 % des unités de pêches regroupées dans le golfe d'Ajaccio. La flottille est composée de 209 unités artisanales réparties entre 188 petits métiers côtiers (principalement des navires de 6 à 10 mètres), 4 fileyeurs palangriers, 9 chalutiers de fond dont l'activité est principalement située sur la côte orientale et 8 armements de plongeurs-corailleurs.

¹Source SIH/IFREMER-Réseau d'observation des ressources halieutiques et des usages (Activité 2007) et DPMA.

²Essentiellement constituée des ventes en criée.

2. ÉTAT DES STOCKS DES ESPÈCES PRIORITAIRES

2.1 Évaluation du stock partagé franco-espagnol de merlu du golfe du Lion (GSA 07)

Les résultats de l'évaluation du stock de merlu du golfe du Lion confirment cette année encore la surexploitation de croissance et une stagnation de la biomasse reproductrice avec cependant une amélioration sensible du recrutement au cours des deux dernières années. Le groupe recommande également une augmentation des tailles capturées (notamment par la généralisation de la maille carrée de 40 mm pour les chalutiers) ainsi qu'une réduction de l'effort de pêche au chalut et de l'effort de pêche au filet maillant et à la palangre notamment durant les pics de reproduction.

2.2 Évaluation du stock partagé franco-espagnol de rouget du golfe du Lion (GSA 07)

L'évaluation du stock partagé de rouget a été réalisée pour la première fois cette année; un diagnostic de pleine exploitation a été émis pour ce stock, pour lequel on recommande de ne pas augmenter l'effort de pêche.

2.3 Évaluation du stock partagé franco-espagnol d'anchois (*Engraulis encrasicolus*) et de sardine (*Sardina pilchardus*) du golfe du Lion (GSA 07)

La biomasse évaluée pour l'anchois à partir des campagnes PELMED de l'IFREMER dans la GSA 07 est faible et inférieure à celle de l'année précédente; on note la même situation dans la GSA 06 voisine à partir des données des campagnes espagnoles ECOMED de l'IEO. En conséquence il a été recommandé de veiller à ne pas augmenter l'effort de pêche sur cette espèce dans ces deux zones.

La biomasse de sardine a été évaluée pour la période 2006-2008 ; bien que la biomasse de juvéniles soit en augmentation sensible la biomasse totale du stock est inférieure aux évaluations des années précédentes. Aussi il a été recommandé de ne pas augmenter l'effort de pêche dirigé sur cette espèce.

2.4 Information sur les pêcheries de thon rouge

Dans la Méditerranée, le thon rouge est pêché principalement par des senneurs depuis les années 1970. Les captures françaises totales de thon rouge Atlantique Est-Méditerranée s'élèvent en 2008 à 2 906 tonnes (252 tonnes dans le golfe de Gascogne et 2 654 tonnes en Méditerranée) contre 10 786 en 2007 (629 tonnes dans le golfe de Gascogne et 10 157 tonnes en Méditerranée), 8 881 tonnes en 2006 (1 217 tonnes dans le golfe de Gascogne et 7 663 tonnes en Méditerranée) et 9 455 tonnes en 2005 (818 tonnes dans le golfe de Gascogne et 8 638 tonnes en Méditerranée).

La très forte diminution des captures françaises en 2008 par rapport aux années précédentes résultent de plusieurs facteurs: la forte restriction de la saison de pêche en Méditerranée suite à l'application de la rec[06.05], la fermeture avancée au 15 juin 2008, le renforcement des contrôles à terre et en mer et la mise en place de quota individuel.

La pêcherie artisanale méditerranéenne, issue de la reconversion des filets maillants dérivants et pratiquant maintenant principalement la canne ou la palangre, a pêché 117,6 tonnes de thons rouge de mai à octobre 2008 le long des côtes françaises méditerranéennes.

La pêche sportive française en Méditerranée et en Atlantique (région Aquitaine) est suivie par la FFPM (Fédération française de la pêche en mer) depuis 1993 à partir des carnets de pêche remplis de manière obligatoire lors des concours de pêche. La fermeture prématurée de la pêche au thon rouge avant la période des concours a interdit toute activité de pêche pour cette flottille en 2008.

2.5 Le stock de langouste rouge en Corse (GSA 8)

La langouste rouge, espèce prioritaire de la pêche corse, essentiellement pêchée au filet trémail, représente environ 60 % du revenu des pêcheurs insulaires. Cependant, on observe aujourd'hui une baisse des productions (respectivement 65 tonnes en 2004 et 47 tonnes en 2005) et une diminution de la taille des captures qui semblent imputables à une érosion du stock.

3. ÉTAT DES STATISTIQUES ET DU SYSTEME D'INFORMATION

Le Système d'information halieutique (SIH) de l'IFREMER constitue le réseau pérenne d'observation des ressources halieutiques et des usages associés. Il est dépositaire des cahiers des charges et des spécifications techniques pour les plans d'échantillonnage, la collecte, le stockage, l'accès aux

données halieutiques (de base et agrégées), les restitutions internes et externes. Il se situe en soutien à l'ensemble des programmes de recherche et des missions d'avis et d'expertise halieutique institutionnelle de l'IFREMER. Enfin, il est en charge de l'élaboration d'indicateurs intégrés sur les pêcheries et de la réalisation de synthèses à destination des acteurs de la filière pêche (recherche, usagers et gestionnaires) et du grand public. Toutes les données halieutiques ainsi récoltées sont mises à la disposition des équipes de l'institut. Le SIH s'appuie sur quatre grandes actions pour le recueil des données: l'échantillonnage des captures commerciales, les campagnes à la mer, les statistiques de pêche et les enquêtes économiques.

À terme l'ensemble des données du SIH devra être intégré dans la base HARMONIE du SIH de l'IFREMER. Actuellement, les données de production et les enquêtes activité sont archivées dans cette base de données nationale. Le RCM 2008 (Regional Coordination Meeting) pour la mer Méditerranée et la mer Noire aura lieu cette année en France, à Sète (24-28 /11/2008).

Concernant les côtes continentales de Méditerranée française, de Nice à Port-Vendres (GSA 7), la collecte de données sur les ressources exploitées par la pêche professionnelle est réalisée dans le cadre de la DCR (Data Collection Regulation). Cette collecte repose sur un programme d'échantillonnages biologiques et des programmes de campagnes d'observation à la mer, effectuées sur des bateaux professionnels ou avec l'aide du NO EUROPE.

3.1 Programme d'échantillonnage biologique (GSA 7)

Des échantillonnages biologiques sont effectués sur les principales espèces débarquées dans les ports du golfe du Lion (sardine, anchois, merlu, rougets barbets, loup, daurade, baudroies et poulpe de roche).

3.2 Programme d'enquêtes d'activités «petits métiers» (GSA 7)

Celles-ci sont conduites pour estimer l'effort de pêche et la production des navires de moins de 12 mètres («petits métiers», mer et lagune) de la frontière italienne à la frontière espagnole, correspondant aux quartiers maritimes de Nice à Port-Vendres, par type d'activité et par mois, ainsi que la saisie de leurs fiches de pêche.

3.3 Programme ObsMer d'observation des captures en mer (GSA 7)

Ce programme national prévoit pour la façade méditerranéenne, le chalutage démersale. Le plan d'échantillonnage prévoit, depuis 2007, 12 observations annuelles à effectuer à bord de navires pratiquant le chalutage de fond. Des informations sont collectées sur les quantités et les espèces commercialisées des captures, sur les prises accessoires et sur les rejets, ainsi que sur les caractéristiques techniques de chaque trait. En Méditerranée, pour l'année 2009 les prises accessoires de 244 marées (281 opérations de pêche) ont été échantillonnées.

3.4 Programme ObsMam d'observation des captures accidentelles de mammifères marins

Conformément aux dispositions du règlement (CE) n° 812/2004 ce programme d'observation est tenu d'assurer chaque année une couverture de 5% de la flottille pratiquant le chalutage pélagique, correspondant à 228 jours d'observation en mer.

3.5 Programme d'observations aériennes du thon rouge dans le golfe du Lion.

L'IFREMER a renouvelé en 2009 les prospections aériennes du thon rouge en Méditerranée qu'il conduit depuis 2000. Du 17 juin au 30 septembre 2009, 25 survols aériens du golfe du Lion ont été effectués parcourant au total près de 16 000 km a en 80 heures de vol. Les positions GPS des bancs de thon rouge repérés en surface ainsi que les tailles estimées des bancs et des individus ont été relevées. Une première analyse présentée au groupe de travail thon rouge du SCRS de la CICTA fait apparaître une densité observée environ deux fois supérieure à celles observées sur la période 2000-2003. Ces résultats sont cohérents avec les observations aériennes menées par les scientifiques espagnols en Méditerranée nord-occidentale en 2009. Cette campagne confirme donc l'intérêt des survols pour suivre l'abondance du thon rouge et de la nécessité de poursuivre ce type d'opération sur plusieurs années et sur les zones de la Méditerranée centrale et orientale.

3.6 Programme MEDITS-France (GSA 7 et 8)

Ce programme a pour objet principal de produire des indices d'abondance relatifs sur les principales espèces démersales du golfe du Lion et de l'est-Corse à partir de campagnes annuelles. Il comporte environ 90 traits de chalut par an, 66 dans le golfe du Lion et 24 pour la façade est de la Corse.

3.7 Programme PELMED (GSA 7)

L'évaluation des stocks de petits pélagiques est menée une fois par an en juillet à l'aide de prospections acoustiques, par la méthode d'écho-intégration à l'aide du logiciel Movies+ et de chalutages d'identification. Les campagnes annuelles PELMED couvre l'ensemble du golfe du Lion (GSA 7) et applique un protocole strictement identique depuis 1993. Toutes les principales espèces de petits pélagiques sont évaluées mais seules les biomasses de l'anchois et de la sardine font l'objet d'une fiche d'évaluation, l'évolution des biomasses des autres espèces étant montrée à titre de tendance comme pouvant servir à l'explication du niveau des stocks des deux espèces principales. Les résultats de ces campagnes sont discutés aux sessions des groupes de travail sur les petits pélagiques du SCSSA. Depuis la mise en place de l'harmonisation des campagnes acoustiques en Méditerranée à travers le protocole MEDIAS, les campagnes PELMED rejoignent les priorités internationales pour les campagnes financées par l'UE.

3.8 Statistiques thon rouge

La flottille des thoniers senneurs français est soumise à la remise d'un journal de bord conforme aux normes de la CICTA et à la réglementation communautaire. Les informations provenant de ces documents sont croisées avec celles concernant les débarquements (notamment en Espagne pour la campagne des Baléares) pour évaluer le montant des captures totales. Un programme d'observateurs à embarqués avait été mis en place pour la saison 2003 dans le but principal de recueillir les informations sur la distribution des tailles des captures transbordées directement de la senne aux cages mais il s'est heurté à certaines difficultés. Ce programme a pu fournir d'intéressantes informations sur les captures accessoires des senneurs méditerranéens, qui sont apparues quantitativement faibles. Un nouveau programme d'observateurs à bord des senneurs méditerranéens a été partiellement mis en place en juin 2008 selon la réglementation de l'ICCAT Rec [06-05].

4. ÉTAT DES RECHERCHES EN COURS

4.1 Projet UE SARDONE

Ce projet en phase finale avait pour objectif général la connaissance des stades post larvaires et juvéniles de l'anchois et de la sardine et la réduction de leurs captures. Ce projet a permis de montrer des phénomènes de transport des œufs et larves d'anchois au-delà du golfe du Lion vers le plateau catalan.. La recherche de l'amélioration de la sélectivité des chaluts pélagiques a conduit à l'essai de plusieurs innovations dont l'utilisation d'une nappe horizontale dans le but de favoriser la séparation des espèces et des tailles en fonction de leur comportement. L'analyse des résultats se heurte à la difficulté d'estimer l'effet de cette nappe séparatrice sur le volume filtré.

4.2 Programme MERLUMED

Plusieurs actions développées lors des années précédentes ont été finalisées au cours de l'année 2009 ou le seront en 2010, il s'agit en premier lieu, d'une proposition d'une nouvelle courbe de croissance du merlu du golfe du Lion à partir de marquage traditionnels (cf. publication). Concernant la question de la présence de contaminants chez cette espèce, un modèle de bioaccumulation des PCB a été mise en place soulignant l'influence de plusieurs paramètres biologiques du merlu du golfe du Lion sur la localisation et les concentrations de PCB et de DDE dans les tissus de ce poisson. Une comparaison de la bioaccumulation du mercure chez les deux espèces de rouget du golfe du Lion et de mer Noire a été par ailleurs réalisée (cf. 3 publiés ci-jointe).

Enfin, l'établissement du réseau trophique du merlu du golfe du Lion à partir d'analyses de contenus stomacaux et d'isotopes stables du carbone et de l'azote est en cours de publication.

4.3 Projet UE CAFE (capacity, fishing mortality and effort).

Ce projet qui avait pour finalité de produire une revue compréhensive de possibles mesures de gestion et de leur probable effet en matière de conservation de l'état des stocks est achevé. L'analyse statistique des données collectées au cours des cinq dernières années sur les CPUE de merlu d'un échantillon de navires du golfe du Lion montrent que la traction au point fixe est le plus fort (mesure de la puissance maximale du bateau aussi appelée TCT) ainsi que le poids et la surface des panneaux divergents peuvent être de bons estimateurs de la puissance de pêche du navire, aisément contrôlables.

4.4 Programme Marquage thon rouge

Dans le cadre du programme de collecte des données de la DG MARE (UE) qui s'est achevé fin 2008 l'IFREMER a effectué depuis 2006, des marquages sur le thon rouge en Méditerranée, à l'aide de marques électroniques archives de type «pop-up» sur des poissons de 30 à 50 kg dont les routes migratoires sont peu connues).

En 2007 et 2008, 19 marques électroniques archives de type «pop-up» ont été déployées au large de Marseille (Méditerranée nord-occidentale), notamment sur jeunes reproducteurs (taille 125-150 cm, sur lesquels les connaissances sur les routes migratoires restent très parcellaires) et sur quelques individus > 180 cm. Toutes les marques, sauf une, ont émises et au moins un thon marqué a été capturé par pêcheurs récréatifs en Méditerranée sud-occidentale. Les résultats préliminaires tendent à démontrer un fort taux résidence en Méditerranée.

5. ÉTAT DES SCIENCES SOCIALES

Dans le cadre du Système d'Information des pêcheries, l'IFREMER collecte annuellement à des fins d'expertise les données économiques d'un échantillon de 15 % de la flotte active de pêche française dont environ 250 navires méditerranéens. Une nouvelle typologie pour la flotte française de Méditerranée doit être réalisée intégrant les indicateurs économiques de chaque segment et tenant compte des spécificités régionales (exemple: lagunes).

Ce travail bénéficie de la contribution financière avec la Région Languedoc Roussillon et de la collaboration du Comité régional des pêches pour la définition de cette nouvelle typologie et la validation des procédures de collecte des données. Les indicateurs produits seront soumis au secteur professionnel pour validation.

Un programme de collecte des données de capture, d'effort et de coûts variables par sortie de pêche est également mis en place pour compenser les lacunes des données officielles de débarquement.

Enfin, dans le cadre d'un projet national une modélisation bioéconomique des interactions entre les métiers de la pêche du merlu du golfe du Lion est également en cours de réalisation.

6. ÉTUDES SUR L'ENVIRONNEMENT MARIN EN COURS

6.1 Projet IPEP – Étude des interaction pêcheries/tortues marines en Méditerranée

L'objectif de l'étude est d'approfondir la caractérisation de l'impact des pêcheries du littoral méditerranéen sur les tortues marines, suite à une première enquête nationale pour le Ministère chargé des pêches en 2009. Ce stage sera mené dans le cadre des activités du groupe «réductions des captures accidentelles» du Groupe tortues marines France (GTMF) créé à l'initiative du Ministère chargé de l'environnement, et en coordination avec le Réseau tortues marines en Méditerranée française (RTMMF- réseau composé d'observateurs agissant dans le cadre du Réseau national d'échouage-RNE, et alerté en cas d'échouage et de capture accidentelle de tortue marine), lequel a recensé 82 captures accidentelles par les engins de pêche entre 1996 à 2008. Cette étude s'inscrit dans le cadre d'une collaboration avec le Programme IPEP «Impact des pêcheries sur les espèces protégées» du Centre de recherche halieutique méditerranéenne et tropicale de l'IFREMER. L'étude qui devrait débuter en mars 2010 pour une période de 6 mois comportera 3 volets :

- Enquête de terrain auprès des professionnels de la pêche (pêcheurs, mareyeurs, organisations de professionnels): conception du questionnaire, réalisation d'un fichier de professionnels à contacter ; cette enquête sera menée en coordination avec les observateurs du RTMMF.

- Constitution du fichier de données (séries disponibles et données de l'enquête permettant de caractériser/quantifier des captures accidentelles de tortues marines, l'évolution de l'effort et du rendement de pêche des flottilles) et analyse des données.
- Mise à jour/approfondissement de la bibliographie sur les captures accidentelles.

6.2 Projet ALOP – Protection des requins pélagiques Programme action locale de préservation

Un projet d'étude sur les requins renards (*Alopias* spp.) capturés accidentellement par la flottille de chalutiers de Sète est en préparation à la demande et avec la profession (Organisation de Producteurs de Sète SATHOAN). Ce projet répond directement aux recommandations: du plan d'action national requin, de la CICTA (résolutions 08-07/09-07), de la CGPM et du CIEM. L'étude qui devrait débuter en mars 2010 pour une période de six mois et comporter trois axes: l'amélioration des données statistiques, l'étude de l'impact des activités halieutiques sur la dynamique des stocks de requins, l'amélioration des connaissances sur la biologie, l'écologie alimentaire et le comportement. Pour ce faire des d'enquêtes menées sur le terrain auprès des acteurs de la filière (pêcheurs, organisation de professionnels, mareyeurs) et des échantillonnages en mer ainsi que des marquages lors des débarquements sont prévus.

6.3 Canyons

L'Agence française pour les aires marines protégées conduit depuis novembre 2008 un programme de recherches dont l'objectif est d'établir un état de référence des écosystèmes des canyons de la pente continentale des côtes françaises en utilisant différentes techniques d'observation sous-marines. Les résultats de ces observations auxquelles plusieurs laboratoires français et espagnols participent, devraient permettre en outre d'aider à la gestion de ces écosystèmes et à l'établissement d'aires marines protégées dans ces régions.

7. MESURES DE GESTION

Conformément au règlement EC 1967/2006 même règlement, des projets de plan de gestion ont été définis pour les métiers suivants; chalutage du golfe du Lion et de la côte orientale de Corse, senne de plage, senne tournante à divers poissons, drague, gangui provençal et pêche de la langouste en Corse. Ces projets, dont certains intègrent des zones de pêche protégées (herbiers de posidonies par exemple), devront prendre effet en 2010, dès signification de l'accord de la Commission européenne. Ils prévoient notamment un suivi scientifique et une évaluation, l'obligation de déclaration de captures et la délivrance de permis de pêche spéciaux pouvant être exigés pour les navires de moins de 10 m.

8. SUGGESTIONS DE RECHERCHES À PRENDRE EN CONSIDERATION PAR LE SAC

Effectuer un bilan des campagnes d'évaluation en Méditerranée.

Entreprendre des actions pilotes sur la réduction des prises accessoires et des rejets.

Établir un bilan critique de l'utilisation des récifs artificiels en Méditerranée.

Développer des actions pilotes sur l'application de l'EAF.

Rechercher des dispositifs techniques standardisés pour le contrôle de l'effort et de la puissance de pêche des navires.

Étudier les conséquences bioéconomiques des modes d'exploitation de la pêche des petits pélagiques.

GREECE/GRÈCE

1. DESCRIPTION OF FISHERIES

Description of fisheries in Greece regarding and landings and fleet is given in the tables below.

Table 1. Provisional landing data for 2008 year provided by National Statistics Service.
The quantities are expressed in live weight.

	Common name	Scientific name	Landings (tonnes)*
	Sole	<i>Solea vulgaris</i>	776
	Other		106
Flatfish			882
	Hake	<i>Merluccius merluccius</i>	5 514
	Other		13 315
Groundfish			18 829
	Horse mackerel	<i>Trachurus spp.</i>	3 422
	Mackerel	<i>Scomber scombrus</i>	327
	Sardine	<i>Sardina pilchardus</i>	10 545
	Anchovy	<i>Engraulis encrasicolus</i>	16278
	Other pelagics		10964
Pelagics			41 536
	Bluefin tuna	<i>Thunnus thynnus</i>	350
	Albacore	<i>Thunnus albacares</i>	191
	Other tuna		1 389
	Swordfish	<i>Xiphias gladius</i>	962
Tunas			2 892
Other fish			11 598
Total fish			75 737
	Lobster	<i>Palinurus elephas</i>	394
	Norway lobster	<i>Nephrops norvegicus</i>	499
	Shrimp	<i>Parapenaeus longirostris</i>	3 693
	Other crustaceans		67
Total crustaceans			4 653
	Oyster	<i>Ostrea edulis</i>	13
	Mussel	<i>Mytilus galloprovincialis</i>	289
	Scallop	<i>Pecten opercularis</i>	6
	Other shellfish		503
	Squid	<i>Loligo vulgaris</i>	681
	Cuttlefish	<i>Sepia officinalis</i>	1 568
	Octopus	<i>Octopus vulgaris</i>	2 261
	Other molluscs		1 867
Total molluscs			7 188
Grand Total			87 578

*Landings from vessels with engine power over 19 hp.

Table 2. Fishing fleet characteristics

LOA (m)	No. of vessels	Capacity (GT)	Engine power (kW)
0–9.99	15 510	27 123.14	262.612
10–14.99	1 083	11 622.27	83 476.11
15–23.99	433	17 709.47	86 407.48
24–49.99	226	31 341.29	73 996.44
	17 252	87 796.17	506 492.03
TOTAL			
Range o LOA	2.56-48.98		
Average LOA	7.44		

2. STATUS OF STOCKS OF PRIORITY SPECIES

Anchovy, *Engraulis encrasicolus*–GSA 22 (Aegean Sea-NWpart)

In GSA 22 the Greek anchovy fishery is almost exclusively exploited by the purse seine fleet. Regarding the regulations enforced they concern a closed period from the mid-December till the end of February and technical measures such as minimum distance from shore, gear and mesh size, vessel capacity, power of engine. There is a minimum landing size at 9 cm. Discards values are less than 1%, reaching approximately 0.06 % data for GSA 22. Data of the landings per vessel class indicate that small vessels (12–24 m) are mainly responsible for anchovy catches (>70 % of sardine catches).

The assessment of the stock has been based on fishery independent surveys information as well as on Integrated Catch at Age (ICA) analysis model. Acoustic surveys estimations were used for Total Biomass estimates. ICA assessment method uses separable virtual population analysis (VPA) with weighted tuning indices. The application of ICA was based on commercial catch data (2000–2008) and as tuning indices were used the biomass estimates from acoustic surveys estimates and DEPM surveys estimates over the period 2003–2008 with a gap in 2007, as no surveys data were available for this year. The stock was found as fully exploited with no expected room for further expansion. The exploitation rate was found to produce moderate to high fishing mortality and the stock abundance was estimated as intermediate.

Sardine, *Sardina pilchardus* in the Aegean sea–GSA 22 (Aegean Sea-NW part)

In GSA 22 the Greek sardine fishery is almost exclusively exploited by the purse seine fleet. Regarding the regulations enforced they concern a closed period from the mid-December till the end of February and technical measures such as minimum distance from shore, gear and mesh size, vessel capacity, power of engine. There is a minimum landing size at 11 cm. Discards values are less than 1 %, reaching approximately 0.3 % data for GSA 22. Data of the landings per vessel class indicate that small vessels (12–24 m) are mainly responsible for sardine catches (>88 % of sardine catches).

The assessment of the stock has been based on fishery independent surveys information as well as on Integrated Catch at Age (ICA) analysis model. Acoustic surveys estimations were used for Total Biomass estimates. ICA assessment method uses separable virtual population analysis (VPA) with weighted tuning indices. The application of ICA was based on commercial catch data (2000–2008) and as tuning indices were used the biomass estimates from acoustic surveys estimates over the period 2003–2008 with a gap in 2007, as no acoustic survey data were available for this year. The exploitation rate was found to produce high fishing mortality and the stock abundance was estimated as intermediate.

Conclusions for both anchovy and sardine

The conclusions based on those assessments should be considered preliminary and cautionary because they are based on a short time series of data. Based on the assessment results the anchovy stock is considered to be harvested sustainably, operating below but close to an optimal yield level, with no however expected room for further expansion. On the other hand the stock of sardine was found to be exploited above but close to the empirical level for stock decline. Thus the management advice is not

to increase the fishing effort. The sustainability for harvesting of both stocks has to be confirmed in following years, while the stocks should be monitored in an annual basis with direct assessment surveys.

3. STATUS OF THE STATISTICS AND THE INFORMATION SYSTEM

There is not any change of the National System of fisheries statistics during the last year. Fishery statistical data are collected by Administration under various Ministries.

Fish landing data are collected by the National Statistical Service (Ministry of Finance). Landing data are also collected under the Reg. (EC) 2847/93 by the Ministry of Rural Development and Food and transmitted to DG FISH. These data provided by the masters of fishing vessels having on overall length more than 10 metres and for specific species according to the above mentioned regulation.

In particular, catch data for large pelagics, e.g. tunas and tunas like, are collected from all fishing vessels for the purpose of monitoring bluefin tuna (*Thunnus thynnus*) quotas.

The Ministry of Rural Development and Food and Local Prefectures store data of the fishing fleet, which include vessel technical characteristics. All these data are inputted in the National Fleet Registry, which is managed by the Ministry of Mercantile Marine. The Ministry of Mercantile Marine updates the Community Fleet Registry which is kept by the European Commission and allows for updating in terms of fishing vessels characteristics.

The fisheries data arrive to the FAO through the National Statistics Service and as fleet data concerns through the Ministry of Rural Development and Food.

4. STATUS OF RESEARCH IN PROGRESS

- **Improving assessment and management of small pelagic species in the Mediterranean (Acronym SARDONE).**

Proposal/Contract No.: FP6 - 44294

The proposed study aims in the scientific and technological collaboration between the two countries in order to improve the existing knowledge concerning the main features of the anchovy population that characterize the status of the stocks.

- **Capacity fishing mortality and effort (acronym CAFE)**

Contract No.: 022644–EU Specific Targeted Research Project (STREP)

Starting date: 1/2/06–Duration: 36 months

The project will examine the relationship between capacity, effort and fishing mortality for six case studies; North Sea, Biscay and East Mediterranean pelagic fisheries; and North Sea, western (Biscay and Celtic Sea) and north west Mediterranean demersal fisheries. Based on fleets data and fish stocks the project will propose a series of new effort and capacity control measures and scenarios.

- **A framework for fleet and area based fisheries management (acronym AFRAME)**

Contract No.: 044168–EU Specific Targeted Research Project (STREP)

Starting date: 1/4/07–Duration: 24 months

The chief objective of AFRAME is to develop a framework for fleet and area-based fisheries management. The three research themes: 1) the development and testing of a framework for describing fleet activity; 2) the development of indicator approaches to summarising information and presenting advice in relation to multifleet, multispecies fisheries; and 3) stakeholder perceptions and institutional implications of a shift to fleet and area based management, will be developed through case studies areas (North Sea demersals; ICES areas VII and VIII demersals; Mediterranean).

- **Operational Evaluation Tools for Fisheries Management Options (EFIMAS)**

The objective of the EFIMAS project is to develop an operational management evaluation framework that allows evaluation of the trade-off between different management objectives when choosing between different management options. The evaluation framework will be developed to

inform an exploratory, adaptive decision-making process. Evaluation tools will be developed to appraise the biological, social and economic effects of fisheries management measures in the EU, and these will be applied to important fisheries. The tools will take account of the dynamics in the fisheries systems, as well as of uncertainties and will include risk assessments.

- **Fisheries independent survey based operational assessment tools (FISBOAT)**

The purpose of this project is to develop fish stock assessment tools based on survey data only and evaluate how these perform in producing advice within defined management procedures. The project spans several disciplines (i.e. population biology, survey methods, stock assessment, management), with the objectives of (1) producing a comprehensive diagnostic of population status using survey-based population demography and biological indices and (2) evaluate its performance in a management context.

- **NECESSITY (CONTRACT No SSP8-CT-2003-501605)**

Main objectives

- To develop effective and acceptable gear modifications and alternative fishing tactics in cooperation with the fishing industry to reduce the bycatch and mortality of non-target fish species in European nephrops fisheries, and determine the biological effects and socio-economic repercussions.
- To develop effective and acceptable gear modifications, acoustical deterrents and alternative fishing tactics in cooperation with the fishing industry to reduce the bycatch and mortality of cetaceans in European pelagic fisheries and determine the biological effects and socio-economic repercussions.

- **PRONE: Precautionary risk methodology in fisheries (STREP/022589)**

The main objective of the project is to investigate the ways of adapting risk analysis theory, embracing the full process from stock assessment, projection and advice, via management decisions, to the practical implementation of the management measures, including control. Four case studies will be used: Greece (no TAC), North Sea (TAC), Faroes (ITE) and Iceland (ITQ).

- **MADE: Mitigating adverse ecological impacts of open ocean fisheries. (01/04/08-31/03/12)**

The primary objective of the project is to propose measures to mitigate adverse impacts of fisheries targeting large pelagic fish in the open ocean (purse seiners using FADs and longliners), through appropriate knowledge on the biology and ecology of species, and of the fisheries.

- **FISH: Framework contract for the promotion of the dissemination of Scientific information (FISH/2006/16).**

Strategic and promotional activities will be carried out aiming of disseminating results through Council Regulation N° 1543/20001 implementation. In order to obtain this goal the following actions are envisaged: (1) Identification of relevant stakeholder target groups and their expressed needs for output of DCR (Data Collection Regulation) and the identification of current output of the DCR; (2) Based on this inventory of available and requested information designing a communication strategy; (3) Based on the identified needs and the communication strategy organise and implement a series of interactive activities (workshops, seminars) on specific requested topics.

- **CoralFISH: Assessment of the interactions between corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond**

The CoralFISH project aims to support the implementation of an ecosystem-based management approach in the deep-sea by studying the interaction between cold-water coral habitat, fish and fisheries. Multidisciplinary research cruises will be carried out involving fisheries biologists,

marine biologists, geologists and oceanographers. The seabed will be mapped and surveyed with high technology imaging tools.

- **Status of ray population in the Mediterranean Sea.**

The project focus on the estimation of the abundance of the Mediterranean rays, based on the data which have been collected during the MEDITS program between 1994–2001. The contribution of HCMR is consisted of the provision of necessary data of the abundance of rays in the Greek Seas and to the control of their analysis.

- **Dynamic behaviour of long line and static nets in deep waters. Experimental trial in the region of Southern Aegean (long line)**

The aim of this project is the study of dynamic behaviour, efficiency and selectivity of long line of deep waters and special nets that will be used in the marine areas of southern Aegean.

- **Investigation of behaviour of purse seine netting in different conditions of fishery (Gri-gri)**

The aims of the project are:

- The investigation of behaviour of purse seine netting in usual conditions of commercial fishery.
- The study of behaviour of purse seine netting in altered fishing conditions.

- **Management and control of terms of access of trawlers in the region of Northern Aegean (Thermaikos)**

The project objective is to specify the bathymetric distribution of species *Melicertus kerathurus*, with regard to the topography of the fishing fields, to quantify the effect of fishing tools, to examine also the effect of environmental parameters in the distribution of the species. Using this data, will be determined a management system of fishing effort in the regions of Thracian Sea and Thermaikos Gulf.

- **Management and control of terms of access of trawlers in nursery of the species *Merluccius merluccius* in Thracian Sea (HAKE)**

The project objective is to specify the zone in the fishing field northern of the island Thassos, where young individuals of the species *Merluccius merluccius* live, to determine the season of highest abundance of young fishes, to determine the assemblage of the existing fishing tools and to analyse the fish catch of trawlers in the specific region, in order to document scientifically the management regime of the region. Using this data, a protected fishing area will be specified, where will be prohibited seasonally and for a short time interval, the fishery with trawler in specific depth zone. This action is included in the new regulation for the Mediterranean fishery, which aims in the determination of sensitive areas for the main commercial species.

- **Fish population structure and traceability (FishPopTrace)**

The underlying rationale of FishPopTrace is to assess and address challenges arising from the development of traceability tools within a forensic framework for four judiciously chosen target species: cod (*Gadus morhua*), hake (*Merluccius merluccius*), herring (*Clupea harengus*) and sole (*Solea solea*). FishPopTrace will provide information that relates to geography (population “tag”), as well as providing regional signatures that indicate biological differentiation in relation to spawning identity. Both aspects are important for traceability, and are not mutually exclusive, since the former signals source of origin, whereas the latter additionally yields information on biological variability that may underlie population resilience and evolutionary potential. Recognising spawning groups therefore provides a baseline for conservation of genetic resources.

- **Mediterranean small craft fishery and development, Acronym (MESFIDE)**

This project intends to develop and apply a model for the regeneration of coastal fisheries and to demonstrate the coastal fisheries as an economically viable choice of employment, exploiting accessory and rejected fish species. The model includes the recognition and choice of species in

order to exploit them and the development and application of processes that certify the quality and packing, that protect the environment, that provide guarantee to the consumer. The model was applied in four countries Greece, Italy, Cyprus and Egypt. Among others, some items related to fishery was to investigate the composition of the coastal fishery in pilot regions in Greece and Cyprus, to characterize the fishing tools in the same regions, to collect technical details and layouts to describe the traditional methods of fishery and tools in Greece and Cyprus, to sample weekly the fishing effort of small scale coastal fishery and to analyse the population characteristics of some target species. In addition was investigated the determination and analysis of activities that are related with the conditions of hygiene in the ships in Greece and Cyprus, the realisation of laboratorial sample analysis regarding the hygiene on board and the possibility for the application of Hazard Analysis Critical Control Point (HACCP) in the produced products.

- **Investigation of the possibility to use more selective gears targeting in the same fish catch. Introduction of monofilament twines in the construction of fishing gears used by the small-scale fishery (monofilament)**

The nets, gillnets and trammel nets, constitute the main fishing gears of coastal fishery in Greece since over 80% of the fishermen use them normally. Although the gillnet selectivity has been studied in a wide extent, the trammel net selectivity is less reported. Also, comparison of gillnets and trammel-nets selectivity, when the same species is targeted, is even less reported. The use of monofilament twines in fishing gears manufacture is prohibited in Greece according to Presidential Decree (1094/15-11-77). However Greek fishermen strongly demand the use of fishing gears made of monofilament twines. The main objectives of the project were: a) to compare the selectivity and fishing efficiency between gillnets and trammelnets made of multifilament twine with the same gear characteristics (net length, net height, mesh size, hanging ratio; b) to compare the selectivity and fishing efficiency between gillnets made from multifilament and gillnets made of monofilament twine (single monofilament) and to find out the effect of the net type in the selectivity of a gear. The target species were *Mullus surmuletus*, *Mullus barbatus*. Data were collected for: a) the characteristics of the fishing fleet that is occupied in this fishing activity; b) the technical characteristics of the fishing gears that are used in this activity; c) the fishing technique. The types of monofilament twines that exist abroad and are used for the manufacture of fishing gears was also investigated. The results of the experimental trials are summarized as follows: a) the catch of monofilament gillnets was relatively bigger for both areas; b) trammelnets were more effective from gillnets (monofilament and multifilament at Saronikos Gulf while at Thracian Sea their efficiency was the same with the one of the monofilament gillnets). However, gillnets were more selective in both areas. The net type seems to affect mainly the efficiency of the nets since monofilament gillnets were more efficient than multifilament ones in both areas. The selectivity appears to be influenced in smaller degree from the net type. Monofilament gillnets were more selective than multifilament ones in both areas.

5. MARINE ENVIRONMENTAL STUDIES IN PROGRESS

- **Critical Interactions BETWEEN Species and their Implications for a PreCAUTIONARY FiSheries Management in a variable Environment—a Modelling Approach (BECAUSE) SSP8-CT-2003-502482**

The principle objective of this program is the identification and quantification of critical biological interactions between and within commercial target fish species and non-commercial top predators leading to a description of food web structures and the derivation of precautionary reference points for ecosystem oriented fisheries management.

- **Developing Indicators of Environmental Performance of the Common Fisheries Policy (INDECO)**

The programme aims to develop suitable indicators for monitoring the state of the environment in relation to fisheries activities. The development of such indicators will deal with the single species population level, with the community level and then with the ecosystem level, while socio-

economic indicators will be also built up. These indicators will be used to construct models for monitoring the impact of fisheries on the environment.

- **MEECE: Marine Ecosystem Evolution in a Changing Environment**

The project aims to develop predictive management tools and strategies to resolve dynamic ecosystem interactions. The overall concept addresses global change, the result of natural and anthropogenically induced climate change impacts upon the structure and function of marine ecosystems via a number of abiotic and biotic drivers.

- **MOFI: Monk Seal and Fisheries: Mitigating the conflict in Greek seas. (LIFE05 NAT/GR/000083)**

The MOFI project's objective is to improve the conservation status of the European Union's largest population of the critically endangered Mediterranean monk seal found in Greece, by mitigating the negative consequences of the interaction between *Monachus monachus* and the fishery sector that continue to seriously threaten the species survival.

6. MANAGEMENT MEASURES

In addition to EC fisheries management measures, Greece has adopted several national measures for managing fishing effort. These are applied either to the whole of the country or locally and concern the following:

- Fish minimum sizes.
- Certain characteristics of the fishing vessels and fishing gear.
- Seasonal and local closures of fisheries.
- Banned fishing gears.
- Minimum distance of the shore and depth restrictions where fisheries can operate

Regarding large pelagics, such as *Thunnus thynnus*, *Thunnus alalunga* and *Xiphias gladius*, fishery is regulating by issuing special permits valid for one year. As far as *Xiphias gladius* fishery concern, there is a seasonal closure during October to January, with a minimum fish size of 120 cm.

ITALY/ITALIE

1. DESCRIPTION OF THE FISHERIES

In 2008, the Italian fishing fleet consisted of 13 374 vessels, accounting for a total of around 182 909 GT and 1 101 967 kW. Vessel numbers decreased by 16% between 2002 and 2008.

Due to the decreasing number of vessels there is also a trend in capacity reduction with respect to kilowatts (a decrease of around 12% between 2002 and 2008); in the period 2004-2008, gross tonnage has decrease of around 9%.

Italian fishing fleet by LOA class, 2008

LOA class	Number	GT	kW
LOA < 6	2 881	2 885	21 596
6 < LOA < 10	5 301	9 469	164 059
10 < LOA < 12	1 017	6 575	87 240
12 < LOA < 15	2 159	28 599	267 822
15 < LOA < 18	561	15 960	94 560
18 < LOA < 24	956	53 969	249 838
24 < LOA < 40	475	59 432	197 391
LOA > 40	24	6 020	19 462
Total	13 374	182 909	1 101 967

Source: Mipaf

In 2008, around 8 800 vessels are classified in the segment of the small scale fishery. The fleet is characterized by a strong multispecificity and multigear activity. Landings from Adriatic Sea and Sicily Channel account for almost two thirds of national production.

Except for 1 percent of vessels operating in the Mediterranean and high seas, the majority of vessels operate in coastal waters around the Italian peninsula. The small-scale fishery is the Italian fleet segment with the greatest number of vessels, representing 66 % of the total. The small-scale fishery accounts for more than a quarter of the national value of landings. Fishermen represent 47 % of national total with an average crew of two men. Average incomes are low, but these vessels represent an important economic resource in some geographical areas with a high level of dependence on fishery.

The trawler fleet is the largest fishery by volume. In 2008, this segment accounted for 37 % of total national catches and 48 % of total value of landings, employing around 8 831 fishermen (30 % of total fishers). It is also the main segment in terms of capacity, amounting respectively the 62 % and 48 % of the total GT and kW.

Total landings by main targeted species

In 2008, the Italian national fleet landed approximately 216 567 tonnes of seafood and generated income of around 1 082 million euros. Over the last years, the fish production has shown a steady decline. In the period 2002 to 2008, landings have decreased by 29 %. The persistency of productive decline is mainly related to the reduction of activity and capacity that affected most fleet segments.

In terms of landings value, the most important species for the Italian fleet were hake, European anchovy and deepwater rose shrimp. In 2008, they represented 9 %, 7 % and 6 % respectively of the total value of landings.

The species with the highest volume of landings in 2008 was european anchovy, with a total weight of 45 039 tonnes, representing 21 % of the total volume landed.

Apart from small pelagic species and some specific fishery (shrimps, swordfish, tuna, clams) fishers can only partially target species they intend to catch, given the strong multi-specificity of the fisheries. The three mainly harvested species account for 32 percent of the overall catches. Only about thirty demersal species out of over a hundred caught by fishing fleet in the Italian seas are

Main target species, Italy, 2008

	Volume (tonnes)	Value (000 €)
European hake	45 039	77 200
European anchovy	45 039	77 200
Striped venus	24 940	56 171
Common cuttlefish	9 839	68 542
Deep-water rose shrimp	8 244	64 134
Swordfish	4 534	53 522
Norway lobster	3 414	63 649
Giant red shrimp	1 778	33 623
Others	73 741	588 217
Total	216 567	1 082 257

Source: Mipaf-Irepa

2. STATUS OF STOCKS OF PRIORITY SPECIES

The available informations are included in the report of the stock assessment sub-committee.

3. STATUS OF THE STATISTICS AND INFORMATION SYSTEM

The production of Italian fisheries statistics is carried out by IREPA on behalf of the Ministry of agriculture and forestry policies and is included in the ISTAT National Statistic Programme. As for art.10 of the Legislative decree n.322/89 (*Data produced within statistic surveys included in the National Statistic Programme belong to the community...*) the fisheries statistics are available on the Institute Web site and are also published in the “Economic observatory on the productive structures of the Italian maritime fisheries”. Statistics are produced on the basis of a sample of national fishing fleet, yearly updated, and their reliability is guaranteed by specific validation software.

4. STATUS OF RESEARCH IN PROGRESS

Fisheries data have been collected in the framework of the Italian National Data Collection Program 2009, according to the legal Community framework put in place in 2008 with the adoption of a Council Regulations, a Commission Regulation and a Commission Decision laying down the detailed rules of application.

In accordance with chapter II of the annex of the Commission Decision, this national programme comprises of the following modules:

1. Module of evaluation of the fishing sector:
 - Section for the collection of economic variables.
 - Section for the collection of biological variables.
 - Section for the collection of transversal variables.
 - Section for research surveys at sea.
2. Module of evaluation of the economic situation of the aquaculture and processing industry sectors:
 - Section for the collection of economic data for the aquaculture sector
 - Section for the collection of economic data for the processing industry
3. Module of evaluation of the effects of the fishing sector on the marine ecosystem
4. Module for management and use of the data covered by the data collection framework

In implementing the new DCR framework, continuity with data and time series collected under the previous DCR has been assured. In particular economic and transversal data has been collected

applying the same methodologies. The higher level of disaggregation required by the “metier” approach has been obtained through an increase of the sampling intensities, where necessary. Regarding the biological variables, since 2005 a sampling design, based on fleet segments and not on stocks, has been adopted. Therefore, the methodologies and protocols of the previous NP were already in line with the new data collection scheme and they have been just adapted to take into account the Mediterranean métiers. Regarding the surveys, MEDITs has been carried out in line with previous years and the MEDIAS survey started in 2009.

Research activities on marine living resources have been carried out in Italy by several bodies, both private and public, among which are mainly involved University Departments and Research Institutes. During 2009 the following main activities have been performed, as they are included in the Italian National Program 2009:

Module of evaluation of the fishing sector:

Section for the collection of economic variables

The parameters evaluated for analysis of the economic situation of the sector are those reported in Appendix VI of Commission Decision 2008/949/EC.

The following variables has been estimated through a specific sample survey:

Income, personnel costs, Energy costs, Repair and maintenance costs, Other operational costs, Investments Effort–Energy consumption.

The survey was continuous in character and has a reference period of one year. The target population of the survey comprises the Italian fishing fleet and the list was based on the Vessel Register kept at the Directorate-General of Fisheries and Aquaculture of the Ministry of Agricultural and Forestry Policies. It includes vessels < 12 metres.

Section for the collection of biological variables

Metier-related variables

Sampling has been performed in order to evaluate the quarterly length distribution of species in the catches, and the quarterly volume of discards.

The biological parameters (sex, weight, maturity) has been collected by scientific institutes covering each of the seven FAO/GFCM GSA.

Stock-related variables

Biological sampling has been carried out by scientific institutions designated by the relevant Italian Administration separately for each GFCM Geographical Sub-area and by major groups of species (small pelagic species, large pelagic species and demersal species).

Within its assigned area, each scientific institution carried out biological sampling and data analysis and processing. Strata, as for Biological-Metier-related variables of the NP, were represented by a combination of geographical sub-areas (GSA) and métier. The sampling unit was the fishing day (corresponding to the fishing trip). Biological parameters (sex, weight, maturity) has been collected from commercial fisheries (i.e. landing, on board sampling) following each stratum.

Recreational fisheries of bluefin tuna

Data collection on recreational and sport fisheries of bluefin tuna in 2009 and 2010 follows the methodologies suggested by the pilot study previously carried out within the 2004 National Program.

Applied methodologies assured the estimate of total catches and total fleet, as well as biological information on length composition of catches. The main basis of the data collection program was the overall census of recreational and sport fisheries that 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 and an estimate of catches per administrative region has been obtained.

Recreational fisheries of eels

In 2009 a pilot study has been carried out to identify the importance of recreational fishery compared with the commercial one.

The pilot survey collected information on the general context of the eels recreational fisheries (marine or inland, fishermen population, types of fishing, seasonality).

Section for the collection of transversal variables

Capacity

The following parameters have been given for capacity estimation:

- Number of vessels.

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

Parameters has been given annually, per fleet segments (Appendix III - Commission Decision 2008/949EC)) and per supra-regions (Mediterranean and Black Seas and Other regions).

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

More than 70% of the Italian fishing-vessel licences allow the use of more than one fishing system. In these cases the existence or otherwise of actual polyvalent activity have to be verified.

- In order to get this information on the prevalent fishing activity, field surveys have been carried out periodically since the implementation of the DCR and will be updated every quarter.

This survey involves all the vessels in the fleet register, including those less than 12 metres.

Effort

Effort has been estimated according to the variables and disaggregation levels listed in Appendix VIII (Commission Decision 2008/949EC).

In order to estimate fishing effort per metier and GSA, different data sources has been used:

- Logbook information, when available. Logbook is compulsory in the Mediterranean only for a minority of fleet (vessels of overall length exceeding 10 metres) and contain production information only where vessels retain on board quantities exceeding 15 kg live-weight equivalent of the species included in a specific list (Annex VII of Regulation (EC) No 2737/1999).

- Field survey to detect the prevalent fishing activity.

- Sample survey to estimate the monthly distribution of activity by métiers.

The sample survey was based on a panel of around 1500 vessels (10 % 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 have been recorded by gear and species using purposely formulated questionnaires. Results for each area, by month and by metier have been obtained by applying raising factors to the sampled.

Landing

Landings has been estimated according to the variables and disaggregation levels listed in Appendix VIII (Commission Decision 2008/949EC).

Conversion factors has not been applied to landing-weight-based quantities as all species are landed ungutted. Conversion factors has been necessary only for marginal share of landings. For these species, quantities has been converted to live weight by the FAO and Eurostat conversion factors.

Commercial landings has been assessed on the basis of a sampling procedure. The survey has been based on a sample of around 1500 vessels, that is about 10 % of the total fleet. The sample was stratified according to fishing segments and geographical areas. Elementary data have been collected through questionnaires filled by data collectors, which are about 60 and are scattered along the Italian coast. Survey takes place every week on a continuous basis. Data on landings (weight and prices) and fishing area have been recorded by gear and species.

Section for research surveys at sea

MEDITs

The Medits programme aims to conduct co-ordinated surveys from bottom trawling in the Mediterranean. This survey derives from a EU project started in 1994 at European Mediterranean level (Bertrand *et al.*, 2002).

The basic protocol (Medits, Instruction manual 2007), common to all the Mediterranean partners, includes the design of the survey, the sampling gear (feature and handling), the information to be collected, and the management of the data as far as the production of common standardized analyses of the data.

The challenge of Medits survey, as for other scientific trawl-surveys, is to provide data useful for describing and quantifying changes in the fish populations, through indices of demography, mortality, spatial occupation, biological traits, thus contributing to the development of assessment and management advice tools.

The Italian data collection program foresees the continuation of the Medits survey, principally in the perspective of obtaining information comparable among the various Italian areas and with other Mediterranean countries. Since the beginning of the survey (1994) Medits produce, for a pool of target species (benthic and demersal): abundance indices by species (in number of individuals and biomass per square km; i.e. N/km² and kg/km²) and length frequency distribution (splitted by sex and maturity stages) by depth macrostratum (shelf and slope) and geographical sub-area (FAO/GFCM Geographical sub-areas, GSA).

The working zone has been defined as the totality of the trawlable areas off the Italian coasts from 10 to 800 m depth (on the continental shelves and along the upper slopes). These limits have been adopted to cover at best the distribution areas of the main exploited – or potentially exploitable – species, considering the administrative and technical constraints of the project.

The stations have been distributed in each GSA applying a stratified sampling scheme with random drawing inside each stratum.

MEDIAS

The MEDIAS echo-survey on small pelagic fish targets anchovy (*Engraulis encrasicolus*), and sardine (*Sardina pilchardus*) and it covers a series of areas in the Mediterranean EU MS (Spain, France, Italy, Malta, Slovenia and Greece) with a standardized methodology. The aim is to gain knowledge of biomass levels and spatial distribution of small pelagic fishes. Italy was responsible for the performance of two cruises which include also territorial waters of Slovenia and Malta:

a) in the Adriatic Sea (GSAs 17 and 18; FAO sub-areas 37.2.1 and 37.2.2)

b) in the Sicilian Channel (GSA 15 and 16), FAO sub-area 37.2.2)

Surveys have been performed in summer-early autumn following an internationally agreed MEDIAS protocol.

Module of evaluation of the economic situation of the aquaculture and processing industry sectors:

Section for the collection of economic data for the aquaculture sector

The present analysis of the structure of the Italian aquaculture was based on the population of active enterprises that reaches 715 units (Idroconsult, 2002).

Section for the collection of economic data for the processing industry

The population was composed by all the companies that belong to the sector of transformation of fishery products, that is those identified by the activities corresponding to the following ATECO codes:

15201 Preserving of fish, crustaceans and molluscs by freezing, salting, etc

15202 Production of fish products, crustaceans and molluscs

The official register that has been used is ASIA (statistical archives of active companies) and it is managed by ISTAT (the national statistical institute). The sector is composed by around 500 companies and employees 7 600 people (source: Istat).

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

Environmental indicators listed in Appendix XIII of the Commission Decision 2008/949EC has been estimated. The following tables reports the different data sources that has been 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

Module for management and use of the data covered by the data collection framework

This paragraph describes the project for the implementation of an information system for the fishing sector in application of Reg. (EU) 199/2008.

In order to comply with the provisions contained in Reg. (EU) 199/2008 and subsequent Reg. (EU) 665/2008, it becomes necessary to proceed to 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.

The substantial novelties provided for by the project are concisely described below:

- implementation of the system through the methodological and technological development of the current procedures for the collection and storage of data;
- creation of 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;
- development of the system in compliance with national legislative provisions in the matter of accessibility of the Websites (known as the Stanca Law), in the aftermath of positive past experiences in the ambit of portals of bodies pertaining to the MIPAF.

OTHER RESEARCH ACTIVITIES

Assessment of Bycatch of protected species in the pelagic trawl.

Concerted Action for the identification of scientific inputs for the development of organic aquaculture in Italy.

Strategies for the commercial exploitation of the Adriatic bluefish. Networks and relations with the territory.

Study for the detection of integrated tools for the sustainable development of the Italian Fishery following the entry into force of Reg. (CE) 1967/2006 and the application of national management plans.

Group of study for the achievement of data useful for the management of large pelagic fishery.

Small pelagic stock assessment (daily egg production model, age and length method and ecosurveys).

Spatio-temporal identification of nursery area in the Italian seas.

Guidelines and technical measures for the management of Fishery Restricted Areas.

Seafood quality and safety

5. STATUS OF THE SOCIAL SCIENCES STUDIES IN PROGRESS

None

6. MARINE ENVIRONMENTAL STUDIES IN PROGRESS

- Spatio-temporal identification of nursery area in the Italian seas.
- Guidelines and technical measures for the management of Fishery Restricted Areas.
- Fishery and marine pollution: studies on the effects of pollutants on marine fishery.

7. NATIONAL MANAGEMENT MEASURES

Technical measures were adopted in order to ensure exploitation and conservation of living aquatic resources or the protection of marine ecosystems. Fishing activities (i.e. trawlers) have been

temporarily banned. Biological stop changed among regions in order to improve the marine environment and to avoid the depletion of certain stocks.

8. RESEARCH SUGGESTIONS FOR CONSIDERATION BY SAC

In certain fisheries, where some fishery stocks are transboundary and exploited by more than one country could have international relevancy:

- the knowledge of population biology and the identification of population units;
- a common collection of data on stocks and fisheries, within the framework of an international program;
- representative and standardized data on commercial fisheries, both in terms of fishing effort and catches, to evaluate at regional level the impact of fisheries on the shared resources;
- together with the classical biological information, the genetic features of the population subunits should be investigated in order to clarify relationships among populations;
- within the context of Ecological Approach to Fishery Management, an effort should be done to produce a common map reporting both bathymetric, substratum features and biocenoses including inshore and offshore areas;
- coupling of hydrological information with biological data should be improved at regional level;
- on the basis of the results reported in recent literature, the borders of some GSA in the area need some revision.

Further research proposals are:

- Stock-recruitment relationships.
- Identification of spawning grounds and other essential fish habitats.
- Impact of fishing on communities and ecosystems.
- Abundance estimation of small pelagic populations (echosurveys).
- Effect of climate change on stock dynamic.
- Evaluation of spatial management measures (no take zones, marine reserves).

Further research effort is suggested in the fields of bioeconomics models, reference points and indicators for the ecosystem approach to fishery management (EAFM).

LEBANON/LIBAN

DESCRIPTION OF THE FISHERIES

Description of the fishing grounds and GSA:

GSA 27. The Lebanese coastline is 220 km long. The continental shelf is narrow, especially in the South. Bottom grounds are mainly rough with intensive rocky patches, good for stationary demersal gear. The fisheries of Lebanon are classified as small-scale, artisanal, and are traditionally based on bottom stationary gear (trammelnets and longlines), purse seine nets, and beach seines. Fishing operations, with the exception of longlines, are mostly carried out at depths of up to 50 metres. Most of the fishing nets (purse seines, gillnets and beach seines) have small mesh sizes (less than 2x2 cm).

Total landings by main targeted species: N/A

Fleet:

- Number of vessels: 2 662
- LOA (range and average):
Range: 2.5-24.8 m
Average: 6.92 m
- Total kW + GT:
kW: 4 8341 (for 2,378 vessels)
GT: 18 426 tonnes (data available for only 608 vessels)

Status of stocks of priority species: N/A

Status of the statistics and information system

An initiative at the Marine Resources and Coastal Zone Management program (MRCZM) at the Institute of the Environment, University of Balamand (IOE-UOB) has been collecting commercial fisheries data in the Mohafaza (district) of North Lebanon and Akkar on a regular basis since August 2005. The geographical coverage of the monitoring programme represents approximately 42 % of the Lebanese coast. The main goal is to establish long-term monitoring of commercial fish species landings and effort in order to develop appropriate management plans based on scientific data to sustainably benefit from the resource. The monitoring program has been striving to meet the following objectives:

- establish an easy to implement data collection and analysis method;
- develop & validate the socio-economic, fish catch and fishing effort surveys;
- share the collected data with the Ministry of Agriculture;
- raise the awareness of fishermen about the importance of co-managing the resource themselves: promote ownership;
- identify the season in which targeted species will fetch the highest price.

The data collection is an indirect method where data is collected twice per week, 12 months a year. The data is gathered from the four main fishing harbors in addition to the main fish markets in the target area while fishing effort is obtained from the records of the Lebanese Army that records boat activity on a daily basis. The variables currently being evaluated are:

- Fishing gear type (nets, lines, pots);



- fish species landed per gear type: Quantity (kg);
- average fish size (# fish/kg)
- prices (LBP/Kg)
- fishing effort: Total number of fishing boat outings during 24 hours and number of fishing boats per gear type

Data is then entered into a software application dubbed FLOUCA (Lebanese term for fishing boat and stands for **F**ish **L**anding **O**perational **U**tility for **C**atch **A**ssessment) based on the generic software and standard statistical methodology available on the web by the FAO. The system is structured into three distinct but interrelated components.

FLOUCA 1: creates automatically sampling frames (i.e. extrapolating factors) for the estimation of fishing effort. It is not used currently since at the launching of the monitoring system, a fishing vessel register was not available. The recent publication of the MEDFISIS report by the Ministry of Agriculture that includes the register will allow the use of this component.

FLOUCA 2: Works on sample data and generates monthly estimates on catch, effort, CPUE, prices, values, average fish weight and number of individuals in the catch. The collected data is entered into this component of the system.

FLOUCA 3: Integrates monthly estimates into year-based databases. It is the principal program for reporting raw and grouped data. Data from this component can easily be exported to **EXCEL** for further statistical analysis.

The sampling scenarios used by the system (particularly those relating to fishing effort) are flexible and capable of responding to specific needs and field conditions. Such flexibility of action has made the system independent of eventual external changes to its statistical structure and/or sampling operations, thus eliminating the need for software maintenance and ensuring robustness and sustainability.

Status of research in progress:

- Biology and ecology of Lessepsian species along the Lebanese coast.
- Biology of two species of shore crabs along the rocky coast.
- Freshwater fish diversity in inland waters of Lebanon

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.). N/A

Marine environmental studies in progress:

- **Bariche, M. and Bernardi, G.** 2009. Lack of genetic bottleneck in a recent Lessepsian bioinvader, the blue-barred parrotfish, *Scarus ghobban*. *Molecular Phylogenetics and Evolution*, 53: 592-595.
- **Bariche, M., Sadek, R. and Azzurro, E.** 2009. Fecundity and condition of successful invaders: *Siganus rivulatus* and *S. luridus* (Teleostei, Siganidae) in the eastern Mediterranean Sea. *Acta Ichthyologica et Piscatoria*, 11(1): 11-18.
- **Bariche, M., Alwan, N., El-Assi, H. and H. Zurayk R.** 2009. Diet composition of the Lessepsian bluespotted cornetfish *Fistularia commersonii* in the eastern Mediterranean. *Journal of Applied Ichthyology*, 25: 460-465.
- **Krupp, F., Al-Jumaily, M., Bariche, M., Khalaf, M., Malek, M. and Streit, B.** 2009. The Middle Eastern Biodiversity Network: Generating and sharing knowledge for ecosystem management. *ZooKeys*, 31: 3-15.
- **Shakman, E., Boedeker, C., Bariche, M. and Kinzelbach, R.** 2009. Food and feeding habits of the Lessepsian migrants *Siganus luridus* (Rüppell, 1828) and *Siganus rivulatus* Forsskål, 1775

(Teleostei: Siganidae) in the southern Mediterranean (Libyan coast). *Journal of Biological Research-Thessaloniki*, **12**: 115-124.

- **Shakman E., Kinzelbach, R., Trilles, J.P. and Bariche, M.** 2009. First occurrence of native cymothoids parasites on introduced rabbitfishes in the Mediterranean Sea. *Acta Parasitologica*, 54(4): 380-384. doi: 10.2478/s11686-009-0048-9.

Management measures

Minister Decision 20/1 on January 1, 2009. Defining the types of marine fishing gear.

Research suggestions for consideration by SAC

LIBYAN ARAB JAMAHIRIYA/JAMAHIRIYA ARABE LIBYENNE

DESCRIPTION OF THE FISHERIES 2008:

Total landings of demersal and pelagic fish amounted to 47 000 tonnes.

Fleet segments consist of the following:

No.of decked vessels	G.T	hp
16 82	80 013	375 731
Un decked	powered	unpowered
	2 786	70
The total of the fleet	4 538	

All the details of (FISHSTAT FF1 and FISHSAT FF2) have been sent to Mr Abdellah Srouf by fax on 18/10/2009.

Status of stock of priority species:

Studies of biological and morphometric characteristics of the previously reported seven commercially exploited fish species namely: *Mullus* spp., *P.erythrinus*, *M. sermatus*, *Balistes carolinensis*, *Lithognathus mormyrus*, *Merlucius marlusius* and *Scorpaena* sp. are being continued. Biological and main characteristics of the "dusky grouper" *Epinephelus* spp. Also added to be undertaken.

Status of the statistics and information system:

Participation in regional projects:

Main output of activities between MedSudMed project and MBRC:

- Final report of acoustic survey to estimate the biomass and distribution of small pelagic fish species along the whole Libyan coast from Libyan-Tunisian border to Toubruk during the period 15/8-7/9/2008.
- Final report of the oceanographic and ichthyoplanktonic survey which was conducting in 2008 along the Libyan coast from Musrata to Benghazi.

Status of research in progress

- Biological and morphometric characteristics of at least seven commercially exploited fish species namely *Mullus* spp., *P.erythrinus*, *M. sermatus*, *Balistes carolinensis*, *Lithognathus mormyrus*, *Merlusius marlusius* and *Scorpaena* sp. are being continued. Results will systematically be published in the local Libyan Journal issued by MBRC.
- Small pelagic fish species caught by "Lampara" are being sampled at landing sites and data are analysed systematically.
- Data on large pelagic species (i.e. bluefin tuna) caught by longliners are consistently collected seasonally. Report of such studies for the year 2008 has been disseminated to ICCAT. Report for the year 2009 is under preparation.
- Within the framework of Med-Sud-Med project an oceanologic survey and ichthyoplankton study has been made in the middle area of the Libyan coastal waters using the R/V "URANIA". Also, within the framework of MedSudMed project an estimation of the small pelagic fish and an acoustic biological survey along whole length of Libyan territorial coastal waters has been conducted using R/V "Dalla Porta". Laboratory analyses are in progress.
- Genotype and distribution of the commercially exploited exotic *Siganus* sp. along the Libyan coast has been concluded.

Status of social sciences studies in progress or achieved during the intercessional period

The data of the socio-economic study based on a regional standardized questionnaire covering all fishing gears and boats, according to size-classes of the artisanal fleet which was collected last year is being analysed according to Task 1.

Marine environmental studies in progress

- National frame survey according to fishing fleet, segmentation, fishing gear, target species, geographical distribution, daily and annual fishing effort is being partly concluded for the year 2008.
- Monitoring of exotic and/or align marine species (fish and crustaceans) are continually being carried out along the Libyan coast. Fish species were recorded and some became commercially exploited species such as *Siganus* sp.
- Turtle (*Caretta caretta*) nesting sites surveyed along the eastern part of the Libyan coast are being analysed in order to complement previous studies on the species.

Management measures

- Trawl fishing for demersal fish species was prohibited during the period June through July 2009.
- In compliance with *GFCM recommendation 2006/2* fishing for Dolphin fish is prohibited by law from 1 January to 14 August of each year.
- Fishing for sponges in Libyan waters is being forbidden from 1 November to 30 May of each year.

Research suggestions for consideration by SAC

- Regional project aimed to assess the stocks and distribution of Elasmobranches fish species ought to be attempted.
- Bycatch regional assessment is also worth studying by SAC.

MOROCCO/MAROC

1. INTRODUCTION

La pêche en Méditerranée marocaine participe activement au développement du tissu économique national, notamment pour les régions du Nord. En termes de poids, cette pêche contribue jusqu'à 4 à 7 % du total national débarqué dans l'ensemble des ports marocains. Son rendement économique, relativement important, est de l'ordre de 7 à 9 % (les espèces pélagiques débarquées au port de Tanger non incluses) du revenu total assuré par le secteur de la pêche marocaine.

Ce secteur est caractérisé par une diversification de sa flotte, qui se traduit par une variabilité biologique importante des ressources halieutiques que recèle cette façade maritime marocaine, ce qui a donné naissance à une pêcherie des petits pélagiques, une pêcherie démersale, et une pêcherie des grands pélagiques, auxquelles s'ajoute la pêcherie des petits métiers.

L'étude des pêcheries méditerranéennes constitue l'une des priorités de l'Institut national de recherche halieutique (INRH). En effet, par le biais de ses deux centres régionaux, basés à Tanger et à Nador, l'INRH assure le suivi de l'état et du niveau d'exploitation des stocks des principales espèces, conduit des programmes de recherche relatifs à l'étude de la biologie des principales espèces et réalise des études socioéconomiques.

2. DESCRIPTION DES PÊCHERIES

L'exploitation des ressources halieutiques de la Méditerranée marocaine, assure une production moyenne de l'ordre de 40 500 tonnes/an, dont plus de 65 % de cette production est constituée des espèces de petits pélagiques. Les débarquements des espèces démersales viennent en deuxième rang, avec une production moyenne annuelle de l'ordre de 11 000 tonnes/an, ce qui constitue environ 27 % de la production halieutique méditerranéenne. Pour la pêche des grands pélagiques, qui cible en particulier l'espadon, la production est de l'ordre de 2 000 tonnes/an.

Cette production est l'œuvre d'une flotte de pêche constituée d'environ 623 unités, composée de 57 % de palangriers, 24 % de sardiniers et 19 % de chalutiers. Ces unités opèrent à partir de sept ports dont les plus importants sont ceux de Nador, Al Hoceima et M'diq.

L'exploitation de ces ressources est effectuée par des senneurs côtiers. Cette flotte est composée de 165 senneurs (année 2009), utilisant la senne tournante comme engin de pêche, avec une production de 20 881 tonnes (2008) pour une valeur de 119 millions de dirhams (sans Tanger).

Ces senneurs ont une puissance motrice moyenne de 334 cv, un TJB moyen de 49,69 tonnes et une longueur moyenne de 19,5 m.

La pêche des espèces de petits pélagiques, d'espèces démersales et de thonidés en Méditerranée marocaine a atteint une production de 42 615 tonnes au cours de l'année 2008.

L'espadon est ciblé particulièrement par les palangriers et qui sont en nombre de 247 unités, dont 69 % environ sont basés au port de Tanger. Ces unités ont une taille moyenne d'environ 12 m, une puissance motrice moyenne de 80 cv et un TJB moyen de 10 tonnes. Les palangriers ciblent principalement l'espadon, les petits thonidés, le poisson sabre, le mérrou, les rascasses et la dorade grise.

L'exploitation des espèces démersales se fait au moyen de chalutiers (144 unités) ayant une puissance motrice moyenne de 325 cv et un TJB moyen de 50 tonnes, par des palangriers (247 unités) et des barques artisanales (2 700 barques) ayant une puissance motrice moyenne de 15 cv et un TJB inférieur à 2 tonnes.

La production annuelle des espèces démersales est en moyenne de 7 554 tonnes pour une valeur moyenne de 80 millions de dirhams (période 2004-2007). Les principales espèces ciblées par ces

pêcheries sont le merlu, le pageot acarné, le poulpe, la dorade, la sole, le rouget de vase, la crevette rose, la bogue, la seiche, le pageot commun et le merlan bleu.

3. ÉVALUATION DES STOCKS PRIORITAIRES

L'état des stocks des petits pélagiques est évalué selon deux approches différentes mais complémentaires, à savoir: une approche indirecte et une autre directe.

L'évaluation indirecte des stocks pélagiques est appliquée à la sardine. Cette évaluation est basée sur l'analyse des fréquences de tailles par l'utilisation de l'analyse virtuelle des populations (VPA) moyennant le logiciel «VIT» (Leonart and Salat, 1997).

Les résultats, pour l'année 2008, montrent que la pêche est exercée essentiellement sur des individus adultes (entre 16 et 19 cm).

L'analyse des rendements par recrue indique un état de pleine exploitation.

Pour mieux cerner la pêcherie pélagique, des campagnes de prospection et d'évaluation acoustique sont réalisées chaque année. Les valeurs des indices d'abondance collectées pour chaque espèce permettent de déterminer les distributions spatiales des principales espèces des petits pélagiques rencontrées lors de ces campagnes et d'estimer leurs biomasses.

Pour la dernière campagne acoustique réalisée en mai 2008, les estimations de stock des principales espèces de petits pélagiques ont conduit à des valeurs de biomasses de l'ordre de 155 000 tonnes pour la sardine, de 40 000 tonnes pour les chinchards, et de 9 000 tonnes pour l'anchois.

La comparaison entre les estimations récentes de biomasses avec celles réalisées durant la campagne acoustique de l'année 2007, montrent une augmentation d'environ 280 % pour le stock de la sardine contre une baisse de la biomasse du chinchard de l'ordre de 47 % pour le stock du chinchard, alors que le stock d'anchois reste stable.

Le suivi de la pêcherie demersale en méditerranée marocaine est assuré régulièrement par l'échantillonnage biologique des débarquements des principales espèces débarquées par la flotte chalutière ainsi que par la collecte de données sur les statistiques des pêches auprès des administrations concernées. Des campagnes de prospection par chalutage de fond sont réalisées chaque année pour fournir des données sur l'état d'abondance de ces ressources.

Le suivi de ces ressources est assuré régulièrement par l'échantillonnage biologique des débarquements de six espèces: le merlu européen (*Merluccius merluccius*), le rouget de vase (*Mullus barbatus*), la crevette rose (*Parapenaeus longirostris*), la besugue (*Pagellus acarne*), la bogue (*Boops boops*) et le poulpe (*Octopus vulgaris*).

Une campagne de prospection par chalutage de fond a été réalisée en novembre 2009 pour l'estimation des indices d'abondance des principales ressources demersales exploitées en méditerranée marocaine.

L'évaluation indirecte de l'état des stocks a été effectuée pour les espèces de crevette rose (*Parapenaeus longirostris*), le rouget de vase (*Mullus barbatus*) et la bogue (*Boops boops*) en utilisant les méthodes indirectes basées sur l'analyse des données de composition en tailles.

L'évaluation indirecte de l'état du stock de rouget de vase (*Mullus barbatus*) et de la bogue (*Boops boops*) a été basée sur des données de compositions en tailles prises durant la période 2000-2008. Pour la crevette rose (*Parapenaeus longirostris*) les données sur les fréquences de tailles ont été collectées durant la période s'étendant entre octobre 2007 et septembre 2008. Cette évaluation a été réalisée par l'analyse de pseudo-cohorte en utilisant le logiciel «VIT» (Leonart and Salat, 1997).

Pour l'ensemble des espèces étudiées et à l'exception du stock de la dorade rose pour qui les évaluations ont montré un état de pleine exploitation, les résultats obtenus montrent un état de surexploitation avec une mortalité par pêche qui dépasse l'optimum ce qui montre un état de surexploitation de ces stocks.

Pour la dorade rose, et afin de mieux cerner le stock de cette espèce, il est jugé nécessaire que l'étude soit étalée sur l'ensemble de la côte méditerranéenne, notamment au niveau des principaux points de débarquement de ladite espèce.

4. STATISTIQUES ET SYSTÈME D'INFORMATION

Le système statistique méditerranéen englobe les données collectées par l'INRH (campagnes scientifiques en mer, échantillonnage biologique des débarquements des espèces exploitées, enquêtes de terrain) et les données issues des pêcheries (données MAIA et données DPM relatives aux caractéristiques des navires de pêche). À cet effet, un Système d'information halieutique est en cours de développement par l'INRH, en collaboration avec l'IFREMER. Ce système englobera les données collectées par l'INRH, par l'ONP et par la DPMA (Direction de la pêche maritime et de l'aquaculture).

5. PROGRAMMES DE RECHERCHE EN COURS

Les programmes de recherche en cours de réalisation par le Maroc en Méditerranée marocaine concernent le renforcement de l'échantillonnage biologique et son étalement à la pêche artisanale, la mise en place d'un système d'information halieutique, intégrant les données issues des différents intervenants dans le domaine maritime, l'étude de l'impact des facteurs environnementaux sur les principales espèces exploitées, l'analyse des données issues de l'exploitation de ces dernières ainsi, l'étude socioéconomique des différentes pêcheries méditerranéennes, le recensement des espèces de cétacés et l'étude de leur interaction et leur collision avec les navires de pêche et les navires, notamment ceux qui transitent par le détroit de Gibraltar.

6. ÉTUDES SOCIALES ET ÉCONOMIQUES

Les études socioéconomiques, réalisées par l'INRH, concernent principalement l'analyse de l'activité de la pêche artisanale en plus de celles relatives aux autres pêcheries.

Les études programmées à court terme, concernent l'étude socioéconomique de l'impact du changement de la maille losange par la maille carrée de 40 mm de maillage au niveau des culs de sacs des chalutiers et l'étude socioéconomique de la pêche artisanale au niveau du site de Dikki.

7. ÉTUDES SUR L'ENVIRONNEMENT MARIN

Les programmes de recherche en cours de réalisation par le Maroc en Méditerranée marocaine concernent :

- le renforcement de l'échantillonnage biologique et son étalement à la pêche artisanale;
- la mise en place d'un système d'information halieutique, intégrant les données issues des différents intervenants dans le domaine maritime;
- l'étude de l'impact des facteurs environnementaux sur les principales espèces exploitées;
- l'étude socio-économique des différentes pêcheries méditerranéennes.

8. MESURES D'AMÉNAGEMENT DES PÊCHERIES

- Limites de la taille minimale: interdiction de la capture des poissons sous taille, fixant la taille marchande minimale des espèces pêchées dans les eaux marocaines.

- Limitation de l'effort de pêche: les investissements en matière de construction navale ont été suspendus.
- Le contrôle des activités de pêche: un contrôle strict s'étend à l'ensemble de la filière pêche.
- Mise en place de structure pour l'utilisation des systèmes de suivi et de transmission de données par satellite.
- Recoupements avec les services du Ministère de l'économie et des finances afin de vérifier l'authenticité des quantités déclarées à l'exportation et les croiser avec le montant des devises rapatriées.
- Nouvelle stratégie du Département de la pêche maritime (dénommé plan HALIEUTIS).

Cinq instruments ont été créés à savoir:

- le Comité national de la pêche;
- une Agence nationale pour le développement de l'aquaculture;
- un Centre de valorisation des produits de la mer;
- un Observatoire de l'emploi du secteur halieutique; et
- un Fonds pour l'ajustement et la modernisation de la pêche qui sera consacré à la restructuration de la flotte de pêche au Maroc.
- Certification des captures.
- Conservation des requins.

9. RECHERCHES FUTURES

Les programmes de recherches futures concernent:

- L'étude de l'impact biologique et socioéconomique du changement de la maille losange par la maille carrée de 40 mm de maillage au niveau des culs de chaluts (financement par CGPM-COPEMED II).
- Les prospections des champs de corail rouge.
- Le renforcement du système statistique dans le cadre de projets nationaux et régionaux.
- L'identification des zones de distribution des géniteurs, des nourriceries et des juvéniles des principales espèces exploitées.
- L'échantillonnage biologique des débarquements de la pêche artisanale pour l'estimation des paramètres biologiques des espèces ciblées par cette pêcherie et ce dans le cadre de projets régionaux.
- La mise en place d'un échantillonnage biologique des thonidés mineurs et suivi de leur pêcherie.
- Étude des rejets des chalutiers.
- Étude de la biologie et la dynamique de la population de pageot commun (*Pagellus erythrinus*).

MONTENEGRO/MONTÉNÉGRO

DESCRIPTION OF THE FISHERIES

Montenegro is part of GSA 18 that shares with Albania on the east coast and with Italy on the west coast. In front of Montenegro is south Adriatic basin with the greatest depth of 1 228 m. The area of territorial water is 2 460 km² and continental shelf 3 885 km². The greatest part of Adriatic shelf is covered with muddy and sandy sediments. Sandy sediments are formed on the coastal area and in the shallow parts of Adriatic shelf, where on greater depths can be found muddy sediment, i.e. mud that derives from the land.

Activities of data collection on landings of main species have begun in recent years.

Table – Fleet

LOA	Number	kW	GT
Minor gear without engine < 6 m	5		5.8
Minor gear with engine < 6 m	130	455	111.80
Minor gear with engine 6–12 m	55	495	129.34
Trawl 6–12 m	3	295	37.66
Trawl 2–24 m	15	2 300	456.62
Trawl > 24 m	2	2 200	248.0
Purse seiners 6–12 m	6	1 500	75.87
Purse seiners 12–24 m	2	749.00	870.0

Note:

Approximately 30 vessels more will be operating in Montenegro starting from 2010:

4 trawlers 12–24 m LOA; 6 trawlers > 24 m; 20 purse seiners 12-24 m LOA

STATUS OF STOCKS OF PRIORITY SPECIES

During year 2009 AdriaMed Trawl Survey and MEDITS Trawl Survey has not been performed in Montenegrin waters. In June 2009 started National Monitoring of demersal resources in the frame of Agreement between Ministry for agriculture, forestry and water management, Institute for marine biology and Fishery Company D.O.O. Vujcic - Budva. Researches are conducted on 10 positions in four different stratum (10–50, 50–100, 100–200, 200–500 metres) and total surveyed area is 5 000 km². During investigation parameters of population dynamic of commercially important species have been collected (MEDITS Protocol). Researches under this Agreement for National Monitoring will last next 5 years. Data collected during this year are in proceeding.

STATUS OF THE STATISTICS AND INFORMATION SYSTEM

Under the CARDS project 2007/2008 "Support to Fishery Sector in Montenegro and Serbia", the Fisheries Information System was developed, i.e. within it two subsystems: the Fleet Register and the Catch Logbook with a landing declaration.

The Fleet Register, i.e. the Fisheries Information System is not in use pending the development of rulebooks as laid down by the Law on Marine Fishery and Mariculture (Official Gazette of Montenegro 56/09), which is nine months from the day of entry into force of the said Law.

Under one of the components of the IPA 2009 Project "Sustainable Marine Fishery Management" the team of consultants will prepare the program solutions for the three remaining subsystems of the

Fisheries Information System:

- Vessel monitoring system.
- Sales Notes.
- EU reporting.

Setting up of a Local Area Network (LAN) has also been planned as a part of completion of the Fisheries Information System, which is to cover all the stakeholders as well as the fisheries inspectorate on the sea of Montenegro.

STATUS OF RESEARCH IN PROGRESS

Activities of AdriaMed project continued. Pilot study on biological sampling data in Montenegrin coast has been continued in 2009-2010. Samples of eighteen economically important species are taken from all vessels in three fishing ports Bar, Budva, Herceg Novi with monthly dynamics.

Data collecting of population parameters for juvenile anchovy and sardine from small-scale fishery in Boka Kotorska Bay are in the final phase. Those data are in proceeding and will be published as PhD Thesis.

In Boka Kotorska Bay experiments and adoption of new technology for mussel farming *Mytilus galloprovincialis* has been done in order to further developments of this sector.

STATUS OF THE SOCIAL SCIENCES STUDIES IN PROGRESS OR ACHIEVED DURING THE INTERSESSIONAL PERIOD (ECONOMY, RELEVANT LEGISLATION, SOCIOLOGY, ETC.)

Description of the achievement and/or progress in activities related to the national research on the socio-economic aspects of the fishing communities and fishing sector.

In 2009 the Pilot project on collecting socioeconomic data in marine fishery has not developed. Further elaboration and continuation of this project is expected in the next period.

MARINE ENVIRONMENTAL STUDIES IN PROGRESS

During 2009 final phase of ADRICOSM STAR Project has been conducted. In the frame of this project influence of river Bojana inputs on coastal marine environment has been analysed. Final report for this project is expected in February 2010. Also, National Monitoring of state coastal marine ecosystem has been continued for the Environment Protection Agency of Montenegro.

Also, activities on National projects for marine environment have been continued during the 2009. Two allochthonous invasive algal species have been registered: *Caulerpa racemosa* and *Womersleyella setacea*. During research of benthic communities dense assemblages on rocky substratum and on sea grass *Posidonia oceanica* (L.), *Del. rhizomes* were discovered in the area of Lustica peninsula and Donji Grbalj area. Also for *Caulerpa racemosa* some new areas of colonization are noted. Unfortunately the impact of these invasive species on biocenosis structure is not studied and probably should be one of the topics for future projects.

Working on management plan for the first marine protected zone in the Montenegro is continued through cooperation with Italian organization DFS Montenegro Engineering d.o.o. Management of fishery sector will be very important part of the planned activities in that area.

MANAGEMENT MEASURES

Description of the management measures (legislation, regulations, etc) implemented during the interseasonal period and their (expected) effects on the fishery.

The Law on Marine Fishery and Mariculture was adopted by Parliament in August 2009. This Law lays down the objectives and the principles for sustainable management of living marine resources and marine environment through implementation of measures for protection of biodiversity and the environmental conditions as well as by laying down the procedures for development and adoption of

management plans in the fishery sector. This Law also governs the general fishery policy, that is, the support to development of the fishery sector and the respective responsibilities of the administration authorities as regards its implementation. Pending the establishing of an administration authority in charge of the fishery affairs (the Fishery Administration) the administrative and related technical affairs will be carried out by the Ministry of Agriculture, Forestry and Water Management.

The document “National program of Fisheries Development (NFP) from 2009 to 2013” was adopted by the Government of Montenegro in February 2009. This document contains middle term and short term aims of fishery development, type of measures and programs, expected results and sum and sources for financial fund necessary for implementation of identified measures of fishery policy.

RESEARCH SUGGESTIONS FOR CONSIDERATION BY SAC

None

SPAIN/ESPAGNE

DESCRIPTION OF THE FISHERIES

Spanish fleet operates mainly within four GSAs (excluding GSA2, which only supports a deep trawl fishery around Alboran Island). In each of them, different types of fishing grounds are exploited from shallow to deep waters by trawl, purse seine, long line and artisanal fleets. The total number of fishing vessels included in the Fleet Register for the Mediterranean in 2008 was 3 416, with a mean length of 15.45 m, a total GT of 73 177.17 and a total power of 398 934.87 hp. Most of the fisheries are multiespecific, especially the trawl fishery which catches a great diversity of species of fish, crustaceans and molluscs (Table 2).

Table 1. Number and technical characteristics of the Spanish Mediterranean fleet by type of gear (year 2008)

Gear		Total
Trawl	n°	866
	Average hp	258.12
	Total GT	51 849.75
	Average LOA	20.38
Purse seine	n°	283
	Average hp	242.62
	Total GT	10 638.11
	Average LOA	17.5
Artisanal (includes set longlines)	n°	2 203
	Average hp	44.82
	Total GT	8 554.92
	Average LOA	8.16
Longline (census LLD especific for Mediterranean Sea, but other LLD Spanish census can operate as well in Mediterranean waters)	n°	64
	Average hp	125.18
	Total GT	2 134.39
	Average LOA	15.77
Total	n°	3 416
	Total hp	398 934.87
	Total GT	73 177.17
	Average LOA	15.45

Table 2. Total landings in 2008 by main target species (in Tonnes).¹

Species	Tonnes
<i>Aristeus antennatus</i>	979
<i>Engraulis encrasicolus</i>	3 122
<i>Loligo vulgaris</i>	28
<i>Merluccius merluccius</i>	3 874
<i>Micromesistius poutassou</i>	2 846
<i>Mullus</i> spp.	634
<i>Nephrops norvegicus</i>	462
<i>Octopus vulgaris</i>	1 774
<i>Sardina pilchardus</i>	18 032
<i>Scomber</i> spp.	1 466
<i>Sepia officinalis</i>	447
<i>Spicara</i> spp.	212
<i>Squilla mantis</i>	501
<i>Thunnus thynnus</i>	1 070
<i>Trachurus</i> spp.	550
<i>Xiphias gladius</i>	1 913

Status of stocks of priority species

The state of exploitation of some of the main demersal and small pelagic species was assessed by VPA tuned with standardized CPUE from the commercial fleet and abundance indices from trawl surveys.

Red shrimp (*Aristeus antennatus*) exploited by the Spanish trawl fishery: in the geographical sub-areas GSA 05 (Balearic Islands) is considered overexploited.

Norway lobster (*Nephrops norvegicus*) in GSA 05 is fully exploited with an intermediate abundance, and a moderate fishing mortality exerted. It is recommended not to increase the fishing effort and to enforce at least 40 mm square mesh in the codend for trawl fleet.

Striped red mullet (*Mullus surmuletus*) exploited by the trawl and artisanal fisheries in the Balearic Islands (GSA 05) is fully exploited. The fishery is operating at or close to an optimal yield level, with no expectations for further expansion.

Hake (*Merluccius merluccius*) exploited by the trawl fishery off Mallorca (Balearic Islands, GSA 05) overexploited with moderate fishing mortality and intermediate abundance so a substantial reduction of fishing mortality in the long term was also suggested. It is recommended to improve the fishing pattern by adopting the 40 mm square mesh size in the trawl codend.

Anchovy (*Engraulis encrasicolus*) stock assessment in the GFCM Geographical Sub-Area GSA 01, northern Alboran Sea, shows low levels of biomass, recruitment and catch from 2002 to 2008. In GSA 06 (northern Spain) very low levels of biomass are also detected. The recruitment has been low, the population consists almost exclusively of the recruits and has practically disappeared between southern Rosas Bay and Tarragona (North Ebro River Delta).

Sardine (*Sardina pilchardus*) both in the subareas of northern Alboran (GSA 01) and northern Spain (GSA06) is considered fully exploited with risk to overexploitation. The fishery is being exploited at above a level which is believed to be sustainable in the long term, with no potential room for further expansion. Whereas in GSA 01 fishing mortality is at a moderate level, in GSA06 a high fishing mortality is observed.

¹ Based on landing declarations, still pending some data from sales notes (vessels under 10 m).

2 431 tonnes (RW) of Bluefin tuna (*Thunnus thynnus*) were caught in the Mediterranean Sea during 2008, most of which (70 %) were caught by Purse seine. The rest correspond to longliners and other minor gears. The main fishing grounds were Balearic islands, Alboran Sea and Central Mediterranean. Albacore (*Thunnus alalunga*) was caught in the Mediterranean during 2008 using only surface longlines and trol. In 2008, 238.5 tonnes (RW) were landed in the Mediterranean where 207.5 tonnes were caught using longlines.

Swordfish (*Xiphias gladius*) landings in 2008 were 2 095 tonnes (RW) in the Spanish Mediterranean. The main catches (87 %) correspond to surface long-line while 226 tonnes (11 %) were caught by semipelagic longlines. Other minor catches were obtained by traps and trols.

The small tuna catches in Spain are mainly from the Mediterranean Sea. Small tunas are caught using surface gears and traps. The total catches along 2008 were 4 070 tonnes (RW). The specific composition of these catches were: 458 tonnes of Atlantic Bonito (*Sarda sarda*), 3 393 tonnes of bullet tuna (*Auxis rochei*) and 215 tonnes of Atlantic little tunny (*Euthynnus alletteratus*).

Status of the statistics and information system

The Spanish fisheries statistics and information system is based on the data from three different sources: sales notes, logbooks and landing declarations (under RD 2064/2004 and in compliance with Regulation CE 2847/93, Regulation CE 2846/98 and Regulation CE 2371/2002). Data are collected in port and in all places in which a first sale of the fishery products is carried out. Data of landings by species, commercial categories, prices, fishery vessel identification, fishing grounds, landing ports and dates are recorded on a daily basis. Data from logbooks and landing declarations are collected by General Secretariat for the Sea of the Spanish Ministry. Data from sale notes are primarily collected and processed by the fisheries offices of the autonomous governments, and recorded in the centralized database of General Secretariat for the Sea, in charge of collecting all the information related to fisheries and transmitting to the Commission, Fisheries Organizations and any other National or International Institutions.

IEO collects length and biological data of main commercial species under the guidelines of the National Program supported by the EU for the collection and management of fisheries data in accordance with Community programmes (Reg. (EC) 1543/2000 and Reg. (EC) 1639/2001 for the period 2001–2008 and Reg. (EC) 199/2008 for the period 2009–2013). Data information is managed in the frame of the SIRENO database developed by the IEO. SIRENO moreover stores fish market information, observers on board information and research surveys data. Moreover, the General Subdirectorate of Food and Agriculture Statistics collects and processes the economic information on fisheries.

To appropriately manage this information, the General Secretariat for the Sea is developing a global tool to compile the different sources of information in a common database. The main purpose is to store and to export the data in the suitable format required by International bodies.

Status of research in progress

During 2009, the IEO has monitored the fisheries of the main commercial species at the principal landing sites. The target demersal species sampled are hake, red mullet, striped red mullet, anglerfish (2 species), red shrimp (*Aristeus antennatus*), *Parapenaeus longirostris* and *Loligo vulgaris* while the target of small pelagic species are anchovy and sardine, and the target of large pelagic species are albacore, bluefin tuna and swordfish.

Studies on growth and reproduction of demersal and small pelagic objective species are routinely carried out to estimate the assessments parameters.

In 2009, several tagging surveys on lobsters (*Palinurus elephas*) were carried out in two marine protected areas, the National Park of Cabrera, in GSA 05, and the Marine Reserve of Columbretes.

An IEO research project on the red seabream (*Pagellus bogaraveo*) fishery in waters off the Strait of Gibraltar is focusing in the location of nursery and recruitment grounds, growth, and fishing mortality.

The sixteenth International Bottom Trawl Survey MEDITS was carried out with the aim of estimating relative abundance index of the main demersal species in the continental shelf and slope of the Spanish Mediterranean, including Balearic Islands. MEDIAS, the International Acoustic Survey in the Mediterranean, was carried out in summer 2009. These surveys are also activities under the framework of the National Program supported by the EU. ECOMED, a National Acoustic Survey to estimate small pelagic biomass in GSA1 and GSA6 was carried out in autumn 2009.

Bluefin tuna, swordfish, albacore and small tuna (Atlantic bonito, bullet tuna, Atlantic little tuna and skipjack tuna) are the main target of tuna and tuna-like species by the Mediterranean tuna research program of the IEO. The main objective of biological sampling of tuna species is to support research on stock structure by means of genetic analyses (tissue) and microconstituents analyses (otoliths); as well as on reproduction (gonads) and growth (spines, vertebrae and otoliths) research.

For 2008, 6 040 bluefin tuna were measured in the Mediterranean. 238 sets of biological samples were collected in Spanish BFT fisheries (mainly by longline and sport fishing).

The National Research project on BFT biology and migration patterns initiated in 2007 (MIGRATUN), has been developed along 2008. BFT were tagged using Pop-Up Archival tags and archival internal tags in the recreational fishery in 2008. Conventional tagging activities were also developed in collaboration with commercial and recreational fisheries. At present, a total of 500 specimens have been tagged.

In collaboration with the Balfego Group, the IEO has developed an aerial prospective survey in order to estimate the reproductive schools (reproductive stock biomass).

Research activities on Albacore (*Thunnus alalunga*, ALB) were developed on board recreational and long-line fishery vessels targeting ALB. A total of 900 albacores were measured and 315 sets of biological samples were collected. Research on maturity and growth has been developed in 2008 and 2009. Results on both items have been communicated to ICCAT species group and other specialized groups.

Small tuna species, mainly Atlantic bonito (*Sarda sarda*), Atlantic little tuna (*Euthynnus alletteratus*), and bullet tuna (*Auxis rochei*) were also monitored and sampled in tuna traps. A total of 190 full sets of samples were collected to mainly study maturity and fecundity rates, age and growth.

A total of 11 085 swordfish were sampled (Rw and/or length) in the Mediterranean in 2008; 400 sets of biological samples were collected along 2008 in the Spanish swordfish fisheries (mainly longline). Swordfish were tagged using conventional tags in 2008 and some recoveries were obtained. These activities were developed in collaboration with commercial fisheries

MARINE ENVIRONMENTAL STUDIES IN PROGRESS

During this intersessional period, the IEO has carried out a series of quarterly surveys monitoring oceanographic conditions off Málaga (GSA 01), Murcia (GSA 06) and Mallorca (GSA 05) under the framework of the activities developed to study climatic changes in the Mediterranean.

Other research activities are related to marine protected areas. In this case, three topics are studied: quantification of exported biomass from the MPAs to adjacent areas, evolution of the resources in areas previously exploited and currently protected and the monitoring of artisanal fisheries. Furthermore, in each of the 7 Spanish Mediterranean Marine Reserves, several studies are carried out on fisheries enhancement, biodiversity (mapping of sea grasses, maërl and others), effect of climatic change (Columbretes Marine Reserve is involved in the MEDCHANGE Project), bleaching of *C. caespitosa*, invading species (*Caulerpa* spp., *Lophocladia lallemandii*, etc), as well as studies on interactions between birds, cetaceans and fisheries.

A new project INDEMARES was launched aiming to promote research, conservation and assessment of the sea and its resources in order to reinforce the application of International conventions on the sea (as OSPAR and Barcelona) and raise public awareness on biodiversity conservation. Nine institutions are involved in the project, among which IEO, CSIC, Fisheries Secretariat and the NGOs WWF-Adena and Oceana in the study of 5 Marine areas (Creus Canyon, Menorca Channel, Columbretes delta area, Seco de los Olivos, and the Island of Alborán and its volcanic chimneys).

MANAGEMENT MEASURES

The Spanish ministerial order *ORDEN APA/254/2008, of 31 January, that establishes an integral management plan for fisheries resource conservation in the Mediterranean* is currently enforced, regulating purse seine, bottom trawl and longline fisheries, and establishing a series of closed seasons/areas. The expected effect is to contribute to the conservation and regeneration of fishery resources, as well as protecting nursery areas and reducing fishing mortality.

With regard to Marine Reserves, the General Secretariat for the Sea keeps on managing the seven Spanish Mediterranean Marine Reserves existing at present, with enforcement through guards on the spot, follow up, awareness programmes, etc.

Research suggestions for consideration by SAC

More emphasis should be made on studies focusing on the impact of environmental changes (climatic variability, increase of gelatinous plankton, etc.) on the early life stages of exploited species to assess its consequence on recruitment variability, as well as studies on the influence of environmental factors affecting catchability and fleet efficiency.

SLOVENIA/SLOVÉNIE

1. DESCRIPTION OF THE FISHERIES

1.1 Description of the fishing grounds and GSA

The Slovenian fishing vessels are carrying out fishing activities in the area GSA 17.

1.2 Total landings by main targeted species (year 2008)

Species	Landing (in kg)
Sardine (<i>Sardina pilchadus</i>)	305 792
Anchovy (<i>Engraulis encrasicolus</i>)	183 818
Whiting (<i>Merlangius merlangus</i>)	51 159
Sprat (<i>Sprattus sprattus</i>)	16 897
Cuttlefish (<i>Sepia officinalis</i>)	14 809
Octopus (<i>Eledone moschata</i>)	13 813
Other	100 210
TOTAL	686 498

1.3 Fleet

- Number of vessels
- LOA (range and average)
- Total kW + GT

LOA	Number	kW	GT
Minor gear without engine < 6 m	10	0	10
Minor gear with engine < 6m	75	891.29	70.82
Minor gear with engine 6–12 m	68	3 768.01	216.02
Trawl 6–12 m	8	1 433	55.89
Trawl 12–24 m	12	1 967.78	211.09
Trawl > 24 m	2	1 200	312.4
Purse seiners 6–12 m	1	110.4	6.18
Purse seiners 12–24 m	4	472.5	47.41
Other	4	1 014.9	66.1
TOTAL	184	10 857.88	995.91

The data of the Slovenian fishing fleet are referring to the date of 15 November 2009.

2. STATUS OF STOCKS OF PRIORITY SPECIES

In the case of Slovenia five species can be considered as priority species: sardine (*Sardina pilchadus*), anchovy (*Engraulis encrasicolus*), whiting (*Merlangius merlangus*), cuttlefish (*Sepia officinalis*), and musky octopus (*Eledone moschata*). The stock assessment for sardine and anchovy has been performed recently in the frame of AdriaMed project for GSA 17. Taking in consideration relatively small part of Adriatic Sea where Slovenian fisherman are active and relatively small part of shared stocks affected by our fishery all fish stock assessment should be done jointly on the level of GSA 17.

The available information is part of the GFCM Report of the tenth session of the sub-committee on stock assessment (SCSA).

GSA 17 (Northern Adriatic Sea):

Stock	Stock status	WG management advice	SCSA management advice	SCSA comments
Sardine (<i>Sardina pilchardus</i>)	Overexploited	Not to increase the fishing effort	The sardine catches should be reduced close to zero	The SC considers that the low values of both recruits and biomass could possibly indicate that the stock has been collapsed.
Anchovy (<i>Engraulis encrasicolus</i>)	Fully exploited	Not to increase the fishing effort	Not to increase the fishing effort Fishing effort reduction on Sardine should not be transferred to anchovy	Provide the effort level

3. STATUS OF THE STATISTICS AND INFORMATION SYSTEM

InfoRib is centralized information system for fisheries data collection in Slovenia. It consists of several modules:

- Fleet vessel register
- Logbooks
- Fishing permits
- Fisheries economics/Socio-economic questionnaires
- Reporting
- Sampling
- Technical indicators
- Code lists
- First sale
- Aquaculture
- Processing industry
- Discoverer

Those modules are stored in the centralized database in the Ministry of Agriculture, Forestry and Food. Biological-Sampling data Module is permanently stored in the Fisheries Research Institute database. The information system is designed in the Oracle database. The Oracle Discoverer application enables the user to make different data inquiries. Currently our system is under update process. Since all vessels in Slovenian fishing fleet is obliged to fulfill logbook data we are striving to improve the information cross-checking system but we are also trying to establish the system of the verification of the suitability of the data and the automatic corrections of the records in the logbook forms. But of course the original data remain in the system for the inspection purposes.

The second main task is also the improving of the reporting system in the scope of the information system InfoRib. Because of the reasons of our limited administration we are striving to make automatic all the possible reports for different occasions.

Furthermore, the upgrading of the system mainly refers to improving the interconnection of all modules within the system, cross-checking between different data, quality controls and validation procedures. Unfortunately until now Slovenia did not manage to prepare the data for GFCM Task 1 Matrix which will also be priority task regarding information system in the nearest possible future.

As soon as possible we will also make the transmission of the Module of biological data from the base at the Fisheries Research Institute of Slovenia to the servers of the Ministry of Agriculture, Forestry and Food.

Vessel Monitoring System is fully operational since June 2009.

4. STATUS OF RESEARCH IN PROGRESS

In the frame of National programme of the Republic of Slovenia for the collection and management of data 2009-2010, Slovenia is performing two research surveys at sea: MEDITS and MEDIAS.

MEDITS surveys has been performed from 1996 on two stations in Slovenian Sea. Altogether 28 samples has been taken with three rented Italian fishing vessels and from 1999 with Italian research vessel Andrea. All biological material has been elaborated on Fishery Research Institute of Slovenia. We are also performing data aggregations according MEDITS protocol.

MEDIAS surveys has been performed from 2007. The survey in Slovenian waters is a part of joint North Adriatic Echo-survey performed by Italian scientists from CNR ISMAR of Ancona with the research vessel G. Dallaporta each year, usually in September or October. The survey is performed in one day by echo-sounding and two samplings with pelagic trawl net.

In the frame of FAO-AdriaMed project the SOLEMON survey is performed in Slovenian waters by Italian scientists from CNR ISMAR of Ancona with the research vessel G. Dallaporta.

5. STATUS OF THE SOCIAL SCIENCES STUDIES IN PROGRESS OR ACHIEVED DURING THE INTERSESSIONAL PERIOD (ECONOMY, RELEVANT LEGISLATION, SOCIOLOGY, ETC.)

On the economic field Slovenia is implementing three studies on the basis of Council Regulation (EC) No 199/2008 and of Appendix VI to the Commission Decision. The studies are:

1. Module of evaluation of the fishing sector,
2. Module of the evaluation of the economic situation of the aquaculture sector and
3. Module of the evaluation of the economic situation of the processing industry.

Slovenia has complete data for 2007 on fishing sector and processing industry and complete data on processing industry for 2008. Data on fishing and aquaculture sector for 2008 are still collected.

6. MARINE ENVIRONMENTAL STUDIES IN PROGRESS

Slovenia has not performed any studies or analyses which would be relevant to the impact of the marine environment changes on the priority stocks and on the ecosystem alteration originated by the fisheries activities.

7. MANAGEMENT MEASURES

Management measures in the Slovenian seas follow the Council Regulation (EC) No 1976/2006 which contains principles and rules relating to the conservation and management of the living resources of the seas. In order to ensure conservation of living aquatic resources and the protection of marine ecosystem Ministry of Agriculture, Forestry and Food on the basis of the expert opinion of Fisheries Research Institute of Slovenia temporary stopped issuing new fishing permits for trawlers.

In May 2008 Slovenia adopted the regulation on monitoring of catches and selling of fisheries products.

8. RESEARCH SUGGESTIONS FOR CONSIDERATION BY SAC

Regarding MEDITS, Slovenia is supporting the Italian proposal about second MEDITS survey. We also support the further development of SOLEMON project (proposed as Adriatic "Rapido" Trawl Survey-ARTS) to become eligible research project in the frame DCR.

TUNISIA/TUNISIE

1. DESCRIPTION DE L'ACTIVITE DE PECHE

Les côtes tunisiennes s'étendent sur environ 1 300 km abritant huit ports hauturiers, une quarantaine de ports côtiers et de nombreux sites de débarquement éparpillés tout au long des côtes. Selon les dernières statistiques de la Direction générale de la pêche et de l'aquaculture (DGPA), la production annuelle en 2008 a atteint environ 100 578 tonnes dont 50 000 tonnes constitués d'espèces de petits pélagiques (sardine, sardinelle, saurel, maquereaux, anchois, etc.). Les différents types de pêche pratiqués sont essentiellement la pêche côtière, la pêche au chalut benthique, la pêche au feu et à la petite senne, la pêche au thon, la pêche au coquillage et la pêche aux éponges et au corail. Selon l'activité de pêche pratiquée, les fonds fréquentés pourraient s'étendre du rivage (pêche à pied des coquillages) jusqu'à plus de 600 m de profondeur (pêche au chalut). Par ailleurs, il est à noter que les eaux tunisiennes sont subdivisées en trois zones principales: la zone Nord (GSA 12); la zone Est (GSA 13) et la zone Sud (GSA 14). La flottille de pêche est constituée d'environ de 11 800 unités de pêche dont 6 180 barques côtières non motorisées, 4 745 barques côtières motorisées, 430 chalutiers, 399 sardiniers et 55 thoniers (Annuaire statistique de la DGPA, 2007). Selon leur activité et leur zone de pêche, la longueur totale des unités de cette flottille peut varier d'environ 3 mètres (barque non motorisées) à environ une trentaine de mètres (chalutiers puissants et thoniers). De même pour la puissance des moteurs qui peut osciller entre 0 et 90 cv (chevaux vapeur) pour les barques côtières et de 250 à 700 cv pour les unités les plus puissantes.

2. STATUT DU SYSTÈME D'INFORMATION ET STATISTIQUE

Tout d'abord, il est important de noter que la collecte, l'archivage et l'élaboration des bases de données des statistiques de la pêche (production, effort, flottille) sont assurés par les services du Ministère de l'agriculture, des ressources hydrauliques et de la pêche, plus particulièrement la Direction générale de la pêche et de l'aquaculture (DGPA). Le Ministère dispose actuellement d'une base de données informatisée et l'information selon l'espèce, l'engin, les unités de pêche, et autres remonte à l'année 1995. Ce système serait amélioré au courant des années à venir pour renforcer la qualité des données collectées. En effet, actuellement, au niveau de collecte de données, la méthode appliquée repose sur les journaux de pêche, particulièrement pour les chalutiers, les thoniers et les senneurs. Pour la pêche côtière, la collecte se base sur un recensement et une présence physique lors des débarquements, un travail délicat qui demande beaucoup d'effort et de moyens.

Au niveau recherche, nous disposons également de certaines bases de données relatives à celles des campagnes de prospection benthiques, pélagiques, œufs et larves au phytoplancton sur la biodiversité marine, ainsi qu'à certains autres types de données environnementales.

3. ACTIVITÉS DE RECHERCHE EN COURS

Dans le domaine de l'évaluation des stocks, les différentes activités de recherche sont effectuées par l'Institut national des Sciences et technologies de la mer (INSTM), plus particulièrement le Laboratoire des ressources marines vivantes (LRMV), en collaboration très étroite avec l'université tunisienne, les services du Ministère de l'agriculture des ressources hydrauliques et de la pêche et la profession (Union tunisienne de l'agriculture et de la pêche [UTAP]). En effet, depuis l'année 1996, la Tunisie a lancé, d'une façon continue, un grand programme d'évaluation des ressources halieutiques vivantes tunisiennes. Ce programme a été structuré selon des étapes comme suit:

- Le Programme national mobilisateur (PNM): Évaluation des ressources marines des côtes tunisiennes (1996-1999).
- Le Programme de recherche sur contrat (PRC): Évaluation des ressources marines des côtes tunisiennes (1999-2002).
- Les actions de recherche (ESREB, ESSATEL et ERACHID) (2002-2006).
- Les actions de recherche (BIHARE, LAMPAROS et CHANCHOUL) (2007-2010).

Au courant de l'année 2006, le LRMV de l'INSTM a achevé les activités de recherche programmées dans le cadre de ces trois dernières actions. Les données ont été traitées et les rapports finaux ont été élaborés et transmis au Ministère de la recherche scientifique, de la technologie et du développement des compétences. Ces travaux, ont été évalués par le Comité national d'évaluation des activités de la recherche scientifiques (CNEARS) et ont concernés 3 actions de recherche complémentaires:

- **Action ESREB:** Évaluation des stocks des ressources et des écosystèmes benthiques.
- **Action ESSATEL:** Estimation des stocks de sardine, anchois, thon et environnement Littoral.
- **Action ERACHID:** Essais répulsifs acoustiques et chalutage: innovation et développement.

Au courant de l'année 2007, nous avons lancé trois autres actions de recherche en continuité avec celles précédentes. Ces actions sont les suivantes:

- **Action BIHARE:** Biologie et halieutique des ressources benthiques exploitables
- **Action LAMPAROS:** œufs et larves, abondance et migration des poissons pélagiques : aménagement des ressources et optimisation socioéconomiques.
- **Action CHANCHOUL:** Chalutage pélagique sélectif, adaptation d'une nouvelle senne tournante Ciblant l'anchois, Confection de nouveaux engins côtiers adaptés au comportement des crustacés et des coquillages.

Concernant les différents thèmes abordés par ces actions de recherche, les opérations de collecte de l'information sont en cours. Certains travaux et analyses ont été déjà effectués mais les résultats finaux, particulièrement sur l'état d'exploitation des principaux stocks ne seront disponibles que vers le premier semestre de l'année 2010. Cependant, pour les espèces de petits pélagiques, les évaluations basées sur les campagnes d'écho-intégration ont montré que le potentiel exploitable de ces espèces durant l'année 2007 varie de 96 000 tonnes en hiver et 135 000 tonnes en été. Les captures actuelles ne dépassent pas les 55 000 tonnes. L'année 2009 a été consacrée à finaliser les travaux de collecte de l'information et à préparer les différentes bases de données aux traitements finaux. Le premier semestre de l'année 2010 est dédié à l'analyse des données et à l'élaboration des rapports finaux de ces projets de recherche.

4. ÉTUDES EN SCIENCES SOCIOÉCONOMIQUES

Il faut tout d'abord rappeler que la Tunisie a réalisé un travail très intéressant sur les indicateurs socioéconomiques des pêcheries du golfe de Gabès. Très récemment ce travail a été étendu pour les pêcheries de la région Nord et Est du pays. De plus, en 2006, nous avons pu achever un travail sur l'application des modèles bio-économiques de la pêcherie de la crevette royale dans la région du golfe de Gabès. Les plus importants résultats de ce travail ont été présentés par notre expert lors de la dernière réunion du Sous-Comité des sciences sociales et économique du SAC (Malaga, 30 novembre-3 décembre 2009). Dans le cadre de la réalisation de l'action de recherche LAMPAROS, notre regard s'est retourné vers l'étude de la rentabilité économique des unités de pêche ciblant les petits pélagiques, particulièrement les unités de la pêche au feu et des petits sardiniers. Les opérations de collecte des données ont été déjà entamées depuis la fin de l'année 2007 et celles des traitements des données sont en cours de réalisation.

5. ÉTUDE DANS LE DOMAINE DE L'ENVIRONNEMENT MARIN

Dans le cadre des programmes de recherche exécutés au sein du laboratoire biodiversité et biotechnologie marines de l'INSTM, nous avons étudié le statut de plusieurs groupes d'espèces de vertébrés marins pour la plupart menacés: tortues marines, cétacés et élasmodontes ainsi que plusieurs habitats sensibles. Ces études mentionnées dans ce rapport répondent en grande partie au programme de travail intersessions 2009 du SCMEP. Les principaux résultats de ces projets d'étude sont résumés ci-après:

Tortues marines

- Réduction du bycatch par changement de la nature de l'appât dans la pêche à la palangre de surface

Généralement le maquereau *Scomber scombrus* est utilisé comme appât dans la pêche des requins aux palangres de Surface dans le sud tunisien. Le remplacement du maquereau par les pastenagues *Dasyatis* sp. diminue le taux de capture accidentelle des tortues et améliore celui des requins. La différence entre les deux taux de capture serait en relation avec l'attraction des tortues par le maquereau alors que la couleur, l'odeur et la forme des morceaux de pastenague ne les attireraient pas.

➤ Étude de l'interaction des tortues marines avec les filets maillants

Les captures accidentelles totales de tortues marines *Caretta caretta* dans les pêcheries d'élastombranches aux filets maillant dans le sud tunisien ont été estimées à Zarzis (sud tunisien), le travail serait étendu à tout le golfe de Gabès dans un premier temps puis à toutes les côtes tunisiennes

➤ Données biologiques et écologiques

Le monitoring du site de ponte des îles Kuriat et l'étude de l'importance et de la répartition spatio-temporelle des échouages sur les côtes tunisiennes ont permis la détermination de plusieurs paramètres de reproduction et de survie de déterminer d'autre part les causes de mortalité.

Les élastombranches

➤ Données biologiques

- Composition du régime alimentaire des requins émissole, *Mustelus mustelus* (Linnaeus, 1758), dans le golfe de Gabès, sud de la Tunisie
- Biologie de la reproduction du requin émissole *Mustelus mustelus* (L.) dans le golfe de Gabès (centre-sud de la mer Méditerranée)
- Nouvelles données sur la biologie du poisson guitare commun *Rhinobatos rhinobatos* du golfe de Gabès

➤ Les élastombranches dans les débarquements des chalutiers du golfe de Gabès

Les élastombranches constituent 5,42 % de la production totale dont 3,7 % batoides et 1,7 % requins. Les CPUE moyennes estimées des élastombranches sont 79,36 kg/sortie en mer, 7,56 kg/jour en mer et 0,8 kg/trait de chalut. Pour les requins, ces indices sont 23, 66 kg/sortie en mer, 2,5 kg/jour en mer et 0,27 kg/trait de chalut et successivement 55,70 kg/sortie en mer, 5 kg/jour en mer et 0,54 kg/trait de chalut pour les raies.

Les raies sont plus abondantes que les requins dans les débarquements des chalutiers dans la région. Les Dasyatidae (CPUE = 18,65 kg/débarquement), les Myliobatidae (CPUE = 16,75kg/débarquement), les Triakidae (CPUE = 15 kg/débarquement) et les Rajidae (CPUE = 14kg/débarquement) sont les familles les plus communes dans les débarquements des chalutiers dans le golfe de Gabès. Par ailleurs, les Carcharhinidae (CPUE = 0,8 kg/débarquement) sont les élastombranches les moins pêchés par les chalutiers dans la région. L'essentiel des individus débarqués sont des juvéniles immatures.

La capture totale des élastombranches par les chalutiers dans le port de pêche de Sfax pour la période d'étude (janvier-juin 2009) est estimée à 148 244,48 kg, celle des requins à 44 196,88 kg et celle des batoides à 104 047,6 kg.

➤ Systématique des requins

• Présence de *Squalus megalops* (Chondrichthyes: Squalidae) dans la mer Méditerranée

Deux espèces d'aiguillat du genre *Squalus* sont connus dans le golfe de Gabès (Tunisie méridionale, Méditerranée centrale): *Squalus blainvillei* (Risso, 1826) et un aiguillat du groupe *Squalus megalops-cubensis*. Des données morphométriques et méristiques ainsi que l'analyse génétique (DNA Inter Simple Sequence Repeats markers and molecular Barcoding methods) supportent l'assignation de cette espèce à *Squalus megalops* (Macleay, 1881). *Squalus megalops* est connu principalement dans les eaux tempérées et tropicales d'Australie. Notre étude confirme son occurrence dans la mer Méditerranée.

Les Cétacés

➤ Interactions grand dauphin *Tursiops truncatus*-filets de pêche aux îles Kerkennah

Des résultats préliminaires montrent que le grand dauphin est présent aux îles Kerkennah tout au long de l'année. Cette présence prend son apogée au printemps ce qui engendre une augmentation de la fréquence d'interaction pour cette saison. À partir de nos sorties en mer, nous avons enregistré la présence des juvéniles de *Tursiops* accompagnés de leurs mères au mois d'avril. Donc l'archipel de Kerkennah est une zone de reproduction pour le grand dauphin.

Herbiers de Posidonie et peuplements benthiques associés dans le golfe de Gabès

Inventaire et cartographie du couvert végétal marin et mise en place d'un réseau de surveillance des herbiers marins dans le golfe de Gabès.

6. NOUVELLES MESURES D'AMENAGEMENT

Instauration d'une nouvelle réglementation de l'activité de pêche durant la période d'intersessions qui se résume à la fermeture totale de la région sud de la Tunisie (GSA 14, golfe de Gabès) à la pêche au chalut durant une période de trois mois (du 1^{er} juillet 2009 au 30 septembre 2009).

7. PROPOSITION DE RECHERCHE POUR LE CSC

L'INSTM continue régulièrement ses activités de recherche et entretient une collaboration assez étroite avec les deux projets régionaux FAO/MEDSUDMED et FAO/COPEMED. En effet, dans le cadre des activités de ces deux projets, la Tunisie continue ses activités concernant les évaluations des stocks partagés, particulièrement la chevrette dans la région du Canal de Sicile, la pêche artisanale, les expérimentations sur la maille carrée, etc.). Par ailleurs, dans une perspective de l'application de l'approche écosystémique en tant qu'outil d'aménagement des pêcheries méditerranéennes, la Tunisie est intégrée dans un projet européen sur cet aspect. Ce projet de recherche qui groupe de nombreux instituts de recherche méditerranéens, a été déposé, pour financement, à l'Union européenne.

Du côté biodiversité marine, plusieurs projets nationaux et régionaux sont en cours d'élaboration ou de recherche de financement concernant surtout les tortues marines et les élasmobranches.

TURKEY/TURQUIE

DESCRIPTION OF THE FISHERIES

Turkish fishery is generally regarded as artisanal and offshore type of fishery. Practically, there is no deep-sea fishing. Fishing is also carried out in the Turkey's exclusive economic zone (Black Sea). High-sea fishing is limited to the bluefin tuna done in Mediterranean waters. Most of Turkey's fishing is taking place in fishing grounds in offshore waters. As seen in Table 1, the main fisheries in Turkey are pelagic, demersal and shellfish. Commercial fishing operations are generally conducted in the Black Sea and in the Sea of Marmara by purse seine fishing while fisheries in the other areas are mostly of small-scale type.

Table 1. Fisheries type by regions and main commercial species

Fishing type	Sea regions	GSAs	Species
Pelagic fisheries	Eastern Black Sea	29	Anchovy, horse mackerel, bonito, sprat
	Western Black Sea	29	Anchovy, sprat, bonito, bluefish, scad, chub mackerel, Sardines, dogfish
	Marmara	28	Anchovy, bonito, sprat, scad, blue fish, Sardines
	Mediterranean and Aegean	22, 24	Sardines, chub mackerel
Trawl fisheries	Western Black Sea	29	Whiting, red mullet, turbot
	Aegean	22	Mixed
	Mediterranean	24	Mixed
Highly Migratory Species	Mediterranean and Aegean	24	Tuna
		22	Swordfish
Artisanal fisheries (gillnet, trammelnet, longline, traps)	Black Sea, Marmara, Mediterranean and Aegean	29, 28, 24, 22	Mixed (whiting, turbot, red mullet, grey mullet, shrimp, sparids, sole and dab, squids, octopus and cuttlefish, swordfish)
Sea snail fisheries (dredging)	Eastern Black Sea,	29	Sea snail
Clam Fisheries (dredging)	Western Black Sea	29	Baby clams
Shrimp/prawn fisheries	Marmara, Aegean and Mediterranean	28, 22, 24	Shrimp
Lagoon fisheries	Mediterranean, Aegean, and Marmara	24, 22, 28	Mixed (seabass, seabream, eel, mullets)

Ten species, being comprised mostly of small pelagics, account for approximately 90 % of the total marine capture. Marine catch obtained from Black Sea constitutes 70 to 80 percent of total catch (Table 2). The fluctuations in marine catch from Black Sea typically depend on massive catch of anchovy. Fishing is mostly done in the period from September until April. Fish is generally marketed in the form of market sale, mostly as whole fish.

Table 2. Marine Fish Capture (2004–2008)

Marine fish landings (tonnes)					
Marine fish	2004	2005	2006	2007	2008
Anchovy	340 000	138 569	270 000	385 000	251 675
Atlantic bonito	5 701	70 797	29 690	5 965	6 448
Pilchard	12 883	20 656	15 586	20 941	17 531
Horse mackerel	18 068	13 540	14 127	22 991	22 134
Scad	9 337	13 978	11 800	9 030	10 043
Sprat	5 411	5 500	7 311	11 921	39 303
Whiting	8 205	8 309	9 112	12 940	12 231
Grey mullet	12 424	10 560	8 915	8 291	3 345
Blue fish	19 901	18 357	8 399	6 858	4 048
Hake–European hake	4 380	4 100	3 460	3 337	1 252
Total marine fish landings	456 752	334 248	409 945	518 201	395 660
Marine crustaceans and molluscs					
Carpet shell	16 899	10 847	1 266	1 334	1 255
Striped venus	-	-	48 344	47 215	36 896
Squid	506	711	972	844	537
Sea snail	14 034	12 600	11 613	13 791	11 442
Prawn	5 279	6 339	38 56	3 917	4 668
Total marine crustaceans and molluscs landings	48 115	46 133	79 021	70 928	57 453
Total marine landings	504 487	380 381	488 966	589 129	453113

Turkey's marine catch showed a steady increase until 1988 when the total catch amounted to 676 000 tonnes. However, marine catch started to decline thereafter due to predominantly fluctuations in stocks of small-sized pelagic fish. As seen in Table 1, between 2004 and 2008, total marine catch has changed from year to year, ranging from 380 381 tonnes in 2004 to 589 129 tonnes in 2007. Total fishery production in 2008 from marine capture fishing, inland fishing and aquaculture were 453 113, 41 001 and 152 186 tonnes respectively, totaling a production of 646 300 tonnes.

FLEET STRUCTURE

In 2007, there were 18 343 vessels registered with a total tonnage of 187 101 GT. Information on national fleet is given in the Table 3. The majority of fishing fleet is comprised of small vessels: in 2007, 94 percent of fishing vessels were less than 18 metres in length. Of the 18 343 vessels, 16 % had an engine capacity greater than 100 hp and 2 % had 10 or more crew. Nearly half of the total fishing fleet is based in the Black Sea. The majority of large vessels operate in the Sea of Marmara and the Black Sea. Under the current fishing fleet management system, fishing licence is not granted to a new vessel. Although from 2004 to 2007 the fishing fleet decreased by 3 percent, the tonnage remained almost unchanged overall.

Table 3. Information on national fishing fleet (2006–2008)

	2006		2007		2008	
	Number	Total GT	Number	Total GT	Number	Total GT
Total Vessels	18 790	189 777	18 343	187 101	17 816	185 760
Vessels with engines	18 693	189 596	18 253	186 934	17 734	185 606
0–5.9 m	3 620	4 569	3 387		3 085	3 765
6–11.9 m	13 112	53 986	13 003	49 189	12 780	48 901
12–17.9 m	985	21 756	973	21 031	922	20 120
18–23.9 m	497	31 380	482	31 020	451	29 391
24–29.9 m	294	30 898	292	29 152	288	28 765
30–35.9 m	94	19 152	98	20 017	95	19 603
36–44.9 m	71	18 649	81	20 823	86	22 765
45–59.9 m	18	7 812	25	10 288	25	10 902
60–74.9 m	2	1 394	2	1 394	2	1 394
75 m and over	0	0	0	0	0	0
Vessels without engine	97	181	90	167	82	154

STATUS OF STOCKS OF PRIORITY SPECIES

There is a general lack of accurate and reliable information on the status of marine resource stocks in Turkey. This in large part results from a lack of stock assessment research. Furthermore, lack of reliable accurate data on fish stocks makes it too difficult to determine the status of stocks. Scientific stock assessment studies are currently not in place in Turkey in a systematic way, as a part of fisheries management regime. This makes it difficult to classify the status of stocks as overfished, fully-fished or underfished.

STATUS OF THE STATISTICS AND INFORMATION SYSTEM

Over the last years, markedly progress has been made in development of fisheries data collection system in Turkey. FIS, an integrated Web-based database and has been developed. The FIS, which is being subject to routine updates, comprises a combination of resources organised to collect, process, transmit, and disseminate the fisheries relevant data. The system is composed of modules interacting to introduce and extract data to/from a centralized database. The integrated FIS includes vessel registry, fishing licence registry, data on landings, quota (bluefin tuna), catch quota (striped venus clam, and – as from 2010 – anchovy) and sales notes. Vessels over 15 metres are under an obligation to record and keep logbook. MARA planning to shift paper-based logbook into the electronic one due to excess workburden associated with the paper logbook. A study on development of an integrated system for electronic logbook is underway. The application of VMS has been started in 2008 with the vessels involved into bluefin tuna fishing under the rules of ICCAT. About 200 vessels have been equipped with VMS-device. As from 2010, fishing vessels over 15 metres (about 1 250 vessels) will be under an obligation to have Automated Identification System (AIS)

STATUS OF MARINE ENVIRONMENTAL STUDIES IN PROGRESS

An ongoing project titled “Strengthening Protected Area Network of Turkey: Catalysing Sustainability of Marine and Coastal Protected Areas” aims to facilitate expansion of the national system of marine and coastal protected areas, including fisheries protected areas, and improve their management effectiveness. The project is partly funded by GEF and will be completed in October 2013.

STATUS OF THE SOCIAL SCIENCES STUDIES

During the intersessional period, to our best knowledge, no any notable study has been conducted on the socio-economic of fisheries.

MANAGEMENT MEASURES

During the intersessional period, a technical regulation on fishing and landing of anchovy has been imposed. The regulation includes new rules for fish boxes, icing, and limit for daily anchovy catch quantity for vessels.

RESEARCH SUGGESTIONS FOR CONSIDERATION BY SAC

None

The Scientific Advisory Committee (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) held its twelfth session in Budva, Montenegro, from 25 to 29 January 2010. The Session was attended by delegates from nineteen Members of the Commission. The Committee reviewed the activities and results obtained by its subsidiary bodies along with the proposals of the Coordinating Meeting of the Sub-Committees (CMSC), as well as the achievements by the FAO regional projects in support to the GFCM activities. It reflected on the management advice drawn up by the Sub-Committee on Stock Assessment on the basis of thirty-one stock assessments and agreed that the existing scientific evidence sufficed to support that the Commission takes relevant management measures notably to establish a regional logbook and to monitor the fishing capacity in the Mediterranean and the Black Sea. The SAC suggested that, in future, management advice on small pelagic fisheries should benefit more from the development of biological Reference Points for Biomass. It further discussed several important topics including recreational fisheries, improvement of gear selectivity and reduction of bycatch, the impact of climate change, the impact of alien species on fisheries and other issues such as the exploitation of red corals, the status of elasmobranch species and the follow-up on fisheries-restricted areas. The Committee appraised the data exchange protocols and related electronic tools developed by the Secretariat for the submission of Task 1 data. It also proposed that the criteria to identify sensitive habitats should be revisited and amended. Furthermore, the Committee acknowledged the proposal on the new functioning of the SCSA working groups on stock assessments, on the progress made on the updating of the SAC glossary and on updating of the reference frame of SAC and the establishment of a future strategic workplan. Finally, the SAC agreed upon its workplan for 2010 and renewed the mandate of the bureau for another two-year term and nominated a new coordinator for each of its four Sub-Committees.

Le Comité scientifique consultatif (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa douzième session à Budva (Monténégro), du 25 au 29 janvier 2010. Des délégués de dix-neuf Membres de la Commission y ont participé. Le Comité a examiné les activités et les résultats obtenus par ses organes subsidiaires, la réunion de coordination des Sous-Comités (CMSC) ainsi que les réalisations des projets régionaux de la FAO qui soutiennent les activités de la CGPM. Il a examiné les avis de gestion formulés par le Sous-Comité de l'évaluation des stocks sur la base de trente et une évaluations de stocks et a convenu que des preuves scientifiques existantes suffisent à soutenir que la Commission prenne des mesures pertinentes de gestion, notamment pour établir un journal de bord régional et à faire le suivi de la capacité de pêche dans la Méditerranée et la mer Noire. Le CSC a suggéré que les avis de gestion à venir sur les petits pélagiques devraient bénéficier davantage de l'élaboration de points de référence biologiques de la biomasse. Il a en outre discuté de plusieurs sujets importants tels que la pêche récréative, l'amélioration de la sélectivité des engins et réduction des prises accessoires, l'impact du changement climatique, l'impact des espèces non indigènes sur les pêcheries et d'autres questions telles que l'exploitation du corail rouge, la situation des espèces d'élasmobranches et le suivi des zones de pêche à accès réglementé. Le Comité a examiné les protocoles d'échange de données et des outils électroniques mis au point par le Secrétariat pour la présentation des données de la Tâche 1. Il a également proposé que les critères permettant d'identifier les habitats sensibles devraient être révisés. En outre, le Comité a approuvé la proposition sur le nouveau fonctionnement des groupes de travail du SCSA sur les évaluations des stocks et a pris note des progrès accomplis dans la mise à jour du glossaire du CSC, de la mise à jour du cadre de référence du CSC et dans l'établissement d'un plan stratégique pour le futur. Enfin, le CSC a décidé son plan de travail pour 2010, renouvelé le mandat du Bureau pour un autre mandat de deux ans et a nommé un nouveau coordonnateur pour chacun de ses quatre Sous-Comités.

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