GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

COMMISSION GÉNÉRALE DES PÊCHES POUR LA MÉDITERRANÉE

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# REPORT ON INTERSESSIONAL ACTIVITIES FOR 2011, RECOMMENDATIONS AND WORKPLAN FOR 2012 OF THE CAQ AND ITS SUBSIDIARY BODIES

## INTRODUCTION

1. This document summarises the activities of the Committee on Aquaculture (CAQ) covering the intersessional period March 2011 - February 2012. It provides a synthesis of the most significant activities carried out, the recommendations emanating from the CAQ subsidiary bodies, including the fifth session of the Coordinating Meeting of the Working Groups (CMWG), and the proposed workplan for CAQ for 2012.

## ACTIVITIES OF THE CAQ IN 2011

2. The last session of the CAQ was held at the FAO HQs, Rome, Italy, (8-10 March 2011) and followed by the activities of the Working Groups on Site Selection and Carrying Capacity (WGSC) and Sustainability in Aquaculture (WGSA), of the Working Group on Marketing of Aquaculture Products (WGMA), and of the Information System for the Promotion of Aquaculture in the Mediterranean Countries (SIPAM). The outputs of the working groups and projects in support to the activities of the CAQ were discussed and reviewed during the fifth session of the CMWG (Rome, March 2012). Details are available in the document GFCM:XXXVI/2012/Inf.9.

3. The conclusions of activities including meetings are hereunder summarized:

- Pilot Project in Spain (step one) on the identification of indicators for sustainable aquaculture (Puerta Santa Maria, 23-25 May 2011);
- Meeting on the interaction between aquaculture and capture fisheries in Mediterranean coastal lagoons in Italy (Cagliari, 28-30 June 2011);

- Pilot Project in Turkey (step two) assessment of selected indicators for sustainable aquaculture (Mugla, 21-25 September 2011);
- Pilot Project in Tunisia (step two) assessment of selected indicators for sustaianble aquaculture (11 June 2011; 28 September 2011; 11 October-3 November 2011);
- Pilot Project in Morocco (step one) on the identification of indicators for sustainable aquaculture (M'diq, 26-27 October 2011);
- Regional workshop on the pilot case studies and guidelines and application of sustainable indicators in aquaculture (Malaga, 14-16 November 2011);
- Workshop on the definition and environmental monitoring of aquaculture activities within Allowable Zone of Effect (AZE) in the Mediterranean (Malaga, 16-18 November 2011);
- Thirteenth Session of SIPAM (Salerno, 1-3 Febraury 2012);
- Contribution to the "*First meeting of the* ad hoc *Working Group on the Black Sea (WGBS)"* (Constanta, 16-18 January 2012);
- Fifth session of the Coordination Meeting of the Working Groups (CMWG) (Rome, 7-9 March 2012).

***WORKING GROUP ON SITE SELECTION AND CARRYING CAPACITY (WGSC)***

4. The activities of the WGSC were implemented within the Project "Developing site selection and carrying capacity for Mediterranean aquaculture within aquaculture appropriate areas" (SHoCMed). SHoCMed addressed the following: (i) preparation of guidelines for the establishment of Allocated Zones for Aquaculture (AZA); (ii) preparation of a draft Glossary on Site selection and Carrying capacity; (iii) Delphi exercise on Environmental Quality Standards (EQS); (iv) preparation of a review on the Allowable Zone of Effect (AZE); and (v) set up of a platform to share matrix-based data on aquaculture monitoring and environmental standards.

5. The Workshop on the definition and environmental monitoring within Allowable Zone of Effect (AZE) reviewed and agreed on a glossary related to AZE, and selected a number of EQS parameters to be used for an aquaculture environmental monitoring programme.

***WORKING GROUP ON SUSTAINABILITY ON AQUACULTURE (WGSA)***

6. The activities of the WGSA were implemented within InDAM project "Indicators for Sustainable Development of Aquaculture and Guidelines for their use in the Mediterranean and Black Sea countries". InDAM addressed the following: (i) assessment of the identified indicators reference system and follow-up on Pilot Studies (Tunisia and Turkey step two), and implement new Pilot Sudies in Morocco and Spain (step one); (ii) preparation of guidelines on application of indicators in the Mediterranean and Black Sea area; (iii) update the database and dissemination of InDAM results; (iv) strengthen and consolidate cooperation on sustainable aquaculture.

7. The meeting related to the pilot case studies on guidelines and application of sustainable indicators in aquaculture (Malaga, 14-16 November 2011) addressed the following: (i) the refining of the selection of minimum number of indicators for each pillar of sustainability (economic, environmental and social); (ii) discussions on the relevance and definition of reference points; (iii) identification of the step forward for the future Pilot studies; (iv) development of a strategy to finalise the guidelines on indicators.

***MEDITERRANEAN COASTAL LAGOONS MANAGEMENT: INTERACTIONS BETWEEN AQUACULTURE AND CAPTURE FISHERIES (LaMed project)***

- The meeting on "Mediterranean coastal lagoons management: interaction between aquaculture and capture fisheries" (Cagliari, Italy, 28-30 June 2011), organized in the framework of LaMed project funded by Italy, focussed on, *inter alia*: biodiversity and conservation, stock enhancement, nursery areas, eel management, and environmental and economic issues. The meeting identified critical points and suggested priorities for sustainable management of coastal lagoons. The experts agreed on the urgency of the preparation of action plans for the sustainable development of aquaculture and capture fisheries in coastal lagoons in the GFCM area. The degradation that has occurred in many coastal lagoons was determined by the lack of or inadequate management plans, including an unclear legal regulatory framework. The lack of management determined also a negative impact on fishing communities, aquaculture and capture fisheries activities and consequent loss of traditional knowledge, and biodiversity.
- In particular, the meeting noted that the management approach for coastal lagoons should be in line with the main principles of the Code of Conduct of Responsible Fisheries (CCRF) and in particular with the provisions articles referring to: aquatic ecosystems, fisheries habitats, multiple uses of the coastal zone and integrated coastal zone management, participation of fishworkers, environmental and other interested organizations, the role of artisanal fisheries and aquaculture including culture based aquaculture, in accordance with the international law and within an ICZM. The activities of traditional aquaculture and artisanal capture fisheries should be considered a priority within the management plans of Mediterranean coastal lagoons considering the ecological services and economic benefits provided by these ecosystems and traditional activities respectively. A common Mediterranean and Black Sea strategy for the sustainable management of aquaculture and capture fisheries in coastal lagoons areas should be agreed upon as an issue of common interest.

***INFORMATION SYSTEM FOR THE PROMOTION OF AQUACULTURE IN THE MEDITERRANEAN (SIPAM)***

8. SIPAM activities were reviewed during the its Thirteenth Session held in Salerno from 1-3 February 2012, and are summarised as follows: it was noted that improvements were made to SIPAM Production Statistics following the requirements of Recommendation GFCM/35/2011/6; it also acknowledged with great satisfaction that, since the adoption of the Rec. GFCM/33/2009/4 aquaculture data submission was improved and twenty one countries submitted records for Production Statistics.

9. The meeting further took note of the fact that SIPAM Production Centres data entry was released according to the Rec. GFCM/35/2011/6 and that a review of the Production Statistics data prior to 2008 hosted in SIPAM is being carried out.

10. Finally the Secretariat informed the meeting that the "Quick Start Guide for National Coordinators" was updated and composed by two ad hoc sections on Production Statistics and on Production Centres data submission process and that SIPAM portal on GFCM aquaculture was improved and new temathic pages dedicated to the Coastal Lagoons were released.

### *WORKING GROUP ON MARKETING ON AQUACULTURE PRODUCTS (WGMA)*

11. The activities of the WGMA were carried out with the cross involvement of the WGMA on the InDAM activities, in particular the partecipation in Pilot Studies and work related to Economic Indicators: identification of methodology; data collection for performance assessment; preparation of methodology sheets for economic indicators; and partecipation in the identification of regional economic indicators.

### *WORKING GROUP ON THE BLACK SEA*

12. The "First meeting of the ad hoc Working Group on the Black Sea (WGBS)" was held in Constanta, from 16-18 January 2012. Specifically for aquaculture, the WGBS discussed:

- the potential role of aquaculture as a valuable source of protein;
- the sustainable development of both brackish water and marine aquaculture and identification of the main priority needs for developing aquaculture in the Black Sea countries;
- the relevance of site selection procedures and environmental regulations as well as the difficulties and constraints of reaching an appropriate level of aquaculture development to allow the improvement of farming technologies and increase of production capacity.

### *COORDINATING MEETING OF THE WORKING GROUPS (CMWG)*

13. The fifth meeting of the CMWG reviewed the main conclusions and recommendations of the CAQ subsidiary bodies. The CMWG agreed that the adoption of the regional indicators should be considered as a tool at the disposal of the countries to plan and monitor the development of sustainable aquaculture and to harmonize strategies for its development. The meeting considered that, at this stage, the list of selected EQS indicators to be used in an environmental monitoring programme could be submitted for the consideration of the thirty-sixth session of the Commission assuming that critical and safe thresholds for each selected parameter are be provided at later stage. It stressed that additional effort should be made to strengthen cooperation with Producers' Organisations.

14. The CMWG deeply discussed some selected priorities for aquaculture development and underlined that the activities of CAQ should also focus on additional issues such as: certification and traceability on aquaculture, aquatic animal health and bio security, and genetics in aquaculture.

**DESIGNATION OF COORDINATORS OF THE CAQ SUBSIDIARY BODIES**

15. The CMWG acknowledged the designation of Mr Pablo Àvila (Spain), Mr Ioannis Karakassis (Greece), Mr Mohamed Hadj Ali Salem (Tunisia) and Mr Ferit Rad (Turkey), as coordinators of the WGSA, WGSC, SIPAM and WGMA respectively, for two years according to rules and procedures of the GFCM subsidiary bodies.

**MAIN CONCLUSIONS AND RECOMMENDATIONS FOR AQUACULTURE MANAGEMENT**

16. The following recommendations were submitted to the Commission for consideration and possible endorsement:

**Aspects related to the *sustainability of aquaculture***

- The regional indicators for sustainable aquaculture identified and selected for the governance and for different dimensions of sustainability (economic, environmental and social) and indicated in Appendix A, should be adopted at regional level. These indicators should be considered as a tool at the disposal of GFCM countries to plan and monitor the development of sustainable aquaculture in the Mediterranean and Black Sea, and should be regularly monitored within a regional harmonized strategy and framework.

**Aspects related to site selection and carrying capacity**

- The implementation of AZA for marine fish cage culture should be confirmed as a priority for sustainable aquaculture development in the coastal areas of GFCM member countries;

- Setting up AZA should possibly be carried out within an Integrated Coastal Zone Management framework to assure full consistency and compliance with existing and future uses of coastal areas. AZA should also be considered an area where all administrative procedures are shortened and the farming license is given in a relatively short time.

- For marine fish cages, aquaculture Environmental Monitoring Programmes should be included in the national legislation and should be implemented in the areas surrounding the fish farms or in the immediate vicinity of the farms called "allowable zone of effect". The selected EQS variables for an environmental monitoring programme (a definition of those parameters is reproduced in GFCM:XXXVI/2012/Inf.9) should at least include the following:
  *(a) Total Organic Matter in Sediments (%);*
  *(b)Total Nitrogen in Sediments (%);*
  *(c) Redox Potential Eh (mV);*
  *(d) Percentage of Capitellid polychaetes over macrofaunal biomass (%);*
  *(e) Gas bubbles;*
  *(f) Dissolved Oxygen (mg/l);*
  *(g) Turbidity (m);*
  *(h) Percentage of silt/clay in sediments (%);*
  *(i) Litter surrounding area.*

**Aspects related to coastal lagoons management**

- It is proposed to elaborate Guidelines for a Management Plan for Mediterranean coastal lagoons which should reflect the priorities, conclusions and recommendations given by the GFCM-CAQ-LaMed Meeting held in Cagliari, 28-30 June 2011. These guidelines should address the conservation of traditional aquaculture and artisanal capture fisheries including traditional local knowledge, the prevention of any further degradation of coastal lagoons and restoration of the environment. The management plan for coastal lagoon areas should be considered as a priority in the agenda of the Mediterranean countries and by the GFCM at the most appropriate level.

## PROPOSED WORK PROGRAMME 2012-2013

**Workplan of the Working Group on Sustainability on Aquaculture (WGSA)**

- Identify reference points and standards for the selected indicators;
- Implement new pilot studies and test the indicators reference system at local level; follow-up of the pilot studies with: step two Morocco and Spain, step three Tunisia and implement a communication and dissemination strategy;
- Identify strategy for involvement of concerning parties in the use of indicators as appropriate.

**Workplan of the Working Group on Site Selection and Carrying Capacity (WGSC)**

- Organize regional training on site selection and site management;
- Organize regional Workshop on the definition of *reference points* for EQS and monitoring aquaculture;
- Implement a programme of dissemination of the technical results and outcomes of SHoCMed activities;
- Establish an IT forum platform on Site Selection and Carrying Capacity for data sharing within the WGSC;
- Carry out an EQS calibration exercise and setting up of a database hosted by the SIPAM portal;
- Prepare a harmonized monitoring scheme for Mediterranean and Black Sea.

**Workplan of Information System for the Promotion of Aquaculture in the Mediterranean (SIPAM)**

- Integrate SIPAM activities and data bases with the GFCM Working Group on Black Sea;
- Reactivate the “Research and Development Programmes” databank and cooperate with other relevant regional data banks on aquaculture for data sharing;
- Update the available information on aquaculture legal and regulation aspects and make them available online.

**Workplan on Lagoon management and interaction between aquaculture and capture fisheries**

- Identify indicators for the sustainable development of aquaculture and capture fisheries activities within coastal lagoons;
- Finalize the database on the coastal lagoons based on the country report and data sheets prepared during the first phase of the project;

**Workplan of the Working Group on Marketing of Aquaculture Products (WGMA)**

- Work with WGSA on the Indicators for sustainable aquaculture related to economic and marketing issues;
- Work with SIPAM for aquaculture marketing data and issues related to the data surveys on economic aspects;
- Carry out a regional survey and preparation of a review of legislation and present status of Producer Organizations (POs) in GFCM member countries;
- Organize a workshop with the POs and farmers on "Organizational capacity and strengthening the role of aquaculture Producer Organizations and farmers in marketing and market promotion".

**Workplan of the Working Group on Black Sea (WGBS) (aquaculture component)**

- Organize a Workshop/Training on AZA and on classification and zoning for mollusk culture as well as certification protocols (Black Sea);
- Implement regional initiatives to harmonize the environmental monitoring programme on aquaculture and on AZA;
- Undertake pilot studies for coastal aquaculture projects (including new species for aquaculture and new technologies).

**Other priorities issues identified by CMWG:**

- Carry out a regional survey on aquatic animal health and biosecurity on aquaculture;
- Carry out a regional survey on the main aspects related to the certification and traceability in aquaculture.

The terms of reference for some of the above-mentioned meetings are reproduced in Appendix B

**Meetings and Trainings scheduled for 2012-2013**

| TITLE | PERIOD | PLACE |
|---|---|---|
| WGMA Workshop on "Organizational capacity and strengthening the role of aquaculture Producer Organizations and farmers in marketing and market promotion in marketing and market promotion" | TBD | TBD |
| SIPAM – 14th Annual Meeting | November 2012 | Hurghada, Egypt |
| WGSA – WGMA - WGSC – InDAM - SHoCMed Workshops on the identification of *reference points* for economic and environmental indicators on aquaculture | December 2012 | TBD |
| WGSC –SHoCMed Workshop – Training on the site selection, Allocation Zone for Aquaculture and site management for coastal marine aquaculture. | December 2012 | Morocco |
| WGBS-WGSC Training on the site selection and Allocation Zones for Aquaculture (*ad hoc* training for the Black Sea) | TBD | TBD |
| CAQ- Workshop - on "Black Sea aquaculture species diversification" | TBD | Trabzon, Turkey |
| Eighth Session of the Committee on Aquaculture of GFCM | March 2013 | Paris, France |

This list does not include the meetings of the CAQ-InDAM follow up and new Pilot Studies in Tunisia, that will be carried out at local level with the support of the Secretariat. It also does not include the initiatives in cooperation with the Fundación Observatorio Español de Acuicultura (FOESA), AquaMed and other research institutions and projects collaborating with CAQ.

**APPENDIX A**

## List of regional indicators

| ECONOMIC DIMENSION | | | | |
|---|---|---|---|---|
| **PRINCIPLE** | **CRITERIA** | **N°** | **INDICATORS** | **Ref. Values** |
| **Strengthen financial management of enterprises** | Level of profitability | 1 | Production Value Index (PVI)* | See trend in value, ± |
| **Strengthen consumer responsive and market oriented aquaculture** | Use of branding or quality assurance schemes/labels | 2 | Use of quality certification schemes by independent bodies for target markets* | See trend in percentage of enterprises having quality certification scheme/s |
| **Strengthen risk assessment and crisis management capabilities** | Level of diversification | 3 | Number of products* | See trend in no. of cultured species, size categories and other differentiated or value added products, ± |
| **Strengthen risk assessment and crisis management capabilities** | Level of collective marketing and actions | 4 | Existence of collective actions (collective marketing, market promotion) by Producer Organizations** | See trend in:<br>Number of promotional activities and/or<br>Volume of products marketed through collective marketing; ± |
| **Strengthen financial management of enterprises** | Level of profitability | 5 | Input/output Price parity* | See trend in parity, ± |

**Note**: * = Methodology sheet prepared

** = Methodology sheet still to be prepared

| ENVIRONMENTAL DIMENSION | | | | |
|---|---|---|---|---|
| **PRINCIPLE** | **CRITERIA** | **N°** | **INDICATORS** | **Ref. Values** |
| **Minimize the global impact of aquaculture** | Needs of natural resource for food production (pelagic fish and plants) | 1 | FCR Feed Conversion Ratio (kg food/kg fish)* | Sea Bass (350-400 gr): > 2.2/2.2-1.8/< 1.8<br>Sea Bream (300-350 gr): >2.1/2.1-1.6/< 1.6 |
| **Maintain the ecological service of ecosystems** | Reduction of benthic environmental impact | 2 | Existence of criteria for the depth (m) of cage applied to site selection. Related to density. Ratio of depth and density (Depth (m)/ Density (kg/m3) | < 1.5 / 1.5 –2 / >2** |
| **Minimize local impact on environmental conditions and biodiversity** | Use of chemical products | 3 | Existence of a national monitoring programme to monitor antibiotics and other chemical residues | Yes/No |
| | Impact on benthic habitats and communities | 4 | Implementation of a monitoring system for the evaluation of the level of impact on benthos | Yes/No |
| | Biological impact on communities | 5 | Reporting of escapees (number of escape events) | Number of escape events |

**Note**: * = The FCR Ref. Values varies according to the farmed species

** = Higher fish density results in increased organic matter sedimentation, and higher depth would increase the dispersion

| SOCIAL DIMENSION | | | | |
|---|---|---|---|---|
| **PRINCIPLE** | **CRITERIA** | **No** | **INDICATORS** | **Comments** |
| **Contribute to food security and food safety** | Importance of fish availability and supply. Contribution to food security. | 1 | Relevance of fish produced for domestic markets | Consumption of national products (kg per capita) related to consumption of foreign products (kg per capita) |
| | Transparency of production and trading process (*from Farm to the table*) | 2 | Existence of mechanisms for information with regard to the aquaculture production process and its compliance to regulations available and accessible to the public. | Existence and implementation of Labels according to Food Safety and traceability regulations. |
| **Strengthen the role of the Producer Organizations (POs) and NGO's to improve image of aquaculture, social awareness and responsibilities** | Importance of fish farmer organizations | 3 | Existence of strategies or initiatives developed by producers organizations towards the improvement of aquaculture image | % of the total budget of the POs, dedicated to aquaculture promotion and image building. |
| **Strengthen corporate social responsibility** | Quality of labour conditions | 4 | Existence of national legislation on employees' welfare fully applied by the aquaculture sector | Yes/No |

| GOVERNANCE | | | | |
|---|---|---|---|---|
| **PRINCIPLE** | **CRITERIA** | **N°** | **INDICATORS** | **Ref. Values** |
| Strengthen integration of aquaculture in local development | Importance of development initiatives | 1 | Existence of Allocated Zones for Aquaculture (AZA) – (%)<br>(number of farms in AZA/total number of farms *100) | 0-25% Red; 25-75% Yellow; 75-100 Green |
| Promote participation in decision making process | Level of stakeholders' participation | 2 | Existence of participatory mechanism in decision making processes | Yes/No |
| Strengthen research, information systems and extension service | Importance of research and training in aquaculture | 3 | Existence of funded research and development (R&D) programme and training on aquaculture development | Yes/No |
| Strengthen institutional capacities | Level of recognition of sustainable development | 4 | Existence of specific legislation governing aquaculture development in line with the principles of the CCRF | Yes/No |
| Aquaculture monitoring and reporting mechanism | Capacity of monitoring and reporting on aquaculture development | 5 | Existence of data collection and dissemination system | Yes/No |

**APPENDIX B**

**Draft terms of reference for selected meetings**

**I ) WGMA Workshop on "Organizational capacity and strengthening the role of aquaculture Producer Organizations and farmers in marketing and market promotion in marketing and market promotion**"

- Analyze the present status and structure of fish farmers' organizations (Cooperatives, associations or producers' organizations) in GFCM convention area including legal aspects with stakeholders;
- Get feedback on a range of issues which have an impact on organizational capabilities and functioning of fish farmers' organizations with regard to collective marketing and promotional activities;
- Make synthesis and generate recommendations for strengthening the organizational capacities of fish farmers' organization for collective marketing and promotional activities.

**II ) WGSA – WGMA - WGSC – InDAM - SHoCMed Workshops on the identification of *reference points* for economic and environmental indicators on aquaculture.**

- Present and discuss the follow up on the status of the application of the Indicators for Sustainable Aquaculture at different level (regional, national, local, farm) and present the available information.
- Organization of the Workshops in separate groups based on expertise
- Review and make synthesis of the on the *reference points* for economic and environmental indicators
- Experts discussion, synthesis and of the reference points dealing with marine finfish aquaculture.

**III) WGSC – ShoCMed Workshop – Training on the site selection, Allocation Zones for Aquaculture (AZA) and site management for coastal marine aquaculture.**

- Process of the establishment of AZA and relation with the Integration of Coastal Zone Management and Ecosystem Approach to Aquaculture (EAA);
- Institutional and Legal Framework of AZA wihitn the coastal areas
- AZA Definition, Principles and Criteria for its establishment and excluding criteria
- Assessment tools: Basic data;
- Administrative aspects;
- Environmental Quality Standards (EQS) and Environmental Monitoring Programme (EMP);
- The Application of GIS for the establishment
- AZA Management plan (criteria, right and responsibility).