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**GENERAL FISHERIES COMMISSION FOR
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**COMMISSION GÉNÉRALE DES PÊCHES
POUR LA MÉDITERRANÉE**



GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

COMMITTEE ON AQUACULTURE (CAQ)

Seventh Session

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**REPORT OF THE WORKSHOP ON ALLOCATED ZONES FOR
AQUACULTURE (AZA) - WGSC-SHoCMed**

OPENING AND ARRANGEMENTS OF THE WORKSHOP

1. The Workshop on Allocated Zones for Aquaculture (AZA) of the Working Group on Site Selection and Carrying Capacity was held from 18 to 20 October 2010 and was organised with and hosted by the Dirección General de Recursos Pesquero y Acuicolas de la Consejería de Agricultura y Pesca (CAP) de la Junta de Andalucía. The workshop was attended by experts from Albania, Algeria, Croatia, Greece, Italy, Morocco and Spain.
2. The Workshop was opened by Mr José Manuel Gaiteiro y Rey, Subdirector of the Dirección General de Recursos Pesqueros y Acuicolas, who welcomed the participants and pointed out the importance of the aquaculture as a strategic sector and the need to reinforce its position and presence on the public domain thorough the allocation of suitable zones.
3. Mr Fabio Massa, aquaculture officer of the GFCM Secretariat, thanked the Spanish Authority for the kind hospitality and for the excellent organization of the workshop, highlighted the relevance of aquaculture among Mediterranean countries and the priority assumed by the definition of criteria for site selection for aquaculture activities in the agenda of the CAQ as well as the importance of a clear vision of Allocation Zones for Aquaculture for the sustainable development of aquaculture. He also noted that in the GFCM region there are already a few countries with experience on planning coastal finfish aquaculture and that the exchange of experience amongst Mediterranean countries is essential for identifying priorities and key elements for the improvement of spatial planning of aquaculture activities with a more ecosystemic approach to development and management.
4. Mr Pablo Avila was nominated chairperson of the workshop. The agenda of the workshop was introduced and adopted. The agenda and the list of participants are attached to this report as Appendix 1 and Appendix 2 respectively.

5. Mr Daniel Acosta Camacho, Chief of the Servicio de Ordenacion de Recursos Pesqueros y Acuicolas, made a presentation of the marine aquaculture activities in Andalucia, giving particular attention to the situation and future perspectives of this activities in the Region. The presentation included a summary of the administrative and legal aspects of aquaculture licensing and authorisations procedures. The different tools available and developed by the Consejería de Agricultura y Pesca for site selection were also presented.

6. Mr Ioannis Karakassis, Coordinator of the WGSC, highlighted emerging issues related to the sustainable development of mariculture, emphasizing issues related to coastal zone management. He noted the problems related to the water use in food production, the role of mariculture to feed human population; the conflicts of aquaculture activities with the other users of the coastal zone, in particular with the tourism industry, and the main variables and factors affecting aquaculture activities. A series of questions about AZA were presented to facilitate the discussion.

7. The Coordinator of the WGSC highlighted the importance of the present workshop and the relevance to explore the AZA concepts, considering AZA as a management tool for aquaculture planning in the coastal zone. He recalled the main aspects of SHoCMed and the objectives of the workshop. He stressed that the workshop aims at producing criteria for exploring the AZA concept in relation to the potential conflict in the coastal areas among the different coastal users and stakeholders and on its possible effect on local aquaculture management, also in relation to monitoring activities. He presented the main achievements of the SHoCMed Project and other relevant initiatives and stressed the necessity of having a common definition of AZA.

8. Mr Alfonso Dorado, representative of the Andalusian Producers Association ASEMA, presented the vision of AZA from the point of view of the sector. Many aspects and considerations were coincident with problems detected by the CTAQUA's survey: lack of coordination among administrative bodies, legal insecurity, long procedures. He also stressed the need of an Integrated Coastal Zone Management and of a Declaration of Suitable Zones for Aquaculture supported by law.

9. Mr. Juan Manuel García de Lomas Mier, General Manager of the "Fundación Centro Tecnológico de Acuicultura de Andalucía" (CTAQUA), presented the objectives and the core activities conducted by the CTAQUA foundation, which include the promotion and technological support aquaculture. His vision on AZA is for a combined action among a multidisciplinary group of experts to define the most suitable environmental, technical, administrative and economical aspects for site selection and management. He gave emphasis to the economics aspects, as well as on the implementation of general rules and uniform requirements for all producers in order to avoid unfair competition.

REVIEW ON TECHNICAL AND LEGAL PROCEDURES FOR SITE SELECTION FOR AQUACULTURE APPLIED WITHIN THE DIFFERENT MEDITERRANEAN COASTAL AREAS.

10. Mr Pablo Avila, on behalf of CETMAR, made a presentation on the work carried out during the first year of SHoCMed on the legal aspects for aquaculture within the Mediterranean Sea with particular attention to licensing procedures. As a result of the survey made within 15 Mediterranean countries, high diversity of situations and unbalanced administrative procedures among the different countries were presented. A Gap analysis was carried out, to identify common problems and difficulties; several recommendations were provided in order to solve the heterogeneity of situations, such as: time of procedures, legal unbalance, environmental requirements, producers' rights and obligations, and conflicts with other users.

11. The participants stressed the relevance of the survey as an essential element for assessing legal constraints on aquaculture site leasing and licencing, that due to the dynamic nature of the legal issues such analysis can provide the key element for any further development of aquaculture, and the legal aspect should be monitored. For these purposes they considered that such survey should be updated and completed with additional information. These can also include the identification of possible causes of the different aspects related to heterogeneity of situations, time of procedures and number of administrative bodies involved in order to find solutions and fill the existing gaps with the information from the other countries.

REVIEW AND MAKE SYNTHESIS OF MEDITERRANEAN EXPERIENCE ON ALLOCATED ZONES FOR AQUACULTURE.

12. The chairperson introduced this point of the agenda and noted that one of the main objectives to be achieved in this workshop was to find a common definition for AZA.

13. Case studies on available data and information on AZA in Mediterranean countries was presented and discussed. Each country case study presentation focused on the description of the management, the planning activities, the organization and decision tools implemented, including the main aspects related to the rules and procedures for the AZA enforcement and application.

14. The case study in Andalusia (Spain) was presented by José Carlos Macías and Maria del Mar Lara from the Empresa Pública Desarrollo Agrario Pesquero. A review of the Andalusia experience (spatial tools and techniques) on AZA was presented, with special emphasis on the methodology and strategy applied to site selection. Tools such as geographic information systems (GIS) was presented and explained, highlighting their importance not only from the technological point of view but mainly as a decision-making tool that can facilitate participation among different administrations and stakeholders.

15. The case study in Morocco was presented by Mr. Ait Ali from INRH (Institut National Recherche Halieutique). The presentation was focused on the actual situation of Moroccan aquaculture, and the decrease of production in the last five years. The research effort invested by the administration and the identification of potential sites based on environmental surveys were also presented. The need of socio economic studies, environmental impact assessment and identification of AZA were identified as clear tasks toward the implementation of the aquaculture plan for 2020.

16. The case study in Croatia was presented by Ms Vlasta Franičević from the Croatian Ministry of Agriculture, Fishery and Rural Development. A brief review of the Croatian aquaculture production was presented. Physical plans, based on environmental data, legislative framework and criteria for concessions were presented. The involvement in the aquaculture planning of the Authority responsible for the physical planning of the coastal areas was stressed as the key element for the achievement of the AZA. The advantages of the implementation of AZA in the coastal zone were also pointed out especially for the avoidance of conflicts among stakeholders and different users.

17. The case study in Italy was presented by Mr. Alfonso Milano from the Regional Directorate of Fishery and Aquaculture from the Region of Sicily. The presentation focussed on site selection and site management and on the application of local regulations. Mr Milano presented the regional guidelines on AZA in which the different typologies of suitable area for aquaculture are defined and in which the exclusion criteria are also detailed. (e.g.marine habitat, bathymetry, distance from coast, other users, MPA, environmental issues).

18. The case study in Albania was presented by Mrs Mimoza Çobani from the Ministry of Environment, Forestry and Water Administration. The presentation focused on the history and general

overview of aquaculture in Albania. Aquaculture policy and strategy, national plans of development and administrative procedures were presented. Taking advantage of the positive movement of the government towards aquaculture, in Albania the application of AZA within the coastal areas will support the development of aquaculture, but an AZA definition and ICZM are required to help sustainable development of the sector.

19. The case study in Algeria was presented by Fadila Seridi, from the Ministère de la Pêche et des Ressources Halieutiques. A revision on the aquaculture sector in Algeria was made, with special emphasis on aquaculture planning for inland and marine installations. The zoning for aquaculture identified 450 suitable sites (112 in coastal areas) dislocated in five biogeographic units. There is a pretty well established distribution of space and aquaculture allocation, although there are financial problems and taxes on fry and feed imports. This aspect slows down the development of the aquaculture sector.

Information was also given to the participants on the aquaculture spatial planning activities in Turkey and in Tunisia.

SPATIAL TOOLS, TECHNIQUES AND INITIATIVES IN SUPPORT TO PLANNING AQUACULTURE ACTIVITIES IN COASTAL AREAS

20. Mr José Aguilar-Manjarrez, Aquaculture Officer Aquaculture Service (FIRA) of FAO, made a presentation focused on the potential of spatial planning tools (i.e. geographic information systems, remote sensing and mapping) for developing the allocation of aquaculture activities within the coastal zone and in support to the implementation of the ecosystem approach to aquaculture (EAA). Example applications from different countries, as well as field projects and on-going activities of the Aquaculture Service addressing site selection and zoning issues, were presented and discussed. Specific suggestions for the definition of Allocated Zones for Aquaculture (AZAs) from an EAA perspective were also provided.

21. Ms Emma Bello from AQUATT presented the projects COEXISTS and AQUAMED, related to the management of coastal aquaculture and to research on aquaculture activities, and with which cooperation and synergy could be established with the CAQ WGSC – SHoCMed. The project COEXIST: “Interaction in coastal waters: A roadmap to sustainable integration of aquaculture and fisheries”, with more than 13 partners, aims at the characterization of relevant European coastal marine ecosystems, their current utilisation and spatial management, as well as at the evaluation of spatial management tools for combining coastal fisheries, aquaculture and other uses, both now and in the future. The project AQUAMED “The future of research on aquaculture in the Mediterranean region” will make a valuable contribution to the Mediterranean Partnership enabling southern and eastern Mediterranean countries to collaborate with their EU counterparts. This cooperation will facilitate capacity building to enhance the harmonisation of aquaculture and research policies in the Mediterranean basin.

DISCUSSION ON AND SYNTHESIS OF THE MAIN ASPECTS RELATED TO ALLOCATED ZONES FOR AQUACULTURE

22. In the discussion that followed, the participants confirmed the common necessity to define proper zoning and planning fundamentals to build the base for sustainable finfish marine aquaculture in the Mediterranean, to be related to the concept of an ecosystem approach to aquaculture. The necessity for a common understanding and harmonised application of Allocated Zones for Aquaculture was considered as priority in the GFCM area.

23. Despite the rapid expansion of finfish marine aquaculture in the Mediterranean, one of the main constraints of any possible further sustainable development is the lack of coastal space formally devoted to aquaculture, identified by a planning and participative process and regulated by norms and

procedures including management and monitoring. Several aspects, such as legal framework, administrative procedures, availability and collection of environmental information, planning and implementation, were pointed out as essential for a correct implementation and in support of an Allocation Zone for Aquaculture. Participants agreed on the collection of environmental information supported by scientific knowledge that would serve as a base for Physical Planning, and of reference points to comply with Environmental Quality Standards (EQS). Social and economical information were also considered important for the declaration of AZA.

24. On the basis of the few experiences on AZA in Mediterranean, the participants agreed that for aquaculture development the zoning plan is not sufficient if it is not accompanied by appropriate administrative procedures. In spite of the different situations among the countries, many aspects were found to be common, such as the necessity of definition accompanied by a Glossary of terms, regarding AZA. Data collection and availability of environmental information is a key aspect to determine AZA. From legal and administrative point of views, a heterogeneity is found all throughout the Mediterranean.

25. Discussion was held among participants highlighting the different situations concerning AZA within the Mediterranean context. Definition and implementation of AZA from an ecosystem approach were considered the main issues. The interaction with other users of the coastal zone, especially tourism, is a major issue for the importance of this industry all along the Mediterranean coast. The pressure from the tourist sector and the environmental requirements are priorities identified in most Mediterranean countries.

26. The experience of those countries in which AZA is already established is positive, especially in the sense of “a space in which aquaculture is recognized use by other stakeholders”. AZA facilitates a better Integrated Coastal Zone Management.

27. The workshop agreed that the declaration of AZA should be done by law on its definition and management. Integrated Coastal Zone Management and the inclusion of aquaculture on Physical Plans through AZA are two main issues to be pushed forward on the agenda of the different Mediterranean countries.

28. The experts considered that in the proposal of AZA a participatory approach should be implemented, supported by environmental, social and economical information collected by administration in collaboration with scientists, and all stakeholders shearing the maritime space. Discussion focused also on who would be the responsible/s for the preparation and declaration of AZA and participants agreed that all the processes should be led by the regional and local authorities involved in the planning process.

29. When discussing about the terms to be used and priorities, participants considered the work carried out so far by SHoCMed is fundamental and confirmed their appreciation for the IUCN’s Guides for the Sustainable Development of Mediterranean Aquaculture “Aquaculture Site Selection and Site Management” prepared by IUCN and FEAP and supported by the Spanish Government. The technical documents produced by WGSC-SHoCMed, the FAO guidelines on EAA (FAO. Aquaculture development. 4 Ecosystem approach to aquaculture. FAO Technical Guidelines for Responsible Fisheries. No. 5, Suppl. 4. Rome, FAO. 53p.) and the guidelines by the IUCN, including the terms applied, could be used as supporting technical grounds in facilitating the process of harmonisation of legal and monitoring aspects. It was recalled that valuable contents of these documents will facilitate the work of the WGSC and SHoCMed programme in making synthesis and identifying priorities and criteria for enhancing the integration of aquaculture in Coastal Zone Management.

CONCLUSIONS AND RECOMMENDATIONS

30. A brainstorming discussion was held on the main topics presented and discussed during the workshop as well as on the main achievements of the first year of activities of the WGSC in the framework of SHoCMed. The discussion followed a SWOT analysis approach.

- Despite the continuous and quick growth of the aquaculture sector and despite aquaculture activities are considered a priority for the development of the primary sector for many Mediterranean countries, the lack of adequate instruments (legal, administrative and procedural) can not facilitate its further sustainable development.
- Aquaculture activities physically imply the use of coastal areas and any kind of further development should require a local spatial planning with specific areas physically devoted to aquaculture.
- Space availability, space allocation and license procedures for farms allocation, including zoning, still remain the main constraints and issues to be addressed for any further sustainable development of Mediterranean aquaculture.
- *The Allocation Zones for Aquaculture (AZA)*
 - is considered a good instrument for decision makers, administration and investors: it induces self-regulation and improves inter-administrative coordination,
 - is a tool to prevent conflicts among different coastal users and might increase competitiveness, sharing costs and services, and assures investments.

furthermore:

- the information needed for the definition of AZAs is available to all stakeholders
- the AZA as a concept and implementation should be considered as a starting point for implementing the sustainable finfish marine aquaculture and the integration of aquaculture in the ICZM and in meantime is the last step of a site selection process,
- The lack of AZA has certainly slowed down or stopped aquaculture development in some countries.

Spatial planning and allocation zone for aquaculture based on the coastal zone management principles made by relevant authorities and included in the legislation should be aimed at the improvement of the space availability for coastal aquaculture development. In the preparation of AZA relevant authorities, at different level, should be involved in order to facilitate the process of licensing procedures.

Furthermore some specific recommendations were made to the CAQ taking notes that this might lead the GFCM to adopt appropriate measures to tackle this issue.

31. Allocation Zones for Aquaculture for planning finfish marine aquaculture activities and their establishment within a local and national plan for aquaculture should be drawn by the Mediterranean and Black Sea countries to ensure that aquaculture development is sustainable. The AZA is the result of a zoning process of physical planning in which specific areas are assigned to aquaculture activities. The AZA should serve as a basis for the integration of aquaculture activities into the coastal zone management and to meet sustainable development objectives within ecosystem perspectives. The establishment of AZA as planning tool would facilitate the increase and the promotion of aquaculture activities within the coastal community. It would also serve as a base to avoid any negative interaction or competition among the different coastal users. An AZA should be accompanied by an appropriate Environmental Monitoring Programme and the sustainability of an AZA should be considered within an EAA.

The implementation of AZA for the development and management of aquaculture activities should be considered with priority among the Mediterranean and Black Sea countries and should be ensured through a normative approach. In this context each country should ensure its implementation defined according the following guidelines:

- **AZA (definition):** For marine coastal Allocation Zone for Aquaculture (AZA) is intended any spatial planning system or zoning, carried out at local or national level; an AZA is also:
 - a marine area where the development of aquaculture is prior to other uses.
 - an area dedicated to aquaculture, recognized by physical or spatial planning authorities, that would be considered as a priority for local aquaculture development.
- **AZA (aims):** An AZA is implemented to facilitate and develop aquaculture activities into the coastal zone including the licensing process and procedures. AZA is also a planning system aimed at integrating aquaculture activities into coastal zone areas with the other users and to avoid conflicts on the use of these areas. It is considered as a means to improve sustainable marine aquaculture in the Mediterranean. AZA is then essential to facilitate the coordination of competences among the different public agencies involved in aquaculture licensing and leasing procedures and monitoring.
- **AZA (who will prepare them).** The process for the preparation of AZA should follow a participatory approach and should be transparent. The preparation of the AZA should be coordinated by the authority responsible for local geographical planning and/or for the marine aquaculture planning. The AZA should be prepared in cooperation with the different authorities involved in the aquaculture licensing and leasing procedures and monitoring..
- **AZA (what it should contain).** The AZA should include zones fiscally reserved for aquaculture activities and facilities. An AZA should be part of the physical plan in which the criteria for its preparation are described in terms of exclusion and not exclusion. The AZA should define suitability of zones for aquaculture activities in which at least 3 categories area described (areas suitable for aquaculture activities, areas unsuitable for aquaculture activities, areas for aquaculture activities with particular regulation and/or restriction).
- An **AZA** should be considered within an EAA (Ecosystem Approach for Aquaculture) perspective, promoting sustainable development, equity, and resilience of interlinked social and ecological systems. It should include Carrying Capacity definition supported by technical studies.
- AZA should be regulated by norms, and be included in national or regional legislation.
- Monitoring of AZA should be mandatory. Monitoring plans should be flexible and adaptable taking into account scale (**time and space**) approach. Monitoring results should be public.
- The identification of AZA should be based on administrative, social, economical and environmental information. This information should be collected and treated under an administrative supervision and supported by technology. GIS, remote sensing, and data banks are the most suitable tools to store and manage information. In this sense, the reliability of the information is assured and it facilitates the dialogue among stakeholders. Tools used for AZA are useful not only for stakeholders directly linked to aquaculture, but for all users of the Maritime Public Domain.

OTHER MATTERS

32. Within WGSC-SHoCMed, the workshop considered relevant to continue the review of the existing experiences in the Mediterranean on Allocated Zones for Aquaculture (AZA), with emphasis on all the aspects related to coastal zone management and guidelines (legal aspects; methodologies; and procedures). The review should also consider the update of the information on legal aspects on site selection and carrying capacity collected by SHoCMed during the first year of activities.

Appendix I**AGENDA**

1. Opening and arrangement of the meeting
2. Review on technical and legal procedures for site selection for aquaculture applied within the different Mediterranean coastal areas.
3. Review and make synthesis of Mediterranean experience on Allocated Zones for Aquaculture.
4. Spatial tools and techniques in support for planning aquaculture activities in coastal areas.
5. Discuss and make synthesis on the main aspects related to Allocated Zones for Aquaculture.
6. Other matters
7. Conclusion and Recommendations

Appendix II

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