Regional Aquaculture Conference
“Blue Growth in the Mediterranean and the Black Sea: developing sustainable aquaculture for food security”
Bari, Italy 11 December 2014

Draft conclusions

Aquaculture is a key component of the Blue Growth Initiative of the Food and Agriculture Organization (FAO) of the United Nations, due to its potential for sustainable socioeconomic growth, food security and employment.


The 31st Session of the Sub-Committee on Aquaculture of the FAO Committee on Fisheries (COFI) held in Saint Petersburg, Russian Federation, in 2013, outlined priorities including the need for bilateral, multilateral and regional cooperation to support the global advancement of aquaculture and the implementation of an ecosystem approach to aquaculture.

The preparation activities carried out at the regional level throughout 2012–2013, the outcomes of projects, regional expert consultations and meetings and the Aquaculture Reflection Day (GFCM-ARD) organized by the General Fisheries Commission for the

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1 Detailed final conclusions will be included in the consolidated report of the conference, to be submitted to the next session of the GFCM Committee on Aquaculture (February 2015).
Mediterranean (GFCM) in Tunis, Tunisia, in 2013 laid the foundations for the set-up of the GFCM Aquaculture Multi-stakeholder Platform (AMShP). It was adopted at the thirty-eighth session of the GFCM (May 2014, FAO HQ) as an instrument to enhance dialogue and facilitate visioning, priority-setting and consultation process in the Mediterranean and Black Sea region.

Within this framework, the Italian Presidency of the Council of the European Union (EU), together with the GFCM of the FAO and the European Commission organized in Bari, Italy, on 11 December 2014, a Regional Aquaculture Conference “Blue Growth in the Mediterranean and the Black Sea: Developing Sustainable Aquaculture for Food Security” to reaffirm the importance of aquaculture to achieve food security and sustainable development. The Conference participants discussed strategies for sustainable aquaculture development at the regional level in the light of emerging economic, social and environmental issues and advances in aquaculture innovation.

GENERAL CONCLUSIONS

The Conference recognized that:

- aquaculture offers great potential to provide sustainable sources of fish and fishery products, thus playing a major role for food security, employment and economic development at the global level, and hence therefore constitutes a strategic sector for the future, in particular under the Blue Growth perspective;

- the unique aquatic ecosystems of the Mediterranean and the Black Sea are confined within a semi-enclosed area where a high variety of human activities occur, driven by market demand;

- the complexity and specificities of aquaculture across the Mediterranean and the Black Sea, which consists of various culture systems at varying stages of development, requires different strategies for growth;

- a high level of integration of aquaculture with the environment should be pursued to the greatest possible extent since healthy environments are necessary for this activity;

- the complex and overlapping regulatory frameworks for the allocation of zones for aquaculture and the involvement of different national authorities for licensing purposes, often result in interactions and conflicts over uses with other coastal activities;

- an effective market data collection, including consumption patterns and distribution channels, is essential in order to support a market-oriented approach in production and marketing planning and to target aquaculture products diversification and consumer preferences;

- the relevance of sustainable interactions between aquaculture and capture fisheries, particularly referring to small-scale fisheries and coastal communities, should be properly taken into account;
an effective and timely data collection and reporting statistics on aquaculture performed by competent national authorities is pivotal to increase institutional capacity; processes for data sharing and information exchange need to be harmonised to support aquaculture development at the regional level;

- a sustainable industry means ensuring that aquaculture is not only economically and environmentally sustainable but also that farms are operated in a socially and culturally responsible manner;

- decision-making processes must engage a broad array of stakeholders through a participatory process able to facilitate the identification of the different issues raised and of possible solutions at national, regional and interregional level;

- since aquaculture farmers are the key driving force in the aquaculture development, their participation in all relevant fora should be promoted;

- the involvement of the private sector is a key driving force for the development of aquaculture and particular attention should be paid to support its participation also through public-private partnerships initiatives;

- aquaculture is a bio-economical activity based on knowledge and thus research and technology development (RTD) together with research capacity-building and an effective knowledge transfer are essential to progress towards a thriving aquaculture industry;

- national and trans-national cooperation at every level is a powerful tool and should be further fostered to steer a sound aquaculture growth in the Mediterranean and Black sea region;

- in light of the need to drive forward the process of aquaculture development, the FAO as well as other relevant intergovernmental organizations at the regional level should provide for general agreed policy directions and technical guidelines as well as ensure enhanced transparency and participation.

### SPECIFIC CONCLUSIONS RELATED TO THE FOUR EXPERT PANELS

The Regional Aquaculture Conference participants took note of the main conclusions and recommendations of the expert discussion panels.

**Panel 1**

**Enabling good governance in aquaculture**

**Main conclusions**

- Enabling good governance in aquaculture is a fundamental issue in achieving sustainable aquaculture development. Good governance principles in aquaculture include participation, accountability, effectiveness, rule of law, transparency and coherence.
In many countries, management, planning and licensing fall within the competence of numerous administrations involved at both the national and the local level. Coordination to streamline authorization processes (license, permits, concession or lease, etc.) is essential to facilitate aquaculture development.

There are significant regulatory constraints facing the aquaculture sector. Weaknesses in spatial planning for aquaculture in maritime or inland zones are among the major constraints for aquaculture development in the region. The inclusion of planning and site selection processes according to Allocated Zones for Aquaculture principles (GFCM) is crucial for aquaculture growth.

The adoption of a participatory approach and regional cooperation frameworks are crucial in the development of the regional aquaculture sector. Such an approach complies with good governance principles, facilitates stakeholder participation, reduces possible conflicts in coastal area management and promotes a cost-effective approach to site selection.

Soft law instruments are recognised as useful tools to strengthen aquaculture governance in the region.

Good labour conditions are recognized as a priority in aquaculture to guarantee decent employment of aquaculture farm workers in the whole region.

Main recommendations

In light of the discussions held in Panel 1, the participants made the following recommendations:

- The regional aquaculture industry should be developed, based on considerations of sustainability, with a view to reconciling issues of economic, environmental and social concerns.

- Conducive legal and administrative frameworks for aquaculture should facilitate development and include: principles, property rights over production sites, licensing processes, guarantees for concessions or permits, etc.

- Better coordination should be ensured among competent administrations to develop effective and efficient authorization processes. In this respect, removing existing legal and bureaucratic obstacles while increasing the cost-effectiveness of aquaculture operations are necessary.

- Good governance should include soft law tools such as self-regulation and general user-friendly guidelines based on common criteria for site selection, environmental management or common requirements for AZA.

- A participatory approach is recommended to ensure representation and consultation in the decision-making process. This approach should include, among others, a clear access to information, discussion fora and appropriate channels to foster participation.

- Increased coordination amongst countries in the region and the direct involvement of all relevant actors, including private sector and civil society organizations, through institutional and technical capacity-development are also essential.
- The governance framework for the management and development of aquaculture should ensure that environmental impacts are minimized by incorporating procedures to undertake environmental impact assessment prior to the establishment of aquaculture facilities and guarantee the monitoring of effluents, the use of drugs and chemicals and other related activities that might adversely affect the surrounding land or water.

- Based on the ILO Declaration on Fundamental Principles and Rights at Work and related guidance, coherence should be facilitated in policies for sustainable aquaculture development, with particular reference to the implementation and enforcement of internationally recognized labour standards.

- Distinct and more simplified authorization and licensing procedures should be considered for small-scale and medium enterprises. The creation of one-stop-shop and fast-tracking procedures could represent a valid solution in this respect. The GFCM was invited to lead a wide and consultative process aiming at the elaboration of regional guidelines for the simplification of administrative procedures.

### Panel 2

#### A healthy environment, a stronger aquaculture industry

**Main conclusions**

- The unique aquatic ecosystems of the Mediterranean and the Black Sea are confined within a semi-enclosed area where a high variety of human activities occurs. The interactions between aquaculture and the environment are complex with positive aspects as well negative impacts.

- Aquaculture environment interactions occurring at the local level bear consequences at the local, national, regional and the global level due to the physical continuity of aquatic ecosystems, and this calls for a regional approach in addressing and monitoring aquaculture effects on biodiversity and ecosystems.

- Sustainable aquaculture should duly consider the challenges of climate change and ocean conditions’ variation, such as ocean acidification, which will increasingly impact the sector.

- Diseases can cause heavy economic losses in farmed fish, molluscs and crustaceans and may affect growth, competitiveness and sustainability of aquaculture sector.

- Effective health management measures to prevent and control diseases at the regional level are based on good knowledge of epidemiology.

**Main recommendations**

In light of the discussions held within Panel 2, the following recommendations emerged:

- National institutions should be involved and strengthened to ensure they play a more active role in addressing aquaculture aspects related to the environment, climate change, responsible fish feed production and management, human and aquatic animal health, biosecurity, labour and industry.

- Harmonized environmental regulatory and monitoring frameworks including and environmental impact assessment (EIA) and environmental monitoring programme
(EMP) should be implemented together with specific indicators within an ecosystem-based management approach to aquaculture.

- Aquaculture Better Management Practices (BMP) should be developed, widely disseminated and implemented at local and regional level.
- The use of risk analysis in aquaculture including risk assessment, management and communication to assess aquaculture-environment interactions and the vulnerability of ecosystems and their ecological services provided should be fostered and implemented by the public and private sector with equally shared responsibility.
- Carrying capacity assessment of potential sites should be carried out systematically, taking also into consideration cumulative effects from all activities.
- A particular focus on the interactions between capture fisheries and aquaculture is necessary at all level, including natural resources, fisheries stocks and socio-economic aspects.
- A harmonized and common approach to strengthen the surveillance system should be implemented at the regional level, taking into account the World Organisation for Animal Health (OIE) standards.
- Record keeping and sharing information through the creation of a database system to monitor the health status of farmed stock may help farmers to prevent and control diseases.
- Application of effective biosecurity measures at farm level should be based on education, extension and continuous training of aquaculture operators.

Panel 3
Boosting markets for aquaculture

Main conclusions

Aquaculture in the Mediterranean and the Black sea is contributing to food security, employment and trade in the region. To further enhance its contribution in these domains, it should be market-driven, consumer-responsive and it needs to address challenges such as: increasing consumer awareness for quality, seafood safety, freshness, traceability, animal welfare and sustainability.

Within this context, fundamental elements of aquaculture market-marketing, data-information collection and dissemination schemes, image building, promoting local consumption, value-chain, use of information and communication technologies (ICT), the role of retailing sector and aquaculture farmers organizations were among the issues which have been addressed and discussed within Panel 3.

In particular, the following points have been underlined:

- A shift from production-oriented growth to market-oriented and consumer responsive approach can contribute to job creation, seafood trade and aquaculture development in the Mediterranean and the Black Sea.
- Common standards (e.g. “code of conduct/good practices”) or harmonized standards at the Mediterranean level could be beneficial to promote responsible aquaculture practices in the region.
Aquaculture farmer organizations play a crucial role in sustainable aquaculture development in the region.

The image of Mediterranean and the Black Sea aquaculture could be further valorised and strengthened.

Shellfish farming is an integral part of aquaculture in the region and bears great socio-economic benefits and environmental services.

Promoting domestic consumption can boost the markets for Mediterranean and Black Sea aquaculture products.

**Main recommendations**

In light of the discussions held in Panel 3, the participants made the following recommendations:

- The collection and dissemination of market/trade data along with qualitative information on consumers’ preferences and behaviours should be ensured in order to facilitate a market-oriented aquaculture development in the region.

- Responsible aquaculture practices (e.g. code of conduct or practices) based on common regional minimum standards should be promoted, among others, to respond to societal consumer concerns and further image strengthening.

- The role of aquaculture farmer organizations should be enhanced to facilitate collective and proactive actions through harmonized legislation and stronger political will.

- The domestic consumption of aquaculture products should be promoted by public administrations and by the industry through effective and coordinated communication campaigns highlighting non-price attributes (e.g. freshness) of aquaculture products and the Mediterranean diet.

- The market for shellfish products should be boosted through the promotion of the nutritional aspects and added value to increase profit margins and ensure the economic sustainability of the industry.

- The GFCM was invited to gather success stories aiming at improving the image and acceptability of aquaculture products and to set up a mechanism to monitor market conditions in real time while strengthening regional databases on aquaculture.

**Panel 4**

**Advancing aquaculture innovations**

**Main conclusions**

- Research and technologies development (RTD) are fundamental for the sustainable development of aquaculture. Innovation is a critical aspect for competitiveness although it can be multifaceted according to the different species farmed, to the level of maturity and the structure of the sector in each country.

- Aquaculture production (e.g. fish growth and mortality, feed efficiency, etc.) is strongly linked to the technologies in place and to their performance.
Investments in aquaculture research and development to foster technology innovation and the improvement of production systems in the region are essential.

Although innovation challenges are a crosscutting feature of the whole industry in the region, there is a need to identify more precisely the main bottlenecks in Mediterranean and Black Sea aquaculture in order to improve its efficiency and unlock its potential. In this respect, the geographical scope of each bottleneck should be recognized (i.e. individual farming company level, national level or Mediterranean level) so that appropriate solutions can be identified.

Taking into account the actual needs of the industry, public administrations and stakeholders’ cooperation are essential for the prioritization of RTD challenges.

One of the main challenges for RTD in the region is cooperation exchange between research and the industry. Scientists, researchers and academics generally work with different timings and professional incentives compared to those that prevail in the industry. Furthermore, there are different expectations with respect to RTD outputs and the objectives of applied research sometime do not match with producers’ needs and expectations.

At the regional level, North-South cooperation in research programmes is based on acceptance of problems and issues that can be resolved by better aligning sectoral needs with research infrastructure, competences and research capacity building.

National and mirror platforms of aquaculture stakeholders are useful instruments to facilitate the sharing of scientific data, information and know-how.

Recommendations

Specific RTD topics for Mediterranean and Black Sea aquaculture should be refined and linked to adequate geographical scope in order to ensure effective collaboration between stakeholders and common research strategies.

Appropriate Mediterranean and Black Sea-wide RTD schemes should be established and North-South collaboration should be strengthened. In this respect, the GFCM Aquaculture Multi-Stakeholder Platform (AMShP) can be an appropriate framework to coordinate efforts and offer room for networking and strengthening the dialogue between researchers, the industry and policy-makers. The role of platforms and structures at all levels is essential to identify needs, solve challenges and transfer knowledge.

The role of farmers associations across the region should be strengthened and synergies should be promoted between research programmes at the national level. In this respect, GFCM should play a facilitating role to strengthen this approach and leave space for stakeholders. For example, this could take the form of public/private partnerships and groups of economic interest based on clearly defined terms of reference.

The use of public funds for RTD requires an effective process to prioritize research needs and the social accountability of their results. RTD activities should also be encouraged by national authorities at the farm level, for example through incentives to companies able to certify in-house RTD expenses and by facilitating collaboration between scientists and farmers. This latter approach could be taken into consideration in particular when research innovations are planned in support of a green economy.
• The dissemination of research results is required for an optimal application of results. A common strategy on specific dissemination programmes through cooperation and networking in the Mediterranean and Black Sea region should be set up.

• The GFCM was invited to coordinate efforts towards a regional programme for capacity-building and training for small-scale aquaculture farmers, aquaculture workers, including the launching of pilot studies on relevant RTD issues (e.g. feed, cost-efficiency, valorization, etc.).