

A PRELIMINARY SURVEY ON AQUACULTURE FARMERS' ORGANIZATIONS IN THE MEDITERRANEAN AND BLACK SEA

Ferit RAD^{1*}, Fabio MASSA², Aina AFANASJEVA³, Federico DE ROSSI²,
Davide FEZZARDI²

¹University of Mersin Faculty of Fisheries, Department of Aquaculture, Mersin, Turkey

²FAO-General Fisheries Commission for the Mediterranean (GFCM), Rome, Italy

³International Organization for the Development of Fisheries in Eastern and Central Europe (Eurofish), Copenhagen, Denmark

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*Corresponding author: Tel.: +903243412815/2109; Email: Ferit.rad@gmail.com and frad@mersin.edu.tr

ABSTRACT

As in other parts of the world, aquaculture plays an important role in terms of contribution to food security, employment for coastal communities and economic development in the Mediterranean and Black Sea countries. Despite its growth, marine/brackish aquaculture in the Mediterranean and Black Sea areas has been facing several constraints with regard to markets and marketing in recent decades. The crucial role of aquaculture farmers' organizations in sustainable development of aquaculture in the Mediterranean and Black Sea is well acknowledged at GFCM level. This preliminary online regional survey was therefore designed to understand the current status and structure of aquaculture farmers' organizations in GFCM member countries and to shed light on organizational and managerial constraints and challenges which hinder their effectiveness. Most of the farmer organizations tended to be multipurpose in delivering advocacy, technical and economic services to their members. However, most of the aquaculture farmers' organizations from the surveyed area were only moderately effective in delivering advocacy and technical services and even less effective in providing market related and marketing services e.g. trade and intermediation, collection and dissemination of market data /information, capacity of processing/value addition opportunities and collection/dissemination of economic, first sales and production forecast information.

Key words: Aquaculture farmers' organizations, the Mediterranean and Black Sea

AKDENİZ VE KARADENİZ ÜLKELERİNDEKİ SU ÜRÜNLERİ YETİŞTİRİCİ ÖRGÜTLERİNE YÖNELİK ÖN-ARAŞTIRMA

ÖZET

Dünyanın birçok bölgesinde olduğu gibi Akdeniz ve Karadeniz ülkelerinde de su ürünleri yetiştiriciliği gıda güvencesi, kırsal alanlarda istihdam yaratması ve ekonomik büyüme açısından büyük bir role sahiptir. Son yıllarda gelişmesine rağmen denizel/acısu kültür balıkçılığı Akdeniz ve Karadeniz bölgelerinde pazar ve pazarlama açısından birçok sorun ile karşı karşıyadır. Su ürünleri yetiştirici (üretici) örgütlerinin Akdeniz ve Karadeniz bölgelerinde sürdürülebilir kültür balıkçılığı bağlamında oynayabileceği rol GFCM tarafından kabul görmekte ve önemsenmektedir. Bu ön çalışmada GFCM'e üye ülkelerdeki su ürünleri yetiştirici örgütlerinin genel durumu ve yapılarının araştırılması amaçlanmış ve bu örgütlerin etkinliğini aksatan örgütsel ve yönetsel sorunlara ışık tutulmasına çalışılmıştır. Bu bölgelerdeki su ürünleri yetiştirici örgütlerinin büyük çoğunluğu çok amaçlı olup üyelerinin hak ve taleplerini (seslerini) ilgililere duyurmanın yanı sıra teknik ve ekonomik alanda da üyelerine hizmet sunmaktadırlar. Buna karşın, çalışma kapsamında ele alınan örgütlerin çoğu üyelerin seslerini ilgililere duyurmada ve teknik hizmetlerde kısmen etkili iken, ticaret, aracılık, ürüne katma-değer yaratma kapasitesinin geliştirilmesi ile pazara, ekonomiye, satış ve üretim tahminlerine ilişkin veri toplama ve yayımı gibi pazarlamaya yönelik hizmetlerde daha az etkin oldukları saptanmıştır.

Anahtar kelimeler: Su ürünleri yetiştirici örgütleri, Akdeniz ve Karadeniz

INTRODUCTION

Markets and marketing of seafood either wild or farmed are becoming increasingly global, complex and competitive. Globalization of seafood trade and tough competition, restructuring in distribution channels, increasing consolidation and market power in the retail sector, tighter standards for handling and food safety by retailers, increasing consumer demand for quality, convenience and traceability are some of the major features of today's markets for aquatic products. Developing societal awareness regarding the issue of sustainability, increasing concerns of consumers about sustainability of seafood production systems and responsible practices with regards to environment, food safety and animal welfare are also at the forefront of aquaculture management and development policies. It is also widely acknowledged that increasing demand for food safety standards, traceability, certification and other non-tariff requirements is posing extra costs for producers. Large-scale aquaculture enterprises with sufficient financial capabilities are able to meet extra costs associated with market requirements. On the other hand small-scale enterprises with limited financial and technical capabilities are facing enormous constraints in accessing modern supply chains and dealing with the changing market environment (Kassam et al. 2011, Subasinghe et al. 2012). Collective arrangements and actions are regarded as an opportunity and effective tool to help aqua-farmers to improve their capabilities and access to modern supply chain. Especially for small-scale enterprises, collective actions in the form of "Aquaculture Farmers' Organizations (AFOs)" can facilitate group certification schemes, creation of efficiencies, bulk purchasing of inputs and services, collective marketing and processing, dialogue and communication among farmers, extension training and dissemination of technical and market information (Kassam et al. 2011, Subasinghe et al. 2012). Farmers' organizations can take many forms and differ with regard to their legal status, membership base, functions/services provided (advocacy, economic and/or technical) and geographical scope/level of operations (local, national or regional). They can include a wide range of organizations and structures

e.g. informal farmer groups, associations, cooperatives, federations, unions and chambers. Informal organizations can be formed by a group of farmers to exchange experience or market information and provide technical assistance to each other. Formal farmers' organizations including cooperatives, associations and societies are distinguished by a formal constitution and legislation that applies (Bijman and Ton 2008, Mangus and Steenhuijsen Pijters 2010, Kassam et al. 2011). As in other parts of the world, aquaculture plays an important role in terms of contribution to food security, employment for coastal communities and economic development in the Mediterranean and Black Sea countries. Unlike capture fisheries production which is stagnant since early 1990s, marine and brackish water aquaculture grew steadily during the last decades within the General Fisheries Commission for the Mediterranean (GFCM)¹ convention area. According to GFCM Information System for the Promotion of Aquaculture in the Mediterranean (SIPAM) statistics for 2010, the total marine and brackish water aquaculture production in the GFCM member countries (excluding aquatic plants, freshwater aquaculture and marine and brackish aquaculture from Atlantic area) increased from about 540 000 tonnes in 1990 to around 1 400 000 tonnes in 2010, of which more than 50% coming from brackish water aquaculture in Egypt. When production of freshwater aquaculture and production from the Atlantic area are included, the volume and value of production reach 1 961 700 tonnes and USD 5.5 billion respectively. Positive growth in aquaculture in the GFCM region is mainly due to development of marine and brackish water aquaculture of namely European seabass, gilthead seabream and mullet. The production of bivalve molluscs is also of quite importance for the GFCM member countries. Mussels dominate by far the production, which accounted for about 414 500 tonnes in 2010 (GFCM 2013). Despite its growth, marine/brackish aquaculture in the Mediterranean and Black Sea areas has been facing several constraints with regard to markets and marketing in recent decades. According to outputs of GFCM-MedAquaMarket (Development of a Strategy for Marketing and Promotion of Mediterranean

¹ The GFCM is the FAO regional fisheries management organization (RFMO) which promotes the development, conservation, rational management and best utilization of living marine resources, as well as the sustainable development of aquaculture in the Mediterranean, Black Sea and connecting waters.

Aquaculture) project; lack of cooperation amongst producers for promotional activities, low level of collective actions, unregulated supply and demand patterns, inefficient mechanism to control product supply and price reductions, lack of market data/information and efficient marketing, small number of certified products, lack of communication between stakeholders, industry and public institutions, lack of management and production planning in small-scale enterprises, decreasing negotiation power in the market and negative perceptions regarding aquaculture (image) are some of the constraints which the aquaculture industry has to resolve (Barazi-Yeroulanos 2010). The facilitating role of farmers' organization in meeting some of these challenges has been one of the core elements of proposed strategy for marketing and promotion of Mediterranean aquaculture by MedAquaMarket project. The strategic role of farmers' organization in:

- Collection and dissemination of market data and information to match supply to market demand both in terms of quantity and qualitative attributes and thus stabilizing market,
- Facilitating well-structured advertising, continuous promotion, marketing and public service communication,
- Promoting the image of Mediterranean aquaculture by developing Code of Practices/Best Management Practices for responsible aquaculture practices and further development of collective quality norms and certification schemes,
- Facilitating "pool-sales" and strengthening the negotiation power of small and medium-scale producers, and
- Providing technical assistance/training for small and medium-scale enterprises to increase their competitiveness and risk management capabilities, have been underlined (Barazi-Yeroulanos 2010). It should be pointed out that with the exception of Greece, Spain and Turkey where the evident trend is the dominance of large-scale capital intensive enterprises, in most of GFCM member countries marine aquaculture sector is represented by small to medium-scale enterprises (Barazi-Yeroulanos 2010). Promoting managerial and technical capabilities of these enterprises to deal with changing market environment through empowering aquaculture farmers' organizations is therefore a logical and rational strategy

for promoting sustainable development of aquaculture in the Mediterranean and Black Sea. A regional survey was therefore designed to understand the current status and structure of aquaculture farmers' organizations in GFCM member countries and to shed light on organizational and managerial constraints and challenges which hinder their effectiveness. An online survey was carried out in collaboration with the International Organization for the Development of Fisheries in Eastern and Central Europe (Eurofish) to collect quantitative and qualitative information needed using the SIPAM portal.

MATERIALS AND METHODS

Aquaculture farmers' organizations in GFCM member countries (the Mediterranean and Black Sea) were the target groups of this survey. For purpose of this survey: "Any formal membership organization formed by aquaculture farmers/producers to promote their interests through advocacy, economic and/or technical services" was regarded as "Aquaculture Farmers' Organization (AFOs)". The AFOs were directly contacted, and in many cases the GFCM national focal points for the SIPAM network were requested to disseminate the call for the survey at national level and to invite aquaculture farmers' organizations in their respective country to take part in the survey. The online-questionnaire was active in the SIPAM portal from November 2012 to May 2013 and included inter alia sections on; 1) objectives and functions of the organizations, 2) membership and revenues, 3) targeted farmer group (s), 4) effectiveness of organizations in providing services, 5) use of indicators for monitoring the development of the sector and 6) organizational and managerial constraints and challenges faced by organizations. Data collected from each organization was converted to Excel worksheets for statistical evaluations. With the aim of measuring the effectiveness of farmers' organizations (Section 4), respondents were asked to evaluate their performance for each item for a set of activities and services most commonly provided by farmers' organizations using a 4-point ordinal rating scale (0=not applicable, 1=not effective, 2=moderately effective and 3=highly effective). The mode value was used to measure the central tendency of responds (Boone and Boone 2012).

RESULTS

Descriptive data

Twelve organizations from eight different Mediterranean and Black Sea countries took part in the online survey. Breakdown of these organizations including their legal status and geographic coverage are given in Table 1. As far as legal status is concerned, "association" was the most common organization type (8 entities). Aquaculture farmers were also organized as cooperative, federation or union. In terms of geographic coverage, most organizations (9) were organized at national level and only 3 were active at local level. Objectives and functions of organizations When organizations are classified according to their objectives and functions (e.g. advocacy, technical or economic services), 75% of respondent organizations resulted to be multifunctional/multipurpose, meaning that they were established with the objective of providing advocacy, technical and economic services to their members. Only one organization (8%) was solely focusing on a specific objective i.e. advocacy (Figure 1).

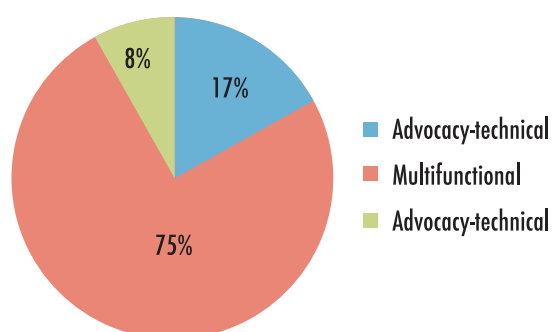


Figure 1: Breakdown of organizations according to their objectives and functions.

Source of revenues

Reliable and sustainable sources of revenues is a crucial issue for sustainability and well-functioning of farmers' organizations. Figure 2 summarizes the sources of revenues for aquaculture farmers' organizations taking part in the survey: 33% of organizations relied only on membership fees as a source of revenue. The remaining 67% relied on membership fees plus services provided by the organization and/or public funding.

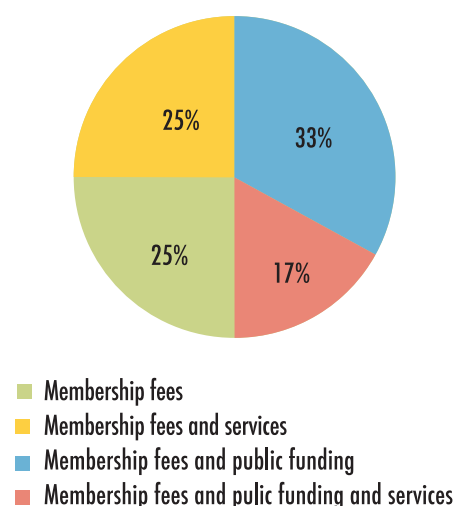


Figure 2: Sources of revenues in aquaculture farmers' organizations

Profile of target groups

Data provided by respondent aquaculture farmers' organizations revealed that the target groups of these organizations were quite diversified. While 42% of these organizations supported all aquaculture farmers groups including marine/freshwater finfish and shellfish, 25% targeted marine finfish farmers, 8% marine shellfish, 8% both marine finfish and shellfish and the remaining 17% freshwater finfish farmers (Figure 3).

Table 1: Breakdown of organizations taking part in the survey

Country	Number	Legal Status of the Organization			
		Association	Cooperative	Federation	Union
Albania	1	-	-	National	-
Croatia	1	National	-	-	-
Greece	1	-	-	National	-
Israel	1	National	-	-	-
Italy	3	National (2)	Local	-	-
Romania	1	National	-	-	-
Spain	2	National; Local	-	-	-
Turkey	2	Local	-	-	National

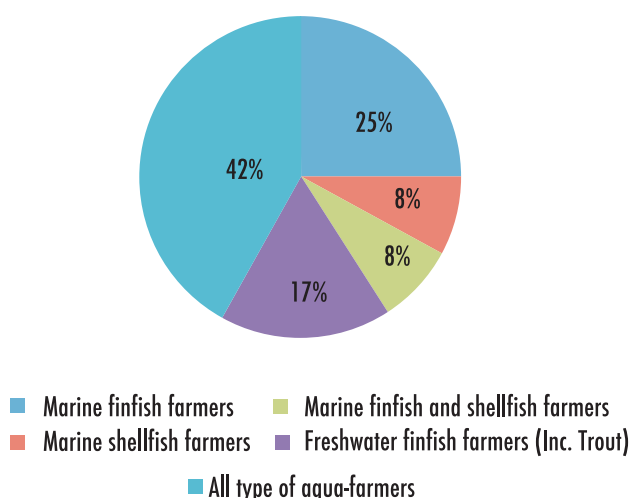


Figure 3. Target farmers groups by aquaculture farmers' organizations

Effectiveness in providing services

The effectiveness of the surveyed organizations in delivering advocacy, technical and economic services to their members is presented in Table 2. Here the mode values present the central tendency of responds/self-ratings of organizations for each service expected from these organizations. Accordingly, most of the aquaculture farmers' organizations surveyed regarded themselves as "not-effective" or "moderately effective" in delivering services to their members. The

domains where organizations regarded themselves as "not-effective" were; "Trade and intermediation", "Facilitating market access for members through collection and dissemination of market data /information and surveys", "Providing product processing/value addition opportunities for products of members" and "Collecting economic, first sales and production forecast information".

Use of indicators for monitoring development of the sector

Though sustainability and sustainable development is the core domain of management policy for many sectors including aquaculture, only 3 of surveyed organizations (25%) had an internal monitoring system of indicators to monitor the development of the sector in this domain. "Feed consumption by the sector" and "analysis of the production costs" were the two indicators used by these organizations to follow the development patterns of the sector.

Organizational and managerial constraints and challenges

The most common managerial constraints and challenges which hinder the activities and functionality of surveyed aquaculture farmers' organizations are

Table 2: Effectiveness of aquaculture farmers' organizations in delivering advocacy, technical and economic services

Activities & Services of the Organization	Effectiveness (Mode values)
Lobbying and defending interest of members	2
Facilitating access of members to Input such as fry and feed	2
Facilitating access of members to loans and credits	2
Training and extension services for capacity building	2
Planning and coordinating production of members to regulate the market	2
Marketing and negotiating sale contracts for its members	2
Trade and intermediation	1
Promoting image of aquaculture products through effective communication with the society	2
Promoting veterinary services	2
Organizing market promotion activities and campaigns	2
Promoting collective actions towards responsible/better aquaculture practices and certification	2
Facilitating market access for members through collection and dissemination of market data /information and surveys	1
Providing product processing/value addition opportunities for products of members	1
Interfacing with applied research organizations to meet R&D needs of members	2
Providing assistance and guidance in establishing aquaculture farm activities	2
Channeling the supply and the marketing of members' products	2
Collecting economic, first sales and production forecast information	1

1- Not Effective

2- Moderately Effective

3- Highly Effective

presented in Table 3. The constraints and challenges were ranked according to voted importance. Lack of enabling institutional environment/well-designed legislation appeared to be the most important and prominent constraint expressed by surveyed organizations.

Table 3: Managerial constraints and challenges faced by organizations.

Order	Constraint & Challenge
1	Lack of enabling institutional environment/well-designed legislation
2	Insufficient support by public sector and decision-makers
3	Insufficient revenues/funding to fulfill foreseen functions
4	Lack of commitment and involvement by members
5	Difficulties in collective management and decision-making process
6	Financial sustainability of the organization
7	Lack of interest in membership by farmers

DISCUSSION

Farmer organizations are an important tool and opportunity for improving governance and management of aquaculture sector through self-regulation and collective arrangements. Farmer organizations are also a tool for small and medium-scale enterprises to integrate into modern supply chains and to meet their requirements for food safety standards, traceability and certifications. The AFOs would also facilitate market access and negotiation power of small and medium-scale enterprises through concentration of supply. The AFOs such as associations, cooperatives or other institutional arrangements can play an important role in sustainable development of aquaculture sector and specifically help small-scale enterprises through:

- Enhancing participation and consultation of all stakeholders in planning, management and development of aquaculture, including the promotion of codes of practice and best management practices;
- Facilitating voluntary self-regulation for attaining best practices such as cluster management;
- Promoting the appropriate and efficient use of resources, including water, sites, seed, stock, finance and other inputs;
- Promoting capacity building by facilitating the provision of training, technology transfer and access

to information;

- Increasing market access through enhanced ability to meet market requirements, increased negotiation and bargaining power and economies of scale;
- Facilitating the provision of extension services, credit and market information;
- Developing government communication and consultation process and promoting comprehensive policies and a supportive legal and institutional framework that support sustainable aquaculture development and
- Building partnerships with government to progress and implement policies and programmers, making government efforts and the use of scarce resources more cost-effective (Hough and Bueno 2003). Obviously, accomplishment of these objectives will depend on building properly functioning and successful farmers' organizations. Analyzing the characteristics of successful farmers' organizations Kassam et al. (2011) and Bijman and Wollni (2008) underlined the importance of inter alia common and clearly defined objectives, technical and managerial capacity, organizational structure, group cohesion, effective financial management, strong relationships with the private sector, capacity building and an enabling legislative and institutional environment as factors affecting the success of these organizations. The crucial role of aquaculture farmers' organizations in sustainable development of aquaculture in the Mediterranean and Black Sea is well acknowledged at GFCM level. Empowering aquaculture farmers' organizations is regarded as one of the ten strategic areas and priorities for aquaculture development identified by the Aquaculture Multi-stakeholders platform for the Mediterranean and Black Sea (GFCM 2014). Even though this preliminary survey covered twelve aquaculture farmers' organizations in eight countries, the size of data set is still statistically not representative enough to draw a comprehensive and definite assertion or assessment on legal status, structure and effectiveness of aquaculture farmer organizations in the Mediterranean and Black Sea. However, the available data set does shed light on issues and challenges which need to be addressed to empower AFOs in development of sustainable aquaculture in the Mediterranean and Black Sea countries. Within responses received "Association" was the most common type of aquaculture farmer

organization. Even organizations with similar legal status e.g. "association" could function under different legal arrangements/environment in different countries and practice different functions. For example while an association in Italy could plan/coordinate production of its members, such a function may not be applicable for an association in other countries. In countries with developed aquaculture industry (e.g. Greece, Spain and Turkey) farmers' organizations tended to cluster according to species, species group or locality, whereas in countries with less developed aquaculture sectors such organizations could even target fishermen. It should also be considered that in some countries these organizations were quite new and discussions about their relevance for farmers have just started. Most of the farmers' organizations tended to be multipurpose in delivering advocacy, technical and economic services to their members. However, most of the aquaculture farmers' organizations from the surveyed area were only moderately effective in delivering advocacy and technical services and even less effective in providing market related and marketing services e.g. trade and intermediation, collection and dissemination of market data/information, capacity of processing/value addition opportunities and collection/dissemination of economic, first sales and production forecast information. Accordingly, challenges which need to be addressed for empowering AFOs include inter alia a well-designed legislation/enabling institutional environment, supportive policies for enhancing visibility of AFOs for sustainable development of aquaculture, well-defined and clear organizational objectives, securing financial sustainability of AFOs and sufficient revenues to accomplish foreseen functions, supporting capacity building for effective management and professional approach in collective actions including marketing and market related issues. In this regard as a regional fisheries management organization GFCM can play a crucial role in developing a harmonized policy towards empowering AFOs in the Mediterranean and Black Sea regions and contribute to enhancing visibility of these organizations for sustainable development of aquaculture.

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