



Food and Agriculture  
Organization of the  
United Nations



General Fisheries  
Commission for  
the Mediterranean

# **GUIDELINES IN SUPPORT OF** **social acceptability for sustainable** **aquaculture development**



Funded by the  
European Union



**GUIDELINES IN SUPPORT OF**  
**social acceptability for sustainable**  
**aquaculture development**

**Required citation:**

FAO. 2022. *Guidelines in support of social acceptability for sustainable aquaculture development*. General Fisheries Commission for the Mediterranean. Rome. <https://doi.org/10.4060/cc2299en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-136961-6

© FAO, 2022



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original English edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

**Third-party materials.** Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

**Sales, rights and licensing.** FAO information products are available on the FAO website ([www.fao.org/publications](http://www.fao.org/publications)) and can be purchased through [publications-sales@fao.org](mailto:publications-sales@fao.org). Requests for commercial use should be submitted via: [www.fao.org/contact-us/licence-request](http://www.fao.org/contact-us/licence-request). Queries regarding rights and licensing should be submitted to: [copyright@fao.org](mailto:copyright@fao.org).

This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of FAO and do not necessarily reflect the views of the European Union.

Cover illustration: ©Yamrote Alemu

# Preparation of this document

---

This document presents the guidelines in support of social acceptability for sustainable aquaculture development that were prepared by the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization of the United Nations (FAO).

The guidelines were developed with financial support from the European Union Framework Programme for Research and Innovation, Horizon 2020, Mediterranean Aquaculture Integrated Development (MedAID) project, as part of its Work Package 7 “Social acceptability and governance of aquaculture development in the Mediterranean” (MedAID, 2021). This publication also benefited from the support of the European Union Directorate-General for Maritime Affairs within the project “Select activities of the fisheries and aquaculture strategies and a strengthened subregional approach implemented in the Mediterranean and the Black Sea”.

Improving the social acceptability of aquaculture is a GFCM priority and was addressed in its 2030 strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea (Target 3 “Aquaculture: a sustainable and resilient sector growing to its full potential”).

The guidelines were developed under the 2018–2020 work programme of the Scientific Advisory Committee on Aquaculture (CAQ) and adopted by the Commission at its forty-fourth session (online, November 2021) (FAO, 2022a).

This document builds on the work of the CAQ and integrates the results of a regional survey targeting a wide range of stakeholders in 22 Mediterranean and Black Sea countries. The survey was based on non-random stratified sampling and was designed to appraise the critical factors influencing social acceptability of aquaculture, in order to better understand current challenges and offer a review of available documentation. These guidelines also benefited from several GFCM projects and from work by FAO to understand perceptions and misconceptions of aquaculture, paving the way for future work to improve public understanding and acceptance of the sector.

As part of their elaboration, these guidelines were shared amongst a wide array of stakeholders and experts in a participatory process to gather their inputs and priorities. The guidelines were then revised based on the results of these consultations to ensure that they aligned with their views. They were developed with the financial support of the European Union.



# Contents

---

<b>1. Introduction</b>	<b>1</b>
<b>2. Development process</b>	<b>4</b>
<b>3. Scope</b>	<b>6</b>
<b>4. International context</b>	<b>7</b>
<b>5. Guidelines</b>	<b>10</b>
5.1 Governance aspects influencing the social acceptability of aquaculture	10
5.2 Environmental aspects influencing the social acceptability of aquaculture	14
5.3 Economic aspects influencing the social acceptability of aquaculture	16
5.4 Social and ethical aspects influencing the social acceptability of aquaculture	18
<b>References</b>	<b>20</b>
<b>Glossary</b>	<b>22</b>

# Acknowledgements

---

These guidelines were prepared under the overall coordination of the Secretariat of the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization of the United Nations (FAO), thanks to the precious contribution provided by experts and partners from GFCM countries. Special appreciation goes to the presenters and participants in the Workshop on the importance of social acceptability for Mediterranean aquaculture development: stocktaking and the way forward (France, August 2018) and the Workshop on Guidelines in support of social acceptability for sustainable aquaculture development (Tunisia, April 2019), who actively contributed to identifying the crucial elements and practical actions needed to enhance the social acceptability of the aquaculture sector that ultimately shaped these guidelines.

The overall technical coordination was ensured by Houssam Hamza (Aquaculture Officer) and Fabio Massa (Senior Aquaculture Expert), with the support of GFCM staff and consultants, namely Linda Fourdain (Marine Aquaculture Expert), Georgios Paximadis (Specialist on Aquaculture Related Issues) and Davide Fezzardi (Senior Aquaculture Consultant). The publication was coordinated by Dominique Bourdenet (Knowledge Management Officer), with the valuable assistance of Alexandria Schutte (Knowledge Management Specialist), Ysé Bendjeddou (Publications Coordinator) and Matthew Kleiner (Junior Publication Specialist). The technical editing was performed by Malcolm Dickson and the graphic concept, design, infographics and layout were created by Yamrote Alemu.

# Abbreviations and acronyms

---

AFO	aquaculture farmer organization
ANDA	National Agency for the Development of Aquaculture (Morocco)
AZA	allocated zone for aquaculture
CAQ	Scientific Advisory Committee on Aquaculture (GFCM)
CCRF	Code of Conduct for Responsible Fisheries (FAO)
CTA	Technical Centre of Aquaculture (Tunisia)
FAO	Food and Agriculture Organization of the United Nations
FIAM	Products, Trade and Marketing Branch (FIAM) of the Fisheries and Aquaculture Department (FAO)
GFCM	General Fisheries Commission for the Mediterranean
ICUN	International Union for Conservation of Nature
ILO	International Labour Organization
MedAID	Mediterranean Aquaculture Integrated Development
SUMAE	Central Fisheries Research Institute (Türkiye)
UNCED	United Nations Conference on Environment and Development

# Executive summary

---

In Mediterranean and Black Sea countries, the rapid growth of aquaculture has raised concerns that could negatively affect the sector's long-term social acceptability and sustainable development. Understanding and addressing the drivers that influence the social acceptability of the sector could help to unlock potential for further growth and establish sustainable models that contribute towards consensus building. The General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization of the United Nations (FAO) included the preparation of guidelines in support of social acceptability for sustainable aquaculture development in the 2018–2020 work programme of its Scientific Advisory Committee on Aquaculture (CAQ) and adopted them in 2021. The main purpose of these guidelines is to provide Mediterranean and Black Sea countries with recommendations for improving the social acceptability and sustainable development of the sector.

The guidelines address governance, environmental, economic, social and ethical aspects that could influence the social acceptability of aquaculture in the region. For each aspect, they recommend practical actions and identify the main categories of stakeholders that should be involved. Following an introduction on the background and scope of the guidelines, this document highlights that each country should include specific components in their national aquaculture strategies and plans to improve the social acceptability of aquaculture, as well as define a communication plan to increase trust while adopting a participatory approach aimed at increasing stakeholder involvement. Furthermore, the environmental conditions surrounding aquaculture farms should be studied and the results widely disseminated, along with information on technological innovations and the environmental benefits of aquaculture. The guidelines also call for increased communication about the positive economic spill-over effects from aquaculture development, as well as social responsibility initiatives undertaken by the aquaculture sector.

# 1. Introduction

---

Mediterranean and Black Sea aquaculture has grown substantially in recent decades, helping to meet rising demands for aquatic products, food security, employment and economic development in the region. However, in some cases, this rapid expansion has caused concern over environmental impacts and competition with other activities, as well as impacts on human health and social issues.

The term sustainability can be used as a synonym for sustainable development, defined as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” by the 1987 Brundtland Report (World Commission on Environment and Development, 1987).

The sustainability of aquaculture lies at the heart of the Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries (CCRF) and has been a major item on the General Fisheries Commission for the Mediterranean (GFCM) agenda since 1999, when technical consultations with FAO discussed the principles set forth in Article 9 of the CCRF and priorities for the development of sustainable aquaculture in the GFCM area of application were agreed.

There are many definitions of social acceptability, yet none exhaustively capture the complex social processes involved. For these guidelines, social acceptability is defined as a combination of the following two interpretations:

1. **social acceptability is an integral part of sustainability** and refers to social license and the degree to which aquaculture activities are accepted by the local community, by various interest groups and by the wider society (Hishamunda, Ridler and Martone, 2014); and
2. **social acceptability is a judgement people make** about whether an action, attribute, or condition is rated as superior or relatively neutral when compared with potential alternatives (Brunson and Shindler, 2004).

**In short, the social acceptability of aquaculture refers to how this food production technique and its products are accepted or rejected by the public at large.**

The social acceptability of aquaculture is influenced by many intertwined, critical factors and can vary according to the general public’s perceptions or misconceptions of the sector based on, *inter alia*, objective knowledge; preconceived ideas, attitudes and beliefs; the stakeholders involved and their characteristics; and the aquaculture activity’s typology and objectives, which are often linked to local conditions (Figure 1).

**FIGURE 1. Factors influencing the social acceptability of aquaculture**



## **Social acceptability is a crucial element of governance and a key driver for sustainable aquaculture development.**

Understanding the factors that influence this phenomenon could help to unlock the development potential of aquaculture and establish sustainable models that could contribute to consensus building around aquaculture activities.

In order to enhance the social acceptability of the sector and improve public understanding of aquaculture, it is necessary to look beyond its role in food production and to communicate its assets in terms of ecosystem services and food security as well as social and economic benefits, especially for local communities, reaffirming the sector's potential to contribute to sustainable development.

Meanwhile, it is also necessary to systematically address the social acceptability of regional aquaculture strategies and development plans.

There are several examples worldwide of negative perceptions towards aquaculture resulting in severe consequences for aquaculture development. Marine aquaculture takes place mostly in coastal zones, sometimes in proximity to marine protected areas, and alongside other activities, such as coastal and marine tourism, as well as commercial and recreational fisheries (Piante and Ody, 2015). Unfortunately, as coastal space is limited, the operators of these businesses may view aquaculture as a sector inhibiting their activities. Several global organizations, including the International Union for Conservation of Nature (IUCN) have acknowledged the urgent need to implement a participatory approach when planning aquaculture activities to improve its social acceptability (IUCN, 2009a).

# 2. Development process

A participatory and consultative process during the development of the guidelines ensured that they aligned with the views of key stakeholders, reflecting their priorities, inputs and expertise. The process began with a 2018 review on the social acceptability of aquaculture conducted by the GFCM within the framework of the European Union Framework Programme for Research and Innovation, Horizon 2020, Mediterranean Aquaculture Integrated Development (MedAID) project (MedAID, 2021). This review led to the development of a web-based MedAID survey distributed in 2018 to 606 respondents from 26 countries by the GFCM and the Products, Trade and Marketing Branch (FIAM) of the Fisheries and Aquaculture Department of FAO.

Sixty-five participants from 22 countries then met at the first regional stakeholder workshop in Montpellier, France in 2018 (GFCM, 2018).

This workshop helped to identify preliminary elements for the guidelines based on the results of the survey. The following year, 70 participants from 17 countries met in Monastir, Tunisia for a second regional stakeholder workshop to discuss the roles and responsibilities of local and national stakeholders: "Guidelines in support of social acceptability for aquaculture development." The information gathered from these workshops, coupled with the results of the survey, formed the basis for the draft guidelines that were presented to the eleventh session of the Scientific Advisory Committee on Aquaculture (CAQ; Spain, September 2019). The guidelines were subsequently revised based on the inputs of the CAQ and presented to the MedAID Committee before further revisions. Finally, they were presented to the forty-fourth session of the GFCM (online, November 2021), where they were adopted (FAO, 2022a).

**DEVELOPMENT PROCESS FOR THE GUIDELINES** .....>



**REVIEW**

Review of the social acceptability of aquaculture conducted by the GFCM

2018



**SURVEY**

Web-based MedAID survey with 606 respondents from 26 countries

2018



**FIRST STAKEHOLDER WORKSHOP**

First regional workshop in France with 65 participants from 22 countries

2018



©GFCM/Sahbi Dorai



### SECOND STAKEHOLDER WORKSHOP

Second regional workshop in Tunisia with 70 participants from 17 countries

2019



### DRAFT GUIDELINES

Draft guidelines developed based on survey results and stakeholder workshops

2019



### REVISION AND ADOPTION

Draft revised based on the inputs of the CAQ and adopted by the forty-fourth session of the GFCM

2020–2021

# 3. Scope

---

The guidelines follow a regional approach tailored to Mediterranean and Black Sea aquaculture and related stakeholders. They are based on common definitions and concepts constituting a shared template at the regional scale that should subsequently be adapted to national and local conditions.

The overall objective of the guidelines is to provide Mediterranean and Black Sea countries with recommendations for better governance of and communication about the aquaculture sector in order to improve its social acceptability and sustainable development in the Mediterranean and the Black Sea.

Specifically, the guidelines aim to:

- support countries in developing strategic aquaculture development plans that include **provisions to improve the social acceptability of aquaculture**;
- support aquaculture stakeholders, at every level, in **establishing and implementing good governance mechanisms**;
- **foster the adoption of appropriate policy instruments and decision-making processes** to enhance participatory approaches and open dialogue both within the industry and between aquaculture subsectors to engage with interested local communities and other key stakeholders and build mutual trust; and
- **improve knowledge and perceptions** about aquaculture amongst the general public.

The guidelines rely on the principles of good governance, accountability, transparency, prevention, stakeholder participation in decision-making and social responsibility. They are based on the best available knowledge and good practices in terms of the social sphere.

The guidelines address different aspects of the sustainable development of aquaculture that could influence social acceptability of the sector, including governance, environmental, economic, social and ethical considerations. For each aspect, the guidelines clearly identify the recommended actions and the relevant stakeholders.

The guidelines are advisory in nature and consistent with existing national, supra-national and international instruments. They should be considered a tool at the disposal of Mediterranean and Black Sea countries to enhance existing processes.

The varying maturity stages of different aquaculture industries, which result from regional specificities and different legal contexts in Mediterranean and Black Sea countries, should be taken into account, along with the capacity of developing states to implement the guidelines.

To ensure their effective implementation and create a level playing field in the region, these guidelines should be adjusted, if necessary, to specific conditions. Preparatory work on implementation needs should be carried out, as appropriate, possibly through the provision of technical assistance.

## 4. International context

---

The guidelines take into account relevant international instruments, declarations, initiatives and guidelines, in particular those relating to sustainable aquaculture development and responsible fisheries.



## INTERNATIONAL CONTEXT

**1992**

Agenda 21 produced by the 1992 United Nations Conference on Environment and Development (UNCED), which introduced the concepts of pillars or dimensions of sustainability, by integrating environmental, economic and social concerns into a single **policy framework** (United Nations Sustainable Development, 1992).



**1995**

The 1995 CCRF, particularly its Article 9.1.1 recognizing the need to take into account the social aspects of fisheries and aquaculture and the importance of governance in aquaculture by requiring states to establish, maintain and develop an appropriate legal and administrative framework to facilitate the development of responsible aquaculture (FAO, 1995).

**1998**

The 1998 Declaration on Fundamental Principles and Rights at Work by the International Labour Organization (ILO), which commits its member states to respect and promote principles and rights associated with the freedom of association and the effective recognition of the right to collective bargaining, the elimination of forced or compulsory labour, the abolition of child labour and the elimination of discrimination in respect of employment and occupation (ILO, 1998).



**2002**

The 2002 Johannesburg Declaration on Sustainable Development adopted at the World Summit on Sustainable Development, which reaffirmed that sustainable development is built on three interdependent and mutually reinforcing pillars that have to be established at local, national, regional and global levels and introduced the importance of governance as an overarching dimension of sustainability (United Nations, 2002).

**2014**

The 2014 GFCM Regional Conference “Blue growth in the Mediterranean and the Black Sea: developing sustainable aquaculture for food security” in Bari, Italy, which acknowledged that wider stakeholder participation in decision-making guarantees accountability and increases social acceptability, that sustainable aquaculture development requires a sound site selection process and should involve all stakeholders, particularly local communities, in order to increase social acceptability, and that participation in the establishment of allocated zones for aquaculture (AZA) can be a mechanism for aquaculture governance and increase the social acceptability of aquaculture.

**2013**

*The Strategic Guidelines for the sustainable development of European Union aquaculture*, which put forward the need to improve the image of European Union aquaculture products and to improve the sustainability, social acceptance and competitiveness of sector (European Commission, 2013).

**2007–2009**

The guides published by the IUCN aiming to lead towards the sustainable development of Mediterranean aquaculture (IUCN, 2007, 2009a, 2009b).

**2007**

The ecosystem approach to aquaculture formalized in 2007 at an FAO expert workshop as “a strategy for the integration of the activity within the wider ecosystem in such a way that it promotes sustainable development, equity, and resilience of interlinked social and ecological systems” (Soto, Aguilar-Manjarrez and Hishamunda, eds., 2008).



## 2015

The United Nations Global Compact *Guide to Corporate Sustainability*, which puts forward five defining features of corporate sustainability essential to long-term corporate success and to ensuring that markets deliver value across society (United Nations Global Compact, 2015).

## 2015 – 2016

Two key FAO publications on perceptions and misconceptions of aquaculture and increasing public understanding and acceptance of aquaculture, which together laid the ground for future work (Bacher, 2015; FAO, 2016).

## 2017

Resolution GFCM/41/2017/2 on guidelines for the streamlining of aquaculture authorization and leasing processes, which recalls the principle of social responsibility and advocates for participatory and consenting mechanisms and programmes involving local communities and other interest groups in aquaculture planning and development to increase the social acceptability of aquaculture (FAO, 2017b).

## 2020

The 2020 Shanghai Declaration of the Global Conference on Aquaculture, which provides a roadmap to optimize the role that aquaculture can play in achieving the 2030 Agenda for Sustainable Development (FAO, 2021).

## 2021

Resolution GFCM/36/2012/1 on guidelines on allocated zones for aquaculture that underpins principles of good governance as fundamentals for social acceptability (GFCM, 2021).

## 2022

The draft FAO guidelines for sustainable aquaculture elaborated at the eleventh session of the Sub-committee on aquaculture in May 2022, which are global in scope and are intended to support the visibility, recognition, and enhancement of the aquaculture sector's important role in contributing to global, regional and national efforts towards the eradication of hunger and poverty and to support socioeconomic development for the benefit of current and future generations (FAO, 2022b).

## 2017

The FAO technical guidelines on aquaculture governance and sector development, which are considered to be a key milestone towards responsible development of the sector (FAO, 2017a).

## 2017

Resolution GFCM/41/2017/1 on a strategy for the sustainable development of Mediterranean and Black Sea aquaculture that addresses social aspects in Target 1 "Build an efficient regulatory and administrative framework to secure sustainable aquaculture development" and Target 3 "Facilitate market-oriented aquaculture and enhance public perception" (FAO, 2017b).

## 2022

The forthcoming FAO guidance on social responsibility in the fisheries and aquaculture value chains, which targets all enterprises operating along the seafood value chain and urges them to observe existing international standards and to implement a due diligence process to uphold the human and labour rights of workers in fisheries and aquaculture value chains as well as reduce the risk of violations, to ensure socially responsible fish and fish products (FAO, 2022c).



# 5. Guidelines

---

## 5.1 GOVERNANCE ASPECTS INFLUENCING THE SOCIAL ACCEPTABILITY OF AQUACULTURE

Good governance is an important factor in enhancing the social acceptability of aquaculture, particularly when participatory approaches with increasing stakeholder involvement are used to improve mutual trust. Awareness-raising and stakeholder ownership are instrumental strategies towards implementing efficient decision-making processes and regulatory systems in which the management and conservation of natural resources and human well-being operate as reference frameworks towards effective governance.

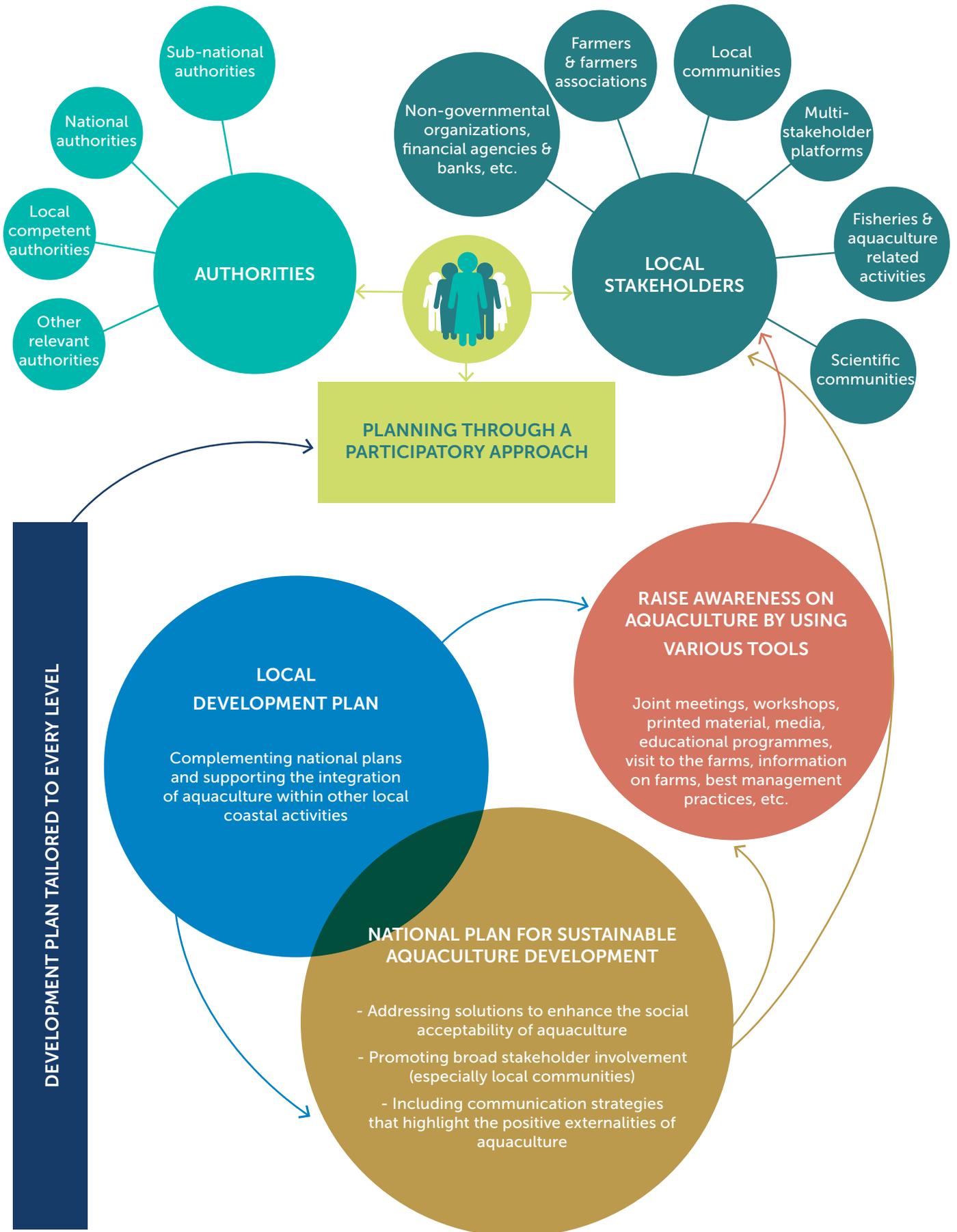
Case studies from the Mediterranean and the Black Sea have shown that the process of establishing aquaculture farms, which requires that a series of decisions be made related to governance and local contexts, can be hindered by opposition fuelled by misperceptions. Opposition can also occur after farms have already been established, compromising the readiness of decision-makers to facilitate aquaculture development in terms of legislation and public–private investments.

Among the main governance factors that negatively influence the social acceptability of the sector in the Mediterranean and the Black Sea are:

1. **limited coordination** among the various authorities at national, sub-national and local levels;
2. **a lack of participatory approaches** and involvement of stakeholders in developing aquaculture plans, along with insufficient consideration of public opinion and concern leading to the perception that aquaculture development has been through a top-down and non transparent decision-making process; and
3. **low awareness of the sector’s potential**, especially at the local level, as key information on sustainable aquaculture practices and products is not easily accessible to those involved in aquaculture planning, such as regulators and municipal authorities, as well as the general public.

In this context, much could be done to engage stakeholders in the aquaculture development process, particularly those in nearby and coastal communities, and to build trust by telling the stories behind the products. It is important that social acceptability plans are included in strategic aquaculture development plans (Figure 2).

**FIGURE 2. Participatory planning processes to improve social acceptability of aquaculture**



**To enhance the social acceptability of aquaculture from a governance perspective, the following specific actions should be taken:**

- Each country should have components in their national aquaculture strategies and plans to improve the social acceptability of aquaculture, including a communication plan informing key stakeholders, consumers and the general public about the positive externalities of sustainable aquaculture and the benefits associated with aquaculture products. These national strategies and plans should be complemented by sub-national and local development plans aimed at enhancing the transparency and social acceptability of aquaculture (Box 1).
- Administrative managers should adopt an extensive participatory approach and involve local communities and other concerned stakeholders through national, sub-national and local multi-stakeholder platforms or similar bodies. Consultation workshops and other events, at which local communities and other concerned stakeholders are involved in mapping, information-sharing and planning, would enhance knowledge about sustainable aquaculture, build community trust and foster positive relationships.
- While planning aquaculture activities through the establishment of AZAs, each stakeholder participating in the AZA co-development process should collect and share reliable and updated information on their respective activities in the public domain.
- National and sub-national authorities should cooperate with local decision-makers and administrations to promote, in a coordinated manner, activities aimed at improving communication on the economic, social and environmental value of sustainable aquaculture.
- Modern information-sharing methods should be used, such as the internet, mobile apps and social networks, in order to reach a wider audience and provide them with regular updates on aquaculture issues, aquaculture activities, the implementation process for aquaculture projects, and the value of aquaculture and farmed products.
- Communication capacity building should be envisaged for stakeholders, communication authorities and journalists, as media coverage is central to informing the public of prominent issues and debates within the aquaculture industry. This should be accompanied by the development of rules and guidelines to regulate communications to avoid spreading false and misleading information.

**Box 1****Case study – Morocco**

The National Agency for the Development of Aquaculture (ANDA) in Morocco has adopted the concept of allocated zones for aquaculture (AZAs) for aquaculture development. The identification of suitable areas is based on a comprehensive assessment conducted from technical, economic and scientific points of view, as well as on a participatory approach involving all stakeholders at both the local and national levels.

The identified AZAs cover 1 700 km (half of the total Moroccan coastline) and offer optimal farming conditions while ensuring a more coordinated and integrated approach to coastal use, accountability, transparency and enhanced competitiveness.

**At the local scale, development plans should identify stakeholders who may be related to aquaculture development, including local administrations, banks, the army, farmers, small-scale fishers, aquaculture farmer organizations (AFOs), non-governmental organizations), researchers and local communities as well as the tourism industry, and plan to implement activities such as:**

- the dissemination of promotional material on the role of sustainable aquaculture in achieving food security, economic development and employment;
- farm visits to explain the values and objectives of farming aquatic organisms; and
- workshops and other meetings open to the general public offering information about development plans, opportunities and other related aquaculture matters.



©GFCM/Sahbi Douai

## 5.2 ENVIRONMENTAL ASPECTS INFLUENCING THE SOCIAL ACCEPTABILITY OF AQUACULTURE

The strong interconnection between aquaculture and environmental quality is a key factor influencing public perception of the sector, and the need to enhance this interaction has been addressed in several regional and international fora.

The Mediterranean and the Black Sea are characterized by complex aquaculture–environment interactions, and local-scale impacts could affect the provision of wider-scale environmental and ecological services. Furthermore, coastal aquaculture, whether land- or marine-based, could be perceived as polluting and affecting coastal scenic views, raising concerns especially for local communities and the regionally important tourism sector.

The main environment-related factors that negatively influence the sector’s social acceptability are: i) a limited use of sound site selection processes, which may lead to decreased access to traditional fishing

grounds for small-scale fishers and recreational fishers, as well as decreased access to safe anchorage areas for recreational boaters; and ii) poor attention to water quality monitoring around aquaculture farms, which could have negative impacts, including eutrophication and increased algae growth, rendering the water less suitable for recreational activities.

Conversely, awareness of sustainable aquaculture’s need for good water quality and its vulnerability to severe damage by water pollution from other activities undertaken along the coasts is also limited. However, continued research and innovation are leading to new solutions and mitigation measures that can reduce the negative impacts of aquaculture while maximizing its positive effects. Such initiatives should be valorized and documented and the results widely disseminated in order to improve the image of the sector and its products.

### BOX 2.

#### Case study – Türkiye

In Türkiye, the effort to restock turbot originated from growing awareness among several public and private sector stakeholders of the depletion of natural resources and the need to preserve them. Thus, the Turbot Stock Enhancement Programme was launched in 1999 by the Trabzon Central Fisheries Research Institute (SUMAE) to recover turbot spawning biomass and overcome fish recruitment limitations. Since then, 120 000 hatchery-reared turbot juveniles have been individually tagged and released into the Black Sea following a responsible and precautionary approach. The programme has continued through the present and is supported by all relevant stakeholders, especially fishers, while every year about 10 000 turbot are released into the environment. Turbot restocking and monitoring activities, such as the recapture of specimens at sea, also contribute to better understanding of the species’ feeding behaviour, migration patterns and other aspects of its biology, demonstrating complementarity between farming practices and capture fisheries, as well as enhancing the social acceptability of aquaculture.

**To enhance the social acceptability of the sector from an environmental perspective, the following actions should be taken:**

- Administrations and farmers should take the lead in producing and disseminating information on the environmental conditions of water bodies in the vicinity of aquaculture farms, as well as disclosing data to increase transparency and social responsibility. They should also be proactive in the dissemination of information explaining that aquaculture requires high-quality water and can be impacted by water pollution caused by other land-based and marine activities.
- Competent authorities, researchers and farmers should carry out comparative studies on the environmental impacts of aquaculture versus those of other industrial or agricultural activities along the coast. The results of the studies should be communicated to consumers, authorities and administrations.
- Competent government bodies and researchers should inform the public at large that beyond food production, sustainable aquaculture activities can also contribute to the restocking of vulnerable species, relieving pressure on depleted natural resources and enhancing biodiversity.
- The industry should support, promote and inform the public about innovations and new technologies using renewable energy at the farm level (for example, solar panels) in order to increase sector efficiency and reduce its carbon footprint.
- The industry should support, promote and inform the public about innovations aimed at reducing aquaculture escapes and about the use of more sustainable feeds and feed management systems that can reduce environmental impacts and improve sector performance.

**Furthermore, public authorities and researchers should disseminate information about the multifaceted interactions between aquaculture and capture fisheries that are steadily becoming more positive. Key positive aspects regarding the sustainability of the aquaculture sector include:**

- The progressive replacement of fish meal and fish oil in aquaculture feed with alternative protein and lipid sources, contributing to environmental sustainability and resource-use efficiency. Meanwhile, a larger proportion of fish for human consumption is now coming from aquaculture rather than from fishing, thereby relieving pressure on wild stocks.
- Aquaculture can successfully be used for restocking and stock enhancement purposes to support the recovery of fisheries stocks and biodiversity conservation as demonstrated by Türkiye (Box 2).
- An increase in capture fisheries catches has been noted in areas where aquaculture facilities are located.

## 5.3 ECONOMIC ASPECTS INFLUENCING THE SOCIAL ACCEPTABILITY OF AQUACULTURE

Sustainable aquaculture is an activity that generates direct and indirect economic benefits at the micro or local level and at the macro level through its contribution to gross domestic product, employment and food security. In the Mediterranean and the Black Sea, the aquaculture sector has been flourishing, especially in the past four decades, increasingly contributing to national economies and employment. This positive trajectory is expected to continue into the future, particularly as most countries show a negative trade balance in aquatic products, meaning aquaculture should consolidate its position as one of the fastest-growing food production sectors.

However, while these facts could contribute towards enhancing the public acceptability of the sector, they are often not recognized by the general public. In the Mediterranean and the Black Sea, the main economy-related negative influences on the social acceptability of the sector are:

- i. limited information and research studies on the economic value of aquaculture;
- ii. a lack of awareness that aquaculture contributes to national and local economic growth and national fish supply;
- iii. limited awareness of the role played by aquaculture at the local level in the generation of job opportunities and in the stimulation of other income-generating activities, such as tourism, the food service industry and activities along the value chain, including transport and local services; and
- iv. competition between products from capture fisheries and aquaculture, as well as, in some cases, the general impression that aquaculture competes with other activities such as maritime transportation, tourism and small-scale fisheries.

It is crucial that both public awareness of the economic benefits from the sector and recognition of its potential as a win-win opportunity for both local and national-level economic development continues to grow. Better research and communication about the real, rather than the perceived, impacts and the growth of the sector.

**To enhance the social acceptability of the sector from an economic perspective, the following specific actions should be taken:**

- Aquaculture development plans should be integrated within local economic development plans and the positive spill overs from aquaculture to local economies should be highlighted.
- Local economic development plans should promote the integration of aquaculture into other coastal activities such as tourism, small-scale fisheries and local crafts.

- National administrations or AFOs should promote ad hoc studies highlighting the contribution of the sector to economic growth as well as to socioeconomic well-being, emphasizing the employment opportunities and economic activities generated by aquaculture along the value chain, such as processing, distribution, retailing, packaging, equipment, the feed industry and tourism.
- Administrations should encourage the deployment of financial or other mechanisms to share socioeconomic benefits between established aquaculture businesses and local communities by, for example, contributing to the building of schools, developing infrastructure or helping poor families.

Furthermore, authorities, AFOs and farmers could develop innovative business models linking aquaculture production with tourism and educational activities.

This process would be facilitated by the power of strong aquaculture organizations to enhance opportunities for collaboration and entrepreneurship as well as to reduce fragmentation. Positive synergies between aquaculture and coastal tourism could be promoted through a win-win approach adding value to local community businesses, as seen in Montenegro (Box 3). This cooperation allows farms to diversify their operations but also requires farms to allow public access. Visitors would learn about farm operations and have the opportunity to directly purchase and consume farmed products. Farm visits could also include educational components, perhaps focusing on the history of the farm, the life and biology of farmed species and ecological aspects of the surrounding environment. In the case of marine farms, these workshops might also be combined with snorkelling, diving and recreational fishing around floating fish cages or shellfish rafts (Box 3).

### BOX 3.

#### Case study – Montenegro

Montenegro is characterized by a small-scale marine aquaculture industry concentrated in a number of mussel and oyster farms in the area of the Boka Kotorska Bay that are usually small businesses owned by local families. The Boka Kotorska Bay is also an important tourist site attracting visitors all year round. In line with the 2015–2020 Montenegro Fishery Strategy that promotes inter-sectoral cooperation, economically viable synergies have been forged between aquaculture and the vibrant tourism industry. Small groups of tourists (up to 10 people per farm per visit) join shellfish farm tours beginning with a two-hour visit to the aquaculture facilities, where the operators explain the farming cycles of mussels and oysters, including the breeding and grow-out in Mediterranean traditional longline systems. The presentation is then followed by the collection of shellfish from the sea, which can be directly purchased, and by a tasting of gourmet dishes prepared with fresh oysters and mussels following traditional recipes. In addition, tourists may also enjoy swimming and snorkelling between the longlines. This form of aqua-tourism has become one of the most attractive experiences for visitors to Montenegro. Meanwhile, the Ministry of Agriculture and Rural Development, in cooperation with the Institute of Marine Biology, is planning to brand the shellfish produced in the Boka Kotorska Bay in order to increase its value and to foster aquaculture entrepreneurship in Montenegro.

## 5.4 SOCIAL AND ETHICAL ASPECTS INFLUENCING THE SOCIAL ACCEPTABILITY OF AQUACULTURE

There are a number of important social and ethical elements determining the balance between acceptance and resistance in relation to the existence and development of the aquaculture industry. The public may be sensitive to social responsibility issues at the farm level such as equity, fairness, transparency, accountability and welfare. In addition, there might be concerns linked to human health and the safety of consuming aquaculture products. Such interconnected aspects will vary from country to country, reflecting cultural specificities of the Mediterranean and Black Sea region and the various perceptions and attitudes of stakeholders.

In the Mediterranean and the Black Sea, the main negative influences on the social acceptability of the sector related to social and ethical questions are: i) a lack of available information on the social responsibility initiatives implemented by aquaculture farms; ii) limited knowledge and conflicting information on the nutritional value of aquaculture products for human consumption, including in terms of safety and quality, which may cause confusion or deter consumption; and iii) the aesthetic impact of aquaculture facilities and structures on seascapes and coastal landscapes, even though seascapes and landscapes are dynamic and already change constantly due to human activity and natural processes. Given the sometimes problematic relationship between aquaculture, the tourism industry and local communities, this may be seen as a threat or result in opposition to development of the sector.

The aquaculture industry needs to expand communications about their social responsibility initiatives and foster broader, more open dialogue to improve transparency and social license for the sector to operate.

**To enhance the social acceptability of the sector from a social and ethical perspective, the following specific actions should be taken:**

- At the local level, decision-makers should develop a policy to facilitate the employment of local people, including through capacity-building training on aquaculture. The entry of young people and women into the sector should be promoted, perhaps through government incentives.
- The status of aquaculture workers should be clearly acknowledged and distinguished from other categories of workers, such as fishers. Aquaculture workers should be protected through effective social security rights.
- Planning authorities should establish AZAs that include landscape (for land-based facilities) and seascape character assessments with a view to identifying ways to link and blend farm developments into surrounding areas. Well-designed and well-sited aquaculture farms can limit impacts on coastal character and visual amenity, while the industry should also promote new technologies to make aquaculture facilities more visually attractive.

- Aquaculture farmer organizations and farmers should organize events (for example, Aquaculture Day celebrated on 30 November each year) to engage with local communities and key stakeholders. These occasions are opportunities to demonstrate that farmers and local communities share the same social and ethical values, such as concern for animal welfare, eagerness to safeguard cultural and natural heritage values and a sense of belonging to the sea. Such values should be communicated through social responsibility communication strategies aimed at building long-lasting relationships, while enhancing mutual trust and support.
- The aquaculture industry, supported by AFOs and competent authorities, should cooperate on sustainable initiatives and better management practices, including in support of aquatic animal health. The public at large should be informed of these initiatives and of progress made on research and innovation, such as the minimal use of antibiotics and other chemicals, decreased content of fish meal and fish oil in feed, animal welfare and fish health measures.
- Aquatic product consumption campaigns should be implemented to raise the profile of all products along the value chain, irrespective of their origins (capture fisheries or aquaculture) (Box 4). These efforts should fit into the framework of public health promotion strategies targeting particularly the younger generation. A media-oriented reference document or newsletter could be produced by the GFCM and include general and advanced information on Mediterranean and Black Sea aquaculture, along with discussions on other issues concerning the sector, such as species produced, production trends and results of water quality monitoring. Fish consumption campaigns should aim to reach as many people as possible across demographics such as age, gender, interest and use of social media platforms. While the message is clearly important, the person delivering the message is even more important for creating maximum impact. Campaign messages should be delivered by influential people such as chefs, actors, singers, doctors and trusted authorities.

#### BOX 4.

#### Case study – Tunisia

Tunisia has experienced significant growth in marine aquaculture production over the last decade, with more than 90 percent of the sector's production sold on the national market. The private sector, in cooperation with the State, initiated a programme of communication about and promoting aquaculture products. The Technical Centre of Aquaculture (CTA), created in 2008 to link the administration to the sector, took charge of this programme through communication campaigns at schools, fairs and aquaculture events. A series of workshops were also organized to deliver science-based information to various stakeholders (including fishers, non-governmental organizations and consumers) to improve public knowledge and acceptance. The CTA has devoted special attention to inland areas, far from the coast, where average annual per capita consumption rates of fishery products are currently less than 2 kg.

# 6. References

---

- Arechavala-Lopez, P., Toledo-Guedes, K., Izquierdo-Gomez, D., Šegvić-Bubić, T. & Sanchez-Jerez, P.** 2017. Implications of Sea Bream and Sea Bass Escapes for Sustainable Aquaculture Management: A Review of Interactions, Risks and Consequences. *Reviews in Fisheries Science & Aquaculture*, 26(2), 214–234.
- Bacher, K.** 2015. *Perceptions and misconceptions of aquaculture: a global overview*. GLOBEFISH Research Programme, Vol. 120. Rome, FAO. [www.fao.org/3/bc015e/bc015e.pdf](http://www.fao.org/3/bc015e/bc015e.pdf)
- Brunson, M.W. & Shindler, B.A.** 2004. Geographic variation in social acceptability of wildland fuels management in the Western United States. *Society and Natural Resources*, 17(8): 661–678.
- Council of the European Union.** 2007. Council Regulation (EC) No 708/2007 of 11 June 2007 concerning use of alien and locally absent species in aquaculture. *Official Journal of the European Union*, 168(1): 1–17.
- European Commission.** 2013. *Strategic Guidelines for the sustainable development of EU aquaculture*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2013) 229. Brussels.
- FAO.** 1995. *Code of Conduct for Responsible Fisheries*. Rome. [www.fao.org/3/v9878e/v9878e.pdf](http://www.fao.org/3/v9878e/v9878e.pdf)
- FAO.** 2016. *Report of the Workshop on Increasing Public Understanding and Acceptance of Aquaculture – the Role of Truth, Transparency and Transformation, Vigo, Spain, 10–11 October 2015*. FAO Fisheries and Aquaculture Report No. 1143. Rome. [www.fao.org/3/i6001e/i6001e.pdf](http://www.fao.org/3/i6001e/i6001e.pdf)
- FAO.** 2017a. *Aquaculture development. 7. Aquaculture governance and sector development*. FAO Technical Guidelines for Responsible Fisheries. No. 5, Suppl. 7. Rome. [www.fao.org/3/i7797e/i7797e.pdf](http://www.fao.org/3/i7797e/i7797e.pdf)
- FAO.** 2017b. *Report of the forty-first session of the General Fisheries Commission for the Mediterranean (GFCM) – Budva, Montenegro, 16–20 October 2017*. GFCM Report No. 41. Rome. [www.fao.org/3/i8500en/i8500EN.pdf](http://www.fao.org/3/i8500en/i8500EN.pdf)
- FAO.** 2021. *Shanghai Declaration: Aquaculture for food and sustainable development*. Global Conference on Aquaculture Development: aquaculture for food and sustainable development, 22–25 September 2021, Shanghai, China. Rome. [www.fao.org/3/cb8517en/cb8517en.pdf](http://www.fao.org/3/cb8517en/cb8517en.pdf)
- FAO.** 2022a. *Report of the Forty-Fourth Session of the General Fisheries Commission for the Mediterranean (GFCM), Online, 2–6 November 2021*. GFCM Report no. 44. Rome. <https://doi.org/10.4060/cc0292en>
- FAO.** 2022b. *Draft guidelines for sustainable aquaculture*. Committee on Fisheries. Eleventh Session of the Sub-Committee on Aquaculture, Online, 24–27 May 2022. Rome. [www.fao.org/3/cb9500en/cb9500en.pdf](http://www.fao.org/3/cb9500en/cb9500en.pdf)
- FAO.** 2022c. *Social responsibility: scoping paper and future developments*. Committee on Fisheries, Sub-committee on fish trade. COFI:FT/XVIII/2022/11. Rome. [www.fao.org/3/cb9931en/cb9931en.pdf](http://www.fao.org/3/cb9931en/cb9931en.pdf)
- FAO.** 2022d. FAO TERM Portal. In: *Food and Agriculture Organization of the United Nations*. Rome. Cited 8 April 2022. [www.fao.org/faoterm/en](http://www.fao.org/faoterm/en)
- GFCM.** 2018. *Workshop on the importance of social acceptability for Mediterranean aquaculture development: stocktaking and the way forward, Montpellier, France, 29 August 2018*. Scientific Advisory Committee on Aquaculture. Rome, FAO. [www.fao.org/gfcm/technical-meetings/detail/en/c/1476873](http://www.fao.org/gfcm/technical-meetings/detail/en/c/1476873)
- Hishamunda, N., Ridler, N. & Martone, E.** 2014. *Policy and governance in aquaculture: lessons learned and way forward*. FAO Fisheries and Aquaculture Technical Paper No. 577. Rome, FAO. [www.fao.org/3/i3156e/i3156e.pdf](http://www.fao.org/3/i3156e/i3156e.pdf)
- ILO.** 1998. *Declaration on Fundamental Principles and Rights at Work*. Geneva.

- IUCN.** 2007. *Guide for the Sustainable Development of Mediterranean Aquaculture 1: Interaction between Aquaculture and the Environment*. Gland, Switzerland and Malaga, Spain.
- IUCN.** 2009a. *Guide for the Sustainable Development of Mediterranean Aquaculture 2: Aquaculture site selection and site management*. Gland, Switzerland and Malaga, Spain.
- IUCN.** 2009b. *Guide for the Sustainable Development of Mediterranean Aquaculture 3: Aquaculture: Responsible Practices and Certification*. Gland, Switzerland and Malaga, Spain.
- Macias, J.C., Avila Zaragoza, P., Karakassis, I., Sanchez-Jerez, P., Massa, F., Fezzardi, D., Yücel Gier, G., Franičević, V., Borg, J.A., Chapela Pérez, R.M., Tomassetti, P., Angel, D.L., Marino, G., Nhhala, H., Hamza, H., Carmignac, C. & Fourdain, L.** 2019. *Allocated zones for aquaculture: a guide for the establishment of coastal zones dedicated to aquaculture in the Mediterranean and the Black Sea*. General Fisheries Commission for the Mediterranean. Studies and Reviews. No 97. Rome, FAO. [www.fao.org/3/ca7041en/ca7041en.pdf](http://www.fao.org/3/ca7041en/ca7041en.pdf)
- MedAID.** 2021. *Mediterranean Aquaculture Integrated Development (MedAID)*. Cited 22 September 2021. Zaragoza, Spain.
- Piante, C. & Ody, D.** 2015. *Blue growth in the Mediterranean Sea: the challenge of good environmental status*. MedTrends Project. WWF-France.
- Soto, D., Aguilar-Manjarrez, J. & Hishamunda, N., eds.** 2008. *Building an ecosystem approach to aquaculture*. FAO/Universitat de les Illes Balears Expert Workshop. 7–11 May 2007, Palma de Mallorca, Spain. FAO Fisheries and Aquaculture Proceedings. No. 14. Rome, FAO. [www.fao.org/3/i0339e/i0339e.pdf](http://www.fao.org/3/i0339e/i0339e.pdf)
- United Nations.** 2002. *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August–4 September 2002*. New York, USA.
- United Nations Global Compact.** 2015. *Guide to Corporate Sustainability*. New York, USA.
- United Nations Sustainable Development.** 1992. *Agenda 21*. United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992. New York, USA.
- World Commission on Environment and Development.** 1987. *Our Common Future*. Oxford, Oxford University Press.

# Glossary

---

## **Aquaculture farmer organization (AFO):**

A formal voluntary membership organization created for the economic benefit of farmers (and/or other groups) to provide them with services that support their farming activities such as: bargaining with customers; collecting market information; accessing inputs, services and credit; providing technical assistance; and processing and marketing farm products. Formal membership criteria could include payment of membership fees or a percentage of farmers' production. Informal membership criteria could be based on ethnicity or gender (FAO, 2022d).

## **Allocated zone for aquaculture (AZA):**

A marine area where the development of aquaculture has priority over other uses, and therefore will be primarily dedicated to aquaculture. The identification of an AZA results from zoning processes undertaken through participatory spatial planning, whereby administrative bodies legally establish that specific spatial areas within a region have priority for aquaculture development (Macias *et al.*, 2019).

## **Aquaculture:**

The farming of aquatic organisms that implies some sort of intervention in the rearing process to enhance production. Farming also implies individual or corporate ownership of the stock being cultivated (FAO, 2022d).

## **Aquaculture escape:**

The sum of fish escape and escape through spawning (Arechavala-Lopez *et al.*, 2017).

## **Aquaculture governance:**

The set of processes by which a jurisdiction manages its resources with respect to aquaculture, how its stakeholders participate in making and implementing decisions affecting the sector, how government personnel are accountable to the aquaculture community and other stakeholders, and how the respect of the rule of law is applied and enforced (FAO, 2017).

## **Aquatic organisms:**

Any species and subspecies living in water belonging to the animalia, plantae and protista kingdoms, including their reproductive products, gametes, fertilized eggs, seeds and propagules, embryos and juvenile stages of their individuals that might survive and subsequently reproduce (Council of the European Union, 2007).

## **Biodiversity:**

The variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part: this includes diversity within species, between species and of ecosystems (FAO, 2022d).

**Corporate sustainability:**

A company's delivery of long-term value in financial, environmental, social and ethical terms (United Nations Global Compact, 2015).

**Ecosystem services:**

The direct and indirect benefits people obtain from ecosystems including provisioning services, regulating services, cultural services and supporting services (Macias *et al.*, 2019).

**Social acceptability:**

An integral part of sustainability that refers to social licence and the degree to which aquaculture activities are accepted by the local community, by various interest groups and by the wider society (Hishamunda, Ridler and Martone, 2014), as well as a judgement people make about whether an action, attribute, or condition is rated as superior or relatively neutral when compared with potential alternatives (Brunson and Shindler, 2004).

**Social license to operate:**

A community's perceptions of the acceptability of a company and its local operations (Macias *et al.*, 2019).

**Stakeholder:**

A large group of individuals and groups of individuals (including governmental and nongovernmental institutions, traditional communities, universities, research institutions, development agencies and banks, donors, etc.) with an interest or claim (whether stated or implied) which has the potential of being impacted by or having an impact on a given project and its objectives (FAO, 2022d).

**Sustainable development:**

Management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment of continued satisfaction of human needs for present and future generations. Such sustainable development conserves land, water, plants and animal genetic resources and is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable (FAO, 2022d).





# **GUIDELINES IN SUPPORT OF SOCIAL ACCEPTABILITY FOR SUSTAINABLE AQUACULTURE DEVELOPMENT**

This publication presents guidelines prepared and adopted by the GFCM to improve the social acceptability of the aquaculture sector in the Mediterranean and the Black Sea. Specifically, it identifies the governance, environmental, economic, social and ethical aspects that could influence the social acceptability of aquaculture in the region. By recommending practical actions to stakeholders, these guidelines aim to help unlock the potential for sustainable aquaculture development and provide decision-makers with a useful tool for policy development.

---

**General Fisheries Commission for the Mediterranean**

[gfc-secretariat@fao.org](mailto:gfc-secretariat@fao.org)

[www.fao.org/gfc](http://www.fao.org/gfc)

Twitter: @UN\_FAO\_GFCM

Food and Agriculture Organization of  
the United Nations. Rome, Italy