

# TCP/TUR/3101: Developing a roadmap for Turkish marine aquaculture site selection and zoning using an ecosystem approach to management

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## BACKGROUND

In 2006 the Turkish Environmental Law 2872 was amended as Law 5491. According to this law “Marine aquaculture facilities should not be constructed in sensitive areas such as enclosed bays and gulfs and in natural and archeologically protected areas. Fish farms existing in contradiction of this article will be closed after 1 year of the publication of this law”. The notification describing the criteria for aquaculture site selection in enclosed bays and gulfs was published in 2007. The law indicates that monitoring is necessary of fish farms, which already exist in enclosed bays and gulfs, if these sensitive areas have an eutrophication risk as calculated with the TRIX index. If these sensitive areas have high eutrophication risk, marine aquaculture facilities will not be constructed. Fish farms found to be in violation of this notice were under threat to be closed.

## OBJECTIVES OF THE ASSISTANCE

The specific objectives of TCP/TUR/3101 are: (i) to develop a road map for the moving of farms offshore, (ii) to determine the constraints and support needed for this to happen and (iii) to develop a plan of action within an ecosystem approach strategy for the growth of mariculture in Turkey.

## METHODOLOGY, ACTIVITIES AND PARTICIPATION

The project considered the following activities:

- elaboration of an initial map or estimate of conflicting farm distribution in the main marine cage culture areas of Turkey
- identification and analysis of information available about environmental and social issues of cage farming in Turkey through two stakeholder workshops
- initial training of farmers on site selection criteria and management aspects with an ecosystems perspective
- field work to develop a pilot zoning plan
- elaboration of a draft project for the development

of sound mariculture growth with an ecosystem approach in a multi-stakeholder environment

- development of aquaculture information brochures with selected data obtained and agreed in the workshops
- preparation of a road map for the recommended activities and presentation of the plan to government institutions.

All these activities were undertaken in close cooperation with the Ministry of Agriculture and Rural Affairs (MARA) and supported by the technical team consisting of the following: (i) two national consultants specialised in environmental issues, with a wide experience in coastal fish farming, large involvement with farmers and government offices and (ii) two international consultants, with wide expertise on issues of cage farming, site selection and modelling aquaculture impact, expertise in fish farming technologies and offshore aquaculture. Additionally, government counterparts participated actively in all technical activities. Overall coordination and backstopping was provided by FIMA in Rome and with the support of the FAO office in Turkey.

A very relevant element in this project was the participatory approach particularly through the two initial workshops with stakeholders and farmers and final workshop with government authorities.

The first workshop “Developing a Roadmap for Turkish Marine Aquaculture Site Selection and Zoning Using an Ecosystem Approach to Management” was held in Izmir, Turkey on 16 -17 July 2008. This facilitated workshop, attended by 37 participants belonging to 22 national institutions, farmer groups, companies and NGOs, identified issues of conflict between aquaculture and local communities and other sectors and potential solutions, as well as agencies who could implement the solutions and

develop a time-line for action. A road map was developed for the Turkish marine cage culture sector to prepare for the move from inshore sites to offshore sites (1 kilometre from the shore line).

The second workshop (same title), held in Muğla, Turkey from 10 to 11 August 2008 was attended by 62 participants belonging to 5 national institutions, 16 fish farmer companies/clusters, 6 aquaculture support industries, 3 farmer associations. At this workshop, the draft road map was presented and discussed and presentations were made on site selection criteria, offshore cage culture technology and management.

The pilot zoning plan started with field work involving the technical team and farmers in Gerenge Bay and Ildir Bay. Two meetings with authorities in Ankara elaborated further the process and discussed the main issues. The project team met weekly through internet conferences (Skype) to analyse progress in the development of the roadmap. Additionally, several informative flyers on Turkish cage fish production were prepared to inform other users of the coastal zones and to clarify many misconceptions.

The final roadmap and plan of actions was presented to government authorities in a workshop in Ankara at the MARA headquarters in January 2009. Seventy people attended the workshop, most of them belonging to different ministries involved (Environment and Forestry, Tourism, and Agriculture and Rural Affairs). Such meeting demonstrated the willingness from different sectors and institutions to understand this new sector and to make efforts to integrate it in to a well-planned coastal zone management.

### THE ROAD MAP

The roadmap addresses the actions to be taken from the immediate- to the long- term. It also proposes responsibilities, leadership and participation of various institutions.

The proposed roadmap covers 5 years including stages or periods of the first 6 months, the first year, 3 years and 5 years. Starting point could be considered the moment this roadmap is adopted by the Turkish government and adapted to current priorities.

Urgent issues to be addressed during first 6 months and actions include: i) assisting small farmers that are still inshore, ii) reviewing of the monitoring system for the farms, iii) implementation of a better planning system, iv) improving coordination between related ministries and institutions, and v) producing solutions for urgent issues such as logistic support (e.g., jetties and facilities for offshore farms). Some immediate action will be transitory until a more formal process is in place and the creation of the new institutions allow for more permanent measures. In this respect, a framework of at least 12 months is proposed for such needed transitory measures.



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*Fish cages in tourist area, Gulluk Bay/Muğla*

During the first year period, the most relevant action suggested is the establishment of a inter-ministerial “Special Commission for Mariculture Development” to carry out the following tasks: coordination and planning process, education and training aspects, public relations activities, investment and credit issues, amending current legislation on site rental period and rental charges, identifying research priorities and ICZM among other duties.

Within 3-5 year period, there shall be a process of strengthening institutional organization. Other activities include education and training programs, data collection and monitoring, setting up of databases, assessment of carrying capacities of allocated mariculture zones, revision of implementation of current aquaculture regulations and preparation of a new/separate “aquaculture legislative act”.

This has been a model project with very close and coordinated work between FAO and MARA but also in close contact with other stakeholders such as the farmers themselves and other users of the coastal zones.

The roadmap for mariculture development as well as the pilot zoning plan could also be used as a model for other Mediterranean countries. The pilot zoning plan could be used by the CAQ (Committee of Aquaculture of the GFCM) and tested in other member countries. In fact, the project approach and results were presented as an example of an ecosystem approach to management of aquaculture sector during a side event of the 29th session of the Committee on Fisheries held in Rome.

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