



United Nations Environment Programme



Distribution
RESTRICTED
UNEP/WG.15/INF.6
24 February 1978
ENGLISH
Original : ENGLISH

Expert Consultation on Aquaculture
Development in the Mediterranean
Region convened by the Government of
Greece in cooperation with FAO/GFCM
and UNEP

Athens, 14 - 18 March 1978

REGIONAL ACTIVITIES FOR THE DEVELOPMENT OF AQUACULTURE IN THE MEDITERRANEAN REGION

Note prepared by the FAO (GFCM)

REGIONAL ACTIVITIES FOR THE
DEVELOPMENT OF AQUACULTURE IN THE MEDITERRANEAN

1. The development of aquaculture in the Mediterranean has received the attention of the General Fisheries Council of the Mediterranean of FAO since 1967, when it appointed a special Working Party to implement a programme of work "to promote national and international action to fully utilize brackish and hypersaline water resources and to identify problems requiring further research". The Working Party undertook a preliminary assessment of the potential for brackishwater aquaculture development in the region and organized a Cooperative Research Programme on Aquaculture (COPRAQ) from 1970 to carry out research on problems of high priority identified by the Council. A total of 30 institutions participate in the Programme on a voluntary basis with FAO providing the Secretariat for Coordination. This Programme serves to stimulate research on the subject and the meetings of COPRAQ research workers convened by the Council, assist in developing interaction between investigators and dissemination of the results of research conducted.

Strategy for Aquaculture Research and Development

2. The working paper UNEP/WG.15/3 presented at this Consultation summarizes the available information at present on the main culturable species and the state of technology relating to their culture.

The culture systems described can be broadly divided into three :

- (a) those for which there is a fairly long tradition in at least some of the countries of the region and for which technical and economic viability are known;
- (b) those for which research has reached a stage where there is an immediate need for pilot production projects to determine economic and technical feasibility;
- (c) those that are still in an experimental stage.

3. The global strategy for aquaculture development recommended by Regional Aquaculture Planning Workshops 1-3/ and the FAO Technical Conference on Aquaculture in Kyoto, Japan 4/ consists of :

- i) the selection of a small number of production systems for large-scale application, rather than numerous species, and a variety of production

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- 1/ Aquaculture Planning in Africa. Report of the First Regional Workshop on Aquaculture Planning in Africa, Accra, Ghana, 2-17 July 1975, Rome, FAO, AOC/REP/75/1 114 p.
 - 2/ Aquaculture Planning in Asia. Report of the Regional Workshop on Aquaculture Planning in Asia, Bangkok, Thailand, 1-17 October 1975, Rome, FAO, AOC/REP/76/2: 154 p.
 - 3/ Planificación de la Acuicultura en América Latina. Informe de la reunión consultiva regional de planificación sobre acuicultura en América Latina, Caracas, Venezuela, 24 noviembre - 10 diciembre 1975, Rome, FAO, AOC/REP/76/3: 173 p.
 - 4/ Report of the FAO Technical Conference on Aquaculture. Kyoto, Japan, 26 May - 2 June 1976, FAO Fish. Rep (188): 93 p.

systems that are the subjects of research;

- ii) implementation of pilot projects or large-scale production programmes based on the selected systems using known technologies;
- iii) provision of appropriate support services for production programmes on a regional basis in the form of (a) adaptive multidisciplinary research to enable transfer to technology through modifications to suit local conditions and to improve techniques and (b) training of aquaculture practitioners.

4. Such a strategy would appear very suitable for the Mediterranean region also in the present state of the industry and the potential for future development. The culture of oysters and mussels, for which there is a tradition and adequate technology base, can be considered for expansion or introduction, if suitable sites can be selected and necessary markets identified.

5. Mullet and eel culture techniques have also a tradition, at least in some countries of the region, and it should be possible to undertake large-scale production programmes in other countries incorporating recently developed improvements, preceded, if necessary, by pilot operations.

6. Research on the culture of Dicentrarchus Labrax and Sparus aurata appears to have reached a stage that warrants pilot-scale production in sufficiently large fish farms, either in mono- or polyculture systems. Adequate basin information is also available for pilot experiments in the production of shrimps in selected localities.

7. Whether intensive, semi-intensive or extensive culture practices should be adopted in respect of each of the systems mentioned above, will depend on prevailing conditions in the areas and countries selected for the projects. The availability and cost of inputs and the return on investment will vary according to local conditions and therefore decisions will have to be based on these.

8. Although it is roughly estimated that there are over 1 million hectares of brackishwater areas available in the Mediterranean region for aquaculture, how much of this area is available and suitable for aquaculture has to be determined through detailed site surveys. In any future plan of aquaculture development in the Mediterranean, suitable sites will have to be selected for pilot or production programmes with due consideration to engineering, bio-technical and socio-economic aspects. Farms and hatcheries as needed will have to be designed and constructed on selected sites. The necessary inputs like seed and feed will have to be produced. The farms will have to be operated by adequately trained personnel. When the pilot projects become successful, they could become demonstration and training centres for the region as a whole.

9. There will be many advantages in linking the projects, particularly the pilot projects, with selected aquaculture research centres, and particularly those already participating in CDPRAQ, so that the necessary research to adapt or improve the technologies can be undertaken conveniently. When selecting project sites this aspect has also to be borne in mind.

10. For the implementation of both pilot and large-scale production programmes, it will be essential to train an adequate number of practical aquaculturists (as opposed to aquaculture scientists). Such training has to be of a multidisciplinary

nature and carried out in a centre where facilities for intensive practical training are available. The lack of suitably trained personnel is very often the most serious constraint to aquaculture development.

11. In pursuance of the global strategy for aquaculture development referred to on page 2, FAO through UNDP/FAO Aquaculture Development and Coordination Programme (AOCPP) is implementing pilot and production projects and in support of these developing networks of aquaculture research, training and information centres in Asia, Africa and Latin America. Similar activities, if undertaken in the Mediterranean, could establish close links with these regional networks with mutual advantages.

Follow-up Action

12. It is suggested that this Consultation should consider the lines of action indicated above, along with any others that may be proposed by participants during discussions, and make specific recommendations for follow-up action. There are major advantages in concentrating efforts in a small number of centres in order to obtain maximum benefits in a short period of time, particularly since the financial resources and expertise of the type suggested, it may be necessary to convene, as soon as possible after the Consultation, a small expert group to work out the details of the project or projects to be implemented.