Report of the

EXPERT CONSULTATION ON THE PROPOSED SUB-COMMITTEE ON AQUACULTURE OF THE COMMITTEE ON FISHERIES

Bangkok, Thailand, 28-29 February 2000
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PREPARATION OF THIS DOCUMENT

This is the final version of the report of the Expert Consultation on the Proposed Sub-Committee on Aquaculture of the Committee on Fisheries, held in Bangkok, Thailand, 28 – 29 February 2000.

Distribution:

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Participants at the Consultation
Other interested nations and national and international Organizations
FAO Fisheries Department
Fishery Officers in FAO Regional Offices
ABSTRACT

This is the report of the Expert Consultation on the Proposed Sub-Committee on Aquaculture of the Committee on Fisheries, which was held, in response to the request by the 23rd Session of COFI, in FAO Regional Office for Asia and the Pacific in Bangkok, Thailand, from 28 to 29 February 2000. Thirty-three participants from 14 countries, two regional intergovernmental organizations and two international non-governmental organizations attended the consultation. The expert consultation confirmed that the growing importance of aquaculture, including culture-based fisheries, and its interactions justified a focused global intergovernmental mechanism to provide the opportunity for information exchange, discussion and consensus-building among various parties interested in aquaculture development and to establish an efficient means to advise and guide COFI and FAO. The consultation concluded that the establishment of such a sub-committee would be in line with the FAO Conference Resolution 13/97 and the expenditure of funds on the sub-committee would be justified. The consultation identified major issues and prioritized six key areas that need to be addressed and stated that the role of aquaculture for enhancing food security and economic development in FAO member countries was a primary priority.
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INTRODUCTION

1. The Expert Consultation on the proposed Sub-Committee on Aquaculture of the Committee on Fisheries was held in the FAO Regional Office for Asia and the Pacific, Bangkok, on 28-29 February 2000. The Consultation was attended by 30 participants (Appendix B).

OPENING OF THE SESSION

2. The Consultation was welcomed by Mr. Veravat Hongskul, Senior Fishery Officer for FAO in Asia-Pacific, and opened by Mr. Dong Quinsong, Deputy Regional Representative and Officer-in-Charge of the FAO Regional Office for Asia and the Pacific. Mr. Jiansan Jia, Chief of the Inland Water Resources and Aquaculture Service, Fisheries Department, FAO, provided an introduction on the purpose and background of the Consultation.

ADOPTION OF THE AGENDA

3. The Agenda adopted by the Expert Consultation is attached as Appendix A. The documents which were presented at the Expert Consultation are shown in Appendix C.

ELECTION OF THE CHAIRPERSON AND VICE-CHAIRPERSON, AND DESIGNATION OF A DRAFTING COMMITTEE

4. Mr. Glenn Hurry was unanimously elected Chairperson of the Consultation, and Mr. Yugraj Singh Yadava was unanimously elected as Vice-Chairperson.

5. The Expert Consultation also elected a Drafting Committee consisting of Mr. Uwe Barg, Mr. Devin Bartley, Mr. Tim Carey, Mr. Vincent Sagua, and Mr. Yugraj Singh Yadava.

BACKGROUND

6. The importance of aquaculture, its development and its growing social and economic benefits and contributions, in particular to total fishery landings and supply of fish as food for human consumption, have been increasingly recognized during the last decade. Aquaculture has expanded to one of the fastest growing food production sectors, continuously exceeding annual peaks in global production and value, with production levels reaching 39.4 million metric tonnes and with a total value of USD 52.5 billion in 1998. Aquaculture contributed 31.1% of total global fishery production in 1998. Developing countries produce about 90% of total global aquaculture output for both domestic consumption and export. Low income food deficit countries account for over 80% of global aquaculture production. Aquaculture production has increased more rapidly in developing countries than in industrialized countries. The FAO Ministerial Meeting on Fisheries held in Rome, 10 – 11 March 1999, "...recognized the growing importance of environmentally sound aquaculture as a source of

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1 Aquaculture is defined by FAO, for statistical purposes (FAO/FIDI, 1999) as "Aquaculture is the farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Farming implies some sort of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture while aquatic organisms which are exploitable by the public as a common property resource, with or without appropriate licences, are the harvest of fisheries." As envisaged by the Code of Conduct for Responsible Fisheries (FAO, 1995), aquaculture is considered to include culture-based fisheries.
fish supplies for human consumption and attached high priority to ensuring the contribution of sustainable aquaculture to food security, income and rural development”. The Bangkok Declaration that was developed during the NACA/FAO Conference on “Aquaculture in the Third Millenium Conference” held in Bangkok, Thailand, 20-25 February 2000, confirmed the importance of aquaculture and identified trends and issues, and declared support for a strategy for aquaculture development beyond 2000 (see Appendix F).

7. At the 22nd Session of the Committee on Fisheries (COFI) held in Rome at FAO Headquarters from 17 to 20 March 1997, the importance of aquaculture as a major provider of food and income for the member countries was emphasized. During the discussion of the major issues in world fisheries, COFI underlined the valuable potential of aquaculture in meeting the expected increased demand for aquatic products. In the discussion of the implementation of the FAO Programme of Work and Budget 1996/1997, the Medium-Term Plan for 1998/2003 and the proposed Programme of Work and Budget 1998/99, the mandate of FAO for fisheries and aquaculture and its leading role as a specialized agency within the UN system was reaffirmed. COFI recalled the increasing contribution made by aquaculture to food security, employment and income of rural populations and, as a consequence, called for special attention to be given to the sustainable development of aquaculture, inland fisheries enhancements and culture-based fisheries.

8. The report of the 22nd Session of COFI stated: “Given the increasing importance of aquaculture as a means of providing employment and contributing to food security, the Chinese delegation proposed that a Sub-Committee on Aquaculture be established under the Committees auspices. Due to budgetary constraints and other factors, some delegations questioned whether such a sub-committee was needed to be established or if the work could be accomplished by the Committee. A number of delegations supported the Chinese proposal. The Chinese delegation expressed the willingness of its Government to assist FAO in organizing an Expert Consultation in order to work out a concrete programme for consideration by the Committee at its 23rd Session. It was recognized that extra-budgetary funds would be required for such a consultation.”

9. As stated in the report of its 23rd Session, COFI “agreed that sustainable aquaculture could have high potential in securing food availability and poverty alleviation in developing countries. There was broad support in the Committee to the proposal to establish a COFI Sub-Committee on aquaculture. Noting that extra-budgetary funds for such a body had not yet been identified, suggestion was made that consideration be given to funding such a sub-committee from Regular Programme resources. The Committee agreed that the above priorities should be reflected in the Programme of Work and Budget 2000-2001”.

10. Funding for the Expert Consultation on the Sub-Committee was requested under the “real growth” budgetary option presented to the Conference but this option was not agreed on. As a consequence, and in order to reduce the cost to FAO while ensuring broad participation, it was considered opportune to hold the Expert Consultation in conjunction with the Conference on Aquaculture in the Third Millennium, organized by the Network of Aquaculture Centers in Asia and the Pacific (NACA), in cooperation with FAO and hosted by the Government of Thailand, on 20-25 February 2000 in Bangkok, Thailand.
OBJECTIVES OF THE EXPERT CONSULTATION

11. The objectives of the Expert Consultation were:

- to review key issues in aquaculture and to determine those of international importance requiring the establishment of an intergovernmental forum for the development of norms and action aiming at sustainable contribution of aquaculture to food security and economic development in FAO Member Countries;
- to study the practical implications of the establishment of the proposed Sub-Committee on Aquaculture, including the determination of benefits for FAO Member Countries and interested parties and the financial implications of holding regular biennial meetings;
- to elaborate and draft Terms of Reference and Rules of Procedure of, and outline a possible Programme of Activities for the Sub-Committee, including a draft agenda for the first two sessions of the Sub-Committee.

ASSESSMENT OF THE NEED FOR A SUB-COMMITTEE ON AQUACULTURE

12. The establishment of an intergovernmental statutory body dealing specifically with aquaculture, has been proposed by a number of delegations to the FAO Committee on Fisheries (COFI).

13. Therefore, the Expert Consultation concurred:

- with the growing contribution of aquaculture to global food security and economic development;
- with the diversity of international trends that present challenges to the sector and call for greater international cooperation and normative work;
- with the increasing need to address aquaculture in food security issues in a global forum; and
- that a sub-committee dealing with these issues would facilitate and complement the work of COFI.

14. The Expert Consultation confirmed that a global intergovernmental mechanism is needed that can provide the opportunity for information exchange, discussion and consensus-building among various parties interested in global aquaculture development and provide means to advise and guide COFI and FAO. The Expert Consultation confirmed that the growing importance of the subject and its interactions justified a specific focus.

15. In addition, as a result of the Conference on Aquaculture in the Third Millennium and discussions of the resulting “Bangkok Declaration on Aquaculture”, there are issues relevant to aquaculture development that must be addressed on a global scale and by an intergovernmental body. The group reviewed existing mechanisms and instruments and concluded that, worldwide, there is no intergovernmental global forum having sustainable aquaculture development as a primary and exclusive focus and target, with a principal and comprehensive mandate for discussion, decision and agreement on technical and policy matters, nor is there the apparent potential for such a forum elsewhere.

16. The Expert Consultation noted the statement of the 1999 Ministerial Meeting on Fisheries, “FAO is the most appropriate forum for addressing vital global fisheries issues and accordingly call on the Organization to assign higher priority and increased share of FAO’s
Regular Programme resources to its fisheries programme activities”. The Expert Consultation considered that FAO provides the best mechanism for meeting these needs in that FAO:

- provides a global forum for comprehensive, open and transparent treatment of technical, trade, and policy topics;
- provides an official interface between governments and links to other relevant organizations; and
- is a repository of data from Members and a source of information on aquaculture and fisheries.

17. The subsidiary and statutory bodies of FAO are valuable fora to aid Members in implementation of the FAO Medium-Term Strategy. However, the creation of new bodies within FAO must be undertaken carefully to ensure efficacy and efficiency. The Expert Consultation concluded that the establishment of a Sub-Committee would be in line with Conference Resolution 13/97 “Review of FAO Statutory Bodies” which states that the following factors should be taken into account in establishing new technical bodies and subsidiary bodies:

a) Centrality to the FAO mandate and the Organization's current priorities as expressed by FAO Members and reflected in planning documents.

b) Clarity of the definition of the task, which should normally be of limited duration.

c) Positive impact of the Body's work at the level of FAO Members.

d) FAO's comparative advantage, thereby avoiding overlap and creating synergy with the work of other Bodies.

e) Proportion of the FAO Membership to which the work of the proposed body is of importance with due regard to the economic capacity of less-advantaged members, including least developed countries and small-island developing states.

f) Willingness of their Members to contribute financially and through non-monetary inputs to the work of the Body, especially where the Body will serve a more limited number of countries, with due regard to the economic capacity of their less advantaged members and the availability of other financial mechanisms.

18. In light of the above considerations the Expert Consultation concluded that the formation of a Sub-Committee was justified and that terms of reference, an overview of relevant issues to be addressed, and possible elements for future programme of activities for the Sub-Committee be drafted for consideration by the next meeting of COFI.

PROPOSED TERMS OF REFERENCE FOR THE SUB-COMMITTEE ON AQUACULTURE

19. The Expert Consultation discussed and formulated the following Terms of Reference for the Sub-Committee on Aquaculture:
20. The principal functions of the Sub-Committee are twofold:

a) to advise COFI on technical and policy matters related to aquaculture, and

b) to advise COFI and FAO as to the work to be performed by the Organization in the subject matter field of aquaculture.

21. Specifically the Sub-Committee would:

a) identify and discuss major issues and trends in global aquaculture development;

b) determine those issues and trends of international importance requiring actions to increase the sustainable contribution of aquaculture to food security, economic development, and poverty alleviation in FAO member countries;

c) recommend and/or agree on international action to address aquaculture development needs;

   - advise on mechanisms to prepare, to facilitate and to implement action programmes identified, as well as on the possible/expected contributions of partners;
   - to liaise with other relevant groups and organizations with a view to promote harmonization and to endorse policies and actions, as appropriate;
   - in particular, strengthen international collaboration to assist developing countries in the implementation of the Code of Conduct for Responsible Fisheries.

d) request and/or promote the preparation of technical reviews and elaboration of issues and trends of international importance for example, on agreements on international norms and standards on food safety and quality, biotechnology and biosafety, environment, use of inputs, production practices, and product labelling.

e) address specific matters relating to aquaculture referred to it by COFI or the Director-General, FAO.

22. The venue and frequency of meetings should be cost-effective and take advantage of existing facilities and existing mechanisms where possible. In order for timely input of material from the sub-committee to COFI, meetings should be held biennially and approximately 6 months prior to COFI.

23. In line with Conference Resolution 13/97, COFI is invited to consider a schedule for the timely review of the usefulness of Sub-Committee.

RULES OF PROCEDURES

24. The Rules of Procedures of the Sub-Committee would be, mutatis mutandis, those of the parent body, COFI (see Appendix D for COFI Rules of Procedures). The Consultation recognized that there may well be significant benefits associated with the participation in the proposed Sub-Committee of international governmental as well as non-governmental organizations, representing views of the private sector, interests of social and environmental advocacy organizations, and other stakeholders, in accordance with regular procedures and practices. Participation of established FAO partners and regional networks should be encouraged where the sub-committee feels that they bring relevant information to the discussions.
OVERVIEW OF INTERNATIONAL ISSUES AND TRENDS IN AQUACULTURE DEVELOPMENT

25. The Expert Consultation reviewed key issues in aquaculture development which are of global, inter-regional, and international importance, to be taken up by the Sub-Committee. Issues addressed by the Sub-Committee should have one or more of the following characters:

- they should have a transboundary component;
- they should have the possibility to lead to international agreements; and/or
- they should utilize FAO's comparative advantage.

26. In selecting and prioritizing the major issues and key areas of international concern, the Expert Consultation emphasized the critical importance of addressing issues of food security and poverty alleviation at local, national, regional and global levels. The role of aquaculture for enhancing food security and economic development in FAO Member nations to alleviating poverty was therefore considered a primary priority. The Expert Consultation identified six key areas to be addressed by the Sub-Committee. The six priority areas are:

- The role of aquaculture in food security, economic development and poverty alleviation
- Consumer issues (food safety, quality and certification)
- Human resource development (training and education), research and extension
- Environmental aspects of aquaculture development
- Institutional capacity building and policy development; and
- Statistics, data and information management

27. More specific topics under these general areas are listed in Appendix E.

28. The Expert Consultation recognized that aquaculture is an extremely dynamic sector and that priorities may change and new issues may arise. The Sub-Committee should be able to respond to such changes as the need arises and amend the above list of priority areas and the general items in Appendix E. Recognizing that other groups and institutions may also take up these issues, the sub-committee should complement such efforts as appropriate.

29. A more detailed presentation of the above issues is presented in the Bangkok Declaration and Strategy (Appendix F).

FUTURE PROGRAMME OF ACTION

30. The Expert Consultation discussed possible contributions that the Sub-Committee could make to sustainable aquaculture development and identified three specific areas as warranting higher priority because of their potential impact and their links with on-going activities of FAO:

- Improving the collection and analysis of statistics leading to the documentation and quantification of the unfulfilled and fulfilled potential of aquaculture to increase food security and poverty alleviation.
- Support of the implementation of the FAO Code of Conduct for Responsible Fisheries through the development and refinement of best management practices in aquaculture.
• Enhancement of institutional capacity building through networking and strengthened regional and inter-regional collaboration in all areas and in particular in Africa and Latin America and the Caribbean.

31. The Expert Consultation felt that these three activities could be considered as elements of the provisional agenda for the first meeting of the Sub-Committee. Also included in the agenda of the first meeting would be the identification of appropriate follow-up activities in regard to the above three areas and the selection of new topics for subsequent meetings of the Sub-Committee.

FINANCIAL AND BUDGETARY REQUIREMENTS

32. The establishment of an intergovernmental body has administrative and financial implications for the FAO Secretariat and for the governments participating in the work of such a body. The Expert Consultation agreed that the aquaculture sector is sufficiently important to justify the expenditure of funds on the Sub-Committee and Members of FAO would be better served by expenditures on the Sub-Committee.

33. For FAO, the convening and servicing of sessions, as well as the preparation, processing and distribution of documentation and follow-up work, will involve additional staff time, travel costs and possible contractual services. The Expert Consultation was informed by the Secretariat that, depending on the items covered in the Agenda, it is estimated that approximately six person/months per year of professional staff time and an equal amount of general service staff time would be required and should be reflected in the Programme of Work and Budget. To the extent that a portion of this work is already undertaken by FAO staff as part of regular programme activities, additional resources would not be required.

34. The Expert Consultation was informed that the direct costs for a meeting session include documentation, translation, and interpretation. Indicative costs are presented here. Experience has shown that four days of interpretation (seven sessions) with five languages cost US$ 38,000; with four languages the cost is US$ 28,800. Translation is approximately US$ 500/1000 words; COFI usually aims at producing four major documents of a total of 25,000 words, i.e. a cost of US$ 12,500. If documents are available for translation well in advance of the required date, translation fees can be substantially reduced (as much as 50%). Costs of meeting facilities and staff time are omitted from these considerations as they will change depending on venue.

35. It should be recognized that during the course of the Sub-Committee's work, extra costs may arise from time to time, for example in the creation of ad hoc groups, and commissioning of review papers. Creative means to meet these costs are available and should be explored, e.g. linking of COFI Sub-Committee meetings with other conferences and taking advantage of other research initiatives that might be relevant to the work of the Sub-Committee. The funding mechanism of the COFI Sub-Committee on Fish Trade could also serve as a useful model in this regard.

36. For participating governments and observers the additional financial obligations consist mainly of provision of information, and direct participation in meetings.

37. The participant from the People's Republic of China indicated that there is an offer from the Government of the People's Republic of China to host the first meeting of the Sub-Committee on Aquaculture and cover local costs.
ADOPTION OF THE REPORT

38. This report was adopted by the Expert Consultation on 29 February 2000. The Expert Consultation recommended that this report be presented to the 24th Session of COFI.
APPENDIX A

Agenda

1. Opening of the Consultation
2. Procedural matters
3. Overview of international issues and trends of aquaculture development
4. Justification for the establishment of a COFI Sub-Committee on Aquaculture
5. Terms of Reference and Rules of Procedures of the Sub-Committee on Aquaculture
6. Future programme of activities
7. Financial and budgetary requirements
8. Drafting of the report
9. Adoption of the draft Report
APPENDIX B

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APPENDIX C

List of Documents

F1:COFI-AQ/2000/1  Provisional Agenda
F1:COFI-AQ/2000/2  Prospectus
F1:COFI-AQ/2000/Inf.1  Provisional List of Participants


CONFERENCE RESOLUTION 13/97 – A. Review of FAO Statutory Bodies
APPENDIX D

Rules of Procedures of the Committee on Fisheries
Regarding Attendance and Membership

I. RULES OF PROCEDURES OF THE COMMITTEE ON FISHERIES

Rule I - Officers

1. At the first session in each biennium, the Committee shall elect a Chairman, a first Vice-Chairman and four other Vice-Chairmen from among the representatives of its Members, who shall remain in office until the election of a new Chairman and new Vice-Chairmen and who will act as a Steering Committee during sessions.

2. The Chairman, or in his absence the first Vice-Chairman, shall preside at meetings of the Committee and exercise such other functions as may be required to facilitate its work. In the event of the Chairman and the first Vice-Chairman not being able to preside at a meeting, the Committee shall appoint one of the other Vice-Chairmen or, failing these, a representative of its Members to take the chair.

3. The Director-General of the Organization shall appoint a secretary, who shall perform such duties as the work of the Committee may require and prepare the records of the proceedings of the Committee.

Rule II - Sessions

1. The Committee shall hold sessions as provided in Rule XXX.4 and 5 of the General Rules of the Organization.

2. Any number of separate meetings may be held during each session of the Committee.

3. The sessions of the Committee shall in the years immediately following a regular session of the Conference be held at the seat of the Organization; in other years they may be held in another place in pursuance of a decision taken by the Committee in consultation with the Director-General.

4. Notice of the date and place of each session shall normally be communicated at least two months in advance of the session to all Member Nations and Associate Members of the Organization, and to such nonmember States and international organizations as may have been invited to attend the session.

5. Each Member of the Committee may appoint alternates and advisers to its representative on the Committee.

6. Presence of representatives of a majority of the Members of the Committee shall constitute a quorum for any formal action by the Committee.
Rule III - Attendance

1. Participation of international organizations in an observer capacity in the work of the Committee shall be governed by the relevant provisions of the Constitution and the General Rules of the Organization, as well as by the General Rules of the Organization on relations with international organizations.

2. Attendance by nonmember States of the Organization at sessions of the Committee shall be governed by the principles relating to the granting of observer status to nations adopted by the Conference.

3. (a) Meetings of the Committee shall be held in public, unless the Committee decides to meet in private for discussion of any items on its agenda.

(b) Subject to the provisions of subparagraph (c) below, any Member Nation not represented on the Committee, any Associate Member or any non-member State invited to attend in an observer capacity a session of the Committee may submit memoranda and participate without vote in any discussion at a public or private meeting of the Committee.

(c) In exceptional circumstances, the Committee may decide to restrict attendance at private meetings to the representative or observer of each Member Nation of the Organization.

Rule IV - Agenda and documents

1. The Director-General, in consultation with the Chairman of the Committee, shall prepare a provisional agenda and shall normally circulate it at least two months in advance of the session to all Member Nations and Associate Members of the Organization and to all nonmember States and international organizations invited to attend the session.

2. All Member Nations of the Organization and Associate Members acting within the limits of their status may request the Director-General normally not less than 30 days before the proposed date of the session to insert an item in the provisional agenda. The Director-General shall thereupon circulate the proposed item to all Members of the Committee, together with any necessary papers.

3. The first item on the provisional agenda shall be the adoption of the agenda. The Committee in session may by general consent amend the agenda by the deletion, addition or modification of any item, provided that no matter referred to it by the Council or on the request of the Conference be omitted from the agenda.

4. Documents not already circulated shall be dispatched with the provisional agenda, or as soon as possible thereafter.

Rule V - Voting

1. Each Member of the Committee shall have one vote.

2. The decisions of the Committee shall be ascertained by the Chairman, who shall resort, upon the request of one or more Members, to a vote, in which case the pertinent provisions of Rule XII of the General Rules of the Organization shall apply mutatis mutandis.
**Rule VI - Records and reports**

1. At each session, the Committee shall approve a report to the Council embodying its views, recommendations and decisions, including when requested a statement of minority views. Any recommendations adopted by the Committee which affect the programme or finances of the Organization shall be reported to the Council with the comments of the appropriate subsidiary committees of the Council.

2. Reports of sessions shall be circulated to all Member Nations and Associate Members of the Organization and to nonmember States invited to attend the session, as well as to interested international organizations entitled to be represented at the session.

3. The comments of the Committee on the report of any of its subsidiary bodies and, if one or more Members of the Committee so request, the views of those Members shall be incorporated into the Committee's report. If any Member so requests, this part of the Committee's report shall be circulated as soon as possible by the Director-General to the States or international organizations which normally receive the reports of the subsidiary body in question. The Committee may also request the Director-General, in transmitting the report and records of its proceedings to Members, to call particular attention to its views and comments on the report of any of its subsidiary bodies.

4. The Committee shall determine the procedures in regard to press releases concerning its activities.

**Rule VII - Subsidiary bodies**

1. In accordance with the provisions of Rule XXX.10 of the General Rules of the Organization, the Committee may, when necessary, establish subcommittees, subsidiary working parties or study groups, subject to the necessary funds being available in the relevant chapter of the approved budget of the Organization, and may include in the membership of such subcommittees, subsidiary working parties or study groups Member Nations that are not Members of the Committee and Associate Members. The membership of such subcommittees, subsidiary working parties and study groups established by the Committee may include States which, while not Member Nations or Associate Members of the Organization, are members of the United Nations, any of its specialized agencies or the International Atomic Energy Agency.

2. Before taking any decision involving expenditure in connection with the establishment of subsidiary bodies, the Committee shall have before it a report from the Director-General on the administrative and financial implications thereof.

3. The Committee shall determine the terms of reference of its subsidiary bodies, who shall report to the Committee. The reports of the subsidiary bodies shall be made available for information to all members of the subsidiary bodies concerned, all Member Nations and Associate Members of the Organization, nonmember States invited to the sessions of the subsidiary bodies, and to interested international organizations entitled to attend such sessions.
Rule VIII - Suspension of Rules

1. The Committee may decide to suspend any of the foregoing Rules of Procedure, provided that 24 hours' notice of the proposal for the suspension has been given and that the action contemplated is consistent with the Constitution and the General Rules of the Organization. Such notice may be waived if no Member objects.

Rule IX - Amendment of Rules

1. The Committee may, by a two-thirds majority of the votes cast, amend its Rules of Procedure, provided that such amendment is consistent with the Constitution and the General Rules of the Organization. No proposal for the amendment of these Rules shall be included in the agenda of any session of the Committee unless notice thereof has been dispatched by the Director-General to Members of the Committee at least 30 days before the opening of the session.

II. GRANTING OF OBSERVER STATUS (IN RESPECT OF NATIONS)

Granting of observer status

1. At its Eighth Session the Conference requested the Council to consider and suggest amendments to the Constitution and General Rules of the Organization for the purpose of eliminating any possible ambiguity with respect to the question of observer status, with special reference to the definition of such status, the establishment of criteria for the granting of the status and the consideration of all juridical and practical aspects of the problem.

Observer status in respect of nations

2. The Ninth Session of the Conference accepted the Council's view that the objective would be fulfilled by defining (a) the categories of nations that may be invited to send observers to meetings of the Organization, (b) the authority that may grant the status of observer to such nations, and (c) the status to be accorded to observers; and that, since there were very few provisions in the Constitution and General Rules of the Organization relating to observer status in respect of nations, it was preferable to formulate a statement of principles on the subject.

3. Therefore, after introducing certain amendments to the text which the Council had proposed (see Report of the Twenty-sixth Session of the Council), the Conference adopted the following Resolution:

Resolution No. 43/57 - Observer status in respect of nations

THE CONFERENCE

Considering that Article III of the Constitution and the relevant General Rules of the Organization regarding observer status are not sufficiently clear;

Adopts the statement of principles relating to the granting of observer status to nations set forth in Appendix C to this report;
Requests all bodies set up under the aegis of the Organization in accordance with Articles VI and XIV of the Constitution to bring their statutes and rules of procedure into harmony with the aforementioned principles at the earliest possible date.

1. The Conference considered that the principles set out in Section A, paragraph 2 of the statement of principles referred to above should be included in the General Rules of the Organization and consequently requested the Council to submit to the next session of the Conference a draft amendment to Rule XXVI.9 (new Rule XXV.9)

APPENDIX PART A - STATEMENT OF PRINCIPLES RELATING TO THE GRANTING OF OBSERVER STATUS TO NATIONS

Member Nations and Associate Members

1. Sessions of the Conference, Council, commissions and committees. Member Nations and Associate Members of the Organization may not attend any session of the Conference in an observer capacity. This principle shall also apply to members of the Council and of the commissions and committees established under Article VI or Article XIV of the Constitution with respect to attendance at the sessions of such bodies.

2. Executive, private or closed meetings of the Council. Rule XXV.9(c) of the General Rules of the Organization provides that any Member Nation not represented on the Council and any Associate Member may submit memoranda and participate without vote in any discussion of the Council. In interpreting this Rule it will be understood that, as a general practice, Member Nations of the Organization that are not members of the Council, or Associate Members, should be admitted to private meetings, unless the Council decides otherwise in cases of necessity.

3. Regional or technical meetings (including those of regional commissions set up under Article VI of the Constitution). Any Member Nation or Associate Member may, on request, participate in the capacity of observer in any regional or technical meeting of the FAO governing or subsidiary bodies, or any regional or technical meeting of which the Director-General on the authority of the Council assumes the initiative or has the primary organizing responsibility, even though the Member Nation or Associate Member does not geographically belong to the particular region, always provided that the Member Nation or Associate Member has a definite interest in the subject matter to be discussed. Notice of the intention to attend any such meeting should be given to the Director-General at least 15 days before the meeting, it being understood that notice may be waived by the meeting itself.

4. Committees consisting of a limited number of Member Nations and Associate Members. Committees consisting of a limited number of Member Nations and Associate Members established by the Conference or its commissions or by the Council, under Article VI of the Constitution, or Rules XIV, XV or XXV.10 of the General Rules of the Organization, shall not be open to attendance by observers of Member Nations or Associate Members that are not members of such committees unless otherwise determined by the Conference, the said commissions or the Council. 5. Dependent territories of and trust territories administered by Member Nations. The Director-General may draw the attention of a metropolitan power or administering authority to the desirability of its participation in a regional or technical meeting of interest to a particular dependent or trust territory.
APPENDIX PART B - NON-MEMBER STATES

1. States which, while not Member Nations or Associate Members of the Organization, are members of the United Nations, any of its specialized agencies or the International Atomic Energy Agency may, on request, and subject to the provisions of paragraph B.4, be invited by the Conference or the Council to be represented by an observer at a session of the Conference or Council.

2. Such nonmember States may, on request and with the approval of the Council, attend regional or technical meetings of the Organization. In cases of urgency, however, where there is insufficient time to consult the Council, the Director-General may on request invite such nonmember States to send an observer to such meetings.

3. States which are not Members or Associate Members of the Organization or members of the United Nations, any of its specialized agencies or the International Atomic Energy Agency shall not be permitted to send observers to any meeting of the Organization.

4. Former Member Nations of the Organization that have withdrawn leaving arrears of contributions shall not be permitted to send an observer to any meeting of the Organization until such time as they have paid up all such arrears or the Conference has approved an arrangement for the settlement thereof, or unless the Council, in special circumstances, decides otherwise with respect to such attendance.

5. Should an application for membership have been received by the Organization, the requesting authority may, subject to the provisions of the preceding paragraph 4, be invited by the Council to participate in an observer capacity in technical meetings, in which such authority is regarded as having a technical interest, pending a decision of the Conference on the application.

6. Rules XXIV.1(d)(v) and XXXII.2 of the General Rules of the Organization shall be interpreted in the light of the principles laid down in paragraphs B.3 and B.4. The occasion may arise when a nonmember of the Organization which is, however, a member of the United Nations, any of its specialized agencies or the International Atomic Energy Agency needs to be consulted, because of emergency conditions, on some technical action, in which case the restrictive nature of paragraphs B.4 and B.5 above should not debar the Director-General from inviting an observer from such nonmember to attend a technical meeting for the discussion on a particular subject, if he deems such an invitation to be in the best interests of the Organization and its work, on the understanding that the Director-General shall consult the Members of the Council, if necessary by correspondence.

APPENDIX PART C - STATUS OF OBSERVERS

1. Observers from nations admitted to meetings of the Organization may be permitted:

(a) to make only formal statements in Conference and Council plenaries and in Commissions of the Whole, subject to the approval of the General Committee of the Conference, or of the Council;

(b) to participate in the discussions of the commissions and committees of the Conference and Council and in the discussions of technical meetings, subject to the approval of the Chairman of the particular meeting and without the right to vote;
(c) to receive the documents other than those of a restricted nature for and the report of the particular meeting;

(d) to submit written statements on particular items of the agenda;

(e) to attend a private meeting of the Council or of a commission or committee established by the Conference or Council, subject to the following rule: When it is decided that the Council or a commission or committee established by the Conference or Council shall hold a private meeting, the Conference, Council, commission or committee, subject to the provisions of the Constitution and the General Rules of the Organization and to the principles laid down in the present Resolution, shall, at the same time, determine the scope of such a decision with respect to observers of Member Nations and Associate Members that are not members of the commission or committee and to observers of nonmember nations that have been invited to be represented at the session of the commission or committee.

III. GRANTING OF OBSERVER STATUS (IN RESPECT OF INTERNATIONAL GOVERNMENTAL AND NONGOVERNMENTAL ORGANIZATIONS)

Granting of observer status

1. At its eighth session the Conference requested the Council to consider and suggest amendments to the Constitution and General Rules of the Organization for the purpose of eliminating any possible ambiguity with respect to the question of observer status, with special reference to the definition of such status, the establishment of criteria for the granting of the status and the consideration of all juridical and practical aspects of the problem.

RESOLUTION No. 44/57 - Observer status in respect of international organizations

THE CONFERENCE

Decides:

(a) that in future intergovernmental organizations that do not have an agreement with FAO and nongovernmental organizations in liaison status with FAO may be invited to send observers to Conference and Council sessions if, in the judgement of the Director-General, there are concrete reasons for inviting them which would forward the work of the Organization;

(b) that the status of observers sent to FAO meetings by intergovernmental organizations that have relations with FAO shall not be less than that accorded to the observers of nongovernmental organizations in consultative status with the Organization; and Notes that subject to the foregoing interpretation the provisions of the Constitution and General Rules of the Organization which apply to international organizations and the FAO policy statement concerning relations with international nongovernmental organizations adopted at its Seventh Session provide adequate criteria for the granting of observer status to international organizations and adequately define the status of their observers.
APPENDIX E

Major Issues for Consideration by the Sub-Committee

In selecting and prioritizing the major issues and key areas of international concern, the expert consultation emphasized the critical importance of addressing issues of food security and poverty alleviation at local, national, regional and global levels. The role of aquaculture for enhancing food security and economic development in FAO Member nations to alleviating poverty was therefore considered a primary priority. The expert consultation identified six key areas to be addressed by the Sub-Committee. The six priority areas are:

1. Food Security and Poverty Alleviation
   - documentation and quantification of the unfulfilled / fulfilled potential of aquaculture
   - direct and indirect contributions of commercial aquaculture
   - determination of the contribution of aquaculture to food supply and demand, food availability, nutrition, and consumption of and access to fishery products
   - gender and stakeholder issues and their inclusion in aquaculture development, planning and management
   - assessment of the impact of economic subsidies for fisheries on aquaculture development.

2. Consumer issues (food safety, quality and certification)
   - development of local markets and the emphasis on production for domestic consumption
   - certification and labelling
   - assessment of the interactions in the markets of the products of aquaculture and capture fisheries

3. Human resource development (training and education), research and extension
   - improvement of the means of dissemination of information and communication
   - extension methodologies and systems
   - farm management skills development
   - means to promote the development of self regulatory instruments, such as training in relevant codes and guidelines, and best management practices
   - ways of enhanced producer involvement
   - enhanced involvement of academic sector

4. Environmental aspects of aquaculture development
   - development/selection and use/application of criteria and indicators of sustainable aquaculture development
   - site selection, environmental impact assessment, monitoring
   - best management practices
   - resource use and resulting environment interactions
   - environmental impacts on aquaculture
   - movement of aquatic organisms and products
   - genetic resource management and new biotechnologies
   - interactions with fisheries and resource protection
• dissemination and implementation of the provisions of the Code of Conduct for Responsible Fisheries, as it pertains to aquaculture development

5. Institutional capacity building and policy development
• sector management tools (legislation, regulatory and market based instruments)
• policy and legal frameworks
• integration (of different resource uses, of polices and measures of different government authorities, of different stakeholders interests, private/public)
• strengthening of regional aquaculture networks, and support to their establishment in all regions in particular Africa and Latin America and the Caribbean
• improvement of financial support policies and practices, in particular through promoting coherence of donor support and developing screening procedures for corporate investment

6. Statistics, data and information management
• cooperation on means to improve quality of statistics on aquaculture
• identify effective mechanisms to establish and maintain arrangements for sharing, generating and using data and information
• harmonization and standardization of aquaculture statistics
• assessment of new technologies to improve information flow and exchange
APPENDIX F

Aquaculture Development Beyond 2000:
The Bangkok Declaration and Strategy

Conference on
Aquaculture Development in the Third Millennium
20-25 February 2000
Bangkok, Thailand

The first major international Conference on Aquaculture organized by FAO was held in Kyoto, Japan in 1976. The Conference adopted the “Kyoto Declaration on Aquaculture.” In February 2000, some 540 participants from 66 countries and more than 200 governmental and non-governmental organisations participated in the “Conference on Aquaculture in the Third Millennium” in Bangkok, Thailand. This conference was organised by the Network of Aquaculture Centres in Asia-Pacific (NACA) and the FAO and hosted by the Government of Thailand. Additional support was provided by the European Union (EU), the Australian Agency for International Development (AusAID), the Canadian International Development Agency (CIDA), the Danish Centre for Environment and Development (DANCED), the Department of Agriculture, Forestry and Fisheries of Australia (AFFA), the Rockefeller Brothers Fund, and the World Bank-Netherlands Partnership Program.

Throughout 1999, NACA and the FAO facilitated the preparation of reviews on aquaculture developments in Africa, Asia, Europe, Latin America, North America, the countries of the former USSR, the Near East, and the Pacific Island nations and held expert meetings to consider major trends in aquaculture development. Fourteen Thematic Reviews on selected aspects of aquaculture were promoted and eight overviews on key issues were prepared for presentation and discussion at the Conference. All participants to the Conference received extended summaries of all material prepared. Twenty plenary presentations and discussions, and 12 workshop sessions facilitated by expert panels enabled participants to discuss and prioritise major issues and strategic actions for follow-up.

Major themes discussed included policy-making and planning for sustainable aquaculture development (covering food security and poverty alleviation, rural development, stakeholder involvement, incentives, and legal and institutional frameworks); technological and R&D priorities (including systems/species, genetics, health management, nutrition/feeding, and culture-based fisheries); human resource development; international trade; product quality, safety and marketing; regional/inter-regional co-operation; financing; and institutional support.

Against this background, the Conference participants discussed priorities and strategies for the development of aquaculture for the next two decades, in the light of the future economic, social and environmental issues and advances in aquaculture technologies. Based on these deliberations, the participants adopted the Bangkok Declaration and Strategy for Aquaculture Development Beyond 2000. The Conference encouraged States, the private sector and other concerned stakeholders to incorporate in their strategies for aquaculture development the key strategy elements identified during this Conference.
The proceedings of the Conference, including global and regional reviews on trends in aquaculture development, thematic reviews, keynote addresses and other invited presentations will be published by NACA and FAO.

NACA and FAO acknowledge all individuals and agencies who assisted in the conference process.

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The Bangkok Declaration

PREAMBLE

1. The first international Conference on Aquaculture organised by the Food and Agriculture Organization of the United Nations (FAO) was held in Kyoto, Japan in 1976. The Conference adopted the “Kyoto Declaration on Aquaculture”.

2. In February 2000, some 540 participants from 66 countries participated in the “Conference on Aquaculture in the Third Millennium” in Bangkok, Thailand. This Conference was organised by the Network of Aquaculture Centres in Asia-Pacific (NACA) and the FAO and hosted by the Government of Thailand.

3. Throughout 1999, NACA and the FAO facilitated the preparation of reviews on aquaculture developments in Africa, Asia, Europe, Latin America, North America, the countries of the former USSR, the Near East, and the Pacific Island nations and held expert meetings to consider trends in aquaculture development. Thematic Reviews on various aspects of aquaculture were also conducted. Participants to the Bangkok Conference were informed of the findings and conclusions of these activities.

4. Against this background, the Conference participants discussed strategies for the development of aquaculture for the next two decades, in the light of the future economic, social and environmental issues and advances in aquaculture technologies.

5. Based on these deliberations, the participants to the Conference adopted the following Declaration.

THE DECLARATION

We, the participants to the Conference on Aquaculture in the Third Millennium, Bangkok 2000, recognize that:

- during the past three decades aquaculture has become the fastest growing food-producing sector and is an increasingly important contributor to national economic development, the global food supply and food security;
- aquaculture consists of a broad spectrum of users, systems, practices and species, operating through a continuum ranging from backyard household ponds to large-scale industrial systems;
- the per caput supply of food fish from capture fisheries is likely to decline with population increase;
- a great proportion of aquaculture production comes from developing countries, where aquaculture will continue to contribute to peoples’ livelihoods, food security, poverty alleviation, income generation, employment and trade;
- there has been a significant increase in commercial and industrial aquaculture, both in developed and developing countries, that has contributed to food supply, export income and trade;
- globally, aquaculture is at varying stages of development and will require different strategies for growth;
the potential of aquaculture to contribute to food production has not yet been realized across all continents;

- aquaculture complements other food production systems, and integrated aquaculture can add value to the current use of on-farm resources;

- aquaculture can be an entry point for improving livelihoods, planning natural resource use and contributing to environmental enhancement;

- responsible aquaculture practitioners are legitimate users of resources;

- education and research will continue to make a significant contribution to the growth of aquaculture;

- some poorly planned and managed aquaculture operations have resulted in negative impacts on ecosystems and communities;

- aquaculture has also been negatively impacted by other unplanned activities;

- the continued growth of aquaculture will occur through investment by the private and public sectors;

- effective national institutional arrangements and capacity, policy, planning and regulatory frameworks in aquaculture and other relevant sectors are essential to support aquaculture development;

- improving co-operation amongst stakeholders at national, regional and inter-regional levels is pivotal for further development of aquaculture;

- the potential of aquaculture to contribute to human development and social empowerment cannot be fully realized without consistent, responsible policies and goals that encourage sustainable development;

*and declare that:*

- the aquaculture sector should continue to be developed towards its full potential, making a net contribution to global food availability, household food security, economic growth, trade and improved living standards;

- the practice of aquaculture should be pursued as an integral component of development, contributing towards sustainable livelihoods for poor sectors of the community, promoting human development and enhancing social well-being;

- aquaculture policies and regulations should promote practical and economically viable farming and management practices that are environmentally responsible and socially acceptable;

- national aquaculture development processes should be transparent and should take place within the framework of relevant national policies, regional and international agreements, treaties and conventions;

- in pursuing development, States, the private sector, and other legitimate stakeholders should co-operate to promote the responsible growth of aquaculture;

- strengthened regional and inter-regional co-operation should increase the efficiency and effectiveness of aquaculture development efforts; and

- all parties formulating improved policies and implementing practices for aquaculture development should consider and where appropriate, build on the FAO Code of Conduct for Responsible Fisheries.
6. The following contains the major strategy elements based on the Conference session recommendations. The detailed recommendations from the sessions are given in the Conference Report.

**STRATEGY FOR AQUACULTURE DEVELOPMENT BEYOND 2000**

7. States are encouraged to incorporate in their strategies for aquaculture development the key elements identified during this Conference.

8. The key elements are:

**Investing in people through education and training**

9. Further investments in education and training are essential to build the knowledge, skills and attitude of all people involved in the sector. Human capacity development can be made more cost-effective and responsive to needs through:

- using participatory approaches to curriculum development;
- improving co-operation and networking between agencies and institutions;
- multidisciplinary and problem-based approaches to learning;
- use of modern training, education and communication tools, such as the Internet and distance learning, to promote regional and inter-regional co-operation and networking in the development of curricula, exchange of experiences and development of supporting knowledge bases and resource materials; and
- providing a balance of practical and theoretical approaches to train farmers and provide more skilful and innovative staff to industry.

**Investing in research and development**

10. There is a need to increase investment in aquaculture research, whilst making efficient use of research resources and building the capacity of research institutions to be more responsive to development requirements through such mechanisms as:

- collaborative multidisciplinary research;
- stakeholder participation in research identification and implementation;
- improving linkages between research, extension and producers;
- collaborative funding arrangements between institutions and public and private sector organizations;
- efficient communication networks;
- regional and inter-regional co-operation; and
- a continued effort to build the skills of researchers involved in aquaculture development.

**Improving information flow and communication**

11. Efficient management of the sector requires improved information flows at the national, regional and inter-regional levels which will avoid duplication of effort and save costs, while encouraging consistency in areas such as education and training, policy-making, planning and the application of rules and procedures.

12. Improved information flows will increase institutional capacities for dealing with emerging issues and can be achieved by:
• establishing arrangements for sharing data and information;
• strengthening national capacity to determine data requirements and data selection and management;
• providing effective mechanisms for access to relevant and reliable information to all stakeholders; and
• making effective use of new technologies to improve information flows and management policies and practices within aquaculture.

13. The collection and dissemination of accurate and verifiable information on aquaculture may help to improve its public image and should be given attention.

**Improving food security and alleviating poverty**

14. Enhancing food security and alleviating poverty are major and complementary global priorities. Aquaculture has a special role in achieving these objectives because, firstly, fish is a highly nutritious food that forms an essential, if not indispensable, part of the diet of a large proportion of the people in developing countries. Secondly, while aquaculture contributes to the livelihoods of poor farming households, particularly in areas of Asia where it is a traditional farming practice, there is a huge, unfulfilled potential in most countries, as aquaculture is a relatively recent and underdeveloped sector as compared to agriculture and animal husbandry. Aquaculture could improve food security, provide entry points and contribute to sustainable livelihoods for the poor through:

• promoting poor-people-centred development focus in aquaculture sector policies, wherever appropriate;
• promoting systems to farm low-value fish affordable to the poor, particularly small-scale household production in rural areas where it may be the only source of fish due to poor infrastructure;
• disseminating information about the nutritional advantages of fish to vulnerable groups of people such as pregnant and lactating women, and families with infants and pre-school children;
• greater use of holistic, participatory approaches to identify the poor and assess their needs; and to develop and extend aquaculture technologies appropriate to the resources and capabilities of poor households;
• recognising that the development of small-scale aquaculture requires initial public sector support, with more support needed and for longer periods for poorer target groups; and
• empowering poor stakeholders to actively participate in policy decision-making.

**Improving environmental sustainability**

15. There is a need to develop and adopt policies and practices that ensure environmental sustainability, including environmentally sound technologies and resource efficient farming systems, and integration of aquafarms into coastal area and inland watershed management plans. Improvements in environmental sustainability can be achieved through:

• development, adoption and application of environmental, economic and social sustainability assessment criteria and indicators of aquaculture development;
• development of and support to implementation of improved management practices and codes of good practice for aquaculture sectors that are supported by enforceable regulations and policy;
• research and development of resource-efficient farming systems which make efficient use of water, land, seed and feed inputs; exploring the potential for commercial use of species feeding low in the food chain; and utilising enhancement techniques;
• development of strategies to integrate aquaculture into the coastal areas and inland watershed management plans and ensuring aquaculture developments are within local and regional carrying capacities;
• promotion of good practices for environmental management of aquaculture; and
• promotion of aquaculture, where appropriate, as a means of improving environmental quality and resource use.

Integrating aquaculture into rural development

16. With the goal of increasing the impact of aquaculture on rural development and poverty alleviation, strategies are required to put people as the focal point for planning and development for such programmes and to integrate aquaculture into overall rural development programmes. In essence, this can be achieved through:

• integrating aquaculture planning within overall rural development planning, taking into account multi-sectoral developments and views, and multi-sectoral co-ordination which brings agencies together;
• integrating aquaculture with other rural development efforts to improve resource utilisation, such as integrated coastal area management and inland watershed management;
• awareness-raising in other rural development sectors of the potential of aquaculture to improve livelihoods;
• using participatory approaches to involve stakeholders in policy-making, planning, implementation and monitoring; and
• the documentation and wide dissemination of information on experiences and utilisation of good practices and benefits thereof.

Investing in aquaculture development

17. Future investment in aquaculture should be made with long-term strategies in mind to ensure sustainability. Private sector investments make the biggest contribution to aquaculture development, but adequate public sector finance for capacity building, institutional development and infrastructure, is indispensable for society to reap the full benefits of a well managed and efficient aquaculture sector.

18. Sound investment strategies should include:

• providing initial financial encouragement and facilitating investments in aquaculture development;
• encouraging continued public investment in rural and small-scale aquaculture in developing countries, and in applied research and farmer access to knowledge and capital;
• encouraging private sector funding and investment in aquaculture development and infrastructure which will provide the benefits of aquaculture to rural communities;
• developing mechanisms (e.g., investment screens, credit linked to performance or adoption of best management practices, performance bonds) which encourage the growth of environmentally and socially responsible aquaculture, including economic, educational and other incentives for responsible aquaculture;
• support to sponsorship of industry-driven codes of practice to promote responsible aquaculture;
• fostering a greater understanding within financial institutions and bilateral and multilateral assistance agencies regarding aquaculture development and its financial needs; and
• establishing credit schemes that support sustainable aquaculture, e.g., micro-credit programmes, particularly for small-scale development.

19. International development assistance is becoming increasingly directed towards poverty alleviation and needs to adhere to basic principles of social equity, including gender equity, environmental sustainability, technical feasibility, economic viability and good governance. The level of risk is important when supporting initiatives to address poverty alleviation.

20. To make efficient use of international donor resources, a programme approach to multi-sectoral development should be applied under which donors can more effectively cooperate and collaborate with each other. Ultimately, this should occur within comprehensive planning and development frameworks. There is thus a need for donors to adopt more cohesive approaches and procedures.

**Strengthening institutional support**

21. One of the key issues for the growth of aquaculture will be the ability of countries and organisations to strengthen their institutional capacity to establish and implement policy and regulatory frameworks that are both transparent and enforceable. Incentives, especially economic incentives, deserve to be given more attention in the planning and management of aquaculture development.

22. Institutional capacity should be made more effective and strengthened through:

• developing a clear aquaculture policy, and identification of a lead agency with adequate organisational stature to play a strong co-ordinating role;
• developing, through a participatory approach, comprehensive and enforceable laws, regulations and administrative procedures that encourage sustainable aquaculture and promote trade in aquaculture products;
• providing education and training, research and extension services to support the development of enforceable legislation, policy and regulatory frameworks, encompassing economic and other incentives to improve aquaculture management;
• targeting not only government ministries and public sector agencies dealing with administration, education, research and development, but also organisations and institutions representing the private sector, NGOs, consumers and other stakeholders;
• developing mechanisms and protocols for the timely collection and reporting of statistics;
• sharing information on policies and legislation, rules and procedures that encompass best practices in aquaculture;
• clarifying legal frameworks and policy objectives regarding access and user rights for farmers; and
• improving the capacity of institutions to develop and implement strategies targeting poor people.

**Applying innovations in aquaculture**

23. The technologies for sustainable aquaculture development should provide a varied and adaptable "tool box" from which people can select and design the system which most effectively meets their needs and best fits the opportunities and constraints of the local
environment. The delivery of such techniques requires efficient communication networks, reliable data on the merits and drawbacks of the various approaches, and help with the decision making process through which people choose their production systems and species.

24. As we move into the next two decades, water and land for aquaculture will become critical issues. New opportunities for aquaculture development will also emerge through improvements in science and technology for aquaculture systems.

25. The potential areas for further consideration include:

- technologies for sustainable stock enhancement and ranching programmes, and open ocean aquaculture;
- increased use of aquatic plants and animals as nutrient stripping;
- increased emphasis on integrated systems to improve environmental performance; and
- emerging technologies (e.g., recirculating systems, offshore cage culture, integrated water use, artificial upwelling and ecosystem food web management).

Improving culture-based fisheries and enhancements

26. Fisheries enhancements in inland and coastal waters include culture-based fisheries and habitat modifications in common pool aquatic resources, which require minimal food and energy inputs. These practices therefore provide important opportunities for resource poor sections of the population to benefit from relevant aquaculture technologies and permit efficient use of under-utilised, new or degraded resources. Culture-based fisheries in particular have considerable potential for increasing fish supplies from both freshwater and marine fisheries and generating income in rural inland and coastal areas.

27. The full potential of enhancements and culture-based fisheries could be achieved by:

- creating conducive institutional arrangements to enable and sustain investment in common pool resources;
- providing appropriate research and development inputs;
- managing environmental and other external impacts; and
- promoting effective regional co-operation and information exchange.

Managing aquatic animal health

28. Disease is currently an important constraint to aquaculture growth which has impacted both socio-economic development and rural livelihoods in some countries. Addressing aquatic animal health issues has, therefore, become an urgent requirement for sustaining growth of aquaculture, especially through pro-active programmes. Harmonising health protection approaches and measures and effective co-operation at national, regional and inter-regional levels are needed to maximize the effectiveness of limited resources.

29. This can be achieved through:

- developing, harmonizing and enforcing appropriate and effective national, regional and inter-regional policies and regulatory frameworks on introduction and movement of live aquatic animals and products to reduce the risks of introduction, establishment and spread of aquatic animal pathogens and resulting impacts on aquatic biodiversity;
• capacity building at both the institutional and farmer levels through education and extension;
• developing and implementing effective national disease reporting systems, databases, and other mechanisms for collecting and analysing aquatic animal disease information;
• improving technology through research to develop, standardise and validate accurate and sensitive diagnostic methods, safe therapeutics, and effective disease control methodologies, and through studies into emerging diseases and pathogens;
• promoting a holistic systems approach to aquatic animal health management, emphasising preventative measures and maintaining a healthy culture environment; and
• developing alternate health management strategies such as the use of disease resistant, domesticated strains of aquatic animals to reduce impact of diseases.

30. Establishment of an effective international mechanism, such as an international task force which is outcome-oriented with focussed strategies and milestones that are independent of vested interests, would be beneficial in reducing the losses due to diseases in aquaculture.

**Improving nutrition in aquaculture**

31. Nutrition and feeding strategies play a central and essential role in the sustainable development of the aquaculture sector. Feed development will need to give increased emphasis on efficient use of resources and reduction of feed waste and nutrient discharge. Fishmeal reduction in diets will be important to reduce feed costs and avoid competition with other users.

32. These can be achieved through:

• increasing the understanding of dietary nutrient requirements of cultured species, including their application to practical culture conditions;
• developing species-specific broodstock diets that allow complete domestication and maximal reproductivity and larval quality;
• better understanding of larval nutritional requirements in order to develop suitable compound diets, which will further reduce the need for live food;
• improving the understanding of the aquaculture farming systems and the potential nutrient loads and losses to the environment, to maximise nutrient retention efficiency;
• improving the use of agricultural and fishery by-products and non-food grade feed materials, and basing feeding strategies, wherever possible, on the use of renewable feed ingredient sources;
• better understanding of nutrient bioavailability and interactions of commonly used feed ingredients;
• better understanding of the mechanisms of nutrient modulation of disease resistance as well as improved strategies to minimise toxicity of nutrients and other compounds of feed origin;
• promotion of “good aquaculture feed manufacturing practice” and "good on-farm feed management;” and
• ensuring that limitations in the selection and trade of raw materials for aquaculture feeds are based on sound, documented scientific facts.

**Applying genetics to aquaculture**

33. Genetics has an important role to play in increasing productivity and sustainability in aquaculture through higher survival, increased turnover rate, better use of resources, reduced
production costs and environmental protection. This will require resources, but the benefits in both the short and long term should justify these efforts.

34. There are many elements and practices of genetics that may be considered for aquaculture. Recognising that aquaculture has not benefited as much as terrestrial animal husbandry from the adoption of best practices such as selective breeding and stock improvement programmes, high priority should be given to the application of genetics in aquaculture. The interventions include:

- developing and utilising improved domestication and broodstock management practices and efficient breeding plans to improve production in aquatic animals;
- designing and promoting strategies for equitable dissemination of genetic techniques and genetically improved organisms;
- encouraging public awareness and providing information to consumers on the application of genetics;
- greater application of genetic technologies to the conservation of aquatic biodiversity; and
- addressing the potential implications for aquaculture, including environmental and human health implications, in a precautionary, safe and practical way.

Applying biotechnology

35. Biotechnology as a science has the potential to impact on all food production sectors. In the future the aquaculture sector will confront the issue of biotechnology through:

- developing and applying biotechnological innovations for advances in nutrition, genetics, health, and environmental management;
- addressing the potential implications for aquaculture of biotechnology, including GMOs and other products, in a precautionary, safe and practical way; and
- encouraging public awareness and providing information to consumers on the potential applications of biotechnology.

Improving food quality and safety

36. As consumer awareness increases, aquaculture producers, suppliers and processors will need to improve the quality of products and enhance product safety and nutritional value. The incentives for this will be potentially higher prices, lower insurance rates and increased consumer demand.

37. This can be achieved through:

- improvements in diets, feeding regimes and harvesting strategies to enhance product quality and nutritional value of aquaculture products;
- promoting the application and adoption of international food safety standards, protocols and quality systems in line with international requirements such as the Codex Alimentarius;
- adopting international protocols for residue monitoring in aquaculture and fisheries products;
- appropriate and informative labelling of aquaculture feeds, including information on additives, growth promoters and other ingredients.
• collection, analysis and dissemination of relevant and scientifically sound information to allow producers and industry operators to make informed decisions and ensure consumer confidence in the food safety of aquaculture products;
• application of appropriate safety assessments based on risk analysis and the precautionary approach prior to market approval, including products from modern biotechnology; and
• increasing consumer confidence in aquaculture products by ensuring that industry takes responsibility for the production and distribution of safe products, utilising systems that allow traceability of product ingredients, including information on packaging, processing and production conditions.

Promoting market development and trade

38. A focus on market development and trade will increase demand, add value and increase returns for aquaculture products. This will require developing marketing and promotional strategies for aquaculture products and understanding consumer requirements and changing market demands.

39. These goals can be achieved through:

• reducing trade barriers for aquatic products;
• assisting producers, processors and manufacturers in identifying markets for aquaculture inputs, products and technology;
• providing data for, and investing in, information-technology based market-information systems that are easily accessed by producers and processors;
• researching changing consumption patterns, market segmentation trends and the emergence of new markets and products; and
• ensuring transparency in the chain of custody ("chain traceability") of aquatic products and encouraging the provision of relevant information to consumers through product labelling (e.g., nutritional values, environmental friendliness).

Supporting strong regional and inter-regional co-operation

40. Over the years, regional and inter-regional co-operation has brought considerable benefits to aquaculture development through dissemination of knowledge and expertise. In an era of globalisation, further strengthening of this co-operation at all levels will ensure increased benefits for sectoral development and sustainability.

41. This could be achieved through:

• supporting and strengthening existing regional organisations;
• improving inter-regional collaboration and networking between existing regional organisations to ensure synergy;
• encouraging the formation and development of regional organisations for aquaculture development in regions where they are lacking; and
• facilitating in-country support for the establishment and operation of these organisations.

42. The Conference noted there are issues relevant to aquaculture development that require a strong global focus to be addressed and that this need might best be achieved by establishing a global intergovernmental forum within an appropriate existing international organisation, having sustainable aquaculture development as its primary focus, and with a mandate for discussion, decision and agreement on technical and policy matters.
IMPLEMENTATION

43. The Conference encourages States, the private sector and other concerned organisations to implement Strategies for Development of Aquaculture Beyond 2000.

44. The aquaculture sector has become considerably more diverse since the Kyoto Conference and has developed a broad range of stakeholders. This diversity provides considerable opportunity for productive co-operation.

45. The Conference recognises that the primary responsibilities for development and implementation of these strategies rest with States and their private sectors. The Conference recommends that States develop strategies through encouraging private sector development incorporating the key elements identified above.

46. The Conference further affirms that co-operative mechanisms among countries provide an excellent opportunity to co-ordinate and support the development of aquaculture, through sharing of experiences, technical support, and allocation of responsibilities for the varied research, education and information exchange. The fostering of co-operation among developing countries deserves special attention and support.

47. Furthermore, the Conference recommends that effective use of existing regional and inter-regional mechanisms be made, and that decision-makers seek to promote synergy and co-operation between existing organisations. Where effective regional inter-governmental organisations to promote co-operation in aquaculture development do not exist, such as in Africa and Latin America, building of such mechanisms, and sharing experiences with the existing regional networks, is recommended.

48. The Conference notes that there are considerable opportunities for enhanced regional and inter-regional co-operation among different partners including governments, non-governmental organizations, farmers organizations, regional and international organizations, development agencies, donors and lending agencies with a common interest in development through aquaculture.

49. In this regard, the Conference strongly recommends the development of an effective programme of regional and inter-regional co-operation to assist in implementation of the Strategies for Aquaculture Development Beyond 2000.

The Declaration and Strategy was drafted by a Technical Drafting Committee (TDC), taking into account the recommendations of all conference sessions, and the views and suggestions expressed by the participants during and after the Conference. The composition of the TDC is: Glenn Hurry and Chen Foo Yan (Co-Chairs), Uwe Barg, Pedro Bueno, Jorge Calderon, Jason Clay, Sena De Silva, Maitree Duangsawasdi, Dilip Kumar, Le Thanh Luu, Modadugu V. Gupta, Joaquin Orrantia, Michael Phillips, Rolando Platon, Vincent Sagua, Sevaly Sen, Patrick Sorgeloos, Rohana Subasinghe, Rolf Willmann, and Wu Chao Lin.
This is the report of the Expert Consultation on the Proposed Sub-Committee on Aquaculture of the Committee on Fisheries, held at the request of the 23rd Session of COFI in the FAO Regional Office for Asia and the Pacific, Bangkok, Thailand, from 28 to 29 February 2000. The expert consultation confirmed that the growing importance of aquaculture, including culture-based fisheries, and its interactions justified a focused global intergovernmental mechanism to provide the opportunity for information exchange, discussion and consensus-building among the various parties interested in aquaculture development and to establish an efficient means of advising and guiding COFI and FAO. The consultation concluded that the establishment of such a subcommittee would be in line with FAO Conference Resolution 13/97 and that the expenditure of funds for the subcommittee would be justified. The consultation identified the major issues and six key priority areas that need to be addressed, emphasizing that the role of aquaculture for enhancing food security and economic development in FAO member countries was a primary priority.