

September 2006

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## COMMITTEE ON FISHERIES

### SUB-COMMITTEE ON AQUACULTURE

#### Third Session

New Delhi, India, 4-8 September 2006

### PROGRESS MADE ON THE IMPLEMENTATION OF THE AQUACULTURE RELATED PROVISIONS OF THE CODE OF CONDUCT FOR RESPONSIBLE FISHERIES

#### SUMMARY

This paper provides an overview of recent efforts in implementing the provisions of the CCRF related to aquaculture. It specifically refers to the analysis of the aquaculture related responses by Members to the questionnaire sent in 2004 to evaluate progress made in the application of CCRF provisions, as well as to the main areas of interest and the requests of assistance advanced by responding Members. In addition, it reports on the efforts made by FAO and non-FAO initiatives since 2003 to facilitate the implementation of the CCRF at national and international levels aiming at the sustainable development of aquaculture. Some conclusions and suggestions are advanced for consideration by the Sub-Committee on Aquaculture, with a view to invite advice and guidance by the Members, as well as to encourage collaboration among Members.

#### INTRODUCTION

1. Article 4 of the 1995 FAO Code of Conduct for Responsible Fisheries (CCRF) states, *inter alia*, that FAO will report to the FAO Committee on Fisheries (COFI) concerning the implementation of the Code. The Sub-Committee on Aquaculture reviews progress made in the implementation of aquaculture-related provisions of the CCRF, based on the progress report prepared by the Secretariat. This report is the third such report prepared for the Sub-Committee on Aquaculture<sup>1</sup>. The information provided in this report has been supplied by FAO Members,

<sup>1</sup> FAO. 2003. Progress in Implementing the Provisions of the Code of Conduct for Responsible Fisheries (CCRF) relevant to aquaculture and culture-based fisheries. Second Session of the Committee on Fisheries Sub-Committee on Aquaculture, Trondheim, Norway, 7-11 August 2003. COFI:AQ/II/2003/4. 8 p.

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regional fishery bodies (RFBs), international non-governmental organizations (NGOs) and the FAO Secretariat. The information is collated and analyzed on the basis of self-assessment questionnaires provided by FAO.

2. This report presents efforts promoted and progress made by Members towards application of the CCRF in the development of responsible aquaculture from analysis of the responses given by the Members to the CCRF questionnaire survey in 2004. It also gives an overview of actions undertaken and information generated during 2003 – 2005 by FAO and others aiming at the promotion of the CCRF and implementation of measures towards sustainable aquaculture development.

### **SUMMARY OVERVIEW OF RESPONSES BY FAO MEMBERS AND OTHERS TO FAO CCRF QUESTIONNAIRES IN 2004 FOR MONITORING THE IMPLEMENTATION OF CCRF**

3. The CCRF progress report<sup>2</sup> prepared for the 26<sup>th</sup> Session of COFI in 2005 highlighted the fact that 49 FAO Members (27 percent of the FAO Membership) responded to the questionnaire in comparison to 105 Members in 2003 (57 percent of Members). These figures indicated a 53 percent decline in reporting. Seventeen RFBs (52 percent of the bodies to which FAO sent questionnaires) had responded in comparison to 19 RFBs in 2003. In addition, reports were received from four NGOs for that report in comparison to five NGOs in 2003.

4. This present report summarizes the responses to the aquaculture-related items of the CCRF questionnaire returned by 67 FAO Members<sup>3</sup> to the 2004 survey. Responses from four INGOs<sup>4</sup> were also reviewed. The questionnaire sent to RFBs does not include specific questions on aquaculture development and, for this reason, was not analyzed.

5. The reduced number of responses (37 percent of FAO Membership in 2004) analyzed for this present report does not allow the formulation of a substantial global statistical analysis. Nevertheless, some general tendencies and needs can be identified and analyzed. Comparison with the previous set of responses (105 members filled the questionnaire in 2003, 57 percent of Membership) should be approached with caution, even though this could help indicate progress in the adoption and application of the CCRF along with recurring major needs for assistance.

### **Aquaculture-related responses from responding Members**

6. Of the top priority areas dealt with in the CCRF (question 5 of the questionnaire), about half the reporting Members (36 Members or 54 percent of all respondents) assigned high priority to aquaculture development; 34 percent of respondents considered aquaculture development a

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[ftp://ftp.fao.org/fi/DOCUMENT/cofi/cofi\\_aq/2003/y9565e.pdf](ftp://ftp.fao.org/fi/DOCUMENT/cofi/cofi_aq/2003/y9565e.pdf)

FAO. 2002. *Towards Sustainable Aquaculture Development: Progress in the Implementation of Aquaculture-related Provisions of the Code of Conduct for Responsible Fisheries (CCRF)*. First Session of the Committee on Fisheries Sub-Committee on Aquaculture, Beijing, China, 18-22 April 2002. COFI/AQ/I/2002/4. 8 p.

<http://www.fao.org/docrep/meeting/004/Y3020E.htm>

<sup>2</sup> FAO. 2004. *Progress in the Implementation of the Code of Conduct for Responsible Fisheries and related International Plans of Action*. Committee on Fisheries, Twenty-Sixth Session, Rome, Italy, 7 – 11 March 2005. Rome, FAO. COFI/2005/215 p.

<ftp://ftp.fao.org/docrep/fao/meeting/009/j4176e.pdf>

<sup>3</sup> This analysis also reviews those responses that were not included in the statistical analysis presented at the twenty-sixth session of COFI in March 2005 in COFI Document COFI/2005/2, as they were received after 1 November 2004. Seven more countries are added here to the 12 mentioned in document COFI/2005/2 (<ftp://ftp.fao.org/docrep/fao/meeting/009/j4176e.pdf>) making a total of nineteen Members whose responses were not included in the previous analysis as they were received after 1 November 2004: Bolivia, Bulgaria, Bhutan, Chile, Congo Republic of, Equatorial Guinea, Eritrea, Haiti, Honduras, Iceland, Japan, Kenya, Lithuania, Mauritius, Myanmar, Saudi Arabia, Syria, United Arab Emirates, and Venezuela.

<sup>4</sup> The four international non-governmental organizations (INGO) include : FDCI – Fisheries Development Council International, ICFS – International Collective in Support of Fishworkers, MSC – Marine Stewardship Council, OPRT – Organization for Promotion of Responsible Tuna Fisheries

medium priority while only a few (12percent) ranked aquaculture development as low priority. This global view shows important differences when analyzed at the regional level. Aquaculture development is considered a top priority in Asia (ten out of eleven responding Members), and is viewed as highly important in Europe<sup>5</sup> (six out of ten responding Members), in Latin America & the Caribbean (nine out of seventeen responding Members) and the Near East (four out of eight responding Members). Aquaculture is considered less important in the South West Pacific (two out of five responding members) and is assigned the lowest priority rating in terms of responding Members from the African region (four out of fifteen countries).

7. Responses to question 15 of the questionnaire (legal and institutional framework) show that 57percent of reporting Members<sup>6</sup> declared that they have in place some form of legal framework for planning and regulating aquaculture development. However, only one in four Members refers to National Aquaculture Development Plans or comprehensive specific aquaculture policies, adopted or under preparation, and can count on the availability of specialist personnel for the public administration and monitoring of the sector. Meanwhile, the establishment of principles and criteria for the implementation of national policies on responsible fisheries (and aquaculture) development and management (objectives (a) and (b) in Article 2 of the CCRF; question 1 in the questionnaire) is confirmed as being a top priority<sup>7</sup>. Objective c of Article 2 (establish/improve legal and institutional framework) was identified as priority area by 53percent of responding Members. Many of the responding Members put forward requests of assistance in this area. These requests are oriented towards the establishment of general regulatory platforms through provision of specialist training for personnel, development of a normative framework for the aquaculture sector and the strengthening of technical monitoring of aquaculture practices applied.

8. Adoption of codes or instruments of best practice in aquaculture (question 16 of the questionnaire) is limited to approximately one third of the reporting Members, with scarce participation of producers and almost no involvement of suppliers and manufacturers. In the various regions, active participation of producers in the definition and application of instruments of best practice for aquaculture is restricted to those countries where the production sector already assumed national economic significance and where the sector already has a significant influence in the planning process for the use of land and water resources. Intensive salmonid and shrimp farming are major sub-sectors where specific codes or management regulations are applied.

9. Several Members required the establishment of national databases on the number of aquaculture production enterprises which have been or will be licensed. The need for a general overview of the production sector is required either for improving its public administration and monitoring or for a more efficient provision of national or external technical support. An aquaculture database is also seen as a tool to increase internal dialogue among producers and between the various components of the private sector (producers, suppliers and manufacturers) and the public administration.

10. About 60percent of responding Members confirmed that measures are in place to assess the environmental impact of aquaculture activities and (54percent) to monitor aquaculture operations (question 17 of the questionnaire). The introduction of alien species is controlled by just over half the responding Members (51percent). These figures are, however, different from

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<sup>5</sup> The response given by the EC is treated here as if it were a single responding member since the EC countries, in line with Community regulations, did not individually respond to the questionnaire. This limits the analysis of the responses from the European region resulting in the absence of significant indications from Members where aquaculture is highly advanced or considered a development priority.

<sup>6</sup> 61percent of 49 responses in the Regional Statistical Analysis presented at the Twenty-sixth session of COFI. See: Regional Statistical Analysis of Responses by FAO Members to the 2004 questionnaire on the Code of Conduct for Responsible Fisheries

<sup>7</sup> COFI/2005/2: Progress in the implementation of the CCRF and related IPOAs, Paragraph 5. <ftp://ftp.fao.org/docrep/fao/meeting/009/j4176e.pdf>

region to region and, again, existence and effectiveness of norms appear to depend on the real dimension of the production sector and the adoption of comprehensive legislation on aquaculture.

11. Assessment of the environmental impact of aquaculture, monitoring of aquaculture operations and controls on the introduction of alien species appear to be routinely applied in Europe and North America with, in general, no demand for external assistance. Differences between countries within the region appear in Asia, Latin America & Caribbean and the Near East where, despite the widespread application of specific norms, the “need of improvement” is frequently declared (Asia: 4 out of 11 responding Members; Latin America & Caribbean: 9 out of 13 Members responding to the point; Near East: 3 out of 7 Members responding to the point). Only four out of fifteen responding Members in Africa stated that there was effective control of aquaculture practices. While only one out of five responding Members in the South West Pacific monitors aquaculture operations, four out of five assess the possible environmental impacts of aquaculture.

12. Many Members identified the establishment of a sector-specific legislative framework for aquaculture activities as the major requirement for improving control over their impacts on the environment. Better identification of the parameters to be monitored and the standards to be applied are indicated by several responding Members as essential steps towards increasing the efficiency of the national monitoring systems of aquaculture operations as well as of their environmental impacts. Mandatory application of environmental impact assessment for the licensing of aquaculture activities, as already developed in some countries or regions (e.g. Chile, Norway, EC, USA) is a frequent request by others. Prohibition of import of non-native species for aquaculture is only declared by a few responding Members (5 on 67) but the necessity of more effective control over the introduction of alien species is mentioned by 41percent of the responding Members (24 of 59 responding to the point).

13. A similar tendency is drawn from the responses given to point 18 of the questionnaire (reporting on the most important measures supported for the promotion of responsible aquaculture practices and specific needs for assistance). Control of environmental impacts of aquaculture and promotion of adequate techniques are of major importance in Europe and North America while the Eastern European Members requested assistance with strengthening the legal framework. Responsible aquaculture through control of its environmental impact is also a major issue in Asia (7 out of 11 responding Members) and Latin America & the Caribbean (6 out of 14 Members responding to the point), where measures such as a decrease in the use of chemicals, reduced stocking density (intensive shrimp farming), and strict control in the introduction of alien species are supported. Requests for assistance are mainly addressed towards technical and financial support and technical training to increase the effectiveness of the monitoring systems applied, as well as expanding awareness and application of good aquaculture practices, and support for the development of comprehensive national aquaculture legislation.

14. Promotion of aquaculture development in support of rural and coastal communities is a second important consideration for Asia (6 out of 11 responding Members) and the request for assistance is concerned with increased availability of human resources for extending technical training and assistance to the communities and setting up adequate credit schemes. In the African region, the majority of the responding Members support small-scale aquaculture development (7 out of 11 Members responding to the point) and assistance is required for technical training, promotion of pilot projects and demonstrative actions, and for increasing the production of fingerlings for producers. Responding Members from the Near East region promote marine aquaculture (4 out of 6 Members responding to the point) by supporting research programs and technical training. Attention is also focused on the use of aquaculture in support of rural communities.

15. The demand for assistance concerns technical support in the development of research programs and technical training to increase production capacity and efficiency. Members from the South West Pacific region mainly require assistance for the start-up of the aquaculture sector

through institutional strengthening, transfer of technology and technical training. Further requests for assistance advanced by the responding Members concern the transfer of technology and provision of advice for the development of more efficient and environmentally-friendly techniques, better health management of aquatic animals and product safety and quality, and the wider involvement of research institutions in aquaculture development.

16. A large majority (75percent) of responding Members declared that conflicts between coastal fishery and coastal aquaculture are inexistent or infrequent (questions 20 and 21 of the questionnaire). Most of them have a mechanism in place to resolve conflicts which might arise between the two sectors. However, reporting Members did not classify the integration of fisheries (and aquaculture) into coastal and basin area management as a priority (question 5 of the questionnaire). It is noteworthy that many (61percent) of those Members which assigned high priority to aquaculture development considered fishery integration into coastal area management a medium level priority.

17. It is noted that research increasingly plays a major role in aquaculture development as underlined by the Advisory Committee on Fisheries Research<sup>8</sup>. This Committee recommended that FAO produce an authoritative review of the aquaculture sector and the role of aquaculture in poverty reduction, and related research addressing the environmental and social impacts of aquaculture. Improvement of the role of research in fisheries (and aquaculture) and associated ecosystems and relevant international factors is considered a top priority (question 1 of the questionnaire) by 40percent of the responding Members.

18. In 2005, the COFI Sub-Committee on Fish Trade<sup>9</sup> highlighted the growing contribution of aquaculture to fish trade. Within the fishery production sector, traceability and eco-labelling of fish products as well as HACCP procedures can be more easily applied to aquaculture. Contradictory responses were received from the responding Members with regard to trade issues as one of the issues dealt with by the CCRF. When ranking CCRF objectives according to relevance in their country, over 50percent of the Members assigned a high priority level (level 4 and 5) to trade (item 8 of question 1 of the questionnaire) but in question 5 of the questionnaire only 22percent considered trade issues a priority. The need for identifying market strategies for aquaculture products is explicitly mentioned only once in the measures supported and assistance needs declared by Members responding to question 18/18a of the questionnaire.

19. Generally, the dissemination of FAO Technical Guidelines for Responsible Fisheries (question 43 of the questionnaire) should be considered satisfactory although a significant number of Members stated that they have not received all guidelines issued. Guidelines on aquaculture development were received by 73percent of Members, but a lower value was attributed to dissemination of guidelines on Good Aquaculture Feed Manufacturing Practice, which is an issue of interest for the development of responsible aquaculture practices underlined by several responding Members.

20. Some Members participating in the Twenty-sixth Session of the COFI<sup>10</sup> noted that they faced a heavy reporting burden on the CCRF. A proposal was made that detailed in-depth analysis be undertaken every four years alternating with a general overview report on implementation every two years, including Articles 9 and 11. A definitive decision on this issue was postponed to the next session of COFI in 2007.

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<sup>8</sup> Synthesis of the report of the fifth session of the Advisory Committee on Fisheries Research. Rome, 12- 15 October 2004.

<sup>9</sup> COFI/2005/3 Decisions and recommendations of the ninth session of the Sub-Committee on Fish Trade Bremen, Germany, 10-14 February 2004. <ftp://ftp.fao.org/docrep/fao/meeting/009/j3694e.pdf>  
[ftp://ftp.fao.org/FI/DOCUMENT/COFI/cofift\\_9/default.htm](ftp://ftp.fao.org/FI/DOCUMENT/COFI/cofift_9/default.htm)

<sup>10</sup> FAO. 2005. *Report of the twenty-sixth session of the Committee on Fisheries*. Rome, 7–11 March 2005. FAO Fisheries Report. No. 780. Rome, FAO. 88p. (see paragraph 32)  
<ftp://ftp.fao.org/docrep/fao/008/a0008e/a0008e00.pdf>

21. The dramatic reduction in the number of Members responding to the 2004 questionnaire survey seems to indicate a misunderstanding of the purposes and benefits of this recurrent consultation of governments and analysis of responses. In the future discussion on “the questionnaire fatigue”, Members are invited to consider the questionnaire as a tool for the identification of major areas of needs for assistance, for better addressing the international and regional cooperation and for increasing the effectiveness of the external support provided. In the meantime, this repeated exercise will give a progressive picture of advances made in the application of the CCRF principles.

#### **Aquaculture-related responses from international non-governmental organizations (INGOs)**

22. The four responding INGOs indicated the contribution of fisheries to food security and nutritional needs of local communities as a high priority, while two<sup>11</sup> attributed a high priority level to aquaculture development.

23. Two<sup>12</sup> out of three responding INGOs indicated that many Members are not effectively controlling and monitoring aquaculture operations or the introduction of alien species. The implementation of national aquaculture development plans is seen as a major step towards placing aquaculture within a national development context (ICSF), including the assessment of its social and environmental impact, effective technical evaluation of aquaculture investment and independent monitoring of production operations. The formulation of a Responsible Aquaculture list was proposed (OPRT) in line with the model adopted by ICCAT<sup>13</sup>. Good aquaculture practices should be promoted (FDCI). ICSF recommends a more precautionary approach to the introduction of alien species.

### **ACTION BY FAO IN SUPPORT OF THE IMPLEMENTATION OF THE AQUACULTURE RELATED PROVISIONS OF THE CCRF**

#### **FAO Regular Programme Activities**

24. COFI/AQ/III/2006/2 discusses the Fisheries Department's efforts on implementing the recommendations of the Sub-Committee. As most of the Sub-Committee recommendations are directly related to the implementation of the CCRF provisions on aquaculture, some information relevant to this working document are covered in the COFI/AQ/III/2006/2. To avoid duplication they are not repeated here and the Members are requested to refer to COFI/AQ/III/2006/2 also while reading this document.

25. FAO is supporting the dissemination of CCRF provisions on aquaculture through publication of guidelines and organization of workshops and thematic conferences.

26. The Environment and Aquaculture Network in the Mediterranean (EAM) was recently re-established through an expert meeting. Objectives of the programme are harmonization of aquaculture policy and regulation, integrated environmental impact assessment, monitoring information and implementing management systems, integrated coastal zoning for aquaculture and enhancing the positive image of aquaculture.

27. FAO also provides support to GESAMP Working Group 31 on Environmental Risk Assessment and Communication in Coastal Aquaculture and a workshop on the subject is planned for November 2006 in cooperation with the ICES Working Group on Environmental Interactions of Mariculture.

28. In support of the responsible use and control of alien species in fisheries and aquaculture, Fisheries Department has conducted a workshop and published International Mechanisms for the

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<sup>11</sup> FDCI, ICSF

<sup>12</sup> FDCI, OPRT

<sup>13</sup> International Commission for the Conservation of Atlantic Tunas (ICCAT).  
<http://www.iccat.es/Documents/Recs/compendiopdf-e/2003-23-e.pdf>

Control and Responsible Use of Alien Species in Aquatic Ecosystems<sup>14</sup>. For recovery of endangered species, Fisheries Department in association with several partners and funded through the Darwin Initiative, is developing a conservation strategy for the Mekong Giant catfish, which includes breeding programmes, genetic analysis and economic valuation.

29. Addressing the issue of responsible culture-based fisheries, the Fisheries Department has helped design the scientific programme for the 3<sup>rd</sup> International Symposium on Marine Sea Ranching and Stock Enhancement, elaborated breeding guidelines in an international workshop on sturgeon enhancement in the Caspian Sea, and has published case studies in Marine Ranching<sup>15</sup>. FAO and the Government of the Netherlands have documented diversity in rice-based ecosystems, and we are developing projects to use and conserve agricultural biodiversity in Kenya and S.E. Asia; with NACA and other partners in S.E. Asia, FAO has produced manuals on molecular genetic analytical methods in fisheries and aquaculture and sponsored accompanying training course<sup>16</sup>.

30. FAO has disseminated numerous publications and guidelines supporting the application of CCRF provisions. Most are relevant to the requests for assistance advanced by Members responding to the CCRF survey questionnaire, such as Good Aquaculture Practices in shrimp farming focusing on hatchery production (broodstock maturation, larval rearing and feeding, water quality management, biosecurity and health management)<sup>17</sup>, aquatic animal diseases with guidelines for the strengthening of national and regional capabilities in disease surveillance<sup>18</sup>, alien species introduction<sup>19</sup>, and culture-based fisheries<sup>20</sup>.

#### **FAO's Technical Co-operation Programme (TCP)**

31. Within the period 2003-2005, the FAO Fisheries Department widely applied the TCP for the promotion of aquaculture activities and projects largely based on the principles of the CCRF. Support for formulation of policies and regulations and strengthening institutional capacity was provided through TCP/BRA/3001 for the Brazilian Special Secretariat for Aquaculture and Fisheries, with emphasis towards the development of sustainable aquaculture through training in strategic planning and environmental and health aspects of aquaculture.

32. In Chile, the TCP/CHI/3002 is supporting the certification process of environmental regulations for aquaculture. Aquaculture for food security in Peru is supported through TCP/PER/3002, assisting local communities through training, technical assistance and technology transfer for the development of responsible aquaculture practices. TCP/RLA/3003 introduces aquaculture and other integrated production practices to rice farmers, and promotes good aquaculture practice through farmer field schools.

33. TCP/RLA/0071, covering 14 countries in Latin America, deals with health management in shrimp farming and preventing the transboundary spread of the white spot disease. In Antigua and Barbuda, TCP/ANT/006 promotes the strengthening of food controls and safety of fish for export.

34. The Pacific States of Micronesia were assisted in the Strengthening of Coastal Fisheries Legislation through the TCP/RAS/2907 and a TCP proposal to be approved in early 2006 will assist Pacific Micronesia in planning sustainable aquaculture development. Another TCP project

<sup>14</sup> Bartley, D.M., Bhujel, R.C., Funge-Smith, S.; Olin, P.G., Phillips, M.J. (Comps/eds). 2005. *International mechanisms for the responsible use and control of alien species in aquatic ecosystems*. FAO Non-serial publication. Rome, FAO, 195.

<sup>15</sup> Bartley, D.M. & K.M. Leber (eds). 2004. *Marine Ranching*. FAO, Fisheries Technical Paper No.429, Rome, Italy.

<sup>16</sup> NACA/FAO/Kasetsart University. 2005. Manual on applications of molecular tools in aquaculture and inland fisheries management. NACA, Bangkok, Thailand.

<sup>17</sup> Health Management and Biosecurity maintenance in White Shrimp (*Penaeus vanamei*) Hatcheries in Latin America (FTP 450, 2003)

<sup>18</sup> Surveillance and Zoning for Aquatic Animal Diseases (FTP 451, 2004); Preparedness and Response to Aquatic Animal Health Emergencies in Asia: Guidelines (FTP 486, 2005)

<sup>19</sup> Introductions and movement of two penaeid shrimp species in Asia and the Pacific (FTP 476,2005)

<sup>20</sup> Bartley, D.M. & K.M. Leber (eds). 2004. *Marine Ranching*. FAO, Fisheries Technical Paper No. 429, Rome, Italy.

will assist Bosnia and Herzegovina in strengthening the capacity on aquaculture health management. The Latvian and Georgian Governments were assisted in their strategic planning for sustainable aquaculture development through the TCP/LAT/3001 and TCP/GEO/2904. The governments of Cameroon, the Comoros, Antigua and Barbuda, and Namibia were assisted in the formulation of legal frameworks governing aquaculture through the TCP/CMR/2907, TCP/COI/2902, TCP/ANT/2902 and TCP/NAM/0168.

### **Trust Fund Projects**

35. Using multilateral and national trust funds the FAO FishCode Programme effectively supported the implementation of CCRF related provisions. Support is given to project UTF/BRA/066/BRA which aims at the diversification of coastal aquaculture in the North- East Brazilian region.

36. The FishCode Programme promoted projects on sustainable aquaculture development in support of post-conflict recovery in Afghanistan and Sierra Leone. A Memorandum of Understanding for the responsible use of alien species in Lake Tanganyika Basin, based on the ICES/EIFAC protocols of practice, was presented for consideration by the Lake Tanganyika riparian states<sup>21</sup>. This followed the FAO Expert Consultation on international mechanisms for the control and responsible use of alien species in aquatic ecosystems, held in August 2003 in Zishuangbanna, China P.R. The FishCode Programme also contributed to the dissemination of CCRF principles through the organization of seminars and the publication of technical papers. Support was given to the organization of the National Workshop on the CCRF and its practical application to coastal aquaculture in Viet Nam (Hue, Viet Nam, October 2003)<sup>22</sup>.

37. The Government of Japan has provided funds (GCP/INT/936/JPN) to FAO to address key issues in sustainable aquaculture, including food safety of aquaculture fish, environmental impact assessment and monitoring in aquaculture, use of wild fish resources for aquaculture production, wild fish as food for farmed fish (implications for food security and poverty alleviation) and, the ecosystem approach to aquaculture. The expected outputs of these thematic areas are focused on providing guidance on key issues for promotion of capacity building, good governance and sustainability in global aquaculture. Application of the CCRF provisions for responsible aquaculture is further supported by the Italian Government in Viet Nam (GCP/VIE/029/ITA) aiming at the integration of aquaculture into coastal area management (Thua Thien Hue Province).

### **ADDITIONAL ACTIVITIES AND INITIATIVES UNDERTAKEN IN SUPPORT OF SUSTAINABLE AQUACULTURE DEVELOPMENT (NON-FAO ACTIVITIES)**

38. Support for the application of regulations on responsible aquaculture development at regional level was provided by numerous regional and national initiatives. The “International Principles for Responsible Shrimp Farming”<sup>23</sup> is as an outcome of the WB/WWF/NACA/FAO Consortium on Shrimp Farming and the Environment Programme (see COFI/AQ/III/2006/7)

39. SEAFDEC is involved in the regionalization of the CCRF and covers mostly trade-related aspects. The STREAM Initiative<sup>24</sup> (NACA, DFID, FAO, Aus-AID collaboration) promotes good aquaculture practices for improvement of poor peoples’ livelihoods.

<sup>21</sup> FAO. 2005. *Report of the thirteenth session of the Committee for Inland Fisheries of Africa. Entebbe, Uganda, 27–30 October 2004. Rapport de la treizième session du Comité des pêches continentales pour l’Afrique. Entebbe, Ouganda, 27–30 octobre 2004.* FAO Fisheries Report/FAO Rapport sur les pêches. No. 775. 62p. <ftp://ftp.fao.org/docrep/fao/008/y5919b/y5919b00.pdf>

<sup>22</sup> FAO/FishCode. 2004. *Report of the National Workshop on the Code of Conduct for Responsible Fisheries and its practical application to coastal aquaculture development in Viet Nam.* FAO/FishCode Review. No. 12. Rome, FAO. 47p. <ftp://ftp.fao.org/docrep/fao/007/j3572e/j3572e00.pdf>

<sup>23</sup> <http://www.enaca.org/modules/mydownloads/singlefile.php?cid=164&lid=755>

<sup>24</sup> <http://www.streaminitiative.org>



40. In the North American region, the National Oceanographic and Atmospheric Administration (NOAA) published the “National Offshore Aquaculture Act<sup>25</sup>” which encourages the development of responsible marine aquaculture. A Code on Responsible Practices in Saltwater Salmon Farming<sup>26</sup> was issued by the Washington Fish Growers Association which directly promotes the application of the CCRF.

41. The European Aquaculture Society (EAS) promotes responsible aquaculture development through coordination of the CONSENSUS Programme<sup>27</sup> which draws up a series of guidelines based on a multi-stakeholders platform. The Federation of European Aquaculture Producers (FEAP) drew up and constantly updates its Code of Conduct<sup>28</sup> as sector guidance on sustainability and conservation.

42. In the Mediterranean Region the International Union for the Conservation of Nature (IUCN) organized a Workshop on Sustainable Development of Aquaculture (June 2005, Alger) which set up basic principles and a regional strategy for aquaculture production.

43. The need for support to sustainable aquaculture development in Africa is recognized in the Abuja Declaration on Sustainable Fisheries and Aquaculture<sup>29</sup> adopted by the Heads of the State Meeting of the NEPAD (the New Partnership for Africa’s Development) “Fish for All Summit” in 2005. The Declaration includes support to regional cooperation in fisheries and aquaculture, promotes the implementation of the CCRF provisions and ensures that aquaculture is adequately reflected in the national and regional economic policies, strategies and plans.

44. The Secretariat of Pacific Community (SPC<sup>30</sup>) pursues the goal of promoting economically, socially and environmentally sustainable aquaculture in the Pacific Area. Beside the dissemination of information through technical papers (e.g. introduction of aquaculture species, ecological risk analysis) the Secretariat published<sup>31</sup> a series of economic models for aquaculture commodities (pearl, prawn, shrimp, seaweed) including economic risk analysis.

45. Private producers or producers’ organizations are also involved in the promotion of sustainable aquaculture initiatives. The salmon industry in Chile is implementing so-called “Clean Production Agreements” to control the environmental impact of intensive salmon farming. The German Agency for Technical Cooperation (GTZ) is promoting public-private partnership between German aquaculture enterprises and local firms in partner countries to harmonize existing guidelines and standards in order to create a benchmark that fixes criteria which are economically, environmentally and socially acceptable and gives added value to aquaculture products.

## **CONCLUDING REMARKS ON GENERAL TRENDS, PERSPECTIVES AND EXPERIENCES**

46. The analysis of the 2004 survey suggests that progress evaluation in the application of CCRF provisions and the identification of relevant interventions in support of responsible aquaculture development must follow two different directions.

47. Countries with developed aquaculture production, having already experienced a large number of the constraints affecting sector growth and, as a consequence, the need to apply regulations, tend to give more detailed answers and usually deal with the questions within the framework of a general development planning scheme. Regulatory provisions for sustainable aquaculture are already in place or are being partly applied and progressively included in specific

<sup>25</sup>[http://www.nmfs.noaa.gov/mediacenter/aquaculture/docs/03\\_National%20offshore%20Aquaculture%20Act%20FINAL.pdf](http://www.nmfs.noaa.gov/mediacenter/aquaculture/docs/03_National%20offshore%20Aquaculture%20Act%20FINAL.pdf)

<sup>26</sup> <http://www.wfga.net/conduct.asp>

<sup>27</sup> [http://www.easonline.org/home/en/Consensus\\_pressrelease\\_23112005.pdf](http://www.easonline.org/home/en/Consensus_pressrelease_23112005.pdf)

<sup>28</sup> [http://www.feap.info/feap/code/default\\_en.asp](http://www.feap.info/feap/code/default_en.asp) ; [http://www.aquamedia.org/consumer/codes/Framework1\\_en.asp](http://www.aquamedia.org/consumer/codes/Framework1_en.asp).

<sup>29</sup> [http://www.fishforall.org/ffa-summit/C\\_Eg/Abuja%20Declaration%20\(English\).doc](http://www.fishforall.org/ffa-summit/C_Eg/Abuja%20Declaration%20(English).doc)

<sup>30</sup> <http://www.spc.int/aquaculture/site/spc/default.asp?ou2=spc>

<sup>31</sup> <http://www.spc.int/aquaculture/site/home/index.asp>

normative frameworks. Requests of assistance/cooperation are driven by a need of making their applications more effective, with a view to further fostering the environmental, financial and social sustainability of the aquaculture sector.

48. In other countries where aquaculture is still undeveloped or is in its initial stage, responses are obviously less precise, guided by broad considerations of promoting inland rural aquaculture and coastal aquaculture. In this second situation, major requests for assistance/cooperation frequently target technical and financial support for the sustainable development of aquaculture.

49. Despite the decreased number of responding Members in 2004, there is a general confirmation of the areas of intervention already identified by the Sub-Committee to promote aquaculture sustainability and largely justifies the orientation given by FAO to its related CCRF supporting programme activities developed and implemented during the last two years.

50. The Sub-Committee is invited to discuss the current apparent decrease in responses to the CCRF surveys while considering that the questionnaire actually can be seen as an effective instrument for driving national appraisals of the fishery and aquaculture sectors, which may lead to refining planning objectives, improved evaluation of opportunities for economic and social development, clear identification of the needs for assistance and promotion of cooperation at all levels.

51. At the same time, the Sub-Committee might want to further pursue the achievement of objectives identified at its 2<sup>nd</sup> Session, by enhancing the effectiveness of such questionnaire-based analysis of their aquaculture sectors.

52. For this purpose, two avenues are proposed for consideration. First, greater involvement of regional fisheries and aquaculture bodies is proposed for the development of analytical reviews of CCRF implementation, providing opportunities for both more detailed recognition and appraisal of issues and trends at the regional levels and for more dynamic, closer and regular contact with responsible national authorities. Regional Bodies should assist Members in better understanding and using the questionnaire, emphasizing the need for multi-disciplinary and multi-institutional approaches in formulating responses (e.g., through temporary working groups) and for more regular monitoring at national levels. More active participation of FAO and non-FAO regional fisheries and aquaculture bodies, will help to identify the initiatives already promoting responsible aquaculture development at national level, will enhance the identification of opportunities for regional cooperation and information exchange and will favour inter-regional bilateral and multilateral relationships.

53. A second avenue could be to expand the scope of questions in the CCRF questionnaire beyond Article 9, as already done in 1999 for the Consultation on the Application of CCRF Article 9 in the Mediterranean Region<sup>32</sup>. Additional questions could be formulated in the questionnaire to include themes frequently indicated as priorities by responding Members and already identified as major areas of intervention, such as aquaculture integration into coastal management, aquaculture contribution to food security, to rural development and to enhancements of livelihood of local communities.

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<sup>32</sup> FAO. 1999. *Report of the Consultation on the Application of Article 9 of the FAO Code of Conduct for Responsible Fisheries in the Mediterranean Region*. Rome, Italy, 19-23 July 1999. *Rapport de la Consultation sur l'application de l'article 9 du Code de conduite pour une pêche responsable de la FAO dans la région méditerranéenne*. Rome, Italie, 19-23 juillet 1999. FAO Fisheries Report/FAO Rapport sur les pêches. No. 606. Rome, FAO. 1999. 208p. In the context of this Consultation FAO prepared a detailed outline for the preparation of national reports on status and trends of responsible development of aquaculture in the participating countries.

[http://www.fao.org/documents/show\\_cdr.asp?url\\_file=/DOCREP/005/X3764B/X3764B00.HTM](http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/X3764B/X3764B00.HTM).

54. The present analysis of the responses to the questionnaire indicates the necessity of in-depth analysis of the responses being made available to the Members (through the COFI and its Sub-Committees), with a view to present progress made at regional and global level towards the development of responsible aquaculture and thereby supplying a permanent information base and evaluation of resources made available and of the results achieved.

55. In the meantime Members responding to the questionnaire should be invited to supply, as far as possible, the most accurate indications of major bottlenecks and key issues limiting aquaculture development. This would increase the effectiveness of cooperation instruments like FAO's Technical Cooperation Programme and enhance the formulation of specific medium- to large-scale projects (including trust fund or UTF projects). Precise indications are also useful for FAO to identify essential or emerging issues to be addressed by expert groups or technical papers and guidelines.

### **SUGGESTED ACTION BY THE SUB-COMMITTEE**

56. The Sub-Committee is invited to discuss progress made in the promotion and implementation of the aquaculture-related provisions of the CCRF. In addition, the Sub-Committee is invited:

- to consider the possible revision of the CCRF questionnaire format, with a view to extend aquaculture related questions to issues like ecosystem resources management, enhancement of livelihoods of rural and coastal communities, and greater involvement of research institutions;
- to enhance the emphasis on the need of integrating the management of aquaculture development within general national development plans; and
- to strengthen the involvement of FAO and non-FAO Regional Fisheries and Aquaculture Bodies in the conduct of the questionnaire analysis of sustainable aquaculture sector development.

57. The Sub-Committee may wish to consider recommending specific actions by the FAO Fisheries Department, FAO Members, and regional and international organizations concerned with sustainable aquaculture development and the implementation of the CCRF.