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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON AQUACULTURE

Seventh Session

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THE FAO FISHERIES AND AQUACULTURE DEPARTMENT'S EFFORTS IN IMPLEMENTING THE RECOMMENDATIONS OF THE PAST SESSIONS OF THE COFI SUB-COMMITTEE ON AQUACULTURE

Executive Summary

This document contains a brief overview of the efforts made by the FAO Fisheries and Aquaculture Department towards implementing the recommendations of the past sessions of the COFI Sub-Committee on Aquaculture.

The Sub-Committee is invited to:

Reflect on the progress and achievements and provide advice, as required, to strengthen the implementation of the recommendations of the COFI Sub-Committee on Aquaculture, and approve the draft terms of reference for an Advisory Working Group on Aquatic Genetic Resources and Technologies (Annex 1).

INTRODUCTION

1. The Sixth Session of the Sub-Committee on Aquaculture was held in Cape Town, South Africa, from 26 to 30 March 2012, at the kind invitation of the Government of South Africa. The report of the Session is provided as an Information Document COFI:AQ/VII/2013/Inf.5.

MAJOR RECOMMENDATIONS AND SUGGESTIONS OF THE SUB-COMMITTEE

2. The Sub-Committee made a number of suggestions and recommendations, and identified several priority areas for future work towards achieving the full potential of aquaculture for national, regional and global food security; poverty alleviation and human development (see COFI:AQ/VII/2013/Inf.5).

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IMPORTANCE OF AQUACULTURE TO FOOD SECURITY, POVERTY ALLEVIATION AND SOCIO-ECONOMIC GROWTH

3. Due to the financial constraints faced within the framework of the regular programme allocation, efforts have been made to mobilise extra-budgetary funding to implement the recommendations. Despite the limited success achieved in mobilising extra-budgetary resources, the significant financial assistance granted by the governments of China, Norway, Sweden as well from the European Union, is fully acknowledged.
4. In Latin America, an estimation of the contribution of aquaculture to food security and rural employment in a number of countries has been made¹. This has resulted in a series of policy recommendations to member countries.

CAPACITY BUILDING IN AQUACULTURE DEVELOPMENT

Policy planning, strategy development and institutional strengthening

5. Three training workshops were conducted in 2012 in Kenya, Rwanda and Uganda under the SmartFish project funded by the European Union, aimed at strengthening the three countries' institutional capacity in assisting small- and medium-scale farmers to conduct aquaculture as a business.
6. Under the NEPAD²-FAO Fish Programme (NFFP) funded by the Swedish Agency for International Development (SIDA), FAO formulated guidelines for the establishment of a national aquaculture advisory groups and aquaculture farmers' organizations in the Aquaculture Network for Africa (ANAF) region. In addition, guidelines were developed, and endorsed, aimed at transforming ANAF into an inter-governmental organization. Preliminary discussions were held to explore the integration of ANAF to the African Union.
7. In Latin America and the Caribbean (LAC), FAO is currently assisting the Governments of Argentina, Bolivia, Colombia, Mexico, Peru and Paraguay in the formulation of national policies and aquaculture development plans. In the Central Asia region, FAO provided technical assistance in the updating of national fisheries/aquaculture legislation and provided prototype frameworks for a national aquaculture policy and strategy for both the Republic of Azerbaijan and the Republic of Kyrgyzstan.

Aquaculture statistics

8. FAO has continued its effort towards the implementation of the Strategy and Outline Plan for Improving Information on Status and Trends of Aquaculture (Strategy-STA). In collaboration with the Secretariat of the Pacific Community (SPC), FAO organized a regional workshop on aquaculture data and statistics in October 2012, in Nadi, Fiji, with the participation of 20 Pacific islands countries and territories (PICTs). The workshop reviewed the current status of aquaculture data collection in the region and discussed aquaculture data needs and capacity development. The meeting agreed on a set of data to be collected in order to monitor aquaculture development in the region as a whole and identified specific actions to be taken by individual PICTs to improve aquaculture data collection, compilation, analysis and reporting.

Addressing the needs of small-scale aquaculture producers

9. Two sub-regional studies were undertaken in collaboration with the national fisheries and aquaculture authorities in Central America, namely: i) a diagnostic study of the national policy instruments related to small-scale aquaculture; and ii) an analysis of the contribution of small-scale fisheries and aquaculture to food security in the sub-region. The studies resulted in a series of recommendations aimed at promoting sustainable growth in the aquaculture sector.

¹ Contribución de la acuicultura de recursos limitados a la seguridad alimentaria y al empleo rural en países de América Latina. FAO Acuicultura en Latinoamérica No. 9. FAO-RLC, Santiago, Chile. (in press).

² New Partnership for Africa's Development

10. A manual on the construction and installation of artisanal wooden floating finfish cages using locally accessible construction material was prepared in French³. The English version is being finalised.
11. A series of initiatives have been taking place covering issues related to seaweed aquaculture with particular emphasis on the contribution from small-scale operations. Two major studies are presently being finalized: i) a global review on current seaweed farming practices; ii) a study covering the socio-economic dimensions of seaweed farming. A joint FAO/Indonesian Government workshop on seaweed farming, processing and trade is also planned for October 2013.
12. FAO provided TCP assistance to the Kingdom of Thailand in organizing small-scale aquaculture operations for cluster certification. This project contributed to benchmarking of the Thai aquaculture certification against FAO guidelines on aquaculture certification, as well as in establishing a cluster certification of small-scale tilapia and shrimp farms in Thailand.
13. Several pilot and scale-up studies have been conducted in selected Southeast and East Asian countries as a follow up to the project “Indicator system for assessing the contribution of small-scale aquaculture (SSA) to sustainable rural development (SRD)”. These studies tested the 14 indicators⁴ and provided the process and evidence on how to measure SSA sector performance in terms of contribution to SRD.
14. An expert workshop⁵ on “Enhancing the contribution of small-scale aquaculture (SSA) to food security, poverty alleviation and socio-economic development” highlighted that the contribution of SSA extends beyond primary producers. It provides secondary employment to those indirectly involved in providing ancillary services along the value chain. While available methods of measurements of the benefits incurred from SSA – how, to whom accrued and how much – are useful starting points, a major long-term objective should be to make more systematic assessments based on a clear framework that fully considers resource systems/agro-ecological zones.
15. In Latin America, an expert workshop on “National policies to support small-scale aquaculture farmers” proposed the formulation of multi-sectoral (family agriculture-small scale aquaculture) policy instruments, given the sharing of land, water and nutrients between agriculture and aquaculture in many rural communities.

Aquatic animal health and biosecurity

16. A number of capacity building activities on aquatic animal health, biosecurity, epidemiology, and design and the implementation of aquatic animal disease surveillance programmes were implemented in 2012 and planned for 2013 as part of FAO’s normative work and as components of TCP projects. Amongst these activities, several workshops on the application of risk analysis to aquaculture were organized at the national and sub-regional levels, namely in Tonga, Suriname and one in Turkey with the participation of Central Asian nations. The latter also benefitted from an introductory training course on basic aquatic animal health. An emergency TCP to address an unknown disease known as Early Mortality Syndrome (EMS) or Acute Hepatopancreatic Necrosis Syndrome (AHPNS) was implemented in July 2012 and concluded in June 2013.
17. The FAO Aquatic Animal Health Capacity and Performance Survey questionnaire continues to be implemented at both the national (Indonesia, Suriname, Viet Nam), sub-regional (six countries in

³ Assemblage et installation de cages hexagonales en bois pour l'élevage de poissons. Un manuel technique. *FAO Document technique sur les pêches et l'aquaculture*. No. 576. Rome, FAO. 78 pp.

⁴ Bondad-Reantaso M.G.; Prein, M. (eds). 2009. Measuring the contribution of small-scale aquaculture: an assessment. *FAO Fisheries and Aquaculture Technical Paper*. No. 534. Rome, FAO. 2009. 180p.

⁵ Bondad-Reantaso, M.G. and Subasinghe, R.P. (eds.). 2013. Enhancing the contribution of small-scale aquaculture to food security, poverty alleviation and socio-economic development: report and proceedings of an expert workshop. *FAO Fisheries and Aquaculture Technical Paper No. 572*. Rome. FAO. 2012. xxp. (in preparation)

Central Asia and three countries in Sub-Saharan Africa) and regional (Pacific) levels. Such surveys have been included as activity components under several TCPs, whilst others were funded through the FAO Turkey Partnership Programme for aquaculture development in Central Asia (Central Asia Regional Programme for Fisheries and Aquaculture Development or FishDev-Central Asia), and the World Bank as part of the preparatory work on biosecurity framework in connection with the introduction of white spot syndrome virus in Sub-Saharan Africa (Madagascar, Mozambique and Tanzania). In the Pacific this survey has been implemented in 18 countries and territories of the region in support of a regional aquatic animal health strategy.

18. In addition to the above, a sub-regional TCP which commenced in October 2012 and covers Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro and Serbia, is working to enhance compliance with international standards on aquatic animal health and includes capacity building components on risk analysis, disease surveillance and disease diagnosis.

19. Regarding the recommendation for further assistance to monitor and manage the occurrence of the epizootic ulcerative syndrome (EUS) in Sub-Saharan Africa, an initiative has been launched in partnership with South Africa to provide training and pursue educational opportunities to further strengthen aquatic animal health capacity including addressing EUS in the southern African region.

20. Regarding the recommendation for further assistance on Infectious Myonecrosis Virus (IMNV) affecting cultured shrimp, a national TCP project (TCP/INS/3304) entitled “Development of preventive aquatic animal health protection plan and enhancing emergency response capacities to shrimp disease outbreaks in Indonesia” commenced in May 2013. In addition, an inter-regional TCP project Strengthening biosecurity governance and capacities for dealing with IMNV is being finalized and expected to be implemented before the end of 2013.

21. FAO also provided support to the NACA (Network of Aquaculture Centres in Asia-Pacific) Expert Group Workshop on Trans-boundary Aquatic Animal Health issues in the Bay of Bengal through the Bay of Bengal Large Marine Ecosystem – Global Environmental Facility (BOBLME-GEF) project, and held consultations with development partners to seek funding support for the institutionalization of mechanisms for the control of trans-boundary aquatic animal diseases among the South Asian Association for Regional Cooperation (SAARC) countries.

Ecosystem approach to aquaculture and spatial planning activities

22. There have been several regional capacity building efforts on the implementation of the ecosystem approach to aquaculture (EAA) as a strategy to improve sector sustainability and environmental performance. With funding from the FAO Multi-partner Programme support Mechanism (FMM) and in collaboration with OSPESCA, a training course on the practical implementation of the ecosystem approach to fisheries (EAF) and EAA, focusing on shrimp fisheries and aquaculture took place in El Salvador, covering seven Central America Countries. With funding from NFFP, the EAF-NANSEN⁶, FMM and SmartFish projects, a joint EAA and (EAF) training workshop for the relevant institutions and stakeholders was organized in October 2012 in Ghana. The concept and implementation of the EAA and EAF development was also introduced in numerous Sub-Saharan African countries through the NEPAD programme and other regional projects. Under the FAO-Turkey Partnership Programme a series of training workshops on better aquaculture management practices were conducted for Central Asian and the Caucasus nations in line with the EAA principles.

23. Various EAA pilot implementation projects, funded by the FMM, are being carried out in several countries to support policy-makers and stakeholders with an understanding of the different management approaches and tools available. Such is the case of the EAA and EAF implementation in the Estero Real estuary in Nicaragua where the project addresses interactions between aquaculture and fisheries and other economic sectors and resource users.

⁶ EAF-Nansen Project: “Strengthening the knowledge base for and implementing an ecosystem approach to marine fisheries in developing countries”.

24. Special efforts are being made to address spatial planning for aquaculture in the EAA context with training courses offered under FAO's technical cooperation programme projects with a number of different agencies including: i) the Aquaculture Network of the Americas (Red de Acuicultura de las Américas RAA; <http://www.racua.org>) which trained 20 aquaculture officers from six Central American countries; ii) the Committee on Aquaculture (CAQ) of the General Fisheries Commission for the Mediterranean (GFCM) with a training course targeting North African countries; and iii) the Regional Commission for Fisheries (RECOFI) with a regional spatial planning programme for marine capture fisheries and aquaculture for the RECOFI Member countries in the Near East.

25. In addition to the aforementioned, FAO also assisted the Kingdom of Thailand in developing capacity for operational decision-making in aquaculture management and expanding aquaculture planning and policy making capabilities.

26. The compilation and review of aquaculture Codes of Practice and Better Management Practices documents, conducted at regional and global levels, is being completed, and will include related technical overviews for Sub-Saharan Africa, Latin America and the Caribbean, Asia-Pacific, China, Europe, North America as well as a global synthesis, in addition to a global online databank of aquaculture COP/BMP documents compiled or received.

Aquaculture and climate change adaptation

27. FAO has continued expanding the knowledge base on climate change implications for fisheries and aquaculture in order to support Members preparedness and adaptation as well as promoting mitigation. The Fisheries and Aquaculture Department has developed and is implementing a climate change strategy and programme to address the adaptation and mitigation in the sector. Activities are being implemented according to available funding.

28. Several publications are being produced including a regional perspective of climate change vulnerability and adaptation potential for fisheries and aquaculture covering Latin American nations⁷, the Benguela Current and one on the lower Mekong Delta in Viet Nam.

29. An expert workshop jointly organized with the Global Partnership for Climate, Fisheries and Aquaculture (PaCFA) initiative was organized in April 2012 to discuss methodologies to assess climate change vulnerability in fisheries and aquaculture. The results and recommendations from the workshop are currently being published. Furthermore, a global desk study overview on aquaculture vulnerability to climate change and implications for adaptation is being finalized and will provide information on potential impacts to the sector and priority actions to be reviewed.

30. FAO is working with several member countries in developing and implementing their national adaptation plans of action (NAPA) ensuring that the aquaculture sector is adequately represented. Further assistance is being provided to some Members to access GEF and other funds in support of climate change adaptation actions. Efforts have been made to assist Bangladesh, Viet Nam, Myanmar, Malawi, Chile, and Caribbean countries to develop projects for support through the Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF). Efforts are also being channelled in the development of a pilot integrated environmental monitoring system along with the development of guidelines and manuals on environmental monitoring that takes into account climatic variability and climate change.

31. A regional project on climate change for four Central Asian countries, namely Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan has been launched in May 2013. The project aims at providing advice to the participating governments and private sector on aquaculture and culture-based fisheries adaptations to climate change.

⁷ Soto, D and Quiñones, R (eds) 2013. Cambio climático, pesca y acuicultura en América Latina (AL): potenciales impactos y desafíos para la adaptación. Taller FAO/Centro de Investigación Oceanográfica en el Pacífico Sur Oriental (COPAS) Universidad de Concepción 5–7 de Octubre de 2011 Concepción, Chile. *FAO Actas de Pesca y Acuicultura* No 29 (en preparación).

CCRF REPORTING

32. At its Sixth Session, the Sub-Committee on Aquaculture agreed on the importance for FAO Member countries to report on the adoption of CCRF measures through the establishment of national response teams, focal points, and/or other mechanisms to improve the reporting. The Sub-Committee further agreed to the new questionnaire and reporting system whilst emphasizing the need for capacity building when reporting through the new system.

33. The new CCRF aquaculture questionnaire was launched globally in January 2013 in the six official languages of FAO. The report on the responses to the questionnaire is contained in Working Document COFI:/AQ/VII/2013/3.

34. FAO recently undertook a self-evaluation of the six available CCRF Technical Guidelines for Responsible Fisheries dealing primarily with aquaculture development issues (TG5 series), with a view to improving future scope, focus, relevance, outreach and impact of such key aquaculture guidelines.

TECHNICAL GUIDELINES ON AQUACULTURE CERTIFICATION

35. FAO developed an Evaluation Framework to assess the conformity of the public and private certification schemes with the FAO Technical Guidelines on Aquaculture Certification, which is presented to the Seventh Session of the COFI Sub-Committee on Aquaculture for discussion and decision. Please see the Working Document COFI:AQ/VII/2013/5.

ASSESSMENT AND MONITORING OF AQUACULTURE SECTOR PERFORMANCE

36. The FAO Expert Workshop on Assessment and Monitoring of Aquaculture Sector Performance was held from 5 to 7 November 2012 in Gaeta, Italy. The workshop provided a platform for international experts from different institutions and disciplines to share information, techniques and experiences in assessing and monitoring the economic, social and environmental performance of aquaculture development at the national, regional and global levels.

37. The prototype version of a user-friendly tool on World Aquaculture Performance Indicators (WAPI) developed by FAO was presented to the aforementioned workshop for comments, suggestions, and possible future collaboration in order to further improve and finalize the tool. The WAPI tool is intended to facilitate consolidation, analysis and utilization of quantitative information on aquaculture sector performance for policy decision-making and sector management.

38. A regional study and workshop on the application of aquaculture assessment tools in Asia and the Pacific was conducted from 3 to 5 July 2012 in Pattaya, Thailand. This study reviewed the existing assessment tools for aquaculture planning and management in the region. A regional strategy and action plan to promote informed policy-making through the wider use of a mixture of planning and management tools was developed. The development of a practical and applicable planning and management toolkit for aquaculture in Asia is in progress.

AQUACULTURE DATA, STATISTICS AND INFORMATION

39. FAO has continued its efforts in implementing the Strategy and Outline Plan for Improving Information on Status and Trends of Aquaculture (Strategy-STA). The establishment of standard concepts, terminology and methodology for aquaculture data collection was identified as a key issue which initiated the development of the CWP Aquaculture Handbook with the participation of five CWP member organizations and 11 invited experts. The task was passed to the Coordinating Working Party on Fishery Statistics (CWP) following the establishment in 2010 of the Aquaculture Specialized Group (CWP-AS). The CWP-AS has placed the development of CWP Aquaculture Handbook as top priority. Since its initial preparation, the draft has been repeatedly reviewed and revised. It was

subsequently approved by the CWP at its Twenty-fourth session in February 2013. The Aquaculture Handbook is available as a session background document.

40. FAO recognizes that this document, encompassing the full-spectrum of information related to aquaculture data collection, represents the first standard guidelines available and hence seeks external support and interests for the dissemination of the handbook in as many languages as possible. At the same time the CWP-AS, at its second and third meeting, recognized the need for more pragmatic field manuals and the review of the existing aquaculture questionnaire. In this regard, FAO will seek for the active participation and collaboration of countries and regions for reviewing and testing such material.

41. In the Asia-Pacific region a regional action plan under the global strategy for improving agriculture and rural data collection and statistics is being developed. Aquaculture data and statistics collection is an important area covered by the regional action plan.

42. The National Aquaculture Sector Overview (NASO) map collection has been updated and a user manual prepared to assist FAO Members with the inventory and monitoring of aquaculture. The collection is in its early stages, but it clearly provides a tool for potentially monitoring the status and trends of aquaculture development, addressing site selection and zoning issues and improving the operational management of aquaculture.

43. The retrospective analysis of aquaculture land and water use data reported to FAO, in addition to data from other sources, has been continued with a view to providing an overview of relevant trends, availability and usefulness of such data.

FEEDING THE GROWING AQUACULTURE

44. A number of activities on aquaculture feeds and feeding have been conducted during the intersessional period. The CCRF Technical Guidelines (Aquaculture development. 1. Good aquaculture feed manufacturing practice and 5. Use of wild fish as feed in aquaculture) were translated into the official languages of FAO.

45. A series of pertinent feed activities have also been implemented through a number of field projects (TCPs and Trust Fund Projects) including the setting up of pilot-scale commercial and farm-made feed demonstration units.

46. A special study on aquaculture feed production and management was supported to assist Members in improving governance measures in aquaculture feed which resulted in the publication of a technical paper on the demand and supply trends of feed ingredients for farmed organisms⁸. Two additional technical publications were released on on-farm feeding and feed management⁹ and feeding and feed management of Indian major carps¹⁰ produced under the on-farm feeding and aquaculture feed management programme.

47. Under the same initiative referred above, the Department is expected to produce CCRF technical guidelines and a manual on farm-made aquafeeds and aquaculture feed management.

48. To provide wider access and circulation on work carried out by the Department, the Aquaculture Feed and Fertilizer Resources Information System (AFFRIS) Web site, designed and launched to disseminate global information on commercially important aquaculture feed ingredients and nutritional profile of aquaculture species (<http://www.fao.org/fishery/affris/en/>), was fully integrated into the FAO corporate Web site.

⁸ Demand and supply of feed ingredients for farmed fish and crustaceans: trends and prospects. *FAO Fisheries and Aquaculture Technical Paper* No. 564. (2011).

⁹ On-farm feeding and feed management in aquaculture. *FAO Fisheries and Aquaculture Technical Paper* 587. FAO. (2013).

¹⁰ Feeding and feed management of Indian major carps in Andhra Pradesh, India. *FAO Fisheries and Aquaculture Technical Paper* 578. FAO. (2012).

49. In terms of field projects, the Department has implemented a regional project on “Reducing the dependence on the utilization of trash fish/low value fish as feed for aquaculture of marine finfish in the Asian region” in selected Asian countries. The project has contributed to the development of better feed management practices in small-scale farming operations resulting in improved feeding practices and conformity to market-related requirements. Under a different trust fund project, a training activity on fish feed development was organized in the Kyrgyz Republic to build the fish farmer’s skills and line institutions in developing farm-made aquafeeds using locally available ingredients.

50. Other field activities include aquafeed development and species diversification in Namibia through the Namibia-Viet Nam technical assistance programme entitled “Support to the South-South Cooperation Technical Assistance Programme between Namibia and Viet Nam” funded by the Government of Spain; the assessment of key technical, economic and social constraints to seed and feed production and management in Bangladesh and the drafting of a TCP proposal on better seed and feed production and management; and the organization of a regional training activity on aquafeed development and seed production for Central Asia, Caucasus and selected Asian countries which was held from 20 May to 19 June 2013 in Wuxi, China. FAO provided technical assistance to the Aquaculture Network of the Americas (RAA) in the organization of a regional field course on alternative farm-made aquafeeds for small-scale farmers and government technicians from nine countries in the region. Presently, in Paraguay, through a TCP, technical assistance is being provided to compile a national catalogue of alternative, locally available sources of protein, for aquaculture feeds. Alternative, low-cost diets are being tested in small school-farms and transferred to resource-limited aquaculture farmers.

51. Through the coordination of the FAO Secretariat, the Asia-Pacific Fishery Commission (APFIC) is planning a regional consultation workshop on aquaculture feed, feed ingredients and feeding practices for sustainable development in Asia and the Pacific. The topic is also being considered as a main theme at the Fifth session of APFIC in 2014. FAO is also assisting the Philippines and Pakistan in developing TCP and trust fund projects to effectively address the quality of feed supply and good farm feeding practices.

AQUACULTURE GENETIC RESOURCES AND TECHNOLOGIES

52. At the Sixth Session of the Sub-Committee on Aquaculture, the Sub-Committee supported the establishment of an Advisory Working Group on Genetic Resources and Technologies, to be coordinated by FAO, that would bring together knowledge and expertise, establish linkages with other networks and agencies and develop a plan of action as part of its activities. The Thirtieth Session of COFI endorsed the establishment of the working group to advise the Organization on matters concerning aquatic genetic resources and technologies and to enhance international cooperation on aquatic genetic resources.

53. The terms of reference of the Advisory Working Group shall be established by the FAO Secretariat according to its standard rules and procedures. To develop draft terms of reference, FAO convened a two day meeting (31 January to 1 February 2013) in Bangkok, Thailand with the participation of international experts. The terms of reference of the Advisory Working Group are presented to the Sub-Committee for approval as Annex 1 of the present document.

54. Some members at the last SCA Session requested FAO to assist with the development of guidelines on the responsible use and exchange of aquatic genetic resources, on the application of genetic technologies, research and technology transfer. Towards this goal, FAO jointly organized with SPC a Regional Workshop on Aquatic Biosecurity and Aquaculture Data and Statistics in the Pacific Region in October 2012, in Nadi, Fiji. The overall objective of the workshop was to evaluate regional needs and enhance the capacities of PICTs, and, on the specific thematic objective, to promote the responsible use and control of aquatic species introductions and translocations in the region.

55. The Sub-Committee suggested the creation of a framework or network for data and information exchange amongst aquaculture/fishery genetic research institutions, development agencies

and relevant international organizations and emphasized the regional approach to be employed in the process. To this end, the proceedings of an Expert Workshop on information sources relevant to aquatic genetic resources were finalized¹¹ and another FAO expert workshop was held in Bangkok, Thailand, from 28 to 30 January 2013, which brought together technical experts, regional fishery body representatives and national focal points to review, amend and finalize the questionnaire to be used for the preparation of the country reports on aquatic genetic resources. These compiled reports will be used in the preparation of the first “State of the World on Aquatic Genetic Resources for Food and Agriculture” (the Report). The questionnaire and the Report will address farmed aquatic species and their wild relatives under national jurisdiction. The questionnaire was submitted to the 14th Session of the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA) in April 2013. The CGRFA invited COFI, should it establish an Advisory Working Group on Aquatic Genetic Resources and Technologies, to consider inviting the Advisory Working Group to contribute to the preparation of the Report. The CGRFA further requested to be informed, through its Bureau, about the contributions of the Advisory Working Group to the preparation of the Report¹².

56. FAO supported the Government of Nepal in implementing a TCP project to develop the capacity in initiating a genetic improvement programme for important cultured fish species and to strengthen the legal support to aquaculture seed quality control and improved fish hatchery operational practices in the country.

57. In cooperation with the Mekong River Commission (MRC), FAO is supporting the implementation of a regional TCP facility project on capacity building for promoting good fish stock enhancement practices among the MRC Members. The project is assisting the MRC to develop regional technical guidelines for implementing good fish stock enhancement practices to ensure sound ecological impacts.

OTHER TARGETED REGIONAL ACTIONS

Committee for Inland Fisheries and Aquaculture of Africa (CIFAA)

58. Within the NFFP framework and in collaboration with NEPAD’s Planning and Coordination Agency (NPCA), FAO prepared a report on how to renew the Committee for Inland Fisheries and Aquaculture for Africa (CIFAA). The recommendations were presented to the Ministries in charge of inland fisheries and aquaculture in the CIFAA Member countries.

59. The Member countries reiterated that CIFAA had been useful in the development of inland fisheries and aquaculture and hence should not be abolished. They emphasized that the body should be reformed to address its institutional deficiencies and weaknesses, increase its visibility and make it more relevant to the evolving scenario of Africa. They also stressed the importance of obtaining political commitment from CIFAA Member governments to ensure the viability and long-term operational sustainability of the Committee. These results and recommendations will be presented to the African Ministers of Fisheries and Aquaculture at their next conference for decision.

Support to the Regional Commission for Fisheries (RECOFI)

60. A technical workshop for a “Regional Spatial Planning Programme for Marine Capture Fisheries and Aquaculture for RECOFI Member countries” took place in Cairo, Egypt in November 2012. The purpose of this workshop was to complete a spatial planning development programme, including preliminary budget estimates for the development of the capacity to use spatial tools in fisheries and aquaculture management and planning.

¹¹ Halwart, M., Hett, K., García-Gomez, R. and D. Bartley, eds. 2012. Improving the Information Base for Aquatic Genetic Resources for *The State of the World’s Aquatic Genetic Resources* – FAO International Expert Workshop 1–4 March 2011 Madrid, Spain. FAO Fisheries and Aquaculture Proceedings. P23, Rome, FAO. 61 pp.

¹² FAO 2013. *CGRFA-14/13/Report* - Report of the Fourteenth Regular Session of the Commission on Genetic Resources for Food and Agriculture Rome, Italy, 15 – 19 April 2013.

61. Under the aegis of FAO/RECOFI, a tripartite initiative on fisheries management and aquaculture cooperation in the Northern area of the Gulf involving the Islamic Republic of Iran, Iraq and Kuwait, has been supported and the field programme is currently being developed. The project proposal “Initiative on Fisheries Management Cooperation in the Northern Area of RECOFI” was endorsed by the participating countries in November 2012. The project aims to stimulate cooperation amongst the three countries and address a number of significant fisheries and aquaculture issues in the sub-region.

Support to desert and arid land aquaculture

62. At its last SCA Session, the Sub-Committee requested FAO to work on desert and arid lands aquaculture to better understand the potential of this sub-sector particularly in those countries characterized by extensive arid lands and limited surface water resources. Developing aquaculture in desert and arid physical conditions dictates the adoption of production strategies focused on good water management which includes the use of water saving and recycle practices, but also protection against strong solar radiations and the introduction of modern aquaculture technologies such as recirculation systems.

63. FAO took a series of initiatives in close collaboration with a number of ongoing projects and regional organizations including the i) organization of a practical training and capacity building in small-scale aquaponics in Ethiopia; ii) the production of a technical manual on small-scale aquaponics for wider distribution of the technology; and iii) the elaboration of a series of TCP projects for aquaculture development in arid zones (e.g. Jordan, Syria and Algeria) using species low in the food chain such as carps, other cyprinids and tilapia whilst focusing on local ingredients for aquafeeds production.

64. Through a unilateral trust fund arrangement with the Kingdom of Saudi Arabia, FAO is implementing an aquaculture development project covering both marine finfish cage farming and small-scale tilapia farming in freshwater facilities. The project activity covers both the regulation and technical issues including species diversification. The lessons and outputs derived from this project will certainly have a spinoff benefit in the region as a whole through information exchange promoted through the RECOFI regional fisheries management commission and its Regional Aquaculture Information System (RAIS; www.raisaquaculture.net) established with the technical support of FAO.

Regional aquaculture programme for the Central Asian and Caucasus region

65. A FAO scoping workshop on a regional cooperation programme for responsible aquaculture and fisheries development in the Central Asian and Caucasian countries was held in Urumqi, China, from 4 to 8 June 2012. The workshop report has been published¹³ and incorporates a Strategy Framework on Aquaculture and Fisheries Development Cooperation among countries in Central Asia, Caucasus Region, China, the Islamic Republic of Iran, Mongolia, Pakistan and Turkey.

66. The first phase of the Central Asia Regional Programme for Fisheries and Aquaculture Development (FishDev-Central Asia), due to be closed in mid 2014, greatly promoted technical cooperation and overall capacity building in the areas of fisheries and aquaculture in the Central Asian region. The second phase of the Programme is likely to be implemented through the extension of the FAO-Turkey Partnership Programme.

67. FAO is assisting the Government of Mongolia in developing and implementing a TCP project, and supporting trust fund projects, to initiate aquaculture development in the country for improving national fish supply.

Assistance for aquaculture development in small island developing states

68. In the Pacific islands countries and territories, under a series of technical cooperation programme projects, activities covering aquaculture networking and cooperation, community-based

¹³ Report of the FAO Scoping Workshop on Regional Cooperation Programme for Responsible Aquaculture and Fisheries Development in the Central Asian and Caucasian Countries, Urumqi, the People’s Republic of China, 4–8 June 2012. *FAO Fisheries and Aquaculture Report*. No. 1040. 56 pp. (2013).

aquaculture development, food security, aquatic biosecurity issues and risk assessment have been conducted. As an overarching activity in support of sustainable aquaculture development in the region, FAO is in the process of finalizing a compendium of success stories based on an in-depth study of successful enterprises and projects in the Pacific, to serve the region as a useful reference.

69. A joint FAO/SPC Regional Workshop on Aquatic Biosecurity and Aquaculture Data and Statistics was held in the Pacific region from 1-6 October 2012 in Nadi, Fiji. The workshop participants identified strategies to address key challenges and agreed that they should precede analysis of hazards and risks. Some PICTs have already been introduced to risk analysis and have practical experiences that can be shared with the region. A regional biosecurity strategy was drafted and is currently being finalized. Furthermore, a national workshop on risk assessment in aquaculture development aimed at developing national capacity in aquatic animal health in Tonga was organized.

70. A number of national consultations were conducted to discuss the establishment of a sub-regional aquaculture network covering Micronesia and accordingly a sub-regional TCP (Assistance in the Establishment of a Micronesian Network on Sustainable Aquaculture) was approved and launched in 2013. In terms of community-based aquaculture development, a series of activities and studies have been conducted in the Marshall Islands, Papua New Guinea, Tonga and Tuvalu.

71. FAO collaborated with regional partners in the Caribbean region on the formulation of a strategy, action plan and programme proposal on disaster risk management, climate change adaptation in fisheries and aquaculture in the Caribbean Community (CARICOM) and Wider Caribbean Region. Policy and strategy development assistance on aquaculture was provided to Suriname and Guyana in recent years. The preparatory work for the establishment of a regional shellfish hatchery for the Wider Caribbean resulted in a regional workshop in Jamaica in 2010, of which the outcomes were published in 2011¹⁴.

Promote sustainable intensification of aquaculture in Asia and the Pacific

72. A joint FAO/NACA regional consultation on sustainable intensification of aquaculture in Asia and the Pacific was convened in October 2012. The meeting reviewed the status of aquaculture intensification in the region, identified the major issues and challenges, and recommended a strategy for priority actions to promote sustainable intensification. FAO has identified sustainable aquaculture intensification for food security and nutrition as one of the discussion papers for the Thirty-second Regional Conference for Asia and the Pacific. FAO is following-up in collaboration with relevant regional organizations.

TOWARDS A PLAN OF ACTION FOR COFI-AQ

73. In accordance with the request of the Sub-Committee on Aquaculture, the Secretariat prepared a strategic framework for strengthening the role of the COFI Sub-Committee on Aquaculture in advancing future aquaculture development. The draft document has been circulated amongst member countries and the participants of the last session of the Sub-Committee and posted on the FAO website, calling for comments. The revised version, which has taken into consideration the member's comments, is presented to the Seventh Session of the Sub-Committee (COFI:AQ/VII/2013/4).

¹⁴A regional shellfish hatchery for the Wider Caribbean: Assessing its feasibility and sustainability. FAO Regional Technical Workshop. 18–21 October 2010, Kingston, Jamaica. *FAO Fisheries and Aquaculture Proceedings*. No. 19. Rome, FAO. 2011. 246 pp.

ANNEX 1

Draft

TERMS OF REFERENCE FOR THE ADVISORY WORKING GROUP ON AQUATIC GENETIC RESOURCES AND TECHNOLOGIES¹⁵

FAO will establish the Advisory Working Group on Aquatic Genetic Resources and Technologies to advise FAO on matters concerning aquatic genetic resources and technologies, and to enhance international cooperation on aquatic genetic resource management.

The Advisory Working Group shall be established according to FAO's rules.

The Advisory Working Group shall consist of no more than 10 recognized experts in genetic resource use and conservation in fisheries and aquaculture.

Advisory Working Group members shall be appointed by the Director-General for a period of two years but may be renewable. In appointing experts, in addition to scientific and technical excellence, FAO will consider diversity and complementarity of scientific backgrounds and observe, as appropriate, the principle of equitable geographical representation and gender representation. Experts will be invited to participate in the Advisory Working Group in their personal capacity, as experts, and shall not represent the position of the government of which s/he is an official, or of the organization with which s/he is associated.

The working language of the Advisory Working Group will be English.

The scope of the Advisory Working Group shall include the conservation, sustainable use and development of all aquatic genetic resources relevant for fisheries and aquaculture.

Specific tasks of the Advisory Working Group shall be assigned by FAO with due consideration of the advice from COFI.

The membership of the Advisory Working Group may be changed by FAO depending on the specific advice being requested by FAO and/or COFI.

The Secretariat of the Advisory Working Group will be based in the Fisheries and Aquaculture Department of FAO headquarters, Rome, Italy.

The plan of work of the Advisory Working Group will be prepared and approved by the Advisory Working Group in consultation with the secretariat taking into account tasks assigned to it in accordance with paragraph 7 above and available financial resources.

The Advisory Working Group shall prepare a report to the FAO secretariat providing information on its activities and recommendations.

The Advisory Working Group may propose amendments to these terms of reference which shall be transmitted to COFI for consideration.

¹⁵ Based on the 'FAO Consultation to Establish Terms of Reference for a COFI Advisory Working Group on Aquatic Genetic Resources and Technologies' 31 January – 1 February, 2013, FAO Regional Office for Asia and the Pacific, Bangkok, Thailand