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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON AQUACULTURE

Eighth Session

Brasilia, Brazil, 5–9 October 2015

TOWARDS ESTABLISHING A STRATEGIC FRAMEWORK FOR STRENGTHENING THE ROLE OF THE SUB-COMMITTEE ON AQUACULTURE IN ADVANCING AQUACULTURE DEVELOPMENT

SUMMARY

The 7th Session of the COFI Sub-Committee on Aquaculture (COFI-SCA) and the 31st Session of the Committee on Fisheries (COFI) requested the Secretariat to prepare a document outlining the regional priorities in aquaculture, as a basis for developing a strategic framework for strengthening the role of the Sub-Committee in advancing aquaculture development. This document provides the major regional priorities in aquaculture and identifies common priority areas across regions provisionally mapped against the FAO's strategic objectives.

The Sub-Committee is requested to study the document and advise the Secretariat on the way forward towards developing a strategic framework for strengthening the role of the Sub-Committee in advancing aquaculture development.

1. Aquaculture remains the fastest growing food producing sector in the world. Its contribution to global food and nutrition security, alleviating poverty and improving the social wellbeing of millions of people worldwide is broadly recognized, and more recently so at the 41st Session of the Committee on World Food Security CFS. Over the years, the number of interventions made by Members and observers at COFI sessions and the quality of discussions during the past sessions of the COFI-SCA reflect the importance given by the Members to aquaculture and their expectations of the role of the COFI-SCA in assisting sustainable growth of the sector.

2. The fifth Session of the COFI-SCA reiterated the need to create a strategic framework, which would provide for a structured way that would clearly define the specific components of the work programme of the COFI-SCA. The framework would in turn support the identification of resources and partners that might contribute to the successful implementation of the programme. For the purpose of the COFI-SCA, this would broadly cover the organization and conduct of the sessions and eventual implementation of the recommendations of the Sub-Committee.

3. In response to a request made by the COFI-SCA at its 5th Session, and considering the contents discussed at the previous Sessions of the Sub-Committee, the Secretariat presented a document to the 6th Session of the Sub-Committee outlining a process including several options for developing a plan of action.

4. In light of FAO's limited human and financial resources, the COFI-SCA re-emphasized the need for a strategic prioritization of its work. The COFI-SCA recognized that, whilst focusing on key global issues, the strategic prioritization should take into account regional differences in terms of assistance needed and inputs expected, food security and nutritional aspects as well as development options. Consequently, the COFI-SCA encouraged the Secretariat to prepare a draft strategy paper for further discussion at the 7th Session of the COFI-SCA.

5. In-session discussions of the draft strategic framework for strengthening the role of the COFI-SCA in advancing aquaculture development at the 7th Session of the COFI-SCA, in 2013, recommended the following:

6. *"In support of the Strategic Framework, the COFI-SCA agreed to the identification of cross cutting and other leading global priorities and proposed the following sequence:*

- *Hold consultations through regional workshops, networks and/or other mechanisms such as reviewing previous existing knowledge from previous priority settings to determine the regional priorities linked to the FAO Strategic Objectives for the work of the COFI-SCA;*
- *The Secretariat should analyze and synthesize the outcomes of the regional consultations and share the results with Members for discussion at least six months before the next session of the COFI-SCA."*

7. This document (COFI:AQ/VIII/2015/5) presents the draft analysis and synthesis of the regional aquaculture priority areas as compiled by the Secretariat. This document is shared with Members, as requested by the COFI-SCA, in advance, for review, and eventual discussion at the 8th Session of the COFI-SCA to be held in Brasilia, Brazil, from 5–9 October 2015. It is envisaged that this document will help in shaping a strategic framework for strengthening the role of the COFI-SCA in advancing aquaculture development.

8. The preparation of this document employed the following process and procedure:

9. The Secretariat grouped Member Countries into the following regions; i.e. Asia-Pacific (RAP), Europe (EUR), Latin America and the Caribbean (LAC), Near East and

North Africa (NENA), North America (NA) and Sub-Saharan Africa (SSA). For each region, documents containing major decisions, recommendations, agreements and priority setting exercises on aquaculture development issues and targets of technical, strategic, and policy nature during the past 5–10 years were reviewed. Special attention was paid to priorities identified by regional organizations (IGOs and INGOs) on the basis of governments' and other stakeholders' inputs. The identified cross-cutting and global priorities were provisionally mapped against FAO's strategic objectives under the revised strategic framework of the Organization (Table 1). The regional priorities and their synthesis are presented hereafter.

A. ASIA AND THE PACIFIC (RAP)

10. The priorities of the Asia Pacific Region were synthesized from sub-regional proceedings, prioritization exercises and the results of global advocacies. As the major producer of global aquaculture, Asia stands well ahead of the rest of the world. However, a major regional challenge identified is the improvement of environmental and social performance of the aquaculture sector in the coming decades, considering the forecasted and predicted increase in regional production. Key topics of the discussions on priority setting included the capacities for aquaculture management, science and technology support to management and development, improved governance and management practices, strengthened biosecurity, facilitating effective marketing by small aquaculture farmers, promoting responsible production, use of quality feed and seed, increasing the resilience of farmers in confronting climate change and other risks, and increasing investment. The major priorities are as follows:

- General Priorities: (a) The capacities for governance – especially market-based governance and voluntary management – require further strengthening across the region; and (b) Training for farmers, extension technicians and farm managers, and technologists and scientists continue to command a high priority in all countries.
- Policy: (a) Improving equity of benefit sharing along the value chain, and between genders, needs strong policy support; these are also not widely implemented across the region; and (b) Further strengthening biosecurity through better policy and enforceable regulations.
- Science and Technology: (a) although science and technology support in environmental management is fairly developed, capacity for the management of environmental impacts remains weak in most parts of the region. Specific areas for focus include zoning and carrying capacity assessment, followed by pollution management and environmental impact assessment and mitigation. (b) Science and technology support is still weak for climate change resilience and adaptation, product development and certification in order to facilitate better market access by small producers, and emergency response to disease outbreaks, although these are now widely implemented across the region. (c) Science and technology support for feed and nutrition and for breeding and seed quality improvement is variable across the region, being strong in some countries but needing additional investment in most countries, especially those of South Asia. Special sub-regional priorities include: (i) Promotion of aquaponics and the formation of an intergovernmental network organization of aquaculture for the Pacific Region; (ii) Offshore cage culture and use of rice fields and marginal lands with adverse soils for aquaculture production in China; (iii) Survey of aquaculture resources and users' rights to these resources for South Asia; and (iv) Reducing fish waste by converting to useful by-products and

value addition of processed aquaculture products for increasing nutritional value in Southeast Asia.

11. Some of the regional activities and programmes, reflecting the aforementioned priorities and implemented by FAO and national authorities under the new Blue Growth Initiative of FAO, are presented in the working document, COFI:AQ/VIII/2015/7.

B. EUROPE (EUR)

12. Aquaculture is politically recognized as having the potential to boost growth and jobs in the European Union coastal and inland areas with several key European policies highlighting aquaculture as being a key component in achieving economic growth and competitiveness on a global level. Examples of these policies include the overall Blue Growth strategy, the reformed Common Fisheries Policy (CFP), sea basin strategies (i.e. Baltic Sea Region Strategy) and others. However, there are significant challenges to the growth of the sector, for example in the EU, where there are currently over 200 directives, regulations, or other legislations that directly affect the marine environmental policy and management and many European states lack a coherent national aquaculture policy.

13. The CFP reform envisioned the development and promotion of EU aquaculture through the so-called 'open method of coordination' based on strategic guidelines, multiannual national plans prepared by the Member States and mechanisms to facilitate the exchange of best practices. In 2013, the European Commission (EC) published the Strategic Guidelines for the Sustainable Development of EU Aquaculture to assist EU Member States in defining their own national targets taking account of their respective starting positions, national circumstances and institutional arrangements.

14. The common priority areas in Europe (EU member states and non-members) were identified from a set of more than 90 key reports, events and other documentation of intergovernmental organizations, national governments and other stakeholders including foresight exercises, prioritization of needs, recommendations or recognition of key challenges, issues and/or constraints in relation to European aquaculture. In order to be able to generate an overview of priority areas and identify the key challenges, issues and/or constraints the study used five overarching categories: (a) Strategic; (b) Administrative; (c) Technical; (d) Business; and (e) Other.

15. These overarching categories were selected based on an initial identification of common elements across the reports. Under the overarching categories, sub-categories were also used to further classify each specific challenge as identified, and to compare content with a view to identifying similarities and divergences across the various reports. This approach identified trends in the priority areas across three different groups: a) inter-governmental; b) national government administrations; and c) stakeholders. The study has identified a list of European priority areas and highlighted some of the similarities and divergences regarding the strategic planning and implementation plans across European states.

16. Key Findings: The following twelve priority areas have been identified, based on the number (in brackets): of reports which highlighted the given priority area.

- Simplify administrative procedures (18)
- Secure sustainable development and growth of aquaculture through coordinated spatial planning (18)
- Enhance the competitiveness of EU aquaculture (17)
- Fish health and welfare (15)
- Promote a level playing field for EU operators by exploiting their competitive advantages (14)
- Prioritization for aquaculture development (13)
- Regulation and environment (13)
- Public perception (13)
- Licencing (12)
- Technology for innovation (12)
- Knowledge transfer between research and industry (12)
- Sustainable aquaculture strategies (12)

17. A more specific review of the results is provided as grouped under each of the following five categories:

- Strategic priority areas: Under the strategic category the top two key issues identified by all stakeholders were a 'Level playing field' (EC strategic guidelines priority no. 4) and 'Competiveness' (EC strategic guidelines priority no. 3) followed closely by 'Prioritization for development'. In particular the intergovernmental and multi-stakeholder groups highlighted the importance of these areas, with multi-stakeholders also placing strong emphasis on the need to have a vision for the industry. The national reports reviewed for Greece, Spain and the United Kingdom covered strategic elements as expected in response to the EC Strategic Guidelines. Interestingly, Norway did not have any issues/priorities under the 'strategic' category whilst both the Russian and Ukrainian documentation mentioned 'competitiveness' and creating favourable conditions for producers.
- Administrative priority areas: Under administrative issues, the top two key challenges identified across all groups again reflected the priorities of the EC Strategic Guidelines. They were 'Governance and Administration' (EC strategic guidelines priority no. 1) and 'Marine Spatial Planning' (EC strategic guidelines priority no. 2). Also prioritized were 'Regulation & Environmental protection', and Licensing. However, when the national reports of the non EU case studies are considered, Norway highlights "good aquaculture governance", and the Russian Federation indicates some acknowledgement of administrative challenges (site allocation in water reservoirs). 'Public participation in governance' and 'Appropriate public investment' were only highlighted in a few documents primarily from the multi-stakeholder groups.
- Technical priority areas: The top three technical issues presented by the reviewed documents were 'Fish health and welfare', followed jointly by 'Technology Innovation' and 'Knowledge Transfer between Research and Industry'. Although it must be noted that all topics scored highly across the different stakeholder types, with multi-stakeholder groups showing a slightly higher tendency to include more technical issues as priorities. The only discrepancy was for 'Traceability' which received the lowest score, with only one national government and one multi-stakeholder group considering it of priority.
- Business priority areas: The identified topics under business did not score too highly in comparison with the 'Strategic and Administrative' issues for example. However,

of the scores that were given, 'Support to small and medium sized enterprises (SMEs)' came in highest. This was followed by 'Access to capital and investments'. With regard to the national reports, Greece, Spain and the United Kingdom highlighted few of the business priorities. Most notably all three countries highlighted 'Support to small and medium sized enterprises (SMEs)', with Spain also highlighting 'access to capital' and Greece covering energy costs. Norway, The Russian Federation and the Ukraine do not highlight any business priorities. From the overview, it can be seen that these business elements were also not highly ranked by the intergovernmental reports, but were however included in almost all the multi-stakeholder groups findings.

- Other priority areas: In the 'Other' category the top two key issues identified were 'Public Perception' and 'Sustainable Strategies'. Closely followed, jointly, by 'Upscaling, human capacity, succession of sector' particularly within the multi-stakeholder groups and 'Lower environmental impact of activities' particularly within the national government documentation. The lowest scoring topics include 'organic aquaculture' which is covered by two national reports and one multi-stakeholder group, and also 'retailers', which was represented by two intergovernmental recommendations and one multi-stakeholder group.

18. In conclusion, the study has found that the documents analyzed have priorities in line with the four key priorities in the EC Strategic Guidelines, which aim to assist EU member states in defining their own national targets to implement measures to overcome challenges facing the aquaculture sector. The intergovernmental agenda is more concerned with the strategic and administrative issues while the multi-stakeholder groups concentrate on technical and business issues.

C. LATIN AMERICA AND THE CARIBBEAN (LAC)

19. In the Latin America and the Caribbean region, aquaculture is continuously growing to meet the demand for fish products that is currently being met by imports to the region. With more than 2.6 million tonnes of aquaculture products in 2012, Latin America and the Caribbean accounted for nearly 4 percent of global production, with a sustained average growth of 9 percent over the last five years.

20. The region has a very asymmetric production with 4 countries (Chile, Brazil, Ecuador and Mexico) contributing more than 80 percent of regional aquaculture volume. The production is also concentrated around four species groups. The most important aquaculture products are Salmonids and mussels (Chile), Tilapia (Brazil, Honduras and others), and white legged Shrimp (Ecuador, Brazil, Honduras, Mexico, Nicaragua and others).

21. The promotion of "sustainable aquaculture development and expansion in Latin America and the Caribbean with significant positive impacts on poverty alleviation and food security" is the clear regional goal resulting from the collection, analysis and synthesis of all relevant key regional document regarding regional assessments, decisions, agreements and recommendations from relevant fishery bodies (Commission for Inland Fisheries and Aquaculture of Latin America and the Caribbean – COPESCAALC and Western Central Atlantic Fishery Commission – WECAF) and from Intergovernmental

organizations such as the aquaculture network of the Americas (RAA) and the Fisheries and Aquaculture Organization of Central America countries (OSPESCA).

22. With the above regional objective in mind, and after the identification of the main threats and obstacles, and through the analysis of the information collected, a list of regional priorities, outlined herebelow, was compiled.

23. Enhance aquaculture's role in food and nutrition security, particularly through promoting aquaculture products among vulnerable groups; provide assistance to resource poor farmers through better extension and capacity development; sustainably intensify aquaculture within a Blue Growth framework and through implementing ecosystem approach to aquaculture (EAA).

24. Where possible, diversify aquaculture, especially through promoting mariculture of native species. Promote research into areas relevant for expanding local production of native species, particularly in support of resource poor farmers, and especially within the fields of feed, nutrition and biosecurity.

25. Improve social contribution of aquaculture through gender-sensitive decent employment and increasing equity in the value chain. Enhance market access by strengthening the value chains and improving post-harvest quality.

26. Increase investment in aquaculture, improve biosecurity, and strengthen preparedness and adaptation to climate change in all aquaculture systems. This requires more research for better understanding the threats and opportunities of climate change for mitigation and adaptation.

27. Improving aquaculture governance, including development and enforcement of appropriate legal and institutional frameworks which are considered priority amongst all countries in the region, particularly towards increasing assistance to resource-poor farmers, and promoting aquaculture products.

28. Since the region is not homogeneous in aquaculture production and development, the priorities identified are heterogeneous. Even though the leading aquaculture countries in the region are mostly based on industrial medium to large scale aquaculture, the need to support small-scale aquaculture is relevant in all countries in the region recognizing the contributions that aquaculture can make to social wellbeing of the people in the region.

D. NEAR EAST AND NORTH AFRICA (NENA)

29. There are various development opportunities for aquaculture, but several constraints and challenges need to be better properly dealt with. This food production sector has received increasing support from public and private sectors. Both concur that the sector can contribute to seafood supplies, support food security efforts, increase employment opportunities, improve infrastructure in rural areas, reduce poverty and malnutrition, narrow the gap between imports and exports, increase annual per capita fish consumption and meet the overall national and regional growing fish demand.

30. All countries in the region have specific legislation on marine capture fisheries, inland waters and aquaculture management setting up broad national fishery administration frameworks. However, the legal framework governing fisheries is uneven and generally weak. Implementation and enforcement of regulations still need to be improved, although in the past few years some countries have made significant progress particularly in terms of enforcement.

31. There are several major priority areas that stand out in the Near East and North Africa (NENA) region. Each priority area may not have the same level of importance amongst the countries. These depend on the local situation of each country and the extent to which each area may be considered a priority as well as the urgency in which it needs to be considered over others to ensure a sustainable growth in aquaculture sector. These priority aras may be summarized as follows, but without a specific order of priority:

32. Governance: Enactment and enforcement of legislation for the improved governance of the aquaculture sector is a key priority area as laws that exist normally relate to fisheries in general. Newly established fish farms are faced with many bureaucratic hurdles due to lack of aquaculture legislation to regulate these production activities. Institutional coordination is needed among the various authorities and ministries responsible for aquaculture so as to facilitate private investment and monitoring of the sector as a whole. Further, these governance issues are exacerbated by the lack of experienced fish farm managers and administrators. A comprehensive marine spatial plan along with aquauclture zoning and site selection is considered paramount for reducing resource use conflicts and ensuring sustainable growth of aquauclture sector in the region.

33. Environment and climate change: Climate change and variability scenarios have raised concerns regarding possible impacts on the aquaculture sector, especially in regards to water access and quality. Reducing environmental impacts and improving economic performance of the aquaculture sector is a regional priority. Understanding the environmental, social and economic interactions, including aspects related to carrying capacity, impacts on sensitive habitats, assessment of monitoring procedures and harmonization of regulatory procedures, all are considered priority by many regional countries.

34. Access to inputs and capacity development: Quality water, feed, and seed, all are scarce in the region. Provision of those inputs along with appropriate technology including those for managing health and controlling disease, and trained professionals with sound scientific background are considered a priority.

35. Research, development and scientific cooperation: More research is needed to diversify species and production for new markets. A mechanism is needed to facilitate exchange of technical knowledge, information and expertise between the countries. Enhanced cooperation and coordination, knowledge and data sharing among specialized research bodies as well as national capacity-building would be crucial for a more responsive industry.

36. Gender in aquaculture: Aquaculture in the region is mostly male dominated. In aquaculture women are normally involved in freshwater fish and shrimp farming and also in fish trade and marketing, i.e. pre-harvest and post-harvest activities, but are rarely consulted on decisions related to management and markets. Improved conditions in this sector should help women seek employment in aquaculture and get more involved in decision making and enjoy decent livelihoods.

37. Capital and investment: Issues include high initial capital investment and operational costs, lack of concessional credit financing, inadequate local providers of inputs, and lack of market data have become important in the region. Alleviating bureaucratic barriers for investors is needed as inefficient policy mechanisms remain obstacles to attracting local or foreign investors. Sound marketing strategies, introduction and enforcement of traceability systems, and the development of value added products are also considered priority.

38. Marketing: A timely provision of data and statistics on marine aquaculture is needed in order to assess and monitor aquaculture production and production capacity. Strategic market data such as levels of fish consumption, distribution outlets, market trends and trade on aquaculture products should be made available to farmers, policy-makers and other key stakeholders. Consumer awareness of environmental integrity, food quality and safety of aquaculture products increasingly tends to become a precondition for the acceptability and growing consumption of NENA seafood products. Quality issues, certification and traceability of aquaculture products are prerequisites to improve the image and public perception of farmed products.

E. NORTH AMERICA (NA)

39. The priority documents examined for Canada and the United States of America identified five main categories:

- Research and Development;
- Regulatory Framework;
- Environmentally Sustainable Aquaculture;
- Economic Development; and
- Biosecurity.

40. Certain issues were more predominantly highlighted in a certain region or sub-region, but most were fairly consistently identified for their importance in the development of the North American aquaculture sector.

41. Research and Development: Development of a sustainable aquaculture industry necessitates collaborative research and development activity between industry, government agencies, and other funding partners. Fundamentally this includes building research capacity, both human resources and infrastructure. A broad range of R&D objectives have been identified as priority areas to improve scientific capacity and knowledge to advise and inform government and industry. Research is focused on three main issues: 1) improving current practices and inputs; 2) developing new technologies, methods or inputs; and 3) investigating potential environmental impacts from aquaculture production. Improvements include more sustainable aquatic feeds, genetic traits in

broodstock and outlining Best Management Practices (BMPs). Investigation into new technologies includes alternative production systems (e.g. Integrated Multi-trophic Aquaculture (IMTA), Recirculating Aquaculture Systems (RAS), pilot projects assessing the commercial viability of these technologies and potential alternative production species. Understanding environmental impacts is important to inform research into improvements and new developments as well as informing regulation and policy.

42. Regulatory frameworks: Aquaculture is an area of shared jurisdiction in Canada and the United States of America. In this context, the federal and provincial/state governments will work with industry, and other stakeholders to address regulatory challenges. Regulatory priorities aim to improve efficiency and effectiveness of the governing aquaculture frameworks, both with regards to environmental sustainability and removing redundant barriers. Current aquaculture regulations are to be reviewed, streamlined and updated based on sound scientific information to improve environmental outcomes and appropriateness of governance. Another focal priority identified in North America is the streamlining of existing regulation or establishment of a comprehensive programme, especially when supervision is by multiple agencies or programmes.

43. Environmental sustainability: The development of environmentally sustainable aquaculture is accomplished through a number of mechanisms. The most commonly desired outcome is the protection, health and status of wild species and environments. To achieve this objective, several strategic areas and actions are prioritized including social license and reporting and area based management (ABM). Compliance with and enforcement of regulations can be verified through reporting requirements for both environmental/operational and socio-economic performance. Publicly transparent reporting provides an avenue for more meaningful stakeholder involvement and cooperative planning. ABM is an ecosystem-based approach including considerations of fish health, aquatic invasive species control, and genetics. ABM deals with how these issues are managed within a zone for existing and new sites in terms of evaluating applications, monitoring considerations, marine spatial planning and may consider other potential users.

44. Economic development: Aquaculture is a maturing industry in North America with continued economic growth and development appointed as top priorities. Removing the barriers to growth requires cooperation between public and private sectors in an effort to increase jobs and availability of North American products to domestic and international markets. Capacity increasing mechanisms include the building of the main infrastructure and support structures required to support aquaculture’s developmental and operational needs. It is often difficult for producers to secure financing and reducing these challenges require improved risk management and access to financing by fostering the widespread adoption of best management practices, incorporating benchmarking and certification programmes, creating marketing initiatives and removing trade barriers, and reviewing the constraints associated with conventional financing to facilitate access to capital and stock insurance for aquaculture. Lack of public support and inter-agency and other stakeholder cooperation can further hinder development. Strategic actions to increase public support include communication with and involvement of local communities and the establishment of outreach education programmes. Providing and supporting partnership opportunities between government agencies, research facilities, private companies, communities and other public groups foster innovation and transfer of

knowledge and technology. Jobs created through the growth of the aquaculture industry will require a skilled workforce and priority has also been placed on increasing availability of training and skills development programmes.

45. Biosecurity: Improving management of biosecurity is closely associated with the development of environmentally sustainable aquaculture. Many aquaculture production systems are open (or semi-open) to the surrounding ecosystem and the possibility exists for exotic or native pathogens or species to spread outside of the system. Comprehensive fish and shellfish health programmes incorporate mandatory notification of disease, emergency disease response, import controls, zonation and live animal movement controls and can prevent the spread of pathogens within aquaculture operations and to wild populations. Live animal movement controls and zonation are also important components to prevent the introduction of invasive species, with management required to prevent further spread of established populations. Escape prevention management and production methodologies are critical to avoid escapee and further system robustness is provided by response mechanisms in the case of their failure.

F. SUB-SAHARAN AFRICA (SSA)

46. This summary was guided by documented evidence from the continent's senior technical and scientific experts, several recent gatherings of high-level policymakers, including the African Union's Conference of African Ministers of Fisheries and Aquaculture (CAMFA), the Committee for Inland Fisheries and Aquaculture of Africa (CIFAA) and the FAO Regional Conferences of Africa.

47. It was noted the still untapped potential of aquaculture in eliminating hunger, achieving food and nutrition security, creating decent employment opportunities, in particular for rural women and youth, improving livelihoods and wealth, and contributing to achieving the United Nations Millennium Development Goals in Africa. They further noted that sustainable aquaculture development in Africa is hampered by several factors, primarily: poor investment in the sector including in research, technology, and production and market infrastructure; shortage and weak retention of skilled human capital at both the administration and farm levels; inefficient technologies and extension services; limited access to reliable good quality and cost-effective fish seed and feed; misguided sector-specific policies, which have been, long promoting subsistence-type aquaculture in many countries; women and youth suboptimal participation in aquaculture as an economic activity and limited access to productive resources and services; and emphasized the need to curb climate change threats.

48. The following priority actions were identified to develop the sector continent-wide:

49. Support investment: Create an Aquaculture Investment Fund for Africa (AIFA) to accelerate the sector development particularly through supporting investment in and ensuring appropriate and stable access to credit by small- and medium-scale aqua enterprises. Develop and implement policies, strategies and plans geared towards jumpstarting, promoting and supporting business-oriented/commercial and market-led profitable, competitive, socially equitable and environmentally friendly aquaculture for

food and nutrition security, decent employment creation, primarily for youth and women, and equitable economic growth.

50. Streamline policy and governance: Build and implement nationally and internationally integrated robust aquaculture governance and policy frameworks that mainstream aquaculture policies, strategies and plans into national development plans especially, the Comprehensive Africa Agriculture Development Programme, encourage strategic cooperation in many areas of aquaculture at regional and international levels through such schemes as South/North-South cooperation and support mechanisms for an effective revival and/or strengthening of regional aquaculture bodies including Aquaculture Network for Africa and Committee for Inland Fisheries and Aquaculture of Africa.

51. Develop human capacity: Create an Aquaculture Centre of Excellence for Africa (ACEA) with the aim of, *inter-alia*, strengthening human and research capacity of countries in sustainable aquaculture development, and developing and disseminating better aquaculture technologies and practices for the continent, particularly in Sub-Saharan Africa, through regional and intra-regional cooperation, in particular the South-South Cooperation scheme.

52. Mitigate climate change impacts: Safeguard aquaculture against impacts of climate change in Africa through, inter-alia, establishment of an African Network on Climate Change in Aquaculture to advocate for the climate change agenda in aquaculture; adequate financing of infrastructure for relevant climate change data generation, analysis and utilization; capacity building, including economic empowerment, in climate change; and adequate engagement of the youth in climate change advocacy as they constitute the larger fraction of the African population.

53. Support gender equality and provide opportunities for youth: Develop and implement gender equality and youth mainstreaming in aquaculture programmes that eliminate gender-based discrimination in all its forms; enable women and youth full and equal participation in aquaculture, including in the sector's labour force at equal pay and human capital development activities; ensure that all women and youth, in particular the poor and the vulnerable, have equal rights to economic resources, access to basic services, ownership over natural resources including land, and access to appropriate new technologies, financial services, and input and product markets.

Towards common priority areas:

54. Overall, the regional priorities fall within a number of overarching categories, summarized in the table below. Each of the regions prioritized the reinforcement of better governance, including regulation, licensing, investment policy and land tenure. Improved administration underpins the other priorities. Also, each region prioritized both economic and capacity development, mutually supported through value-chain strengthening, marketing strategies and investment mechanisms, and increased training and technology transfer. Increased research and development of new technologies was identified by five regions, which was roughly divided between production intensification and reducing environmental impacts; mitigating the effects of negative environmental externalities was prioritized by the same regions. Four regions put high priority to the elaboration of

methods and technologies to alleviate the effects of climate change, including the diversification of aquaculture. Social protection rated a high priority, including gender equality, application of social innovation, youth opportunities and fair and decent employment. Addressing issues of biosecurity, including animal health and invasive species management was a priority by all regions. Improving access to inputs, especially high quality feed and seed and water was identified by three regions. Finally, while almost all of the priorities would improve food security and contribute to nutrition security, these two targets were explicitly identified by two regions.

55. The Secretariat worked out a provisional alignment of the categories with the Strategic Objectives of the revised corporate Strategic Framework. Fisheries and Aquaculture Department will further elaborate these categories, taking into account the Organizational Outcomes and the Organizational Outputs within the respective Strategic Objectives, during the formulation of the Programme of Work and Budget. These will also be mapped against the new delivery mechanisms such as Regional Initiatives and Major Areas of Work of the Organization. In addition, these would need to match outcomes and recommendations of FAO's Regional Conferences.

56. There is also an opportunity for developing additional programme areas, with appropriate extra budgetary funding, for implementation with partners, including FAO. These could constitute an intersessional work programme, if deemed necessary, in addition to FAO's regular programme and field programme activities.

Table 1: Aquaculture priority areas mapped against FAO's strategic objectives

Major Corresponding Strategic Objective (SO)	Priority area category	Regions*	Additional corresponding Strategic Objective
SO 1 Help eliminate hunger, food insecurity and malnutrition	Improve food security and nutrition	LAC, SSA	SO2, SO3
SO 2 Make agriculture, forestry and fisheries more productive and sustainable	Increase training, capacity development, and technology transfer	RAP, EUR, LAC, NENA, NA, SSA	SO3
	Encourage research and development in new technologies for sustainable intensification	RAP, EUR, LAC, NENA, NA	SO4
	Safeguard against negative environmental externalities	RAP, EUR, LAC, NENA, NA	SO4, SO5
	Address biosecurity, including animal health and invasive species	RAP, EUR, LAC, NA	SO2
SO 3 Reduce rural poverty	Support economic development, value-chain strengthening, marketing strategies and investment	RAP, EUR, LAC, NENA, NA, SSA	SO4
	Ensure decent employment, livelihoods and opportunities for vulnerable groups, youth and women	RAP, LAC, NENA, SSA	SO3
	Reinforce better governance, including administration, policy, spatial planning, institutional capacity	RAP, EUR, LAC, NENA, NA, SSA	SO2
SO 4 Enable inclusive and efficient agricultural and food systems	Secure reliable access to quality inputs, especially feed, seed and water	RAP, NENA, SSA	SO2
	Ensure gender equality and opportunities for women	RAP, LAC, NENA, SSA	SO2
SO 5 Increase the resilience of livelihoods to threats and crises	Elaborate methods for climate change adaptation and resilience, including disease control and biosecurity, and diversify species and technology	RAP, LAC, NENA, SSA	SO2

* EUR = Europe, LAC = Latin America and the Caribbean, NA = North America, NENA = Near East and North Africa, SSA = Sub-Saharan Africa, RAP = Asia and the Pacific.