

# Fish for the People 2020: Adapting to Changes in the Environment

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In an effort to enhance the contribution of fisheries to food security in the ASEAN region considering that fisheries is a very important economic sector, the ASEAN and SEAFDEC co-organized the ASEAN-SEAFDEC Conference “Fish for the People 2020: Adaptation to a Changing Environment” in Bangkok, Thailand from 13 to 17 June 2011. Hosted by the Department of Fisheries of Thailand, the Conference also aimed to assess the importance of fisheries to the socio-economic enhancement of the peoples and address the emerging issues that tend to impede the advancement of the region’s sustainable fisheries development.

SEAFDEC and ASEAN Member Countries have made significant progress in promoting sustainable fisheries in the region. The deteriorating state of the world’s ecosystem and environment brought about by climate change as well as social and economic factors, however made it necessary for the Southeast Asian region to keep abreast of the changing environment and be able to address future challenges faced by the region’s fisheries sector, enhance the competitiveness of the region’s fisheries in addressing food security and poverty reduction, and assist the ASEAN countries to adapt with the emerging situations, *e.g.* climate change, international fish trade, economic crisis. Thus, the ASEAN-SEAFDEC Fish for the People 2020 Conference was convened in order to find ways and means of moving forward and sustain fisheries development in the region in accordance with the new framework of the next decade regional direction and Plan of Action.

The next regional directive has been envisaged to steer the ASEAN countries towards new direction in furthering the development of sustainable fisheries as well as its contribution to food security and poverty reduction by accommodating the new emerging issues, *e.g.* climate change, international fish trade requirements, and projected economic crisis due to exploding population in the region and the new paradigm of exploiting and utilizing the fisheries resources. More particularly, such directive is also meant to pave the way for raising the socio-economic status, alleviating poverty and enhancing food security for the people of the region. In addition, such new directive is also envisaged to build closer collaboration among the ASEAN countries towards the realization of a fully integrated ASEAN Community.

During the *ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security Towards 2020 “Fish for the People 2020: Adaptation to a Changing Environment”* organized on 13-17 June 2011 in Bangkok, Thailand, the Resolution and the Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 (**Box 1** and **Box 2**) were adopted by the ASEAN-SEAFDEC Senior Officials and Ministers responsible for fisheries. These instruments would serve as policy framework and guidelines for the adoption of priority actions towards ensuring fisheries sustainability for food security and improving the livelihoods of people in the region during the next decade. In order to enhance the effective implementation of the 2011 Resolution and Plan of Action as the new and revitalized regional directive, the existing differences among the ASEAN countries in terms of development status, geo-political characteristics, national human resources and financial capacities, should be taken into consideration in the development of future programs and activities where appropriate, while activities



The Inaugural Ceremony of the Fish for the People 2020 Conference (top); and the Press Conference of the Ministerial Session (above)



should be developed targeting the different groups of stakeholders in fisheries.

### Regional Initiatives to Develop the 2011 Resolution and Plan of Action

The preparatory processes for formulating the revitalized regional policy framework to address the emerging issues that impede the sustainable development of fisheries in the ASEAN region, took almost three years in the making. Starting with the submission of the Concept Proposal to the 31<sup>st</sup> Meeting of the SEAFDEC Program Committee in November 2008, for the organization of the ASEAN-SEAFDEC Conference which would serve as platform for the promotion of a new regional directive, the Proposal went through a series of discussions between the ASEAN and SEAFDEC before it was finally approved in principle in November 2009. The endorsement of the organization of the ASEAN-SEAFDEC Conference came with provisions which specified that the Conference should come up with the next decade Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 to be adopted by the ASEAN-SEAFDEC Ministers during the Conference, and that such instruments should be used by the ASEAN countries as guiding principle and priority actions for enhancing the contribution of fisheries to food security.

Considering such directive, SEAFDEC with technical and financial support from the Japanese Trust Fund and other donor agencies, convened Regional Technical

Consultations (RTCs) to pave the way for the identification and assessment of the issues that affect the sustainability of the region's fisheries and impact on the socio-economic well-being of the peoples in the ASEAN region. Meanwhile, the ASEAN countries also conducted National Seminars to facilitate a more extensive consultation with a wider group of national stakeholders. The combined outcomes from the series of regional and national fora were used as basis for the development of the thematic areas for the Technical Session of the Conference, and at the same time served as basis for the ASEAN countries in preparing the draft new decade Resolution and Plan of Action.

To ensure that all relevant emerging fisheries-related issues could be addressed during the Conference, the regional activities and programs initiated by SEAFDEC (**Box 3**) under the SEAFDEC Policy Framework were taken into consideration during the RTCs. Moreover, the RTCs also considered the initiatives of several regional and international organizations in promoting sustainable fisheries and especially in reducing the vulnerability of the impacts of environmental changes on livelihoods of fisherfolks in the Southeast Asian region (**Box 4**).

### Challenges and Vision on Sustainable Fisheries for Food Security in the ASEAN Region

In elucidating the major challenges confronting the sustainable development of fisheries in the region, the Chairperson of the SEAFDEC Council, Dató Ahamad Sabki bin Mahmood (2011) in his Plenary Statement during the 2011 ASEAN-SEAFDEC Conference, stressed on the major concerns that need to be addressed which include: (1) high trophic level that requires effective indicators; (2) impact of climate change; (3) increasing number of legal instruments for the exploitation of the sea; (4) globalization and increasing requirements in global trade; (5) status of marine ecosystem that continues to threaten the sustainability of capture fisheries; (6) people's perspectives on the various facets of capture fisheries; (7) management of commercial fisheries; and (8) complexity of fisheries management. He concluded that sustainable fisheries and food security for the next decade should be pursued in a temporal scale, and that sustainable management of fisheries in the region requires a much wider perspective and multi-disciplinary approaches. In the same vein, the APFIC Secretary, Dr. Simon Funge-Smith (2011) added that ASEAN fisheries is also challenged by the growing gap between the demand for fish and the capacity of the ASEAN region to sustainably supply such demand, and that there is also an urgent need to reduce the negative impacts of aquaculture. All the aforementioned challenges pose problems in the region's efforts towards attaining

**Box 1. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020  
(Adopted on 17 June 2011)**

The Ministers of the ASEAN-SEAFDEC Member Countries responsible for fisheries met in Bangkok, Thailand on the occasion of the ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security Towards 2020 “Fish for the People 2020: Adaptation to a Changing Environment” on 17 June 2011. Upon agreeing that priority should be placed on the issues identified through the national and regional participatory processes in the preparation as well as at the ASEAN-SEAFDEC Conference, the Ministers adopted the Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020. Specifically, the Ministers resolved to:

1. Sustain the supply of fish and fishery products from the ASEAN region to improve food security, facilitate poverty alleviation, and improve the livelihoods of ASEAN people dependent on the harvesting, farming and marketing of fish and fishery products, by enhancing the necessary national fisheries policy, legal and institutional frameworks that encourages and support small-scale fisheries/farmers, including providing alternative livelihood opportunities;
2. Further develop strategic partnerships and cooperation to maximize the synergies and complementarities among the various stakeholders - government, private sector, civil society and relevant development partners and donor agencies to address regional and global challenges;
3. Strengthen human capacity of relevant stakeholders through mobilization of resources and the harmonization of initiatives that support fisheries communities and governments, with a special focus on the women and youth;
4. Strengthen fisheries governance by evaluating current constraints to ensure comparability and compatibility between the required practices and operation of fisheries in the ASEAN Member Countries;
5. Further develop regional initiatives to promote a responsible fisheries management mechanism, taking into account the specific social, economic, cultural, ecological and institutional contexts and diversity of ASEAN and ASEAN fisheries in the spirit of the development of the ASEAN Economic Community and the ASEAN Socio-Cultural Community;
6. Implement effective management of fisheries through an ecosystem approach to fisheries that integrates habitat and fishery resource management aimed at increasing the social and economic benefits to all stakeholders, especially through delegating selected management functions to the local level and promoting co-management as a partnership between government and relevant stakeholders;
7. Promote better management of fishing capacity and use of responsible fishing technologies and practices, recognizing the movement towards replacing the “open access” to fisheries resources with “limited access” through rights-based fisheries, and at the same time, secure the rights and well-being of inland and coastal fisheries communities;
8. Foster cooperation among ASEAN Member Countries and with international and regional organizations in combating IUU fishing;
9. Enhance resilience of fisheries communities to anticipate and adapt to changes in environmental conditions of inland and coastal waters, including those caused by climate change, which could adversely affect fisheries and aquaculture of fisheries communities;
10. Strengthen knowledge/science-based development and management of fisheries through enhancing the national capacity in the collection and sharing of fisheries data and information;
11. Enhance the awareness of the contribution that inland fisheries makes to food security and sustainable livelihoods, and include consideration of fisheries stakeholders when undertaking development projects that may impact inland fisheries;
12. Support ASEAN efforts to promote low carbon development by minimizing the contribution of the fisheries sector to green-house gas emissions, with emphasis on promoting energy efficiency and use of alternative energy sources;
13. Improve the working conditions of people engaged in fisheries activities, and strengthen measures for safety of fishing vessels taking into consideration regional specificity;
14. Promote inter-agency coordination of multiple uses of freshwater resources for sustainable development of the resources and conservation of freshwater habitats;
15. Enhance the awareness that aquaculture makes to food security and sustainable livelihoods to deliver a responsible increase in aquaculture production that promotes aquaculture for rural development as means of rational use of land and water resources;
16. Promote cooperation among Member Countries and with international and regional organizations in encouraging responsible aquaculture practices through joint research, technology transfer and human resource development;
17. Mitigate the potential impacts of aquaculture on the environment and biodiversity including the spread of aquatic animal diseases caused by the uncontrolled introduction and transfer of exotic aquatic species and over-development of aquaculture;
18. Promote joint ASEAN approaches and positions in international trade in fish and fishery products indigenous to the region by harmonizing the standards, criteria and guidelines and developing mutually-recognized agreements on sustainability and safety management systems;
19. Support the competitiveness of the ASEAN fish trade through the development of procedures and programs that would certify, validate or otherwise indicate the origin of fish to reflect the need for traceability, sustainable fishing practices and food safety, in accordance with international and national requirements;

**Box 1. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020  
(Adopted on 17 June 2011) (Cont'd)**

20. Optimize the utilization of catch from water to market by reducing post-harvest losses and waste to increase fish supply and improve economic returns through promotion of appropriate technologies and facilities along the supply chain;
21. Improve technologies and facilities to ensure fish quality assurance and safety management systems, taking into account the importance of traditional fishery products and food security requirements, and promote the development of fishery products as an alternative supplementary livelihood for fisheries communities;
22. Support the Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 adopted by the ASEAN-SEAFDEC Senior Officials; and
23. Pledge the commitment to fully support this Resolution and task ASEAN Senior Officials to implement necessary actions and report progress in the advancement of sustainable fisheries that contribute to a prosperous, stable and peaceful ASEAN Community.

Moreover, the Ministers also agreed that the Resolution should be implemented as soon as possible and use the **Plan of Action** adopted by the ASEAN-SEAFDEC Senior Officials during the Senior Officials Meeting of the ASEAN-SEAFDEC Conference on 16 June 2011, as a guideline for formulating and implementing programs, projects, and activities in the ASEAN countries through appropriate ASEAN-SEAFDEC mechanisms.

food security and improving the livelihoods of peoples in the ASEAN region. Overall, this redounds to strengthened local governance for the management of fisheries and aquaculture.

## **Sustainable Development of Fisheries in the ASEAN Region Towards 2020**

In the Technical Session of the 2011 ASEAN-SEAFDEC Conference, important fisheries-related issues were discussed under eight thematic areas, namely: (1) Enhancing Governance in Fishery Management; (2) Sustainable Aquaculture Development; (3) Ecosystem Approach to Fisheries; (4) Post-harvest and Safety of Fish and Fisheries Products; (5) Emerging Requirements for Trade in Fish and Fisheries Products; (6) Climate Change Adaptation and Mitigation Towards Food Security; (7) Livelihood among Fishing Communities and Prospects of Employment in Fisheries-Related Activities; and (8) Sustaining Food Supply from Inland Fisheries. In his Report on the Outcomes of the Technical Session, the SEAFDEC Secretary-General, Dr. Chumnarn Pongsri,



reiterated that the main objective of the Technical Session was to review the fisheries situation and emerging issues that could impede sustainable fisheries development and tend to hinder the contribution of fisheries to food security and affect the well-being of people in the Southeast Asian region as well as to identify the key conclusions and recommendations that could address those issues and concerns. Taking into consideration those challenges and keeping sight of the visions over the next decade, the Technical Panel Sessions were conducted considering the eight thematic areas and came up with recommendations for the governments of the ASEAN countries to undertake. These general recommendations include: (1) Strengthening governance in fisheries management to enhance the capacity of the countries in achieving sustainable fisheries; (2) Development of the enabling policies for aquaculture operations especially those by the small-holder farmers to adopt better aquaculture practices; (3) Undertaking fisheries-related activities in a more environmental sensitive manner that minimizes the undesirable environmental consequences of fishing practices through the ecosystem approach to fisheries management; (4) Investing in the development of appropriate infrastructure as well as safe and wholesome fish and fisheries production based on the application of effective control and production procedures at all levels along the production chain from catch to the consumer; (5) Addressing the emerging issues that affect international fish trade such as globalization of trade with focus on consumers' protection, and requirements of sustainability of fisheries and aquaculture production as well as promote compliance to the quality and safety standards and requirements with consistency; (6) Incorporating fisheries-related aspects in national action plans related to climate change and building up adaptive capacity of people dependent and involved in fisheries-related activities to cope with changing environment including the effects caused by climate change; (7) Integrating

**Box 2. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020  
(Adopted on 16 June 2011)**

On the occasion of the *ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security Towards 2020 “Fish for the People 2020: Adaptation to a Changing Environment”*, the Senior Officials of ASEAN-SEAFDEC Member Countries met in Bangkok, Thailand on 16 June 2011.

Guided by the (Draft) Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020, and the need to enhance collaboration among government agencies that have responsibility for fisheries and fisheries-related issues in order to harmonize policies, plans and activities that support sustainable fisheries, food security and safety at the national and regional levels, the Senior Officials adopted the following Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 to be used as a guideline to develop programs, projects and activities for the implementation of the Resolution.

**A. PLANNING AND INFORMATION**

1. Integrate the planning of marine capture fisheries, inland capture fisheries and the aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;
2. Strengthen the capacity to plan for sustainable fisheries in the context of changing socio-economic and ecological environments through the mobilization of the most up-to-date data and information and the provision of appropriate policy summaries for decision makers;
3. Strengthen national statistical mechanisms for fisheries and aquaculture and the exchange of statistical data and related information. Include other non-routine data and information such as fish consumption surveys as well as mobilizing local and indigenous knowledge with the aim of improving the valuation of fisheries and monitoring their performance, to address the needs of the ecosystem approach to fisheries and adaptation to climate change;
4. Enhance regional fishery information systems and mechanisms to facilitate sharing, exchange and compilation of statistics and information that are required at the sub-regional and regional level and apply, where appropriate, regionally standardized definitions and classifications for statistical data to facilitate regional compilation, analysis and data exchange;
5. Coordinate, decentralize and enhance the sharing of relevant statistics and information of fisheries-related statistical data and information between the national fisheries and other authorities including those responsible for food security, environment, trade, aquaculture, water resources, agriculture/forestry, wetlands, migration/employment and rural development;
6. Further develop simple and practical indicators in support of planning and monitoring of sustainable fisheries;

**B. FISHERIES MANAGEMENT**

7. Regularly review, update and strengthen national fisheries policy, legal and institutional frameworks through consultation and engagement of government agencies, the private sector, fishers, civil society and other relevant stakeholders;
8. Accelerate the development of fisheries management plans based on an ecosystem approach, as a basis for fisheries conservation and management;
9. Take measures to prevent unauthorized fishing and eliminate the use of illegal fishing practices by building awareness of their adverse impacts, strengthening law enforcement, developing and promoting responsible and selective fishing gears and practices, enforcing regulations and encouraging alternative means of livelihoods;
10. Establish and implement comprehensive policies for an ecosystem approach to fisheries management through effective systems (i) to provide licenses to fish (boats, gear and people); (ii) for community fishing rights/rights-based fisheries; (iii) that provide for the development of supporting legal and institutional frameworks; (iv) encourage and institutional cooperation; and (v) that aid in streamlining co-management;
11. Adopt co-management at all levels and with all relevant stakeholders in the process of planning and policy formulation for management, conservation and rehabilitation of habitats and protective geographical features, as well as policy formulation on the use and management of natural and human resources to ensure that climate change responses are integrated into fisheries policy frameworks;
12. Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations, NGOs and the private sector to better implement necessary actions towards enabling the communities and local organizations to increase resilience, improve livelihoods, alleviate poverty, adopt alternative livelihoods adapt to climate change in support of achieving sustainable development, and encourage the participation of women and youth groups in the process;
13. Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks;
14. Raise awareness of the need to develop financial incentives, especially for small-scale stakeholders and cooperatives, e.g. micro-credit, with national and regional institutional assistance for the responsible development of fisheries enterprises and developmental activities that will optimize socio-economic returns and food security;
15. Increase the efficient use of the alternative energy sources and reduce the use of carbon fossil energy by using appropriate fishing gear and fishing boats designs in fishing operations;

Box 2. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020  
(Adopted on 16 June 2011) (Cont'd)

16. Encourage good and appropriate employment practices in accordance with domestic laws and regulations;
17. Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources;
18. Investigate the potential of under-utilized fisheries resources and promote their exploitation in a precautionary manner based upon analysis of the best available scientific information;
19. Enhance joint ASEAN programs to better protect the livelihoods of small-scale producers and for a more equitable distributions of benefits gained from both intra and extra regional trade of fish and fishery products;
20. Adjust existing programs to take into consideration the effects of climate change, focusing on the programs for (i) managing fisheries and habitats; (ii) reducing fishing capacity and combating Illegal, Unreported and Unregulated (IUU) fishing; (iii) strengthening local organizations; and (iv) promoting safety at sea and other priority areas. Develop indicators and reporting measures to assess how actions of the programs build resilience to climate change;

MARINE FISHERIES

21. Strengthen regional and national policy and legislation to implement measures and activities to combat IUU fishing, including the development and implementation of national plans of action to combat IUU fishing, and promote the awareness and understanding of international and regional instruments and agreements through information dissemination campaigns;
22. Establish and strengthen regional and sub-regional coordination on fisheries management and efforts to combat IUU fishing including the development of regional/sub-regional Monitoring, Control and Surveillance (MCS) networks;
23. Facilitate consultative dialogue among fisheries legal officers to share, at the sub-regional/regional level, perspectives of the respective legal and regulatory framework in terms of developing MCS-networks and to implement efforts to combating IUU fishing;
24. Build up capacity among Member Countries, including functions for regional and sub-regional cooperation, to effectively meet the requirements of Port State measures and Flag State responsibilities;
25. Conduct research on the impacts of various gear types and methods, including light fishing, trawls and push nets, on ecosystems and populations of aquatic animals and also the effects of fishing vessel discharges and waste disposal on marine ecosystems, to promote the use of selective fishing gears and sustainable devices;
26. Take reference from the FAO International Guidelines on Managing By-catch and Reducing Discards, where applicable, to identify and find solutions to ASEAN by-catch problems, including the excessive catch of juvenile fish;
27. Optimize the use of inshore waters through resource enhancement programs such as promoting the installation of artificial reefs and structures, encouraging coordinated and effective planning for coastal fisheries management programs, undertaking environmental impact assessment studies, restocking of commercially-important fish species, as appropriate, and give priority to human resources development for the implementation of such programs;
28. Ensure the inclusion of fisheries objectives in the management plans of future Marine Protected Areas (MPAs) and promote the adoption and use of the *refugia* concept in line with the ASEAN/SEAFDEC Regional Guideline on the use of Fisheries *Refugia* in Capture Fisheries Management, where appropriate;
29. Recognizing the different management approaches that are required, sustainably manage major critical coastal habitats, such as mangroves, coral reefs and sea grasses; and develop and disseminate information and guidance on appropriate tools and interventions;
30. Strengthen efforts to address safety at sea, including considerations of working conditions and socio-economic development, and ensure that these considerations are addressed by all concerned authorities while improving monitoring and control of the status of conditions, especially on small fishing boats;
31. Assess the possible impact of government subsidies on fisheries, particularly the impact on the special requirements and the needs of small-scale fisheries in the region;

INLAND FISHERIES

32. Establish and implement comprehensive policies and supporting legal and institutional frameworks for an ecosystem approach to inland fisheries management by integrating fisheries and habitat management that devolves co-management to the local authority and stakeholders, and at the same time strengthens the rights of communities and develops rights-based fisheries;
33. Undertake campaigns to promote awareness of the importance of freshwater fisheries for local food security, and the importance of rehabilitating and restoring habitats for migratory freshwater fish, restocking indigenous fish species to enhance productivity and encouraging culture-based freshwater fisheries, where appropriate;
34. Develop inter-agency coordination (national/sub-regional) on multiple-use water resources of the wetlands/flood-plains to sustain freshwater fisheries, mitigate conflicts between users and also encourage better coordination to address trans-boundary inland fisheries management issues;
35. Ensure the sustainability of inland fisheries by maintaining ecological health of the ecosystem, particularly the inter-connectivity of habitats and the specific management needs during the dry season. Develop mitigating measures for the adverse impacts on inland fisheries that may be caused by the construction of water infrastructure and alteration of water ways;

**Box 2. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020  
(Adopted on 16 June 2011) (Cont'd)**

36. Encourage coordinated planning on the use of inland rivers, water-bodies and flood plains through (i) resource enhancement programs; (ii) inland wetlands and fisheries management programs; (iii) environmental impact assessment studies with regards to structures that might impact on aquatic resources; (iv) the consideration of restocking of locally and/or commercially-important inland fish species; and (v) giving priority to human resources development for the implementation of such programs;
37. Formulate guidelines to promote the use of practical and simple indicators for inland/flood-plain fisheries within the national inland fisheries management framework, to facilitate (i) timely local level fisheries management decisions with due respect to the large number of people/farmers that take part in fishing; (ii) dialogue to ensure that the inter-connectivity of fish migration path is kept as a tool for management/conservation measures; and (iii) adaptation to the effects of climate change within catchments;
38. Monitor the impact of the structures that might affect migration and spawning of fish through a consultative process that involves collaboration with the regional organizations;

**C. AQUACULTURE**

39. Ensure that national programs and policies on aquaculture address social, economic and environmental aspects of sustainable aquaculture to improve food security, livelihoods, employment and poverty alleviation by (i) providing the mechanisms and enabling environment for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder farmers; and (iii) promoting inter-agency collaborations;
40. Develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices that cover (i) the integration of quality and safety management systems for products with significant trade potential; (ii) the harmonization for chemical use and food safety in aquaculture; (iii) the development of product traceability systems from farm to market; and (iv) harmonization of the quarantine and inspection/sampling procedure and Sanitary and Phytosanitary (SPS) measures for aquaculture products to secure food safety;
41. Integrate aquaculture into rural development activities within the context of multiple-use of land and water resources through inter-agency coordination in policy formulation, project planning and implementation, stakeholder consultation, extension services and technology transfer, participate in and provide support to regional initiatives that will assess the role of aquaculture in poverty alleviation for better policy formulation;
42. Implement measures or strategies at national and local level to (i) monitor and regulate aquaculture operations; (ii) prevent over development; and (iii) ensure that activities are carried out in an environment-friendly manner. This also includes effectively enforcing regulations to avoid conflict in the use of common resources and adopting the concept of environmental capacity as a strategy to prevent aquatic pollution brought about by intensification of aquaculture activities;
43. Provide government support for research and development (R&D) on (i) improving existing genetic resources; (ii) assessing the impact of climate change on broodstock management; and (iii) the feeding and disease management of broodstock;
44. Promote the production and distribution of specific pathogen-free (SPF) and quality seed through the (i) establishment of certified government or private hatcheries as sources of quality seed; (ii) dissemination of new breeding technologies and techniques for the effective distribution and maintenance of genetically improved strains; and (iii) implementation of sound policies that will promote better hatchery management practices, including the responsible collection and use of wild broodstock and seed;
45. Apply the concept of aquatic biosecurity by providing support to (i) research for development of domesticated, genetically improved, specific pathogen-free (SPF) cultured species; and (ii) the small-scale hatchery operators and farmers so as to enhance their access to healthy broodstock and improve their ability to adopt, at the farm level, the established techniques for aquatic animal health care;
46. Formulate and implement complementary and supportive policies that will (i) build the capacity of small-scale farmers and hatchery operators in adopting simple broodstock and hatchery technologies and innovations; (ii) enhance small-scale farmers and hatchery operators' access to quality broodstock and SPF seeds produced through farmer-friendly broodstock management methods; and (iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock;
47. Encourage good and appropriate employment practices in accordance with domestic laws and regulation;
48. Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance, for the responsible development of aquaculture enterprises and developmental activities that will optimize socio-economic returns and food security;
49. Reduce the risk of negative environmental impacts, loss of biodiversity, and disease transmission by regulating the introduction and transfer of aquatic organisms in accordance with the Regional Guidelines on the Responsible Movement of Live Aquatic Animals and Plants;
50. Continue the national efforts to control serious disease outbreaks by providing government support to (i) R&D to improve the ability to handle new and emerging diseases and surveillance of transmission of diseases to wild populations; and (ii) regional initiatives on harmonization of regional disease control standards, disease reporting and implementation of contingency plans to handle new and emerging diseases;

**Box 2. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020  
(Adopted on 16 June 2011) (Cont'd)**

51. Further enhance the capabilities in the diagnosis and control of fish diseases within the region through (i) continued support in development of technology and techniques for disease identification; (ii) promotion of the widespread use of affordable, field-friendly, rapid and standardized diagnostic tests; and (iii) the establishment of regional and inter-regional referral systems, including the designation of reference laboratories and timely access to disease control experts within the region;
52. Develop regional warning systems on aquatic animal health and diseases to inform other Member Countries of relevant epidemiological events and to raise awareness of new diseases that may pose risks. Build emergency preparedness capacity through rapid and timely responses to reduce potential catastrophic consequences of diseases;
53. Improve the efficient use of aquatic feeds by strictly regulating the quality of manufactured feed and feed ingredients and support continued research for developing suitable alternative protein sources that will reduce the dependence on fish meal and other fish-based products. This effort will include the consideration of ingredients not derived from wild caught fish, encouraging the culture of species requiring no or low fish meal content in their feed and applying effective feeding management practices, taking into account the need for cultural and social acceptance of alternative feed ingredients;
54. Improve human resource capabilities for responsible aquaculture through (i) closer public and private sector collaboration in R&D, paying particular attention to the need for advanced skills in biotechnology and assessment of the efficacy and economics of the use of probiotics and immunostimulants; and (ii) effectively implementing aquaculture education and extension services;
55. Formulate and implement national policies and strategies that will enable the aquaculture sector to mitigate and/or adapt better to the impacts of climate change. These strategies should include providing support to R&D on climate change, increasing resilience, and strengthening the overall capacity of various stakeholder groups and fostering cooperation within the aquaculture sector and with other sectors;
56. Where applicable, encourage good practices in aquaculture such as the FAO Technical Guidelines on Aquaculture Certification;
57. Encourage Member Countries to take a precautionary approach to safeguard the environment from the acceleration of offshore aquaculture, and to consider developing regional guidelines on responsible marine (inshore to offshore) aquaculture;

**D. OPTIMAL UTILIZATION OF FISH AND FISHERY PRODUCTS**

58. Introduce and provide support for the development and application of technologies that optimize the utilization of catches, reduce post-harvest losses, wastes and discards in commercial and small-scale fisheries and processing operations, through improved processing, facilities and infrastructure development, on-board and on-shore handling, storage, distribution and marketing of fish and fishery products;
59. Promote the production of and preserve the diversity of traditional fish products by assisting producers to secure stable supplies of quality raw materials, meet food safety requirements and to improve product identity, nutritive value and marketing. In the process, promote One Village, One Fisheries Product (FOVOP) and other initiatives to promote local fishery products;
60. Develop traceability systems, with mechanisms as needed to certify or validate the information, for the whole supply chain, and establish regulations and enforcement schemes in line with international standards. Align Member Countries' inspection systems and incorporate strengthened port inspections in the process as a means to improve inspection systems;
61. Strengthen fish quality and safety management systems that support the competitive position of ASEAN fish products in the world markets, including moving towards ISO/IEC 17025 accreditation of national fish inspection laboratories, strengthening capacity and acknowledging the recognized national laboratories, risk analysis and equivalence agreement such as the Mutual Recognition Agreement (MRA) and promote the implementation of the quality and safety management systems among small and medium enterprises in the ASEAN region;
62. Encourage relevant control agencies at all levels in applying appropriate legislation and coordinated activities regarding the handling, processing, distribution, storage, marketing, quality and safety of fish and fishery products;
63. Promote and conduct training programs and develop training materials to upgrade the technical skills and competencies of personnel in the public and private sectors on fisheries post-harvest technology and food safety management system;
64. Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance for the responsible development of fisheries and aquaculture enterprises and developmental activities that will optimize socio-economic returns and food security;
65. Encourage good and appropriate employment practices in accordance with domestic laws and regulations;
66. Develop standards and guidelines for aquaculture products handling and transportation, hygienic vessel design and construction, and include training of fish handling as part of the requirement for issuance of permits at all levels for fish vessel crews, and encourage new workers to enter the industry where needed;

**E. FISH TRADE**

67. Strengthen cooperation among Member Countries to implement international standards with regards to trade on fish and fishery products within the ASEAN region;



**Box 2. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020**  
(Adopted on 16 June 2011) (Cont'd)

68. Establish regional/ASEAN standards applicable for fishery and aquaculture products that are in line with international requirements and applicable to the region. Harmonize standards, technical regulations and conformity assessment procedures as inputs for the establishment of the ASEAN Policy Guidelines on Standards and Conformance, to increase the competitiveness of fishery products on regional and international markets;
69. Strengthen cooperation and mechanisms among Member Countries to work towards common positions that could be reflected in international fish trade related fora, such as World Trade Organization (WTO), Food and Agriculture Organization of the United Nations (FAO), Office International des Epizooties (OIE), *Codex Alimentarius* Commission, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
70. Engage the private sector (e.g. ASEAN Seafood Federation) in addressing trade-related issues, and in collaborative efforts to promote and sustain regional and international trade;
71. Assist small-scale producers to comply with standards on safety and quality of fish and fishery products by providing support programs including training;
72. Assist small-scale producers from both capture fishery and aquaculture in securing and maintaining access to markets at the national, regional and international levels, and in the process, develop marketing systems that are not capital intensive and accessible for local producers;
73. Encourage and provide guidance to develop/improve branding of fish and fishery products that demonstrate the eco-friendly and socially acceptable nature of ASEAN fish products (e.g. one community one fishery product), including organic standards and coordination of Halal requirements;
74. Encourage the implementation of appropriate international standards and strengthen programs relevant to Sanitary and Phytosanitary (SPS) measures, Technical Barriers to Trade (TBT) measures, R&D, as well as capacity building and awareness raising on fish trade-related issues, and information dissemination recognizing the different status of development in Member Countries;
75. Strengthen risk assessment and R&D related to the use of Genetically Modified Organism (GMO) products in fisheries and aquaculture, including food safety issues;

**F. REGIONAL AND INTERNATIONAL POLICY FORMULATION**

76. Increase participation and involvement of Member Countries in international fora and technical committees such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), *Codex Alimentarius* Commission, Food and Agriculture Organization of the United Nations (FAO), Office International des Epizooties (OIE), Regional Fisheries Bodies (RFBs), and World Trade Organization (WTO); and promote ASEAN interest, recognizing that fisheries policies of relevance to the ASEAN region are increasingly discussed and agreed upon at the global level.

policy for livelihood improvement with overall water resource planning strategy and development programs, and lending support to directions for diversification of community-based livelihoods in fishing communities while maintaining sustainable use of the resources; and (8) Identifying the appropriate management strategies for inland fisheries development and align these with national poverty alleviation approaches, as well as promoting rights-based approach in inland fisheries and developing strategies for sustaining peoples' basic entitlements such as sufficient food, decent work, freedom from oppression, and the right to a dignified life.

**Enhancing governance in fisheries management**

In order to strengthen the capacity of the ASEAN countries to achieve sustainable fisheries over the next decade, it has become necessary for the countries to strengthen their fisheries governance by evaluating the current constraints and accommodating international concerns. Governments should therefore address the priority issues in fisheries governance such as over-capacity and effective governance arrangement that support the coexistence of small-scale

and large-scale fisheries taking into consideration the fact that governance of these two types of fisheries should be approached from the holistic point of view and going beyond management of fisheries but other livelihood opportunities and calling for a broad framework like integrated coastal management. Co-management is necessary as the common focus of management to ensure



wider participation and increase the potential ability of the resource utilization, where the development of new institutional and organizational arrangements for co-management is necessary. The movement of the ASEAN towards building a single ASEAN community further necessitates the strengthening of governance mechanisms within the fisheries sector in the ASEAN countries. Thus, governments should move away from directive-based management to consultative management leading to a more open, accountable, transparent and autonomous management process.

### Intensifying sustainable aquaculture development

Aquaculture production has grown progressively over the last two decades while at the same time capture fisheries production has declined or stagnated, but the inter-dependence of these two fisheries sectors is further illustrated by the growing demand for fish meal and

fish oil in the production of aquafeeds. This demand issue could be addressed by implementing efficient feed management to reduce feed cost by as much as 50% and



### Box 3. Regional Activities and Programs Initiated by SEAFDEC under the SEAFDEC Policy Framework

**Past Activities (before 2000)** - focused on technology development and dissemination to the Member Countries through research, training and information programs. Four key areas related to the development and transfer of technology in fisheries were on capture fishery technology, post-harvest technology, aquaculture, and the programs supporting fisheries management such as collaborative programs on fisheries resource survey, among others.

**Past Decade Activities (2001-2010)** - focused on enhancing regional technical cooperation among ASEAN-SEAFDEC Member Countries by involving both government and private sectors through appropriate framework and logistic arrangements by all possible means with a view to reduce disparities and promote solidarity among the Member Countries, of which priority was given to the important issues affecting sustainable fisheries development in the region. Moreover, the importance of the multi-functionality of fisheries focusing on poverty alleviation, livelihoods, and food security was also considered. The main programs were focused on:

- Human resources development in all aspects of fisheries such as responsible fisheries and aquaculture, maximizing the utilization of fish and fishery products, and on quality and safety standards including the application of HACCP;
- Innovative fisheries management, by improving the management concept and approaches for sustainable fisheries, such as strengthening small-scale fisheries management through the promotion of rights-based fisheries management, co-management;
- Stock assessment and enhancement, strengthening the coastal resource assessment capabilities using the national or SEAFDEC research vessels under a cost-sharing policy, and in addition, promoting the regional framework on rehabilitation of fisheries resources and habitats/fishing grounds through resource enhancement;
- Promotion of responsible and sustainable aquaculture, including the development of environment-friendly aquaculture, development of the nutrition-efficient feeds and feeding management, and good aquaculture practices;
- Disease diagnosis and surveillance of existing highly virulent diseases as well as new emerging diseases;
- Food safety and quality assurance system particularly on the analysis and detection of chemical and antibiotic residues;
- Improvement of regional fisheries statistical systems and mechanisms;
- Strengthening joint ASEAN-SEAFDEC harmonized approaches and common positions on priority issues affecting ASEAN-SEAFDEC Member Countries, including those related to international trade in fish and fishery products.

**Existing Activities (from 2011 onwards)** - focus is on the 2011 ASEAN-SEAFDEC Resolution and Plan of Action adopted by the ASEAN-SEAFDEC Ministers on fisheries, taking into account the required emerging issues and changing of the environment such as those relating to the impact of climate change, fish trade-related issues, poverty alleviation and livelihoods, fisheries sustainability and food safety. The existing and onward programs would focus on:

- Continued promotion of sustainable aquaculture development including accelerating awareness and capacity building in fish health management while stock enhancement would emphasize on internationally threatened and over exploited species;
- Facilitating international and intra-regional trade, continued promotion of quality and safety standards and assurance system especially the food safety of aquaculture products, and traceability system of aquaculture and capture products through the supply chain;
- Improving management concepts and approaches for sustainable fisheries by emphasizing on fisheries governance, and the required adjustment of national policy-management framework to combat IUU fishing through regional cooperation on MCS and improvement of information/data collection, as well as on the promotion of community-based fisheries management or/and co-management under the new concept on ecosystem approach to fisheries;
- Balancing between activities that promote advance/modern technology to support commercial fisheries and activities that target the small-scale fisheries or support livelihoods and food security;
- Strengthening policy dialogue with high level officials of the ASEAN to ensure their continued support;
- Continued promotion of the concept of food safety and quality for CLMV countries (Cambodia, Lao PDR, Myanmar, Vietnam) while providing capacity building opportunities for the development of traditional fish and fish products to ensure that these products meet the standards.

#### Box 4. International Support Provided to the Activities and Programs in the Southeast Asian Region

**Management of Fishing Capacity:** Considering that the open-access system of the Southeast Asian fisheries had led to the rapid decline of fish stocks not only in coastal but also in offshore areas directly affecting the livelihoods of fishers in small- and large-scale fisheries, and that over-fishing capacity had been the main cause of IUU fishing in the region, several programs have been supported by FAO/APFIC and RPOA-IUU aiming to reduce fishing capacity in the region.

**Integration of Habitat and Fisheries Management:** In the past, fisheries management through the concept of establishing Marine Protected Areas had been promoted worldwide including in the Southeast Asian region, where the numbers of MPAs increased rapidly from few hundred to several thousand with the main goal of protecting the existing habitats. However, considering the limitation of fishing areas coupled with the declining of fish stocks in both coastal and offshore areas, establishment of MPAs may not be enough to secure the fish stocks, because many fish stocks do not settle in the MPAs, thus it has become necessary to protect the larval fishes instead through the establishment of the so-called “fishery *refugia*”. For this reason, there is need to integrate fisheries management into habitat management. UNEP/GEF/SCS have worked on this aspect in coordination with countries along the South China Sea and Gulf of Thailand. Similar activities have been conducted by the FAO/APFIC, Mangroves for the Future, and BOBLME in the sub-regional areas.

**Policy Development and Regional Management Arrangements:** Some regional organizations have made efforts to come-up with regional policy and management arrangements of specific fisheries concerns, such as:

- Regional Policy on Development of Aquaculture by NACA, FAO/APFIC;
- Regional Management Plan of Action for Sharks by BOBLME;
- Regional Plan of Action to Eliminate Illegal, Unregulated, Unreported Fishing by RPOA-IUU/Secretariat;
- National Plan of Action for IUU fishing and for Sharks by FAO/APFIC, RPOA-IUU, BOBLME;
- Establishing Fishery *Refugia* in Sub-regional Areas such as in the Gulf of Thailand, Andaman Sea by UNEP/GEF/SCS and Sida;
- Sulu-Celebes Sea Sustainable Fisheries Management Projects supported by UNDP.

**Research and Capacity Building on Marine Ecosystems:** Initiatives had been undertaken by German-based Center for Tropical Marine Ecology (ZMT) in some countries in Southeast Asia such as Thailand, Cambodia and Vietnam, while CORIN-ASIA and Wetlands Alliance have also worked on the Promoting the Sustainable Coastal and Aquatic Resources Management. Many of these activities also give more focus on the coastal resources especially working with communities and empowering human resources and adding value to resources at the local level through community-based activities, public awareness and capacity building programs. Another international support related to this subject had been made by the World Bank, DFG (German Research Foundation), among others.

**Human Resources Development to Improve Livelihood and Alleviate Poverty:** Most regional organizations and donors support HRD programs in line with other relevant programs, like for example the program on Building Local Capacity to Sustainable Wetlands Management operated by Wetlands Alliance, WorldFish Center, MRC, CORIN-ASIA and FAO taking into account the fact that millions of people in small communities throughout Southeast Asia depend in some ways or another, on what the wetlands produce and considering that wetlands is a natural entry point for poverty alleviation. The ASEAN Foundation also gives particular focus on HRD in the ASEAN region. Recently, the Kingdom of Spain supported Cambodia, Indonesia, Philippines and Vietnam through the Regional Fisheries Livelihoods Program for South and Southeast Asia (FAO-RFLP). The Australian Centre for International Agricultural Research (ACIAR) is also one institution that attempts to improve the well-being of peoples in developing countries through its international cooperation in research and related activities on aquaculture development. Other institutions working on these issues include CIDA/ACCC, MRC, NACA, ADB, among others.

consequently reduce environmental impact. Thus, there is the need for enabling policies for aquaculture operations especially those by the small-holder farmers to adopt better aquaculture practices. Governments should also be engaged in the development of high health and diseases resistant broodstock to facilitate access of good quality seeds by small-scale farmers. The countries should also support the coordinated regional initiatives that will continuously monitor new and emerging diseases in order to prevent and control serious disease outbreaks.

#### Promoting ecosystem approach to fisheries

There has been a growing awareness of the need for fisheries-related activities to be undertaken in a more environmental sensitive manner that minimize the undesirable environmental consequences of fishing practices. Ecosystem approach to fisheries management has been seen as means to minimize habitat damage, changes in food chains in natural ecosystems, and loss

of biological diversity. Governments should therefore integrate ecosystem approach in the management of the fisheries sector, promote networking and develop plans of action on the reduction of impacts of fishing on the



environment, and develop and establish inter-agency collaboration (fisheries, environment, tourism) as well as within fisheries agency cooperation to promote the concept of ecosystem approach to fisheries in the ASEAN region. Moreover, it is also necessary to recognize the value of “local commons” to work towards improving habitat and fish production where “front of sea is one’s own garden under one’s responsibility, and fish is one’s own property to be conserved for next generation”.

### **Improving post-harvest and safety of fish and fisheries products**

To ensure the optimal utilization of fish catches and the safety of fish and fisheries products for consumers and for export, all countries would have to invest in the development of appropriate infrastructures for safe and wholesome fish and fishery production based on the application of effective control and production procedures at all levels along the chain of production from catch to the consumer. This would involve cooperation among all relevant government authorities and working with producers at all levels from small-scale fishers to large-scale commercial enterprises.

### **Addressing the emerging requirements for trade of fish and fisheries products**

The emerging issues that affect international fish trade had been increasing. These include globalization of trade with focus on consumer protection in view of the much greater movement of goods and services both within the region and globally, requirements for sustainability of fisheries and aquaculture production considering the adverse environmental impacts of fisheries-related activities and the quality of food and food products derived from the fisheries sector, and effects of climate change. Compliance to the quality and safety standards and requirements with consistency becomes an obligation to be able to continue trading fish and fish products. For the ASEAN region, such standards and requirements should be harmonized considering equivalence, including equal application of tariffs to all ASEAN countries in order that the countries in the ASEAN region could continue providing huge quantity of fish and fishery products in the world market as well as sustain the competitive position of ASEAN fish and fishery products in the world markets.

### **Mitigating the impacts of climate change in fisheries and aquaculture for food security**

Considerable international attention has focused on the potential impacts of climate change and the need for countries to adapt to changing climates in the future. Despite such attention, the scientific ability to predict future changes in weather, climate and ocean circulation is limited and the nature of potential impacts on fish stocks and the ecosystems upon which they depend is thus even more



difficult to foresee. Governments should therefore address the need to ensure that fisheries aspects are incorporated in the national action plans on response to climate change and integrate climate change into fisheries policy and habitat management program framework, and build up adaptive capacity of people dependent and involved in fisheries-related activities to cope with changing environment, including the effects caused by climate change.

### **Creating livelihood in fisheries communities**

The decreasing trends of catch in many small-scale fisheries and overcapacity of the fishing fleet, would oblige the ASEAN governments to integrate policy for livelihood improvement at the local (households) to national levels with overall water resource planning strategy and development programs, and support directions for diversification of community-based livelihoods in fishing communities within (fish processing) and outside fisheries (textile/batik, local business, microfinance) while maintaining sustainable use of resources. Governments should also recognize and improve the social aspect of fishery modernization (choice of technology, labor access to capital, and credit access to fishing ground), and promote equity including gender equity, sustainability of human well-being, respect for human rights, welfare for those who are dependent on fisheries. Thus, regional guidelines on decent work in fisheries sector as well as on labor standards and practices should be formulated to manage both national and migrant workers working onboard vessels. There is also the need to promote and ensure that safety at sea aspects are addressed by governments and incorporated in policies while monitoring and control of the status and use of small fishing vessels should be improved.

### **Sustaining food supply in inland fisheries**

Inland capture fisheries play a significant role in food security both in urban and rural areas of ASEAN countries and these resources are likely to come under increasing pressure in the future due to the increasing population

**Box 5. Expressions of Support for the Sustainable Development of Fisheries in the ASEAN Region**

Organizations/Agencies/Academe	Possible Areas of Cooperation
Government of Japan	<ul style="list-style-type: none"> <li>Continue cooperation in sustainable fisheries development in the region through SEAFDEC</li> </ul>
ASEAN Foundation	<ul style="list-style-type: none"> <li>To participate actively in shaping the future of fisheries development in the region, and cooperate in the implementation in the new Resolution and Plan of Action</li> </ul>
USAID - Southeast Asia	<ul style="list-style-type: none"> <li>Support fisheries development in the region through USAID</li> <li>Cooperate in developing private-public partnership for food sufficiency and security</li> </ul>
FAO/Regional Office for Asia and the Pacific (FAO/RAP) and Asia Pacific Fisheries Commission (AFPIC)	<p><b>General areas of future cooperation</b></p> <ul style="list-style-type: none"> <li>Trawl fisheries by-catch project (GEF)</li> <li>Resource management</li> <li>Managing fishing capacity and combating IUU fishing</li> <li>Capacity building needs</li> <li>Promote sustainable development in small-scale fisheries</li> </ul> <p><b>Priority Areas of Cooperation</b></p> <ul style="list-style-type: none"> <li>Global Record of Fishing Vessels</li> <li>HRD on climate change</li> <li>Aquaculture development</li> <li>Improved management of inland fisheries</li> </ul>
WorldFish Center	<ul style="list-style-type: none"> <li>Improved livelihoods</li> <li>Large-scale sustainable fish production</li> <li>Policy development</li> <li>Aquaculture development</li> <li>Climate change and building resilience</li> <li>Inland fisheries, gender</li> <li>Research within the development context</li> <li>Develop private-public partnership for food sufficiency and security</li> </ul>
Mekong River Commission (MRC) Secretariat	<ul style="list-style-type: none"> <li>Gender in fisheries</li> <li>Inland fisheries development and 'land use'</li> <li>Nutrition and livelihood for rural people</li> <li>Fisheries management</li> <li>Impact of infrastructure development on fisheries</li> <li>Small-scale inland fisheries for poverty alleviation</li> <li>Co-management in inland fisheries</li> <li>Aquaculture of indigenous Mekong River species</li> </ul>
Bay of Bengal Large Marine Ecosystem Project (BOBLME)	<ul style="list-style-type: none"> <li>Fisheries, pollution, habitat</li> <li>Resource management</li> <li>Ecosystem approach to fisheries</li> <li>Management Hilsa, sharks, Indian mackerel</li> <li>Joint Myanmar-Thailand to manage Myiek Archipelago</li> <li>Ecosystem services</li> <li>Fisheries statistics</li> <li>Climate change</li> <li>NPOA sharks</li> <li>Sub-regional cooperation in Andaman Sea</li> <li>Ecosystem Approach to Fisheries framework</li> </ul>
Aquaculture and Aquatic Resources Management (AARM, AIT)	<ul style="list-style-type: none"> <li>Education</li> <li>Research</li> <li>Outreach program</li> </ul>

in the region. Inland fisheries should therefore be given more attention to ensure local food security in the rural areas. Governments should therefore identify appropriate management strategies for inland fisheries development and align these with national poverty alleviation approaches, strengthen collaboration among concerned agencies to maintain the ecological health of water bodies and the connectivity of the habitats, and promote alternative livelihood especially during seasonal flooding/drought. Promote, in policy development as well as in practice, the

rights-based approach in fisheries that goes beyond mere access limits, while basing development strategies on peoples' claims to their basic entitlements, such as enough food, decent work, freedom from oppression and the right to a dignified life.

### **Vision of Cooperation in ASEAN Fisheries Towards 2020**

The representatives from international and regional organizations attending the 2011 ASEAN-SEAFDEC

Conference expressed their respective support and possible future cooperation for the sustainable development of fisheries in the ASEAN region (**Box 5**). The most essential aspects that could ensure food security from fisheries for the peoples in the ASEAN region were identified as human resources development and community-based approach to fisheries management. Considering that the future of fisheries goes beyond fish production, it is necessary to also assess the resilience and capacity of fishers and fish farmers, and promote resources mobilization. However, since the recommendations that came out from the Technical Panel Sessions of the Conference are wide-ranging, there is a need to prioritize the issues based on their “doability” taking into consideration the available financial resources. The areas of collaboration expressed by the regional organizations focused in the aspects of: partnerships with various stakeholders (private-public partnership), linkage – national, regional and sub-regional levels, academic research network – link into policy making and intervention as well as cooperation, and multi-sectoral initiatives.

## Way Forward

In order to consider the outcomes of the 2011 ASEAN-SEAFDEC Conference, SEAFDEC organized the Inception Workshop on Follow-up Activities to the ASEAN-SEAFDEC Conference on Sustainable Fisheries for Food Security Towards 2020 in Bangkok, Thailand on 4-5 July 2011. The Workshop was mainly aimed at enhancing the awareness of ASEAN-SEAFDEC countries as well as relevant agencies, institutions, organizations, and donor agencies on the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 that were adopted by the ASEAN-SEAFDEC Ministers and Senior Officials responsible for fisheries during the Conference. Although the Technical Session of the Conference came up with recommendations that provide in totality a clearer picture on how the countries in the ASEAN region should move towards ensuring sustainable development of fisheries and enhancing the contribution of fisheries to food security for the people in the region, the output generated were of different strata. Therefore, the Workshop also aimed to identify the gaps where more efforts should be exerted as well as the relevant organizations that can work in the region and play the roles in supporting the ASEAN countries in the implementation of the Resolution and Plan of Action. Considering that the recommendations comprise wide-ranging sets of issues and concerns, the Workshop was also meant to prioritize such concerns in order to come up with doable programs and activities and attain the common objective of sustainable fisheries development for food security in the ASEAN region.

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