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## ASIA-PACIFIC FISHERY COMMISSION

### Executive Committee

### Seventy-sixth Session

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### ASIA AND THE PACIFIC'S REGIONAL INITIATIVE FOR BLUE GROWTH

#### Background

1. Marine and inland water bodies and other water associated resources are among the most important natural resources that can provide diversified services to human society. Among all other functions, aquatic ecosystem and related resources are the source/basis of fish (in general term) -- an important animal food for human and the foundation of livelihoods for both rural and urban population.
2. In value terms, over two thirds of fishery exports by developing countries are directed to developed countries. Fisheries and aquaculture are a vital source of jobs, nutritious food and economic opportunities, especially for small-scale fishing communities.
3. Asia plays a dominant role in fish production globally. The regional contribute 89% of the world fish production through aquaculture and 56.5% of the global capture fish production in 2014. Fish contribute more to food and nutrition of Asia population compared with the rest of the world. Current per capita fish consumption stands around 21 kg annual, which supplies about 20% of animal protein in the diet of Asian people.
4. While contributing significantly to regional and global food security and nutrition, fisheries and aquaculture also plays important rural to peoples' livelihood and economic growth. Fisheries and aquaculture are a vital source of jobs and economic opportunities in addition to providing nutritious food, especially for small-scale fishing communities. Global fisheries and aquaculture industry engaged nearly 60 million fishers and farmers, some 84% of them are in Asia. Development of fisheries and aquaculture also stimulates the related chain business development, which include input manufacture, product processing, trading and restaurant business and related logistics. Fisheries and aquaculture have become important economy in many countries. In 2012, some 37% of global fisheries and aquaculture products are internationally traded and the total export value reached nearly 130 billion USD. In value terms, over two thirds of fishery exports by

developing countries are directed to developed countries. Fisheries and aquaculture contribute some 2% of total GDP in many developing countries.

5. The anticipated population growth will significantly increase the demand for fish in the world in the coming decades. It has been estimated that by 2030, just to maintain the current per-capita level of fish consumption, the world will require at least another 23 million tonnes of aquatic animal food above the current production level. If the effect of economic growth on people's consumption of fish is also taken into consideration, the world will need some additional 30-50 million tonnes of fish by 2030 from the current level to meet the increasing demand for fish. Promoting sustainable growth of aquaculture and responsible fisheries has been taken as an important approach to improve the livelihood of inland and coastal rural population and local economic development by the government many developing countries.

6. Under the 2030 agenda, out of all 16 sustainable development goals, at least four sustainable development goals can be contributed by sustainable growth of aquaculture and responsible fisheries development, which are namely SDG 1 - Eliminate poverty in all its forms; SDG 2 - End Hunger, achieve food security and improved nutrition, and promote sustainable agriculture; SDG 5 - Achieve gender equality and empower all women and girls and SDG 14 - Conserve and sustainably use oceans, seas and marine resources for sustainable development.

7. Asia is the regional with the largest aquaculture and fisheries industry in the world. It is also the region with highest percentage of chronic malnutrition and rural poverty. Aquaculture and fisheries have important role to play in achieving the relevant SDGs, in particular, achieving food security and improved nutrition through meeting the increasing demand of people for more fish products and eliminate poverty through make aquaculture and fisheries a more attractive and resilient livelihood options. In order to achieve these targets, it is expected that the Asian aquaculture production will need to increase by some 60% in the next 15 year while the capture fisheries production will need to be maintained at the present level. As the result, aquaculture will supply 62% of total food fish for the people by 2030.

## **Rationale**

8. In order to contribute to the sustainable development goals, fisheries and aquaculture sectors was assigned with important tasks to support the food security and improved nutrition and eradication of poverty through realizing blue economic growth with responsible and efficient use of marine and inland water and associated natural resources. Asia and the Pacific Region will need to take a leading role in achieving the goal considering its current share in global fish production and trends of the sectoral development in the different regions.

9. While recognizing the potential for Asia and Pacific Region to play an key role in achieving sustainable growth of aquaculture and sustained capture fisheries with it advantages in natural resources, scientific and technological advancement, well established human capacity and sectoral structure and general favorable policy environment, many countries face various challenges in realizing such potential.

### ***Aquaculture is reliant on and competes for, land and water resources***

10. The rapid growth in production from aquaculture in the Asian region over the past three decades has largely been the result of two major factors: a) the expansion of culture areas and b) intensification through technological advances and increased use of feed and other resources. While this growth of Asian aquaculture has contributed to food security and rural livelihoods, it has also resulted in significant environmental impacts from some

production systems and practices. It is expected that there will be significant expansion of aquaculture in most countries of the Asian region in the future, and similarly, freshwater aquaculture systems that use large volumes of water will be forced to improve their water use efficiency or integrate their discharges more effectively into other systems. Marine and brackishwater aquaculture rely less on freshwater, they represent significant challenges in terms of maintaining environmental quality and land use in coastal areas. Agricultural and coastal land is now at a premium in most Asian countries which inevitably means that expansion of aquaculture production areas will come at a cost to other forms of land use. In some cases this may be transformation of other forms of agriculture (e.g. rice) elsewhere this has implications for conversion of natural resources such as wetlands. Most countries in the region have taken steps to reduce the conversion of coastal forest, however limited freshwater, high prices for seafood and the lack of other land may increase pressures to convert coastal forest and land for brackishwater aquaculture.

***Greater dependence aquaculture on feed resources due to intensification and species shifting has impact on capture fisheries and other sectors***

11. Important trends of aquaculture development in the past include the intensification and shift towards species heavily depending on high animal protein in order to meet the changing market demand and to achieve better economic efficiency. This presents feed resource challenges and in particular linkage to capture fisheries which currently provide nearly all the fishmeal utilized in aquaculture feeds and/or fish as direct feed in aquaculture in the region. This has stimulated fish pressure to certain extent and impacted the natural resources.

***Impact of IUU fishing on wild fish stock***

12. With the enacting of FAO Code of Conduct for Responsible Fisheries (CCRF) in 1995, most countries in the region have taken actions to combat Illegal, Unregulated and Unreported (IUU) fishing. Largely due to lack of required strong political will, implementation capacity and complexity of the issue, the progress has been made so far is still far from satisfactory. It is estimated that IUU fishing activities are responsible for the loss of 11-26 million tonnes of fish every year for an economic value of US\$ 11-23 billion in addition to the damage to wild fish stock and natural habitats.

***Overcapacity and Overfishing***

13. Although the overcapacity in capture fisheries is well recognized and some countries have taken measures to control the increase of fishing capacity, the actual effect has been limited. The individual vessel capacity increased significantly although the total number of fishing vessels has not been increased significantly. It is considered over 70% of the fish stock are fully exploited and nearly 30% of marine species are over-fished (at unsustainable level). The over-capacity of fishing vessels although resulted decreased CPUE and increasing operational cost.

***Lack of inclusive and equitable value chain for small fishers and fish-farmers***

14. Aquaculture and fishing production has greatly shifted from subsistence production to market oriented production. Small fish-farmers and fisher are now more dependent on inputs suppliers and distant markets. However, inclusive and equitable aquaculture and fisheries value chain has not been well established in many countries. Small fish farmers and fishers usually don't have easy excess to quality inputs and direct access to mainstream markets. They often bear the most economic risks and share the least benefits among all the players along the value chain.

### ***Increased vulnerability of small fishers and fish-farmers with increasing climate variability and climate change impacts***

15. This intensification of aquaculture demands heavier investment of farmers. With the increasing risks associated with climate variability, changing water and rainfall regimes and temperature variability and other internal and external uncertainties, small fish-farmers become more vulnerable than before. Climate change will impact aquaculture and inland fisheries through extreme weather events flooding and drought. Rising sea levels and storm surges have huge implications for coastal fishing and other aquaculture communities particularly in low-lying small island developing countries and in the tropical deltas, which include reduced production efficiency, loss of cultured stock and production assets and even risk of life.

16. In order to respond to the recommendation of the APFIC Session and the APRC and support the implementation of the FAO Strategic Programs, this regional initiative developed to support the member countries addressing the above issues and challenges.

### **Objectives**

17. The objective of the regional initiative is to support the member countries in the region to achieve blue economic growth and contribute to relevant Sustainable Development Goals with the sustainable growth of aquaculture and sustained capture fisheries through responsible management and efficient use of water related natural resources. Specifically, the regional initiative will support the member countries to effectively address the key issues in achieving sustainable aquaculture growth and responsible capture fisheries through regional and country level policy and strategy development and technical interventions at country level.

18. The main focus of the initiative will be on promoting informed policy, good governance and innovative production and management practices that contribute to sustainable growth of aquaculture and improved management of capture fisheries covering the whole supply chain from the input supply to the marketing of products in selected **Regional Initiative Focus Countries**, which currently include **Bangladesh, Indonesia, Philippines, Sri Lanka, Timor Leste and Vietnam**.

19. The implementation of the regional initiative will significantly contribute to the following organizational outputs:

- Output 20101 Stakeholders supported to identify, assess and disseminate innovative and sustainable production practices
- Output 20103: Organizational and institutional capacities of public and private institutions, organizations and networks are strengthened to support innovation and the transition toward more sustainable agricultural production systems
- Output 20201 - Stakeholders in member countries strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers – in the transition to sustainable agricultural sector production systems
- Output 20202 - Countries are supported to strengthen national governance frameworks that foster sustainable agricultural production and natural resources management

- Output 20203 - Public service organizations and inter-organizational mechanisms are supported for the implementation of national policies, strategies and legislation that foster sustainable agricultural production and natural resources management
- Output 20303 - Stakeholders are supported to facilitate implementation and application of international (including regional) instruments and the recommendations or requirements of related governance mechanisms
- Output 30103 - Support to improve access of poor rural producers and household to appropriate technologies and knowledge, inputs and markets
- Output 50301 - Support to Improving capacities of communities and key stakeholders to implement good practices to reduce the impacts of climate related threats to aqua-farmers and fishers

### **Expected outcomes and outputs**

20. The implementation of the regional initiative is expected to achieve the following outcomes that will contribute to the overall objective of the regional initiative:

Outcome 1. Enabling environment for blue growth enhanced at regional and country level through development and implementation of national and regional strategy addressing priority issues in different dimensions related to blue growth and related capacity building and awareness raising

Outcome 2. Improved efficiency and sustainability in aquaculture and capture fisheries production through innovative management systems and production practices for more efficient and sustainable use of resources (fisheries, water, land, forest etc.) and restoration of ecosystem services and functions;

Outcome 3. Increased resilience of farmers and fishers in adapting to climate change impacts and coping with natural and socioeconomic risks; and

Outcome 4. Inclusive and equitable aquaculture and fisheries value chain with special focus on improved access of farmers to quality production inputs, technology and market

In order to achieve the identified outcomes, the regional initiative will need deliver the following outputs in 2016-2017.

**Output 1.1** One Regional strategy and Action plan for sustainable intensification of aquaculture in Asia-Pacific published and disseminated through two regional organizations/mechanisms and government of member countries in the region;

**Output 1.2** 2-3 Specific policy/strategy recommendation documents supporting sustainable growth of aquaculture in the regional initiative countries;

**Output 2.1** Innovative aquaculture production system/practices are identified and demonstrated and scaled up in 3-5 regional initiative focus countries;

**Output 2.2** Aquaculture planning and management tools are piloted in 2 regional initiative focus countries and one focus country;

**Output 2.3** 12 Success practices of sustainable intensification documented and disseminated in the member countries in the Asia and Pacific Region;

**Output 2.4** 4-5 well proven innovative aquaculture system/practices/technologies are well documented and effectively shared among the regional initiative focus countries

**Output 2.5** ICT based aquaculture resources inventory and extension service platform developed for one country

**Output 2.6** Assessment of status of implementation of PSMA and development of national strategy for implementation of PSMA to eliminate IUU fishing

**Output 2.7** Assessment of marine fish stock conducted in one country and information system of aquaculture resources established in one country

**Output 3.1** 1-2 Climate resilient aquaculture farming system/practices are developed and demonstrated in 1-2 countries;

**Output 3.2** 5-6 community based climate resilient aquaculture options are identified and the capacity for adopting the options are developed

**Output 3.3** 4-5 community based climate resilient fisheries options are identified and the capacity for adopting the options are developed

**Output 3.4** 1-2 potential aquaculture insurance schemes are evaluated and related policy recommendations for building social safety net for small fish farmers are developed for 1-2 countries

**Output 4.1** National capacity for supplying quality aquaculture seed are strengthened in 2 countries

**Output 4.2** National capacity for supplying quality and cost effective feed for small farmers are strengthened in 2 countries

**Output 4.3** Aquaculture value chain assessment completed and strategic recommendation for strengthening aquaculture value chain developed for 1-2 countries

### **Work plans for 2016-2017**

21. The regional initiative will be implemented in two major dimensions:

- **Regional implementation** will focus on documentation, exchange and sharing of successful practices and knowledge generated in individual countries; jointly develop specific strategy and identify appropriate technical interventions to address common priority issues in achieving blue growth and produce related strategy documents and knowledge products through joint efforts of focus countries or more extensive regional processes.
- **Country level implementation** will focus on supporting individual focus countries to address national priority issues in sectoral development policy and strategy, sectoral management and production technology/practices through well formulated and implemented country project activities.

**Work Plan for implementing RI-BG in 2016-2017**

Activity	Region/Country	Output to contribute	Timeframe							
			1 <sup>st</sup> Qt -16	2 <sup>nd</sup> Qt -16	3 <sup>rd</sup> Qt -16	4 <sup>th</sup> Qt -16	1 <sup>st</sup> Qt -17	2 <sup>nd</sup> Qt -17	3 <sup>rd</sup> Qt -17	4 <sup>th</sup> Qt -17
Production and dissemination of regional strategy and action plan for SIA in Asia-Pacific	Regional	Output 1.1								
Documentation and dissemination of successful SIA practices in Asia	Regional	Output 2.3								
Piloting of aquaculture planning and management tools in selected ASEAN members (TCP/RAS/3511)	Regional	Output 2.2								
Promote scaling up of innovative production systems/practices and management practices for SIA in Asia (TCP/RAS/360X)	Regional	Output 2.4								
Support combating IUU in Asia through implementing PSMA (TCP/RAS/360X)	Regional	Output 2.6								
Enhancing aquaculture production for food security and rural development through better seed and feed production and management with special focus on Public Private Partnership (TCP/BGD/3501)	Bangladesh	Output 4.1 Output 4.2								
Community-based Climate Resilient Fisheries and Aquaculture Development in Bangladesh (GCP/BGD/055/LDF)	Bangladesh	Output 3.1 Output 3.2								
Support Marine fish stock assessment in Bay of Bengal	Bangladesh	Output 2.7								
Decent Work for Food Security and Sustainable Rural Development (DW4FS&SRD): Support to selected coastal communities along the seaweed value chain (TCP/INS/3502)	Indonesia	Output 4.3								
Integrated economic zone development based on	Indonesia	Output 1.2								

blue economic in Lombok Island, Indonesia (TCP/INS/3501-03)										
Support to scaling up of innovative rice-fish farming in Indonesia	Indonesia	Output 2.1								
Support FISH FEED SELF SUFFICIENCY PROGRAMME in Indonesia (TCP/INS/3601-0X)	Indonesia	Output 4.2								
Building Capacities for a Climate Resilient Tilapia Farming in the Philippines (TCP/PHI/3502)	Philippines	Output 3.1 Output 3.4								
ICT based aquaculture resource inventory and extension platform (TCP/PHI/360X)	Philippines	Output 2.5 Output 2.7								
Improving seabass (Lates calcarifer) aquaculture in Sri Lanka through better feed and health management (TCP/SRL/3502)	Sri Lanka	Output 4.2								
Human resource capacity building related to fish genetics and broodstock management in Sri Lanka (TCP/SRL/3503-03)	Sri Lanka	Output 4.1								
Development of Sri Lanka national aquaculture and fisheries master plan	Sri Lanka	Output 1.2								
Combat IUU fishing in Sri Lanka (TCP/SRL/360X)	Sri Lanka	Output 2.6								
Poverty Reduction through Agricultural Development - Improved fish seed supply for culture-based fisheries (GCP/SRL/062-EC)	Sri Lanka	Output 4.1								
Feasibility study and pilot culture production of marine finfish cage culture (grouper, snapper) in Timor Leste (TCP/TIM/3502-04)	Timor Leste	Output 2.1								
Assessment of causes and impacts of failed intensive shrimp farming on livelihoods of small farmers and piloting sustainable shrimp farming in provinces of Soc Trang and Bac Lieu (TCP/VIE/3502-04)	Vietnam	Output 2.1								

## **Implementation and management mechanism**

### **Supervision**

22. The implementation of the regional initiative will be under the overall supervision of RAP Regional Strategic Program Coordinator and HQ SP Leaders (mainly SP2).

### **Coordination of the planning, implementation, monitoring and reporting**

23. The Regional Initiative Delivery Manager will take the overall responsibility in coordinating the planning, implementation, monitoring and reporting of the regional initiative under the guidance of RAP RSPC, SPLs and other concerned HQ units with the support of concerned RAP SP Focal Points, country focal persons of HQ SP Teams and FAORs in the RI focus countries.

### **Regional Initiative Delivery Team**

24. The delivery team includes: Regional initiative delivery manager, concerned RAP SP focal points, concerned HQ SP country focal points, FAORs/AFAORs in all six RI focus countries, concerned RAP technical officers, concerned technical officers in HQ technical units and SP teams.

### **Technical support needs**

25. The concerned RAP and HQ technical officers will provide support to implementation of the regional initiative at country and regional levels on actual demands coordinated by the delivery manager and FAORs in the focus countries. Based on the currently work plan, the technical support needs are identified in the following HQ technical units and RAP:

- FIAA Aquaculture Officer (Aquaculture Feed and Nutrition)
- FIAA Aquaculture Officer (GIS & Zoning)
- FIAA Aquaculture Officer (Aquatic animal health management)
- FIAA Climate change adaptation and mitigation
- FIAA Aquaculture Officer (Aquaculture economics and insurance)
- FIAF Fishery Officer (Fish stock assessment)
- FIAF Fishery Officer (IUU & PSMA)
- FIAM Fisheries market & value chain
- LEGN fisheries law and regulation and their enforcement
- RAP Aquaculture Officer
- RAP Senior Fishery Officer
- RAP Fishery climate change officer
- RAP Gender Officer
- RAP Knowledge and information management Officer
- More RAP technical officers based on their work plan of potential contribution to RI-BG

### **Implementation of regional and country activities**

26. The regional initiative delivery manager will take the leading role in implementing the regional activities with the support from FAO Representative Office in participating countries.

27. The FAOR will be responsible for implementing the country specific RI activities following the work plan jointly developed by the delivery manager and concerned technical officer and respective country representative office.

**Resource mobilization**

28. Implementation of the regional initiative in 2016-2017 will depend on following resources:

29. Country level priority project activities will be supported by country TCP allocation and GCP funding and the leveraged government funding and HQ technical units funding allocated to support the regional initiative;

30. Regional activities will be supported by regional TCP, TSS generated through project backstopping;

31. It is hoped certain voluntary funding, including SSC funding could be mobilized at HQ and allocated through SP to support the new country and regional activities understand the regional initiative.