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SEAFDEC Statement to WCPFC SC8

SEAFDEC

Agenda 2.4

Report from SEAFDEC

to the Eighth Regular Session of the Scientific Committee

Tuna fisheries has been very important to Southeast Asia in view of its role in increasing the economies and improving livelihoods of fishers in the region. Since 2008, SEAFDEC has continued to assist the five major tuna producing countries in Southeast Asia, namely: Indonesia, Philippines, Thailand, Vietnam, and Malaysia in improving their respective national systems of collecting tuna statistics as well as in reducing by-catch from in longline fisheries. Recognizing the significant contribution of tuna fisheries to food security in the region, the Council Directors for the Philippines, Malaysia, Indonesia and Vietnam have agreed in principle, during the 44th Meeting of SEAFDEC Council in April 2012 in Myanmar, to collaborate in the conduct of joint research study on the maximum sustainable yield of tuna resources in the Sulu-Sulawesi Sea (SSS) areas. In this regard, SEAFDEC developed a Draft of Collaborative Framework (see **Annex 1**) to facilitate the conduct of the said collaborative activity in the SSS which mainly aims to provide updated scientific information and status of tuna resources in the Sulu-Sulawesi Sea. In addition, the specific objectives of the collaborative activity include:

1. To strengthen the collaborative research among the three countries surrounding the Sulu-Sulawesi Seas by:
    - assessing the status of tuna stocks and the maximum sustainable yield,
    - identifying the spawning and nursery grounds of the tuna resources, and
    - investigating the impacts of FADs on the tuna populations;
2. To setup a technical working group for tuna stock assessment in the SSS; and
3. To increase awareness of stakeholders on sustainable exploitation and management of tuna resources.

As planned, the aforementioned collaborative research will be started in 2013 under the cost-sharing policy on the use of the SEAFDEC research vessel, the M.V. SEAFDEC 2. However, SEAFDEC would also need the technical support from WCPFC to ensure that the output of the implementation of the research would not only benefit the member countries but also meet the requirements of WCPFC on management of data on tuna resources in the Southeast Asian region.

Annex 1:

Framework of

"Joint Research Program on Tuna Resources in Sulu-Sulawesi Sea"

SEAFDEC/SEC

I. BACKGROUND

The Sulu-Sulawesi Sea (SSS) is one of the most important large marine ecosystems in the tropical seas of Southeast Asia in terms of biological diversity, which is bounded by three countries, namely: Indonesia, Malaysia and the Philippines. Covers an area of about 900,000 km^2, the SSS is at the heart of the most bio-diverse marine area in the world and thus, considered an eco-region which is physically subdivided into the Sulu Sea and the Sulawesi Sea. The SSS is also a very rich fishing ground for large and small pelagic fishes (*e.g.* oceanic and neritic tunas) as well as coastal and coral reef fishes, providing livelihoods and food for coastal communities in the entire region and beyond. As part of the Coral Triangle, the existing evidence has shown that the SSS is an important spawning ground, nursery grounds and migratory routes for the bigeye, yellowfin, skipjack, and neritic tunas.

Based on the national statistics in 2006, tuna production in the SSS was estimated to be around 370,000 mt. However, due to increasing demand, competition, bycatch of juveniles particularly oceanic and neritic tunas, and lack of regional collaborative research program for sustainable management and development of marine and coastal resources in the SSS, have caused overexploitation and declination of tuna resources in the SSS. In addition, the impacts of thousands of Fish Aggregating Devices (FADs) deployed (particularly in the Sulawesi Sea)/in the area on tuna resources have not been assessed and thus, still remain unknown.

During the 44th Meeting of SEAFDEC Council in April 2012 in Myanmar, the Council Directors for the Philippines, Malaysia, Indonesia and Vietnam have agreed in principle to collaborate in the conduct of joint research on maximum sustainable yield of tuna catch in the Sulu-Sulawesi Seas. In this connection, the Council requested the SEAFDEC Secretariat to develop a collaborative mechanism under the SEAFDEC framework to facilitate the conduct of collaborative activities in this area in the future. As for the involvement of Vietnam in the proposed mechanism, considering that the country is not connected to the Sulu-Sulawesi Seas, its expertise could be tapped for the successful implementation of the mechanism. The involvement of Vietnam in the proposed mechanism is considered voluntary as the country is not connected to the Sulu-Sulawesi Sea. The SEAFDEC Secretariat has therefore developed this proposal for the consideration of the Council.

II. GOAL AND OBJECTIVES

The overall goal of the program is to provide an updated scientific information and status of tuna resources in the Sulu-Sulawesi Sea.

Specific Objectives:

1. Strengthen collaborative research among the three countries surrounding the Sulu-Sulawesi Seas:

- To assess the status of tuna stocks and the maximum sustainable yield
- To investigate the spawning and nursery grounds of tuna resources
- To investigate the impacts of FADs on the tuna populations

2. Setup a technical working group for tuna stock assessment in the SSS.
3. Increase awareness of stakeholders on sustainable exploitation and management of tuna.

III. PROGRAM ACTIVITIES

In order to meet the objectives, the ~~a~~ collaborative research will include four main activities:

1) Review catch and biological data/information on tuna harvested in the Sulu and Sulawesi Sea

   Participating countries would be requested to compile and review catch and biological data and information of tuna harvested in the SSS. The following activities are proposed for implementing at country level:

   - Identify landing sites of tuna caught in the SSS;
   - Review periodical tuna production from the respective national fisheries statistics;
   - Determine total catch from the SSS including species composition, , and identify the needs for data collection; and
   - Conduct at-sea-observation/on-board observer program for the identification of tuna fishing grounds and species composition..

2) Fisheries resources and oceanographic surveys using the M.V. SEAFDEC 2

   The M.V. SEAFDEC 2 is proposed for conducting the collaborative tuna resources and oceanographic surveys within the jurisdiction of Malaysia, Philippines and Indonesia in the Sulu-Sulawesi Sea~~s~~. The scopes of the surveys are as follows:

   - Research on fish/tuna early life history using fish larvae sampling net and Bongo net in the near shore and off shore of the SSS;
   - Oceanographic survey using the Integrated Conductivity-Temperature and Depth (ICTD) attached with other sensors, namely: pH, DO, Fluorescence, among others;
   - Inventory of FADs found in the SSS through ocular observation;
   - Scientific hydro-acoustic survey for biomass estimation and sampling for echo verification;

   The tentative Cruise Plan for one season appears in Annex 1. Moreover, it is also suggested that the survey could be conducted in two seasons to cover before and after monsoon seasons.

3) Fish Stock assessment and fish larvae identification

   In order to assess the tuna stock and population in the SSS regional area, collaboration among the countries concerned is necessary. In this regard, the following activities are proposed:

   - Identify experts on tuna stock assessment and fish larvae identification in the respective concerned countries;

- Standardize the methodology for stock assessment and other related activities
- Establish the expert working group for regional fish (tuna) stock assessment;
- Establish the expert working group for fish (tuna) larvae identification; and
- Conduct biomass estimation using hydro-acoustic technology involving experts (from concerned countries or from outside).

4) Assess the impacts of FADs on the tuna populations in SSS
   - Inventory on number of FADs found in the SSS through ocular observation (During fisheries resource and environmental surveys).
   - Determine species compositions and size of fish caught at FASs.

5) Workshop on Scientific Findings from the Collaborative Fisheries Research Program in the SSS

   Using the existing SEAFDEC framework under the Regional Advisory Committee forum, SEAFDEC will conduct a Regional Workshop on Scientific Findings from the Collaborative Fisheries Research Program in the Sulu-Sulawesi Seas. In this regard, the key experts involved in the assessment under the two working groups will be invited to update on the progress/findings from the collaborative works.

IV. AREAS OF COOPERATION

The "Joint Research Program on Tuna Resources in Sulu-Sulawesi Sea" will be operated mainly through the following three mechanisms. Mutual agreements for concrete research program will be designed in according to the specific requirements identified during the cooperation.

(1) Research Cooperation

With the aim to understand the stock status of tuna and neritic tuna, and to provide technical advice for sustainable conservation and management of tuna fisheries in SSS, a series of research activities mentioned above will be implemented through regional collaboration. The participating countries under this joint research program include Indonesia, Malaysia, and Philippines.

(2) Information Sharing and Exchange

For long-term sustainable development and management of tuna fisheries in SSS, the effective mechanism for information sharing/exchange should be established under this framework.

(3) Technical Transfer and Trainings

Technical and technology transfer during the course of program implementation will be included through the on-the-job training program. It includes specific knowledge and skill in tuna data collection (i.e. onboard, at landing site, and canneries), data analysis, database

development. etc. Materials, tools, and program of the training will be developed by relevant experts, whereas the training locations will be identified by the participating countries and main partners. SEAFDEC/TD is responsible for supporting expertise and facilities of the training in collaboration with SEAFDEC/MFRDMD.

V. WORKING MECHANISM

The working mechanism including responsibilities and implementing budget by participating countries and SEAFDEC is summarized in the following table:

COMPONENT	INDONESIA	PHILIPPINES	MALAYSIA	VIETNAM	SEAFDEC	REMARKS
I. FISHERIES RESOURCES SURVEY BY MV SEAFDEC 2	✓	✓	✓		✓	Based on the Cost Shared Policy for Using of MV SEAFDEC 2: expenditures are depened upon survey areas
II. DATA AND INFORMATION COLLECTION IN COUNTRY	✓	✓	✓			Country Implementation
III. WORKING GROUP ON REGIONAL STOCK ASSESSMENT	✓	✓	✓	✓*	✓	SEAFDEC provide platform for Inception and/or Working group meeting, support Resource person(s)
IV. REGIONAL WORKSHOP ON FINDINGS	✓	✓	✓	✓*	✓	SEAFDEC provide platform for Regional Workshop and support resource person(s)
* Expertise from Vietnam could be tapped to support the regional analysis						

1) Responsibilities of Participating Countries and SEAFDEC

- **Participating Countries**:
  - ✓ Identify and nominate the Country Expert(s) responsible for Regional Fish (Tuna) Stock Assessment in the SSS
  - ✓ Identify and nominate the Country Expert(s) responsible for Regional Larval Fish Identification in the SSS
  - ✓ Conduct data and information collection from landing sites and/or through respective Observers Program
  - ✓ Sharing of information/data on findings from the survey for regional analysis through the Working Group Meeting
  - ✓ Co-financing for the use of the M.V. SEAFDEC 2 under the Cost-Sharing Policy
  - ✓ Responsible for all travel costs of country experts to join the Working Group Meeting and Regional Workshop organized by SEAFDEC

- **SEAFDEC** (including Secretariat, TD and MFRDMD):
  - ✓ Develop the overall work plan in consultation with participating countries
  - ✓ Provide platform for Regional Working Group Meeting for Fish (tuna) Stock Assessment and Hydro-Acoustic Assessment for Biomass Estimation
  - ✓ Provide platform for Regional Workshop on Findings from the Collaborative Research Program
  - ✓ Invite expert(s) from outside to support the Regional Analysis of the Program

2) Invited Expert(s)
SEAFDEC shall invite expert(s) from international/regional institution(s), to support the regional analysis as well as provide capacity building on fish (tuna) stock assessment, larval fish identification, and on biomass estimation using hydro-acoustics techniques.

3) Period and Work Plan
Year 1:
- ✓ 1st Working Group Meeting to finalize the Collaborative Research Work Plan: set standardized methodology for the collaborative program
- ✓ Conduct the 1st Collaborative Survey using the M.V. SEAFDEC 2 (after monsoon season)
- ✓ Review/conduct data/information collection from landing sites and/or observers program

Year 2:
- ✓ Finalize the Collaborative Research Work Plan
- ✓ Conduct 2nd Collaborative Survey using the M.V. SEAFDEC 2 (before monsoon season)
- ✓ Conduct data/information collection from landing sites and/or observers program (continued)
- ✓ Data analysis at country level
- ✓ 2nd Working Group Meeting: regional analysis

Year 3:
- ✓ Develop the working papers
- ✓ Regional Workshop on Findings from the Collaborative Research Program in the SSS

I. **Cost Shared Policy** < will be discussed in details later >

Annex 1: Tentative Cruise Plan for the M.V. SEAFDEC 2

1. Period: 48 days
2. Area of Operation: Sulu Sea and Sulawesi Sea, Malaysia, Philippines and Indonesian waters.
3. Ports of Call: Puerto Princesa, Zamboanga, and Bitung (Sandakan/Semporna – alternative port)
4. Estimated Budget: 155,000 US dollars for one Cruise only.
5. Schedule:

Day 1-5	: Sailing from TD to Puerto Princesa, Palawan (1,336 nm)
Day 6-7	: Discussion and Refill fuel, fresh water, and provisions.
Day 8-16	: Survey station 1 to 25
Day 16	: Arrive at Zamboanga
Day 17-18	: Refill fuel, fresh water and provisions.
Day18-27	: Survey station 26 to 52
Day 28	: Arrive at Zamboanga
Day 29	: Refill fuel, fresh water and provisions
Day 30	: Leave Zamboanga for Bitung (Indonesia)(408 nm)
Day 32	: Arrive at Bitung, Discussion with Scientists
Day 33-38	: Survey station 53-69
Day 39	: Arrive at Bitung
	: Unloading all samples, refill fuel, fresh water and provisions
Day 40	: Discussion, refill fuel, fresh water and provisions
Day 41	: Leave Bitung for SEAFDEC/TD (1,858 nm)
Day 48	: Arrive at SEAFDEC/TD and complete the cruise.