


"Strategies for Trawl Fisheries Bycatch Management"
GCP/RAS/269/GFF

REBYC-II CTI INDONESIA

Technical Meeting on

Data Collection & Evaluation of Fishing Effort for Fisheries Management

(Based on the Guidelines developed for Total Allowable Effort Calculation)

Denpasar, Bali
27 – 30 September 2016

Directorate General of Capture Fisheries
Ministry of Marine Affairs and Fisheries
2017

1. Background

The Project – Strategies for trawl fisheries bycatch management (REBYC-II CTI; GCP/RAS/269/GFF) – is contributing to the more sustainable use of fisheries resources and healthier marine ecosystems in the Coral Triangle and Southeast Asia waters by reducing bycatch and fishing impact by trawl fisheries. The Project is structured around four interrelated components:

a. The *Policy, legal and institutional frameworks component* works towards the establishment of national or area specific trawl fisheries bycatch management plans and building institutional capacity for their implementation. The need for adequate legislation and regulations to support the implementation of improved management measures is also being addressed.

b. The *Resource management and fishing operations component* is leading to the adoption of more selective fishing gear and fishing practices, and provides a basis for implementing the zoning of fishing areas and developing spatial-temporal closure management measures, as well as generating data on the number of vessels and making recommendations for fishing effort and capacity management. Results from this component are informing regional bycatch policy/strategy and the national and/or area specific trawl fisheries bycatch management plans.

c. The *Information management and communication component* includes bycatch data collection (at landing sites and onboard vessels), the mapping of fishing grounds, establishment of socio-economic monitoring procedures, and means for communicating bycatch data and information, including a project website and information, education and communication through IEC materials.

d. The *Awareness and knowledge component* seeks to raise awareness of and knowledge on, trawl fisheries bycatch management issues and how they relate to sustainability, and what measures can make trawl fishing more responsible. Under this component, private sector/fishers, policy makers, fisheries managers, officials, extension officers and NGOs attend training and workshops to enhance their knowledge of best management practices and responsible fisheries.

As part of the “Resource Management and Fishing Operations” component, REBYC-II CTI Indonesia has developed the “MGT” (Mapping, Gear type selection and Total Allowable Effort) scheme to improve the management of shrimp fishing activities using trawl gears. Guidelines on Total Allowable Effort (TAE) Management of trawl fishing in Aru and Arafura Sea is part of the MGT concept. These guidelines have been prepared by the experts.

The guidelines has identified several parameters and economic indicators to determine TAE by using several methods of analysis. The guidelines also explain the mechanism for collecting, tabulating and reporting the data and information involving stakeholders, especially fishing companies, to improve fisheries management by using a participatory approach.

In order to disseminate the guidelines and to ensure that the guidelines could be used by stakeholders (using other fishing gear), there is need of a technical meeting. The event is designed to develop capacity to collect and analyze data and TAE management based on the real data of fishing activities.Technical meeting was conducted for trawl and long line industries which are located in Jakarta and Bali, and was also attended by members of fisheries associations. The results of the meeting was expected to provide recommendations for government policy.

2. Objectives

More specifically the technical meeting focused on:

1. Dissemination of guidelines for TAE management to have better understanding of the purpose of controlling and limiting fishing permit;
2. Implementing and testing the guidelines by using available data in the industries;
3. Building the capacity of stakeholders to calculate the fishing capacity based on the dynamics of the fishery business; and
4. Identifying and evaluating problems in recording and collecting data and information on fishing activities.

3. Summary

1) Technical Meeting was held 4-7 October 2016 at Sanur Paradise Plaza Hotel. The Director of Fishing Vessel and Fishing Gear (KAPI) opened the meeting. It was attended by representatives from Pengambengan fishing port, members of National Working Group (Agency for Marine Affairs and Fisheries Research, Directorate of Fisheries Resource, Fishing Technology Development Center Semarang, Bogor Agricultural University, Jakarta Fisheries University, Diponegoro University, WWF Indonesia), Association of Indonesian Shrimp Catching Companies (HPPI), Indonesian Tuna Longline Association (ATLI) and Indonesia Tuna Association (ASTUIN);
2) The event was opened by Director of Fishing Vessel and Fishing Gear that covered the goals of sustainable development that has been adopted by the UN General Assembly in Resolution 70/1 and the protection and preservation of the marine and resource utilisation. In an effort to achieve sustainable fisheries development, the Directorate of KAPI has developed the concept of fisheries management through the MGT Scheme (Mapping, Gear type selection and TAE Management). The concept has been transformed into guidelines that can be used by all stakeholders;
3) Presentations from the resource persons regarding TAE management as well as data and information sharing included:
    a. Types of data and information in the shrimp and tuna industry (HPPI and ATLI);
    b. Minimum data required in the measurement of TAE Management (National Consultant);

c. Simulation on fishing capacity measurement (technical efficiency, MSY and MEY) (National Consultant);
d. Stakeholders' interpretation on fishery management (HPPI);
e. Stakeholders' involvement in managing the utilisation of fishery resources which is appropriate with responsible fishery management (BBPI);
f. Evaluation and clarification of data presented by stakeholders (National Consultant).

4. Key conclusions

1) Stakeholders (HPPI, ATLI and ASTUIN) have provided the required data with regard to TAE Management which includes: total catch, number of trips, number of crew and total GT.

2) Main principle in the calculation of TAE is calculating the effort to compare optimal value of the landed production with the aggregate operational cost of all vessels operating in certain fishing areas. The TAE calculation as per the guideline shall be supported by vessel production data for certain fishing target over a period of more than five years. In the data collection form, additional types of data are needed and probably can be shared by company/fishing association, i.e.:

a. Operational cost: deck operating cost, spare part cost (machine, oil and fishing equipment), spare part cost (fishing equipment)
b. Cost of crew: salary, bonus, insurance
c. Fuel: quantity and price.
d. Logistic cost: crew meals/consumption.
e. Miscellaneous cost: regular maintenance.

3) Simulation of collected data calculation are as follows:

a. The collected data from HPPI is similar to the submitted data for activities in Sorong (no significant addition).
b. Collected data from ASTUIN and ATLI for the tuna longline fishing in Indian Ocean and then processed using TAE Management guideline. The results are as follows:
    i. Regression value between independent and dependent factors had produced minimum R square value (0.02). This is due to the minimum amount of available data and varied vessel size. So that data clustering is necessary to clarify
    ii. Inter-variable relations can be improved by increasing available data.
    iii. Calculation result shows that average CPUE value per vessel for tuna fishing is 34 ton/trip. The optimum value of tuna longline business should reach 42 ton/trip. This fact shows that that tuna fishing management based in Bali has been in overcapacity.

4) Dissemination of information and training to other stakeholders in fishing industry are necessary in the implementation of TAE Management guideline in order to control fishing capacity and eventually to limit fishing permit and fishing target.

ANNEX 1: Participants List

No	Name	Institution
1.	Mahiswara	BALITBANG KP
2.	Pramudya Aditama V	Directorate of Fisheries Resources Management
3.	Mariana	Directorate of Fisheries Resources Management
4.	Aristi Dian P	UNDIP Semarang
5.	Chandra Nainggolan	STP Jakarta
6.	Eris Mulyadi	Fishing Technology Development Center (BBPI) Semarang
7.	Adrian Damora	WWF Indonesia
8.	Gunung Sarwono	Pengambengan fishing port
9.	Ronny Irawan Wahju	IPB Bogor
10.	I Gst Ngr Merthawibawa	HPPI (PT. Tri Graha Kusuma)
11.	Sidik Dwi Sugiharto	HPPI (PT. Tri Graha Kusuma)
12.	Tri Antoro	HPPI(PT. Dwi Bina Utama)
13.	Soehartoyo	ATLI (PT. Perintis Jaya Internasional)
14.	Huda	ATLI (PT. Daya Bahari N)
15.	I Ketut Widiarta	ATLI (PT. Sentral Benda Utama)
16.	August Edison Manurung	HPPI
17.	Nurchayati	HPPI
18.	Intan Preliyanti	ATLI (PT. Bali Ocean)
19.	I Nyoman Sudarta	ATLI
20.	Ngurah Sindu	ATLI (PT. Bali Baramundi)
21.	Endroyono	Directorate of Fishing Vessel and Fishing Gear
22.	Imron Rosyidi	Directorate of Fishing Vessel and Fishing Gear
23.	Andi Sardy Safri	Directorate of Fishing Vessel and Fishing Gear
24.	Mas Umamah	Directorate of Fishing Vessel and Fishing Gear
25.	I Made Kastaria	Directorate of Fishing Vessel and Fishing Gear
26.	Taufiqur Rohman	Directorate of Fishing Vessel and Fishing Gear
27.	Made Djatmika	ATLI (PT. Intimas Surya)
28.	Widodo	Fishing Technology Development Center (BBPI) Semarang
29.	I Putu Edi Sukayana	ATLI
30.	Djoko Kusyanto	HPPI
31.	Wahid	Fishing Technology Development Center (BBPI) Semarang
32.	Umi Muawanah	Balitbang KP
33.	Usman Effendi	Fishing Technology Development Center (BBPI) Semarang
34.	Suhariyanto	Fishing Technology Development Center (BBPI) Semarang
35.	M. Billahmar	ASTUIN
36.	Bayu Widarmasto	ATLI (PT. Bandar Nelayan)

Annex 2: Technical Meeting Agenda

Date/Time	Agenda	PIC/Remarks
04 October 2016		
09.00 – 14.00	Travel to Denpasar	Participants
14.00 – 17.00	Check in and Registration	Administrative
19.00 – 20.00	Opening of Meeting ▪ Welcome Remarks by NPC REBYC-II CTI ▪ Opening Remarks by Director of Fishing Vessel and Gear	Facilitator
20.00 – 21.00	Overview REBYC-II CTI Indonesia	NPC
05 October 2016		
08.30 – 10.00	Profile/types of data & information on shrimp fishing industry	HPPI
10.00 – 10.15	Coffee Break	
10.15 – 12.00	Profile/types of data & information on tuna fishing industry	ATLI
12.00 – 13.00	Lunch Break	
13.00 – 14.00	Minimum data requirement for TAE calculation	Dr Umi Muawanah
14.00 – 15.00	Simulation on estimating fishing capacity (Technical Eficiency, MSY, MEY)	Dr Umi Muawanah
15.00 – 15.15	Coffee Break	
15.15 – 16.15	Simulation on estimating fishing capacity (Technical Eficiency, MSY, MEY)	Dr Umi Muawanah
16.15 – 17.00	Summary of day 1	Dr Umi Muawanah
06 October 2016		
09.00 – 12.00	Evaluation and clarification of data - Available data and Challenges of data collection	Dr Umi Muawanah
12.00 – 13.00	Lunch Break	
13.00 – 14.00	A Stakeholder Interpretation on management of effort for trawl and long line fisheries	HPPI and ATLI
14.00 – 15.00	The involvement of stakeholder in TAE management to maintain optimal effort and sustainable fisheries	BBPI Semarang
15.00 – 15.15	Coffee Break	
15.15 – 16.00	Summary of day 2	NTO
07 October 2016		
09.00 – 10.00	Summary and recomendation on calculation for Trawl and Long line Management	NPC
10.00 – 10.30	Closing of Meeting	NPC
12.00 –	Travel to Jakarta	Participants

Documentation