The Regional Training Course on
Data Collection and Bio-Statistic for Fishery

3-5 August 2023

Prepared by
Research and Development Division
Training Department
Southeast Asian Fisheries Development Center

Introduction

In the current situation, the fish stock assessment is required to be applied in every region with an active marine capture fishery. The results from the stock assessment can provide the situation of stock for further appropriate management measures to be synthesized according to Sustainable Development Goal 14, life below water. According to the current regional fishery management of Southeast Asia, the region contributes a high amount of marine capture products to the world with a small amount of assessed stock status compared to the catch amount (Hilborn et al., 2020; RAM Legacy, 2021). However, the key to the regional stock status assessment is not the sophisticated models such as the multi-dimensional models for the complicated ecological aspect but to provide a better understanding of the data collection and stock assessment tools at the national and regional levels. These procedures can be the guideline for a better fishery status assessment and establishment of scientific-based management measures for the region.

To achieve regional cooperation, fishery managers, researchers, and local enumerators should strengthen the standard knowledge of the fish stock assessment and management to provide the proper communication for each stakeholder. SEAFDEC and the member countries were aware of this issue and worked closely together by supporting capacity building including cooperation with other regional and global organizations. However, besides the standardization knowledge of the fish stock assessment, the proper methods for data collection are also challenged.

Data collection is a fundamental but very important process for every data analysis. However, several data collection procedures have been applied depending on the condition of each country, and in many cases, a lack of understanding of the data processing was recorded was found. This situation led to difficulties in data analysis at the regional level. In this regard, the training workshop on data collection to update and follow up on the regional data collection is necessary for SEAFDEC Member Countries toward the current uncertain world of fish stock and fishery management. The Japanese Trust Fund project “Sustainable Utilization of Fisheries Resources and Resources Enhancement in Southeast Asia” of SEAFDEC/TD is enhancing scientific knowledge to support the countries in fisheries management within the region. The

project came up with the plan to conduct a training course to enhance the capacity of human resources to strengthen and standardize the knowledge and skill in fishery data collection.

In this connection, SEAFDEC/TD would like to conduct the "The Regional Training Course on Data Collection and Bio-Statistic for Fishery". The participants from SEAFDEC Member Countries are all encouraged to participate to complete their knowledge and skills in data collection.

Objectives

- To build the capacity of human resources from the SEAFDEC Member Countries on the standard data collection procedures and bio-statistic for fishery
- To share and update information on fishery data collection and bio-statistic methods
- To strengthen the network of human resources on data collection, fishery biology, and stock assessment in the Southeast Asian region

Expected Outcomes

- Improved the knowledge of human resources from the SEAFDEC Member Countries on data collection and fishery bio-statistic
- Information on the fishery data collection and fishery bio-statistics in the region
- Strengthened network of human resources on data collection, fishery biology, and stock assessment

Evaluation

The pre and post-examination will be applied to the participants on the first and last day of the training course to monitor the progress of the improvement in skills and knowledge of participants. At the end of each session of the training course, the participants would be requested to fill in the evaluation form to assess the conduct of the Training Course.

Venue and Accommodation

The training course would be organized for 3 days from 3 to 5 August 2023 at SEAFDEC/TD, Samut Prakan, Thailand and the participants would be accommodated at the dormitory of SEAFDEC/TD.

Target Participants

The target participants are the fisheries officers and researchers from each of the SEAFDEC Member Countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam). SEAFDEC strives towards equal opportunities for the participation of female and male representatives from the Member Countries in all events organized by SEAFDEC

English language would be used throughout the training course. Therefore, proficiency in English is required for the participants. Certificates would be awarded upon completion of the training course and successfully passing the written examinations.

Moreover, the participants were required to use a personal computer based on the operating system Microsoft window system version 10. No other operating system such as Linux or Apple system allowed. Each of them should install Microsoft Excel up to version 2016 or higher with the add-ins function can be activated.

Timetable Training

Date/ and time	Activity/topic	Resource person	Remarks
3 August 2023			
08:30–09:00	- Registration - Opening ceremony - Group photo - Pre-test exam - Participants were divided into groups.	TD Staff	
09:00–12:00	- Country report on the data available - The activities related to the stock assessment of SEAFDEC (TD and MFRDMD) - Introduction to bio statistic - Installation of and getting to know the R program	Instructor	- Adjust the basic knowledge of population dynamics and stock assessment
12:00–13:30	Lunch break		
13:30–16:30	- Biostatistics (cont.) o Descriptive statistic o Inferential statistic: Testing hypothesis o Analysis of variances o Regression analysis - Homework assignment	Instructor	- Adjust the understanding of the biostatistics and basic hypothesis testing
4 August 2023			
09:00-12:00	- Length-weight relationship - Reproductive biology o Sex ratio o Maturity	Instructor	- The fundamental knowledge of the length-weight relationship

Date/ and time	Activity/topic	Resource person	Remarks
	○ Fecundity		- Reproductive biology concept and practices
12:00-13:30	Lunch break		
13:30-16:30	- Reproductive biology (cont.) - Homework assignment	Instructor	
5 August 2023			
09:00–12:00	- Sampling theory	Instructor	- The basic understanding of the sampling theory
12:00–13:30	Lunch		
13:30–16:30	- Group Presentation	Instructor	- Group presentation on the homework assigned by the resource person

Instructors: Assoc. Prof. Thanitha Darbanandhana

Contact persons

Dr. Supapong Pattarapongpan
Fishery Oceanographer
SEAFDEC Training Department
Email: supapong@seafdec.org

Ms. Nathacha Sornwaree
Administrative Officer
Research and Development Division SEAFDEC Training Department
Email: natha@seafdec.org

References

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