



REPORT OF THE FIRST CORE EXPERT MEETING ON FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION



SEAFDEC/MFRDMD, Kuala Terengganu, Malaysia

24 November 2020



**Report of the First Core Expert Meeting on Fisheries Management
Strategies for Pelagic Fish Resources in the Southeast Asian Region**

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**Southeast Asian Fisheries Development Center
Marine Fishery Resources Development and Management Department**

Report of the First Core Expert Meeting on Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region

SEAFDEC/MFRDMD, Kuala Terengganu, Malaysia

24 November 2020

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**The First Core Expert
Meeting on Fisheries Management Strategies for Pelagic Fish
Resources in the Southeast Asian Region
24 November 2020
SEAFDEC/MFRDMD, Kuala Terengganu, Malaysia**

I. INTRODUCTION AND OPENING OF THE MEETING

1. The First Core Expert Meeting on Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region was organized by SEAFDEC/MFRDMD via Google Meet webinar on 24 November 2020. The meeting was attended by the representatives from Brunei Darussalam, Cambodia, Malaysia, Myanmar, Philippines, Thailand, and Viet Nam; as well as resource persons from Japan and Malaysia; the representatives from SEAFDEC Secretariat and SEAFDEC/TD; the Chief, Deputy Chief, and Officials from SEAFDEC/MFRDMD. The list of participants appears as **Annex 1**.

2. The meeting was officiated by the Chief of SEAFDEC/MFRDMD, *Dr Ahmad Ali*. He iterated the aims of this meeting, i) presenting findings and outputs of the previous project and ii) the introduction of the new project for the year 2020-2024. He expected all member countries to acquire information based on the previous project outputs and share ideas as the way forward to the new project. He extended his gratitude to the Japanese Trust Fund for supporting this project and the Deputy Chief of SEAFDEC/MFRDMD for his efforts in preparation for this meeting. The opening address appears as **Annex 2**.

II. ADOPTION OF THE AGENDA

3. The agenda was presented to the meeting and adopted without any amendment as appeared in **Annex 3**.

III. INTRODUCTION OF THE PROGRAM ACTIVITY

4. The Project Coordinator, *Mr Mohammad Faisal Md Saleh*, presented the review on JTF VI Phase I, "Comparative Studies on the Management of Purse Seine Fisheries in the Southeast Asian Region." He explained the results and outputs from the previous project as well as the findings and recommendations.

5. He also presented an overview of the new project under Japanese Trust Fund Phase II for the duration of the year 2020-2024, entitled "Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region." The main objective of this project is to evaluate the pelagic fish resources in the Southeast Asian region to establish the sustainable management strategy for the pelagic fisheries. His presentation appears as **Annex 4**.

6. Additionally, the Program and Policy Coordinator of SEAFDEC Secretariat, *Dr Worawit Wanchana*, mentioned that SEAFDEC also established the Scientific Working Group (SWG) for Stock Assessment on Neritic Tunas in the Southeast Asian Region under the ASEAN mechanism to conduct research on neritic tunas and small pelagic species as well.

7. The resource person, *Prof. Dr Takashi Matsuishi* of Hokkaido University, Japan, questioned the validity of the title, "Fisheries Management Strategy," due to the stock

assessment component included in this project. Instead, he suggested a new title 'Fisheries Management Plan'. Regarding the multispecies condition in the Southeast Asian region, he mentioned the difficulty in conducting stock assessment studies, thus recommended the meeting to manage selected important species rather than multispecies altogether. At the same time, he expressed his reservation on age determination through otoliths study. He explained that it is challenging to conduct this study in tropical areas due to the long and indistinct spawning season.

8. The Deputy Chief of SEAFDEC/MFRDMD, *Dr Masaya Katoh*, clarified that changing the project title as suggested by *Prof. Dr Matsuishi* is not possible as it has been agreed during the Forty-two Program Committee Meeting by member countries. *Dr Worawit* also stated that this project is under the ASEAN-SEAFDEC FCG/ASSP Mechanism (a program under SEAFDEC and ASEAN collaborative program). However, *Dr Katoh* informed that SEAFDEC/MFRDMD would consider the risk assessment study, especially within the tropical species, to overcome the region's limitation of multispecies situation.

9. The resource person, *Dr Rumeida Mat Piah* from Universiti Malaysia Terengganu, explained that while the analysis of otolith for tropical fish is hard, she had five (5) years of experience in grouper otolith analysis. She also successfully conducted otolith analysis for two (2) species of tunas. Simultaneously, she confirmed that the otolith shown during the presentation belongs to tropical fish that *Ms Annie* and her team worked on.

10. The representative of Viet Nam, *Mr Nguyen Viet Nghia*, suggested a fisheries management plan as the final output for JTF VI Phase II. He also agreed to continue with the genetic study, suggested additional species, and considered early life-history study if possible.

IV. GENERAL DISCUSSION AND WAY FORWARD

- **SELECTION OF TARGET SPECIES FOR TWO (2) SMALL PELAGIC**

V. *Dr Katoh* explained that two (2) groups of pelagic fishes are the JTF VI Phase II study's primary focus. They are, i) neritic tuna, specifically kawakawa (*Euthynnus affinis*), and (2) small pelagic species that yet to be determined.

12. *Mr Mohammad Faisal* presented the result from questionnaires that have been distributed to the ASEAN Member States (AMSs). Most of the respondents selected *Rastrelliger kanagurta* and *Rastrelliger brachysoma* as the first and second choice of target species. Thus, he suggested that the target species are *R. kanagurta*, *R. brachysoma*, scad (group), and anchovies (group). He further explained that *R. kanagurta* is mainly caught by purse seine and trawler while *R. brachysoma* is usually caught by gillnet at coastal area, hence facilitate the identification of *Rastrelliger* spp. up to species level. Meanwhile, scads will be analyzed as a group since multiple species are caught in the same gear but grouped indiscriminately at the landing ports. His presentation appears as **Annex 5**.

13. *Dr Katoh* also explained that it is suggested to include more species for genetic studies to achieve a comprehensive result, but the cost will increase. Hence, only a few species will be selected for cost-effectiveness.

14. The Assistant Project Manager for JTF Program, *Mr Isao Koya*, inquired on the justification of categorizing scads and anchovies as a group. *Dr Katoh* and *Mr Mohammad Faisal* clarified that both scads and anchovies are caught together by purse seine as multispecies catches, resulting in difficulty sorting them by species-level at landing sites.

15. The representative of Malaysia, *Mr Sallehudin Jamon*, agreed with this assessment. He also suggested selecting pelagic fish species caught specifically by purse seine as target species to ensure robust fisheries management.

16. The representative of Philippines, *Mr Francisco Torres Jr.*, informed that *Rastrelliger* spp. are caught together in Philippines waters, thus suggesting to study *Rastrelliger* spp. as a group. He added that the dominant species for pelagic fishes in each AMSs is different.

17. The representative of Thailand, *Ms Praulai Nootmorn*, and *Mr Nguyen* agreed and supported the suggestion made by *Mr Mohamad Faisal* for the selected target species. She proposed *R. brachysoma* since Thailand has long-term statistical data and DNA study of *R. brachysoma*. Likewise, *R. kanagurta* and scads were selected too. Meanwhile, *Mr Nguyen* revealed that Viet Nam also conducted a DNA study for *Decapterus maruadsi*. *Dr Katoh* responded that it would be good to select those species since many AMSs have conducted DNA studies.

18. The representative of Indonesia, *Mr Kamaluddin Kasim*, informed the meeting that dominant species in Indonesian waters are *D. russelli*, *R. kanagurta*, and *Selar crumenophthalmus*. He also mentioned that Indonesia has enough CPUE data on those species. Lastly, he suggested a discussion on data collection and analysis required for the study.

19. *Mr Sallehudin* inquired about selecting the specific species of *Decapterus* spp., specifically *D. russelli* since it is hardly found in Malaysian waters. He emphasized that *R. brachysoma* is one of the important species in Malaysia and suggested three (3) species of *Decapterus* (*D. maruadsi*, *D. macrosoma*, and *D. russelli*) and two (2) species of *Rastrelliger* (*R. kanagurta* and *R. brachysoma*). *Mr Mohammad Faisal* explained that it is challenging to obtain species-specific samples of *Decapterus* spp. in landing sites since they are not readily categorized according to their species. *Mr Nguyen* agreed as mixed catches are commonly landed in Vietnamese waters, including *Decapterus* spp, Japanese scads (*D. maruadsi*), and Japanese jack mackerel (*Trachurus japonicus*).

20. *Mr Francisco* requested the meeting to consider the study of transboundary species as well. He suggested a collaboration study among the AMSs and SEAFDEC. *Dr Katoh* agreed and considering this suggestion.

21. Lastly, *Mr Mohammad Faisal* concluded that the target species for small pelagic fishes are *R. kanagurta*, *R. brachysoma*, and *Decapterus* spp.

- **FUTURE PLANNING**

22. For the year 2021, *Mr Mohammad Faisal* proposed to conduct two (2) regional workshops depending on the COVID-19 situation in the region. He also recommended appointing two (2) focal points from each AMS for this project.

23. *Prof. Dr Matsuishi* emphasized the morphological similarity of *R. kanagurta* and *R. brachysoma* and the need to exercise caution during the identification process. He also proposed SEAFDEC/MFRDMD to collect information on *R. brachysoma* from Thailand before starting this project. *Dr Katoh* responded that participating countries would note suggestions by *Prof. Dr Matsuishi*, and SEAFDEC/MFRDMD will utilize the genetic approach (DNA marker) for identification purposes.

24. *Dr Rumeaida* suggested that the samples for the otolith study need to be obtained in sufficient numbers. She also proposed that juvenile samples (<1 year) should be collected for otolith study.

25. *Ms Praulai* seconded *Prof. Dr Matsuishi's* suggestions on sharing findings for *R. brachysoma* in Thailand. Regarding the concern raised by *Prof. Dr Matsuishi*, she informed the meeting that the identification of *R. kanagurta* and *R. brachysoma* is possible. She also mentioned that there was a DNA study on this species using DNA microsatellite marker.

V. CLOSING OF THE MEETING

26. The Deputy Chief of SEAFDEC/MFRDMD, *Dr Katoh*, conveyed his thanks to all the participants, resource persons, and secretariat of the meeting for their hard works and contributions to the meeting, which were very helpful for improving the pelagic fisheries management in the Southeast Asian Region. His closing remarks appears as **Annex 6**.

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OPENING ADDRESS

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The First Core Expert Meeting on Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region

SEAFDEC/MFRDMD, Kuala Terengganu, Malaysia

24 November 2020

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

السَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ

Very good morning

Representatives from Brunei Darussalam

Representatives from Cambodia

Representatives from Indonesia

Representatives from Malaysia

Representatives from Myanmar

Representatives from Philippines

Representatives from Thailand

Representatives from Viet Nam

Representatives from SEAFDEC Secretariat

Representatives from SEAFDEC/TD

Our honoured guests from Hokkaido University and University Malaysia Terengganu and

All officers from SEAFDEC/MFRDMD

First of all, I would like to welcome all of you to "The 1st Core Expert Meeting on Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region".

Ladies and gentlemen,

The project entitled "Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region" is a second phase project under the Japanese Trust Fund VI program started this year and will be completed in 2024. This Core Expert Meeting is one of the activities planned in the year 2020.

SEAFDEC conducted research on major targeted pelagic species during JTF II and JTF VI projects in the Southeast Asian Region with the different goals. The JTF II project aimed to ascertain the migration route and existence/absence of sub-populations of small pelagic fishes in the ASEAN region. Meanwhile, the JTF VI project, aimed to develop the reliable management strategies for purse seine fisheries in the Southeast Asian region and to collect fundamental information on purse seine fisheries (catch and effort data, biological data of species caught by purse seine gear) associated to the multispecies situation of pelagic fishes in the SEA region.

Thus, in this second phase of JTF VI, further study is required to acquire more extensive information and data for the assessment and management of four dominant pelagic species in the SEA region comprising two neritic tuna and two small pelagic species. In order to strengthen this information, there is a need to carry out the stock assessment (SA) and risk assessment (RA) for those species.

Two (2) objectives of this meeting are;

- i. To share information and results on the previous JTF VI project, entitled "Comparative Studies for Management of Purse Seine Fisheries in the Southeast Asian Region".
- ii. To introduce new project under the JTF VI Phase II to AMSs and to find way forward until end of year 2024.

At the end of this meeting all AMSs will get updated information on the outcome of previous JTF VI conducted during 2015 - 2019 and way forward for this phase two new project and recommendations.

Finally, I would like to record my appreciation and congratulation to all SEAFDEC/MFRDMD staff especially Deputy Chief Dr Masaya Katoh, Mr Mohammad Faisal and Ms Mazalina as well as Dr Worawit Wanchana for SEAFDEC Secretariat for making this Core Expert Meeting a reality. With that, I officially open the 1st Core Expert Meeting on Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region.

Thank you

**THE FIRST CORE EXPERT MEETING ON FISHERIES MANAGEMENT STRATEGIES
FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION
24 NOVEMBER 2020**

PROVISIONAL AGENDA and TIMETABLE <i>Moderator: Special Departmental Coordinator of SEAFDEC/MFRDMD</i>	
Agenda 1: Opening of the Meeting	
1000 – 1005	Opening Address <i>By Chief of SEAFDEC/MFRDMD</i>
Chairperson: <i>Chief of SEAFDEC/MFRDMD</i>	
Agenda 2: Adoption of Agenda and Photo Session	
1005 - 1020	Introduction and Adoption of the Agenda
Agenda 3: Introduction of the Program Activity	
1020 - 1050	Introduction of the Program Activity for JTF VI Phase II <i>By Mr Mohammad Faisal Md Saleh, Ms Wahidah Mohd Arshaad and Ms Annie Nunis Billy from SEAFDEC/MFRDMD</i>
1050 - 1100	Tea Break
Agenda 4: General Discussion and Way Forward <i>Facilitator: Deputy Chief of SEAFDEC/MFRDMD</i>	
1100 - 1130	Selection of Target Species for Two Small Pelagic
	Future Planning
Agenda 5: Closing of the Meeting	
1130 - 1140	Closing Remarks by Deputy Chief of SEAFDEC/MFRDMD

OVERVIEW ON THE JTFVI-II FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION

BY:
MR. MOHAMMAD FAISAL MD SALEH
MS. WAHDAH MOHD ARSHAAD
MS. ANNIE NUNIS BILLY
MS. NURUL NADWA ABDUL FATAH

SEAFDEC/MFRDMD

THE 1st CORE EXPERT MEETING ON FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION
24 NOVEMBER 2020

REVIEW ON THE JTF VI PHASE I (2013-2019)

COMPARATIVE STUDIES ON THE MANAGEMENT OF PURSE SEINE FISHERIES IN THE SOUTHEAST ASIAN REGION



REVIEW ON THE JTF VI (2013-2019) Comparative Studies on the Management of Purse Seine Fisheries in the Southeast Asian Region

- Aim: To establish suitable management measures exclusively for purse seine fisheries (PS) in the region.
- MFRDMD had led and coordinated the project with eight (8) ASEAN Member States (AMSs), namely Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam, with assistance from SEAFDEC/Secretariat and SEAFDEC/TD.
- Target fish : small pelagic fish exploited by purse seiners in South China Sea (SCS) and Andaman Sea (ANS).
- The activities undertaken throughout the project duration from 2013 to 2019 were 4 Core Expert Meetings and 8 workshops including 6 internal workshops and 2 regional workshops.
- Project Terminal Report was successfully published in January 2020.

THE 1st CORE EXPERT MEETING ON FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION
24 NOVEMBER 2020

RESULTS/OUTPUTS

Activity 1: Comparative Studies on CPUE and TAC.

- Output 1
 - ✓ The catch and effort data from purse seine fisheries from eight AMSs were successfully compiled for two decades from 1996 to 2015.
 - ✓ CPUE per trip was chosen as the most suitable unit of effort to be used for stock assessment compare to other effort unit.

Activity 2: Genetic Data Collection and Analysis.

- Output 2
 - ✓ Genetic study revealed that there were two highly genetic divergent stocks between *A. sirm* from Ranong (northern of Andaman Sea) and the rest of the populations (South China Sea, Java Sea, Celebes Sea and southern part of Andaman Sea).

Activity 3: Meetings for Effective Program Implementation.

- Output 3
 - ✓ Four Core Expert Meetings (CEM) and eight workshops including six internal workshops and two regional workshops were convened during project duration 2013 to 2019.

Activity 4: Recommendations for Purse Seine Fisheries Management in the Southeast Asian region.

- Output 4
 - ✓ Results from Production Model and Feedback Control analyses were offered as scientific advices to the AMSs.
 - ✓ Some management strategies for sustainable PS fisheries were offered including recommendation on Data and Information Collection, Input Control, Output Control, Technical Control and Fishery Management Measures.

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CONCLUSIONS

1. The TAC system is not applicable in the context of the multispecies situation of PS fisheries in the SEA region.
 - Other management measures *Le Production Model and Feedback Control analyses were decided being more applicable.*
2. The Production Model (Fox) analysis;
 - *Exploitation of pelagic resources by purse seiners in Brunei Darussalam, Malaysia and Thailand are already at sustainable level.*
 - *However, the pelagic resources in Indonesia (SCS) is not at sustainable level.*
3. Two analyses (Production Model and Feedback Control) should be repeated in the future project after improvement of data collection.
4. Genetic study of *Amblygaster sirm* revealed two highly genetic divergent stock; Ranong (northern part of Andaman Sea) versus the rest of the populations (South China Sea, Java Sea, Celebes Sea and southern part of Andaman Sea).
 - *It is suggested that these stocks should be independently managed. Further study is highly recommended to identify the possibility of A. sirm in Ranong being a cryptic species in this region.*

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RECOMMENDATIONS

1. **Recommendations for data and information collection** includes (i) all AMSs should improve their data and information collection especially catch and effort; (ii) AMSs should ensure that data collection is well timed and accurate and in accordance to standard format to enable sound statistical analysis; (iii) AMSs should consider sharing of the catch and effort data in accordance to the agreed procedures.
2. **Recommendations for input controls** includes (i) Enhance the licensing scheme; (ii) Control the number of PS vessels; (iii) Limit the size of PS vessels; (iv) Limit the allowable fishing days.
3. **Recommendations for output controls (catch)** includes (i) Introduce the catch quota system; (ii) Improve bycatch handling (non-target species).
4. **Recommendations for technical controls** includes (i) Use larger mesh size; (ii) Limit the length and depth of seine net; (iii) Register and control number of Fishing Aggregating Devices (FADs); (iv) Control the total light intensity of spotlights for luring fish; (v) Encourage establishment of a zoning system (with gear specification); (vi) Identify and establish closed area for specific species; (vii) Encourage AMSs to introduce closed season for specific species.
5. **Recommendations for strengthening PS fisheries management** includes (i) Review Legal Framework periodically; (ii) Establish Fisheries Management Plan (FMP); (iii) Strengthen the monitoring, control and surveillance (MCS) activities among national enforcement agencies; (iv) Integrate the MCS networking among the AMSs within the same ecosystem; (v) Assessment on PS fishing capacity; (vi) Control of fishing capacity; (vii) Introduce exit plan; (viii) Enhance the capacity building; (ix) Encourage co-management involving coastal fishing community.

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INTRODUCTION ON THE JTF VI PHASE II (2020-2024) FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION

INTRODUCTION ON THE JTF VI-II (2020-2024) Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region

- Aim: to evaluate the pelagic fish resources in the Southeast Asian region in order to establish the sustainable management strategy for the pelagic fisheries.
- Period: 2020-2024 (5 years duration).
- Lead Department: SEAFDEC/MFRDMD.
- Participating Countries: Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand and Vietnam.

- ### Objectives
1. To evaluate the current status of two small pelagic species through stock assessment and risk assessment studies.
 2. To evaluate the current status of two neritic tuna species through stock assessment and risk assessment studies.
 3. To clarify the stock structure for neritic tuna species in the Southeast Asian region.
 4. To carry out the life-history study for neritic tuna species in the SEA region.

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BACKGROUND

- The previous JTF projects namely JTF 2 and JTF 6 undertook research on major targeted pelagic fishes in the SEA region with the different goals.
- There is a need to carry out the stock assessment (SA) and risk assessment (RA) for the pelagic fishery. This new project targets two neritic tuna species and two small pelagic species dominated the catch in each AMS in the SEA region.
- The transboundary fish i.e. tunas, anchovies and mackerels are the economically important pelagic species that are high consumptions within the SEA countries, as well as dominated the fishery exports of the SEA countries to other regions of the world. In 2014, the neritic tuna contributed approximately 40% of the region's total marine tuna production, with the value of around USD 1 million (SEASOFIA 2017). Regional statistical data from FishStatJ in the latest 10 years shows the Andaman Sea had higher production of anchovies than in the South China Sea. Scads contributed approximately 1,116,244 MT to the total marine fishes production in 2017. Rastrelliger spp. contributed around 73% to the region's total mackerel production in 2017, with Malaysia and Thailand as the largest producer (Fishery Statistical Bulletin of Southeast Asian 2017, SEAFDEC 2020).
- This project corresponds to Resolution No. 10 of at the ASEAN-SEAFDEC Conference in 2011: strengthened knowledge/science-based development and management of fisheries through enhancing the national capacity in the collection and sharing of fisheries data and information.

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PROJECT GOAL, OUTCOME, OUTPUTS AND ACTIVITIES

GOAL	Sustainable Utilization of Pelagic Fishes in the Southeast Asian region.
OUTCOME	Efficient Management Strategies for Small Pelagic Fishes and Neritic Tunas in the Southeast Asia region are adopted by governments and fishers.
OUTPUT 1	Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region.
ACTIVITY 1	
Activity 1.1:	Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region.
Activity 1.2:	Workshops for small pelagic fishes in the Southeast Asian region.
Activity 1.3:	Meetings for small pelagic fishes in the Southeast Asian region.
OUTPUT 2	Stock Assessments and Risk Assessments for major neritic tuna species in the Southeast Asian region.
ACTIVITY 2	
Activity 2.1:	Stock Assessments and Risk Assessments for neritic tunas in the Southeast Asian region.
Activity 2.2:	Clarification of the stock structure for one neritic tuna species in the Southeast Asian region.
Activity 2.3:	Life-history study for major neritic tuna species in the Southeast Asian region.
Activity 2.4:	Workshops for major neritic tuna species in the Southeast Asian region.

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PROJECT IMPLEMENTATION PLAN FOR 2020 - 2024

Activities	2020				2021				2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1: Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region.																				
Activity 1.1 Stock Assessments and Risk Assessments for small pelagic fishes.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 1.2 Workshops for small pelagic fishes.					X	X														
Activity 1.3 Meetings for small pelagic fishes.			X						X											X
Output 2: Stock Assessments and Risk Assessments for major neritic tuna species in the Southeast Asian region.																				
Activity 2.1 Stock Assessments and Risk Assessments for neritic tunas.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.2 Clarification of the stock structure for one neritic tuna species.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.3 Life-history study for major neritic tuna species.			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2.4 Workshops for major neritic tuna species.							X					X	X	X						

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PROPOSED ACTIVITIES FOR 2020

- In 2020, the project focus on collecting and compiling the regional information for stock and risk assessment study, and arrange the 1st Core Expert Meeting to discuss the current status of targeted pelagic species in the South China Sea and Andaman Sea.
- Purchase necessary equipment and samples for two studies.
 - I. Clarification of genetic structure of the targeted one neritic tuna species.
 - II. Life-history through age determination analysis (otolith analysis) of the targeted one neritic tuna species.



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PROJECT ACTIVITIES IN 2020

Planned activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Output 1: Stock Assessment and Risk Assessment for small pelagic fish in the Southeast Asian region												
Activity 1.1: Stock Assessment and Risk Assessment for small pelagic fishes in the Southeast Asian region.												
Activity 1.2: Meetings for small pelagic fishes in the Southeast Asian region.												
Output 2: Stock and Risk Assessment for major neritic tuna species in the Southeast Asian region.												
Activity 2.1: Stock Assessment and Risk Assessment for neritic tunas in the Southeast Asian region.												
Activity 2.2: Clarification of stock structure for one neritic tuna species in the Southeast Asian region.												
Activity 2.3: Life-history study for major neritic tuna species in the Southeast Asian region.												

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INTRODUCTION ON THE JTF VI PHASE II (2020-2024) FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION

GENETIC STUDY

Clarification of the Stock Structure for One Neritic Tuna Species in the Southeast Asian Region

- 1 A total no. of 610 KAW samples from 13 locations were collected during the Tuna SEAFDEC-Sweden project (2016-2018).
- 2 + 100 KAW samples from 2 locations were collected and stored by Research Institute for Marine Fisheries (RIMF), Indonesia.
- 3 The analysis will use Mitochondrial DNA cytochrome b and D-loop markers.
- 4 MFRDMD is optimizing the primers that will be used for this study.

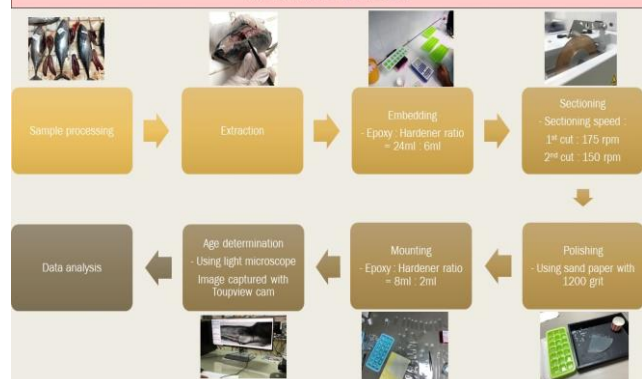
INTRODUCTION ON THE JTF VI PHASE II (2020-2024) FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION

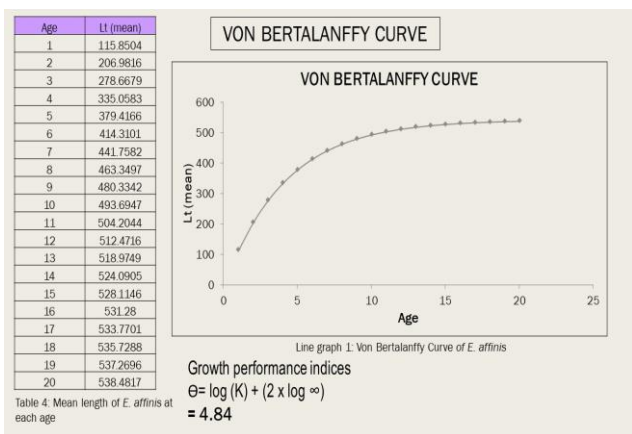
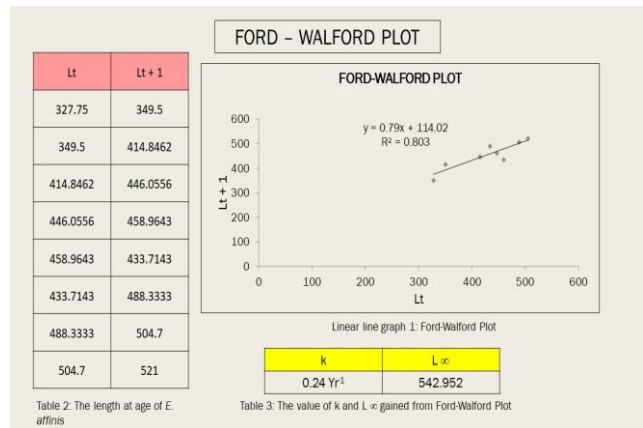
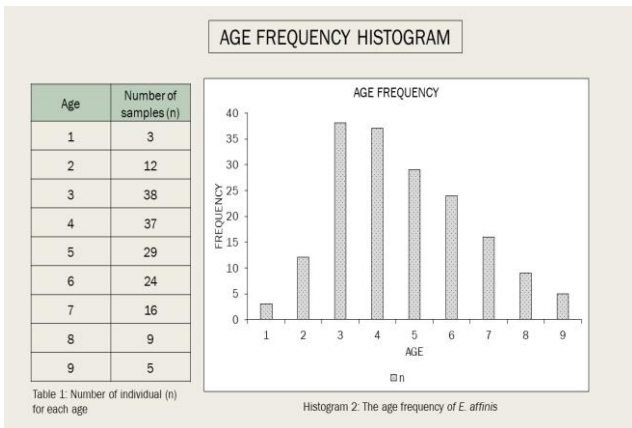
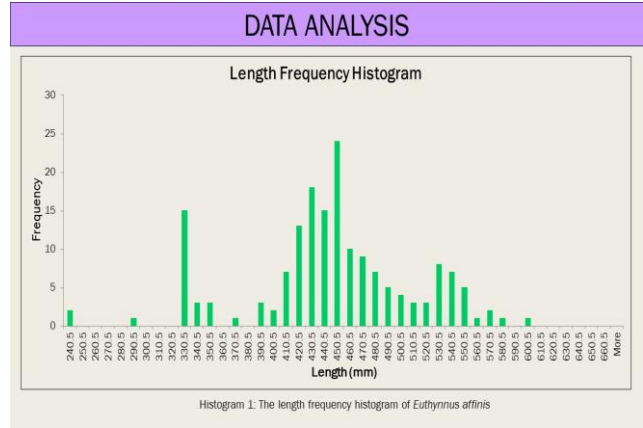
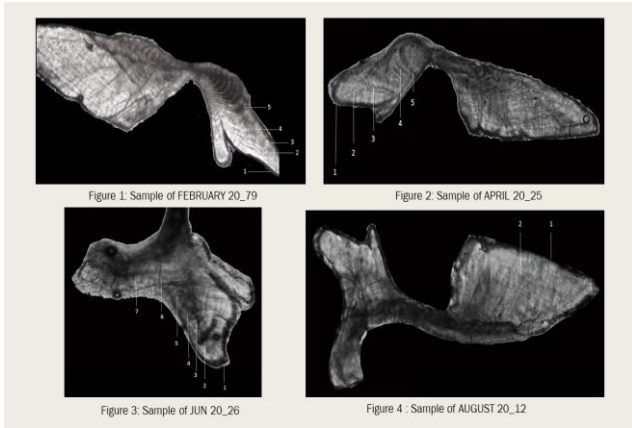
OTOLITH STUDY

INTRODUCTION

- Growth is a bio-energetic process and defined as a changes in its length and weight over a time of period (Warren, 1967).
- Growth parameters required data of age and weight or length data (Pope et al., 2010).
- The estimation of growth can be achieved in many techniques (length-frequency distribution, mark recapture data, hard part analysis)
- Hard part analysis had been used in determining the age of bony fish (Cailliet et. al., 1986).
- Otolith is commonly known as ear bone that consist of calcium carbonate structure that is located behind the brain of a fish (Murayama et. al., 2002). The size and shape of otolith are different between each type of fish.
- This study was conducted on a sample of Kawakawa obtained in Tok Bali, Kelantan located in the northern part of the East coast of Peninsular Malaysia. Samples were collected from January to September 2020.

METHODOLOGY





THANK YOU

Q&A SESSION

GENERAL DISCUSSION

JTFVI-II
FISHERIES MANAGEMENT STRATEGIES FOR
PELAGIC FISH RESOURCES IN THE SOUTHEAST
ASIAN REGION

SEAFDEC/MFRDMD

SELECTION OF TARGET SPECIES FOR SMALL PELAGIC

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WAY FORWARD

THE 1st CORE EXPERT MEETING ON FISHERIES MANAGEMENT STRATEGIES FOR PELAGIC FISH RESOURCES IN THE SOUTHEAST ASIAN REGION
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PROPOSED ACTIVITIES FOR 2021

- In 2021, MFRDMD will continue directing the collaboration from the participating AMSs and relevant organizations to gather comprehensive and reliable information on catch and effort for targeted small pelagic fish and neritic tunas.
- MFRDMD will arrange two regional workshops for Stock Assessment and Risk Assessments for small pelagic fishes and neritic tunas in the Southeast Asian.
- This project also continues the study on the clarification of genetic structure of the kawakawa as well as develops its life-history through age determination analysis (otolith analysis). Necessary equipment and samples for those studies will be purchased.

Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Output 1: Stock Assessments and Risk Assessments for small pelagic fishes in the Southeast Asian region												
Activity 1.1												
Activity 1.2												
Output 2: Stock Assessments and Risk Assessments for major neritic tuna species in the Southeast Asian region												
Activity 2.1												
Activity 2.2												
Activity 2.3												
Activity 2.4												

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ISSUES & RECOMMENDATION

1. To appoint expertise for JTF VI-II.
 - Suggestion: participants of this 1st CEM will be the fixed members for this project from this point onwards.
 - Act as focal point representing each AMS.
 - 2 focal points for each AMS.
 - Except Malaysia; will appoint 4 focal points.

2. To conduct of stock assessment of other important pelagic species including the Indo-Pacific mackerel under a similar framework as that of the SWG-Neritic Tunas.

CLOSING REMARKS

Dr Masaya Katoh

Deputy Chief of SEAFDEC/MFRDMD

The First Core Expert Meeting on Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region

**SEAFDEC/MFRDMD, Kuala Terengganu, Malaysia
24 November 2020**

Professor Takashi Matsuishi, Hokkaido University, Dr Rumeaida Mat Piah, University Malaysia Terengganu, Dr Ahmad Ali, Chief of SEAFDEC/MFRDMD and Ladies and Gentlemen, Good afternoon.

Thank you very much for active participation from SEAFDEC Member Countries during the COVID-19 pandemic. Because of the pandemic, we cannot host face-to-face international meetings. Instead we had a video meeting today. This CEM is supported by the Japanese Trust Fund 6 Phase II project started this year, namely "Fisheries Management Strategies for Pelagic Fish Resources in the Southeast Asian Region." We work for sustainable fisheries in the region and I hope we will work closely to obtain our goal. Now, I declare the meeting closed. Thank you very much.



The **South Asian Fisheries Development Center (SEAFDEC)** is an intergovernmental organization established in December 1967 to promote sustainable fisheries development in the region. Its current Member Countries are Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

Representing the Member Countries is the Council of Directors, the policy-making body of SEAFDEC. The Chief administrator of SEAFDEC is the Secretary-General whose office, the Secretariat is based in Bangkok, Thailand.

SEAFDEC undertakes research on appropriate fishery technologies, trains fisheries technicians and disseminates fisheries information. Five Departments, namely Training Department (TD), Marine Fisheries Research Department (MFRD), Aquaculture Department (AQD), Marine Fishery Resources Development and Management Department (MFRDMD), Inland Fishery Resources Development Management Department (IFRDMD) were established in Thailand, Singapore, The Philippines, Malaysia and Indonesia, respectively, to pursue the objectives of the Center.

Since 1998, technical cooperation between ASEAN and SEAFDEC towards sustainable fisheries development has been initiated under the regional **ASEAN-SEAFDEC Fisheries Consultative Group Mechanism (FCG)** framework; and the promotion of sustainable fisheries development through this mechanism is well accredited within the ASEAN.

To assure that the efforts of ASEAN and SEAFDEC in tackling a number of challenges that have impacts on the development and management of the fisheries sector are sustained, and in support of various activities for the benefit of Member Countries, the **ASEAN-SEAFDEC Strategic Partnership (ASSP)** was formalized in November 2007. ASSP is envisaged to enhance closer cooperation between ASEAN and SEAFDEC and its Member Countries, paving the new phase for ASEAN-SEAFDEC collaboration in achieving long term common goals towards collective regional development and management of sustainable fisheries.

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