

**REPORT OF THE**  
**ON-SITE TRAINING ON IDENTIFICATION OF DEEP-SEA FISHES**

**Kuala Terengganu, Malaysia, 18-21 July 2011**



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SEAFDEC Training Department  
P.O. Box 97  
Phrasamutchedi  
SAMUT PRAKAN 10290  
Thailand

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18-21 July 2011, Kuala Terengganu, Malaysia

## **PART I**

# Report of the On-Site Training on Identification of Deep-Sea Fishes

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## I. Introduction

1. The on-site training on identification of deep-sea fishes is jointly organized by the Marine Fishery Resources Development and Management Department (MFRDMD) and the Training Department (TD) of the Southeast Asian Fisheries Development Center (SEAFDEC) from 18 to 21 July 2011 at the SEAFDEC/MFRDMD in Kuala Terengganu, Malaysia through the Japanese Trust Fund.
2. This program was developed under the SEAFDEC project on “Deep-Sea Fisheries Resources Exploration in the Southeast Asian Waters” implemented since 2007, with the overall objectives to:
  - enhance the capacity of the participants for identifying fish species found at the continental shelf break and slope (sea area from depth 100-400 m depth);
  - confirm the preliminary identification results of fish specimens collected from the waters of Sabah and Sarawak, Malaysia during 28 June -11 August 2010 onboard M.V. SEAFDEC 2;
  - integrate the information/data on the distribution of deep-sea fishes in the Southeast Asian waters for fulfillment of the project.
3. The training was carried out by both lecture and practices with attendance by 16 (sixteen) person in charge for fish taxonomy from the Department of Fisheries, Malaysia, Department of Fisheries Sabah and the SEAFDEC/MFRDMD. The list of the participants and resource persons appears as **Annex 1**.

## II. Opening and introduction of the training

4. The workshop was officially opened on July 18, 2011. On behalf of the Department Chief, Dr. Masaya Katoh, the Deputy Chief of SEAFDEC-MFRDMD welcomed and thanked to the Japanese experts and participants for their participation to the training. He underlined the needs of building human resources capacity with regards to fish identification to support the effort on deep-sea fishery resources exploration. He also expressed the wish for all participants to have strong interest in gaining knowledge and experiences in fish identification during the training.

5. The introduction of the workshop was made by Mrs. Penchan Laongmanee, Fishing Ground and Fishery Oceanography Section Head of the SEAFDEC/TD. She provided the background and progress of the project “Deep-Sea Fisheries Resources Exploration in the Southeast Asian Waters” and the arrangement of the workshop activities which appear as **Annex 2 to 4**.

### **III. Resource person’s presentations**

6. The presentations by the resource persons provided the basis on deep-sea demersal fish identification and fish collection management and the experiences of deep-sea bottom trawl surveys. The presentations included:
  - General procedure for sampling, identification and collection management of deep-sea fishes by Dr. Yoshinobu Konishi (**Annex 5**).
  - Fish morphology and general characters for identification of deep-sea fishes in the Southeast Asian Region by Dr. Toshio Kawai (**Annex 6**).
  - Collection building at the Hokkaido University Museum, Hakodate, Japan by Dr. Toshio Kawai (**Annex 7**).
  - Share experience on the “Japan-Indonesia Deep-Sea Fishery Resources Joint Exploration Project” during year 2004 and 2005 by Dr. Toshio Kawai.

### **IV. Practice of fish photography, fish identification, and results presentation of assigned work**

7. In the first day (July 19) of practical works in the wet laboratory, according to a demonstration of fish photography by Drs. Toshio Kawai and Yoshinobu Konishi, participants handled the fresh fish specimens for expanding fins with pins and formalin solution on a polystyrene board, and then too photos of the fishes using a digital camera.
8. During the two-days practice (July 19-20), participants did the group works on identification and description of meristic and morphometrical characters for the preserved specimens collected from the Sabah and Sarawak waters during 28 June and 11 August 2010 onboard M.V. SEAFDEC 2 under the supervision of the resource persons.
9. In the last day, each group of participants presented the results of their identification and description for the specimens. Then the discussion and clarification including advice on the results were made among the resource persons and participants. The results presentations appear as **Annex 8/1- 8/4**.
10. The presentation on the fish catalogue from the survey and the online database was shared to the training by Dr. Natinee Sukramongkol (**Annex 9**).

## **V. Discussion and recommendations**

11. Based on the discussion, the workshop agreed to:

- establish a network for deep-sea fish taxonomy through coordination and collaboration among the participants/experts of the workshop; and
- share the information and dissemination on the results of deep-sea fisheries resources surveys on the website and database provided by the SEAFDEC/TD.

12. The workshop agreed that the online catalog of fishes could help researchers in the SEAFDEC/MFRDMD to confirm the identification results as well as provide service and knowledge to them and promote the organized activities. Mr. Mohammad Faisal, a participant and researcher of the SEAFDEC/MFRDMD, informed that the catalogue of fishes was existed at the Department and would be online soon.

13. As regards the taxonomic work on the deep-sea fish species and the maintenance of the fish collection in the SEAFDEC/MFRDMD, Dr. Toshio Kawai recommended that:

- the fish collections should be kept under moderate (room) temperature, relatively low humidity, and should avoid being exposed to the sunlight;
- fish specimens in the collection should be kept in 70% ethanol after fixation by formalin solution;
- type specimens should be kept separately from other collections under the special care.

14. Dr. Yoshinobu Konishi suggested to the workshop that the fish specimens with insufficient information on identification should be send to the Hokkaido University Museum in order to confirm the species names of the specimens, and then the species diagnosis with photos and morphological character data should be provided to all participants.

## **VI. Closing**

15. Dr. Masaya Katoh, Deputy Chief of the SEAFDEC/MFRDMD expressed his appreciation to the experts and thanked the participants for their active participation in the workshop as well as the organizing team for their support and cooperation during the workshop. He also reminded the participants that the realization of their respective activities for the fish identification depends on their willingness and intention to apply what the participants have learned from this training workshop, and then he declared the workshop close.

**List of participants and resource persons**

**FRIRA**

**Name** Encik Nik Nasrudin bin Nik Ismail  
**Address** Pusat Penyu Dan Ekosistem Marine  
Rantau Abang Terengganu Malaysia  
**Tel**  
**Fax**  
**Email**



**Name** Encik Rozali Muhamad  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel**  
**Fax**  
**Email**



**SABAH**

**Name** Mr. Benjamin Martin  
**Address** Pusat Penyelidikan Perikanan Likas, 89400  
Kota Kinabalu Sabah Malaysia  
**Tel**  
**Fax**  
**Email** benjamin.martin@sabah.gov.my



**SEAFDEC/MFRDMD**

**Name** Encik Ahmad bin Ali  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** aaseafdec@seafdec.org.my



**Name** Encik Mohammad Faisal bin Md Saleh  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** mohd\_faisal@seafdec.org.my



**Name** **Encik Mohd Tamimi bin Ali Ahmad**  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia

**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** tamimi@seafdec.org.my



**Name** **Cik Noorul Azliana binti Jamaludin**  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia

**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** noorul@seafdec.org.my



**Name** **Encik Nadzri bin Seman**  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia

**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** nadzri@seafdec.org.my



**Name** **Encik Osman bin Muda**  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia

**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** osman@seafdec.org.my



**Name** **Puan Kamariah binti Ismail**  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia

**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** kamariah@seafdec.org.my



**Name** **Encik Rosdi bin Mohd Nor**  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia

**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email**



**Name** Encik Nor Azman bin Zakaria  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** norazmanzakaria@seafdec.org.my



**Name** Encik Nik Ab Rahman bin Nik Ismail  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** nrahman@seafdec.org.my



**Name** Encik Norfaizal Azli bin Mat Nor  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** faizal@seafdec.org.my



**Name** Encik Mohd Sukri bin Muda  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email** sukri\_02@seafdec.org.my



**Name** Puan Nik Zuraini binti Nawawi @Omar  
**Address** Taman Perikanan Chendering 21080  
Kuala Terengganu, Terengganu Malaysia  
**Tel** +609 617 5940  
**Fax** +609 617 5136  
**Email**



## **RESOURCE PERSONS**

**Name** Dr. Yoshinobu Konishi  
**Address** 1221-31 Yoshimuta-go, Nagayo-cho  
Nishisonogi-gun, Nagasaki  
851-2126 Japan  
**Tel** 81-958836704  
**Email** ykoni21080@gmail.com



**Name** Dr. Toshio Kawai  
**Address** Fisheries Science Center, The Hokkaido University  
Museum 3-1-1 Minato-cho, Hakodate, Hokkaido  
041- 8611, Japan  
**Tel** 81-138-40-5553.  
**Fax**  
**Email** kawai@museum.hokudai.ac.jp



**SEAFDEC/TD**

**Name** Mrs. Penchan Laongmanee  
**Address** SEAFDEC/TD, P.O. Box 97, Phrasamutchedi,  
Samutparkan 20190 Thailand  
**Tel** 662-4256141  
**Fax** 662-4256110  
**Email** penchan@seafdec.org



**Name** Dr. Natinee Sukramongkol  
**Address** SEAFDEC/TD, P.O. Box 97, Phrasamutchedi,  
Samutparkan 10290 Thailand  
**Tel** 662-4256142  
**Fax** 662-4256110  
**Email** natinee@seafdec.org



**Agenda and arrangement of the training**

- 1 Opening**
- 2 Introduction to the training activities**
- 3 Lecture and sharing experiences on fish taxonomic study and deep-sea resource exploration as well as fish specimens collection**
  - General procedures for sampling, identification and collection management of deep-sea fishes
  - Fish morphology and general characters for identification of deep-sea fishes in the Southeast Asian region
  - Collection Building at the Hokkaido University Museum, Hakodate, Japan
  - Share experience on the “Japan-Indonesia Deep-Sea Fishery Resources Joint Exploration Project” during year 2004 and 2005
- 4 Laboratory practice**
  - Fish specimens setting for photography
  - Fish photography
  - Fish identification
- 5 Report the results of the identification**
- 6 Discussion and Recommendations**
- 7 Closing**

## Time table

Date/Program	Activities/Topics
17 July (Sunday)	- Arrival of resource persons and participants. - Workshop preparations
<b>18 July (Monday) Opening ceremony, Lectures</b>	
09:00 – 09:15	Opening Ceremony
09:15 – 09:30	Project introduction and activity brief by Ms. Penchan Laongmanee
09:30 - 10:00	Group photo/Break
10:00 – 11:00	General procedures for sampling, identification and collection management of deep-sea fishes by Dr. Yoshinobu Konishi
11:00 – 13:00	Fish morphology and general characters for identification of deep-sea fishes in the Southeast Asian region by Dr. Toshio Kawai
13:00 – 14:30	Lunch
14:30 – 15:30	Collection building at the Hokkaido University Museum by Dr. Toshio Kawai
15:30 – 16:00	Break
16:00 – 17:30	Specimens and equipments preparation
<b>19 July (Tuesday) Practice of photography and fish identification</b>	
08:30 – 13:00 (Laboratory)	Practice on Fish specimens setting and photography (supervised by resource persons and project )
14:00 – 17:00	Practice of fish identification with preserved specimens (supervised by resource persons and project )
<b>20 July (Wednesday) Practice on fish identification</b>	
08:30 – 17:30 (Laboratory)	Practice of fish identification with preserved specimens (supervised by resource persons and project )
<b>21 July (Thursday) Results presentation, Discussions, Closing</b>	
11:00 – 12:00	Presentation and discussion on results of fish identification (4 group presentations)
12:00 – 12:30	Demonstration of deep-sea fishes online database and fish catalog by Dr. Natinee Sukramongkol
12:30 – 12:45	Discussion and recommendation
12:45 – 13:00	Closing