

REPORT OF THE INTERNATIONAL TRAINING COURSE
ON
THE USE OF TURTLE EXCLUDER DEVICES AND JUVENILE AND TRASH
EXCLUDER DEVICES

25 August to 8 September 2003

Submitted to

The Project Coordinator of the FAO/GEF Global Project for the “Reduction of Environmental Impact from Tropical Shrimp Trawling, through the Introduction of Bycatch Reduction Technologies and Change of Management”.

SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER

1. INTRODUCTION

Bycatch is an acknowledged component of fisheries management. Its recent development into a major issue in the management of fisheries can be attributed to increasing demand for fisheries resources and a growing recognition of the need to ensure that fisheries are conducted in a sustainable manner.

In recent years, the Southeast Asian Fisheries Development Center's Training Department (SEAFDEC-TD), and the Food and Agriculture Organization of the United Nations (FAO) in cooperation with the Global Environment Facility (GEF), have been working towards the development and adoption of responsible fishing practices that aim to minimize bycatch in the fisheries of Southeast Asia. Much of this work to date has focused upon experimentation aimed at developing effective bycatch reduction devices, the provision of training to regional stakeholders, and the production of information and extension packages.

The FAO in cooperation with the GEF is implementing a global project for the "Reduction of Environmental Impact from Tropical Shrimp Trawling, through the Introduction of Bycatch Reduction Technologies and Change of Management". Part of the overall work-plan for this project is to demonstrate in each participating country, to a first group of representatives of the fishing industry, and to some government Fisheries Officers, the potential benefits which can be achieved through the adoption of more responsible fishing gear and techniques, particularly shrimp trawls fitted with Turtle Excluder Devices (TEDs), Juvenile and Trash Excluder Devices (JTEDs), Thai Turtle-Free Devices (TTFDs), or various other Bycatch Reduction Devices (BRDs).

Similarly, the SEAFDEC-TD has been implementing a "Responsible Fishing Technologies and Practices" program in its Member countries since 1996, focusing first upon the introduction of TEDs, and since 1998 on experiments to evaluate the suitability of various types of JTEDs to Southeast Asian fisheries. SEAFDEC-TD also places significant emphasis on the promotion of the use of such responsible technologies by the shrimp-trawling industry through their introduction and demonstration at practical workshops, and the production and dissemination of relevant information to its stakeholders.

In support of the abovementioned FAO/GEF global bycatch reduction project, the FAO provided financial assistance to the SEAFDEC-TD to organize and conduct a training course in 2003 on the use of TEDs and JTEDs to a group of 10 officers from Indonesia (5) and the Philippines (5). Extension-methodology for transferring information about these devices to the end users (i.e. shrimp-trawl owners and operators) was also a desired curriculum area.

In response, the SEAFDEC-TD convened an International Training Course on the Use of TEDs and JTEDs from 25 August to 8 September 2003. The course was attended by a total of 16 participants from Brunei Darussalam (1), Cambodia (1), Indonesia (5), Malaysia (1), Myanmar (1), the Philippines (5), Vietnam (1) and Thailand (1). Detailed information about the course participants is provided in Annex 1.

This report details the conduct of the course including an overview of the course objectives, curriculum, activities, participants, instructors and conclusions drawn.

2. COURSE OBJECTIVES

The objectives of the International Training Course were to:

- a) Provide participants with an understanding of the results of previous and ongoing experimentation involving the use of TEDs and JTEDs.
- b) Enable participants to gain practical experience in the construction, installation and use of TEDs and JTEDs, both ashore and at-sea.
- c) Build the capacity of participants to extend information about TED and JTED use in their respective countries.
- d) Promote and encourage the use of TEDs and JTEDs in regional waters.

3. COURSE CURRICULUM

The course was comprised of both theoretical and practical components. The curriculum areas covered in both these components are detailed in Table 1.

Table 1. The theoretical and practical curriculum areas covered during the International Training Course on the Use of TEDs and JTEDs.

Theoretical	Practical
Introduction to TEDs and JTEDs	Construction of TEDs and JTEDs
International collaborative research for the development of selective fishing devices	Installation of TEDs and JTEDs into demersal trawl fishing gears
The distribution and conservation of marine turtle populations in Southeast Asian waters	Technique for cutting escape holes for the TED
Design and installation basics for TEDs and JTEDs	Maintenance of TEDs and JTEDs
Extension methodology and processes	Solving problems encountered during the operation of TEDs and JTEDs

The course curriculum was delivered by 15 expert and technical SEAFDEC training instructors. Information regarding these instructors is presented in Annex 2.

4. COURSE TRAINING ACTIVITIES

The International Training Course was conducted over a total of 15 days. The training program followed during the course is presented in Annex 3. Accounts of the key activities are presented below.

- LECTURE AND DISCUSSION

One day of the program was dedicated to theoretical instruction. This involved lectures and group discussions regarding a number of key topics. Participants were introduced to background information regarding the experimentation and use of TEDs and JTEDs, and training and extension programs associated with the implementation of these bycatch reducing technologies in regional waters. Specific theoretical instruction on the principles of TED and JTED design and use, the correct procedure for installing the devices into demersal trawl gears, and the benefits of TED and JTED use was provided.

This aspect of the course made use of multimedia technology including LCD PowerPoint and video presentations. Case studies on the successes and lessons learned from experimental fishing trials and demonstrations in regional waters were also used to provide participants with a realistic perspective on how this technology can be used to enhance the sustainability of their respective fisheries.



Figure 1. A discussion during the theoretical component of the course.

- PRACTICAL TRAINING

Significant emphasis was placed on the practical training component of the course. This involved two main sub-sessions in the marine engineering section and fishing workshop of the SEAFDEC Training Department. Participants were actively involved in the following practical activities:

- a) The construction of TEDs and JTEDs
- b) Installing TEDs and JTEDs into demersal trawl fishing gears
- c) Cutting netting for extension sections and escape holes
- d) The mechanics of TED and JTED function
- e) Solving problems encountered during the operation of TEDs and JTEDs



Figure 2. Participants receiving instruction on TTFD frame construction.



Figure 3. Participants developing practical experience in the Fishing Workshop.



Figure 4. Participants constructing a JTED in the Fishing Workshop.

- SEA-BASED DEMONSTRATION AND EXPERIMENTATION

A sea-based demonstration and experiment were successfully carried out onboard the SEAFDEC Training Vessel, M.V. PLALUNG. Trawling was conducted during the daytime at depths of 10-12 meters, with a towing speed of 2.5 knots. Participants were provided with an opportunity to observe the at-sea use of the TTFD and JTED (sorting grid type).



Figure 5. Preparation for the JTED demonstration



Figure 6 and 7. The operation of trawling with JTEDs (left) and TTFDs (right)

- OBSERVATION AND STUDY TRIP

During the course, participants were provided with an opportunity to visit the Sea Turtle Conservation Project at Sattaheep Naval Base, Chonburi Province. Kasetsart University's Sriracha Marine Research Station was also visited. These visits were aimed at providing participants with an understanding of efforts in sea turtle conservation in Thailand and the broader region.

5. COURSE EVALUATION

All participants completed a questionnaire type evaluation of the training course. The consensus was that the course both satisfied the expectations of the participants, and greatly enhanced their ability to contribute to the adoption of TEDs and JTEDs in their respective countries. Some course participants recommended that M.V. PLALUNG was not sufficiently large enough to support all learners, and as a result the benefits derived from the sea-based training were not optimized. Other participants recommended that more time be devoted to sea-based demonstrations for the range of JTEDs that have previously been developed and tested in regional waters.

6. CONCLUSION

The importance of developing responsible and selective fishing practices in the Southeast Asian region was recognized by all course participants. The International Training Course on the Use of TEDs and JTEDs was effective in building regional capacity, especially that in Indonesia and the Philippines, for the ongoing extension of information to fishers about these responsible fishing technologies.

ANNEX

List of Participants

Brunei Darussalam



Name : Mr. Bidin bin Suru

Date of Birth : 20 June 1956

Educational Background : Certificate (Fishing Gear)

Position : Second Officer

Office Address : Department of Fisheries
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Cambodia



Name : Mr. Chhan Sokha

Date of Birth : 28 June 1969

Educational Background : M.Sc. (Fish Technology and Fish Product)

Position : Vice Chief of Exploitation Bureau

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Indonesia



Name : Mr. Suharman Ismail

Date of Birth : 20 June 1956

Educational Background : B.Sc. (Fisheries)

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Name : Mr. Muhammad Umar Kotarumalos

Date of Birth : 20 January 1973

Educational Background : B.Sc.

Position : Staff

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Name : Mr. Wilson Simanjuntak
Date of Birth : 9 January 1965
Educational Background : B.Sc. (Fishing Technology)
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Office Address : Fisheries and Sea Service of North Sumatera Province, Jl. Seri Batugingging No. 6 North Sumatera, Medan 20154, Indonesia
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Name : Mr. Jainur Manurung
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Malaysia



Name : Mr. Ahmad Saktian Bin Langgang
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Myanmar



Name : Mr. Khin Maung Aye
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The Philippine



Name : Mr. Renato Buce Almonte
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Educational Background : B.Sc. (Marine Fisheries)
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Name : Mr. Marco Arante Perez
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Name : Mrs. Myrna Benavidez Ramos
Date of Birth : 14 September 1953
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Name : Mr. Salinas Pantaleon Remegio
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Position : Marine Engineer/Training Assistant
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Name : Mr. Pierre Easter Ladrado Velasco
Date of Birth : 2 April 1972
Educational Background : B.Sc. (Marine Fisheries)
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Vietnam



Name : Mr. Phan Hong Dung
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Position : Staff
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Thailand



Name : Mr. Wiwithanon Boonyung
Date of Birth : 21 April 1977
Educational Background : B.Sc. (Fisheries)
Position : Fisheries Biologist
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List of Course Staff

1.	Mr. Niwes Ruangpanit	Course Leader Chief of the Training Department
2.	Mr. Bundit Chokesanguan	Course Director Fishing Instructor
3.	Mr. Suppachai Ananpongsuk	Course Coordinator Fishing Instructor
4.	Mr. Worawit Wanchana	Assistant Course Coordinator Fishing Instructor
5.	Mr. Nopporn Manajit	Assistant Course Coordinator Fishing Instructor
6.	Mr. Nakaret Yassok	Assistant Fishing Instructor
7.	Mr. Weerasak Yingyuad	Assistant Fishing Instructor
8.	Ms Raya Pethkam	Assistant Fishing Instructor
9.	Mr. Suthipong Thanasarnsakorn	Marine Engineering Instructor
10.	Mr. Thaweesak Timkrab	Marine Engineering Instructor
11.	Mr. Apinan Taradol	Marine Engineering Instructor

SEAFDEC/TD ship staff (M.V.Plalung I)

1.	Mr. Trakul Sangphuek	Skipper
2.	Mr. Somphote Vudhipanyo	Fishing assistant
3.	Mr. Somyos Pornprasert	Fishing assistant
4.	Mr. Nimithr Pattamapranee	Oiler

Training Program

Date	Time	Activities/Subjects
25 Aug. 2003	0900 hrs.	Opening Ceremony
	1030-1200 hrs.	TD's facilities observation
	1300-1630 hrs.	Countries paper presentation
26 Aug. 2003	0900-1200 hrs.	Lecture : Introduction of TEDs and JTEDs
	1300-1600 hrs.	Lecture : Training and Extension Program on the Use of TEDs and TEDs
27 Aug. 2003	0900-1630 hrs.	Practice : Construction of TEDs and JTEDs
28 Aug. 2003	0900-1630 hrs.	Practice : Installation of TEDs and JTEDs
29 Aug. 2003	0900-1630 hrs.	Practice : Installation of TEDs and JTEDs
30 Aug. 2003		Free
31 Aug. 2003		Visit Grand Palace, Bangkok
1 Sep. 2003	0900-1200 hrs.	Practice : Installation of TEDs and JTEDs
	1500 hrs.	TEDs and JTEDs sea-trial orientation
2 Sep. 2003	0800 hrs.	Leave TD for Chonburi province
	0900 hrs.	Visit Khoa Kheow Open Zoo
	1030 hrs.	Visit Sea-Turtle Conservation at Sattaheep Naval Base (Royal Thai Navy)
	1400 hrs.	Visit Sriracha Marine Research Station
3-4 Sep. 2003		Sea-trial on the Use of TEDs and JTEDs
5 Sep. 2003		Return to TD
6 Sep. 2003		Free
7 Sep. 2003		Free
8 Sep. 2003	0900-1100 hrs.	Course Evaluation
	1300 hrs.	Closing ceremony