

**REPORT OF  
THE FISHING TRIAL AND DEMONSTRATION TO PROMOTE THE  
USE OF CIRCLE HOOK IN LINE FISHING**

**29 SEPTEMBER TO 1 OCTOBER 2009, KUCHING, SARAWAK, MALAYSIA**



**TRAINING DEPARTMENT  
SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER**

**TD/RP/135**

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## **BIBLIOGRAPHIC CITATION**

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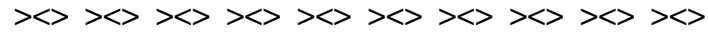
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# **REPORT OF THE FISHING TRIAL AND DEMONSTRATION TO PROMOTE THE USE OF CIRCLE HOOK IN LINE FISHING**

**29 September to 1 October 2009, Kuching, Sarawak, Malaysia**



## **I. Opening**

1. The Fisheries Officer – Department of Fisheries Sarawak, Mr. Jackson Clive Jusak welcomed all participants as well as resource persons from SEAFDEC Training Department (TD) to the Fishing Trial and Demonstration. He stated the importance of raising public concern on the impact of fishing activities on sea turtle mortality, considering that the use of circle hook can significantly reduce sea turtle bycatch as compared to the conventional j-shape hook (J-hook). He then invited representative of Federal Government Administration Department of Fisheries Malaysia, Mr. Rosidi Ali to give the Opening Remarks.
2. Mr. Rosidi welcomed all participants, representatives from: private enterprise in Sarawak area; Forestry Department; Museum Department, Fisheries Officers of Sarawak; Federal Government Administration; as well as SEAFDEC TD. He stated on the urgent need for a greater awareness-building at the national and local levels to carefully conserve population of the sea turtles in terms of carefully design and selection of appropriate the fishing gear and its practice. He also thanked on the support of the Japanese Government through SEAFDEC TD in organizing the fishing trials and demonstration.

## **II. Introduction**

3. The Fishing Trial and Demonstration was attended by local longliners of Kuching, staff of Museum Department (the agency responsible for management and conservation of sea turtles in Sarawak State), staff of Department of Forestry, as well as staff from DOF-Malaysia HQ and SEAFDEC-MFRDMD. The list of participants appears as Annex 1.
4. The SEAFDEC Project Leader, Dr. Worawit Wanchana introduced the resources persons and staff from the SEAFDEC/TD, and outlined the background of the project in supporting and promotion on the reduction of the sea turtles bycatch in the South East Asian Region. He then introduced the arrangement of the Fishing Trial and Demonstration (Annex 2 and Annex 3).
5. The overall objectives of the Fishing Trial and Demonstration are:
  - To raise awareness on the reduction of the sea turtles bycatch and their mortality by fishing activities; and

- To promote implementation of the guidelines for reduction of sea turtles in fishing operation.
6. Specifically, the objectives of the Fishing Trial and Demonstration are:
- To promote the use of circle hook in line fishing; and
  - To study and obtain information on effectiveness in using circle hook for reduction of sea turtles bycatch through fishing trial and demonstration.

### **III. Lectures**

#### **3.1 Sea Turtles Interaction with Fishing Operations**

7. The sea turtle interaction with fishing operation was presented by Dr. Worawit Wanchana (Annex 4).
8. In his presentation, general information to reduce sea turtle bycatch in various fishing gears (longline, trawl, gillnet, purse seine with using FADs, etc.) was introduced. He also stressed on the advantage in using c-hooks replacing the use of conventional j-hook. In the conclusion, it was summarized that, by using c-hook, higher hook rate of target catch/species and reduction of sea turtle bycatch could be expected.

#### **3.2 How to Handle a Sea Turtle Caught Incidentally during Longline Fishing Operation**

9. Handle of sea turtle that caught by small-scale longline fishing was introduced by Mr. Sayan Promjinda (Annex 5).
10. Based on the training materials provided to the participants, recommended procedure on handle sea turtle onboard fishing boat was introduced and discussed during the presentation as follow: Step 1: Pick Up Turtle; Step 2: Remove Hook; Step 3: Check Inside Mouth; Step 4: Help Turtle Vomit Water; Step 5: Observe Turtle; Step 6: Reflex Test; and Step7: After Release Observation.
11. Referring to Step 7, if the turtle can not move after 30 minutes of observation, it should carefully prevented from drying condition onboard and additional observation of 30 minutes should be conducted before releasing it back to the sea.

#### **3.3 Longline Fishing Construction in Southeast Asian Region**

12. Construction of longline fishing in Southeast Asian Region, also including the structure of fishing gear and arrangement of fishing gear and materials using when promoting the use of c-hook in SEAFDEC Member Countries, was introduced and provided to the participants by Mr. Nakaret Yasook (Annex 6).

### **IV. Fishing Gear Assembling Practice**

13. Before going onboard fishing vessel for demonstration on the use of c-hook, the participants were requested to assemble and construct the longline fishing gear as presented and introduced in line with the lecture and assistant giving by resource persons and staff of SEAFDEC/TD.

#### **V. Fishing Trials and Demonstration at Sea**

14. Actual fishing trial and demonstration activities were conducted in close collaboration and local support by Sarawak Department of Fisheries. The participants and observes were onboard longline fishing vessels (SF2-271) and the fishery patrol boat no. S40 (Figure 1, and 2, respectively). The design and construction of the bottom longline fishing gear with c-hook used in the trial and demonstration appeared as Figure 3. The original fishing trial and demonstration was changed from Sea Turtle Island to be in Santubong area instead. This was due to the low tide sea condition which made the arrangement difficulties to transfer all participants and resources persons onboard longliners. The location of the area conducted fishing trial and demonstration appeared in Figure 4.
15. During the fishing trial and demonstration, following study items were conducted in compare efficiency of c- and j-hook:
  - Fishing gear arrangement and baiting before start shooting
  - Shooting operation
  - Hauling operation
  - Restoring fishing gear
16. During the onboard actual fishing trial and demonstration, technical discussion among participants/longliners with the aim to further improvement on the use/application of c-hook by replacing j-hook was carried out. Total numbers of hook used were 200 c-hook and 250 j-hook. Major outcomes from the discussion onboard included:

##### *Period of Demonstration at Sea:*

- Organizer should consider to increase total number of days for fishing trial and demonstration as one-day time allocation for this may be too short.
- However, it was observed that immersion of longline for 2 hours of actual fishing trial and demonstration should be too long. This is due to the common practice of the bottom longliners that the immersion time is normally 30 min with using 3000 total number of hooks.

##### *Longline Fishing Gear and Construction:*

- Longer shank of c-hook should also be trialed. This is due to the observation that baiting process can be shortened.
- Limited supplies of the circle-hook for local fisheries in Sarawak area is one of the major constraints.

- It was noted that the c-hook type has been used in Mabua area for tuna handline operating with FADs. The c-hook is most likely imported by the Philippines local fishing material supplies.

*Catch Efficiency Comparision between C- and J-hook:*

- Due to the fact that there was “no catch” from the actual fishing trial and demonstration, it is therefore not possible to compare the catch efficiency. However, during the fishing gear preparation and stroing (including arrangement of the gear onboard and baiting, shooting, and hauling) of the bottom longline, discussed with fishers had been conducted mainly on the “possibility on the commercially use of c-hook replacing j-hook for bottom longline fishing”. The result from the discusssed was “yes”. However, the following subjects are need to consider:
  - o Price of the c-hook is less/equal to j-hook. Subsidy from the government sector should play an important role on this.
  - o Fishers get more familiar with the fishing gear when baiting and shooting. This is due to the fact that shape of c-hook is unfamiliar to the fishers and it seems to have a higher risk for fishers during the fishing operation. It is therefore it was observed during the demonstration that period for baiting and shooting when using c-hook were taken longer.
  - o Modification of the fishing gear and arrangment for better confidential to fishers is needed, such as basket for storing the longline and gars, shooting equipments, etc.
  - o The actual catch rate of c-hook is higher than j-hook.

## **VI. General Discussion with Department of Fisheries Sarawak**

17. The following day after the fishing trial and demonstration, major results from the discussion are:
  - Local language should be used throughout the course of event implementation. In addition, simplification and translation of the training materials and documents are required.
  - SEAFDEC and/or Department of Fisheries responsible for the promotion on the use of c-hook should consider to distribute appropriate number/amount of c-hook for their own fishing trial. This can facilitate the progress for acceptable useage of c-hook by the fishers. In addition, it was discussed that distribution, he c-hooks to the local bottom longliners can be accomodated to the existing project/program under implementing by DOF-Sarawak. It was also suggested by the fishers that DOF-Sarawak should also distribute the c-hooks to handline fishers for the actual trial.

## VII. Closing

18. Mr. Jackson Clive Jusak in his closing remarks, on behalf of Director of Marine Fisheries Department Sarawak thanked SEAFDEC/TD and other participants for their active participation and contributions to the event.



Figure 1: Bottom longliners used in the fishing trial and demonstration



Figure 2: Fishery patrol boat S40 used in observation of the fishing trial and Demonstration



**Fishing Methods**

**Bottom longline**

**Commercial Scale I**

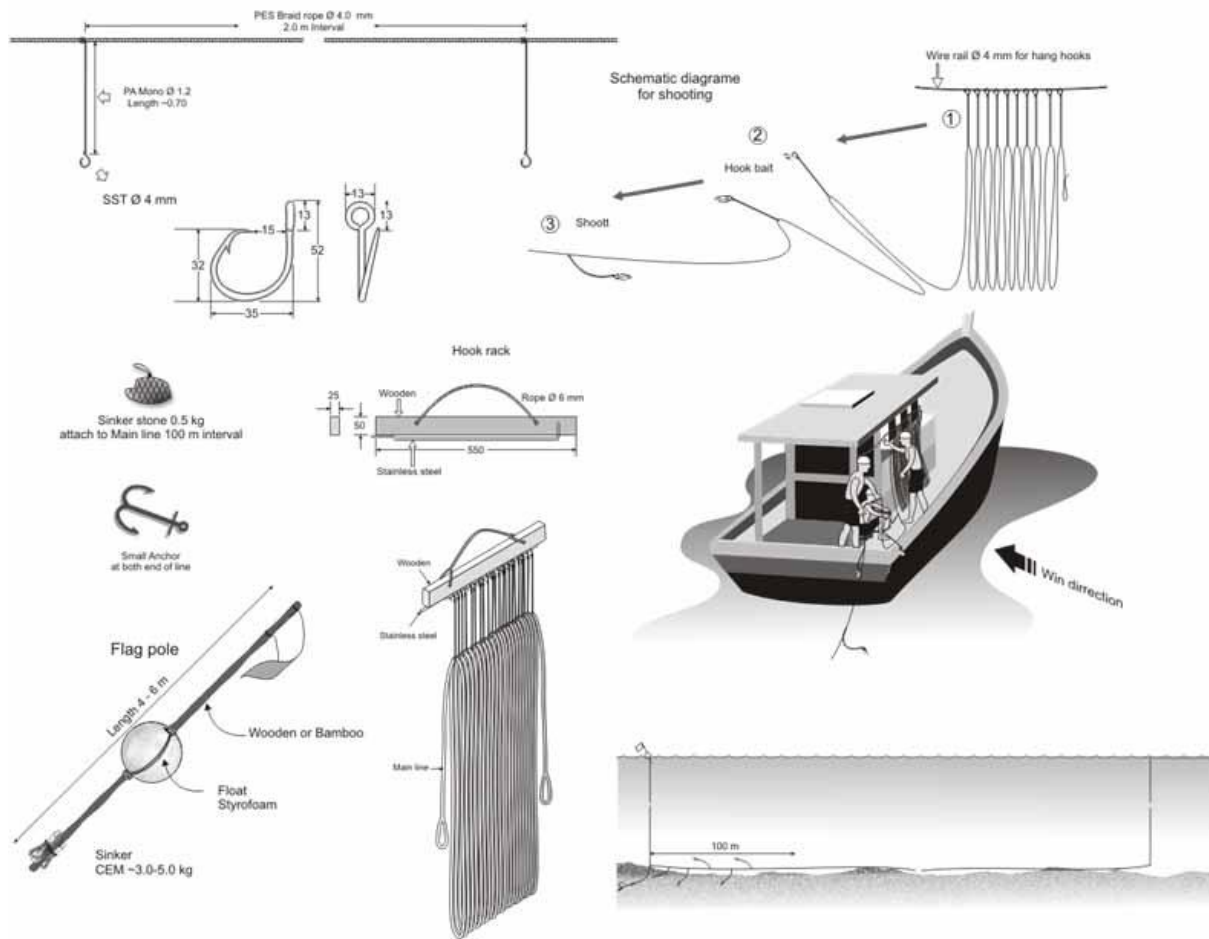


Figure 3: Design and construction of the bottom longline fishing gear with c-hook used in the fishing trial and demonstration

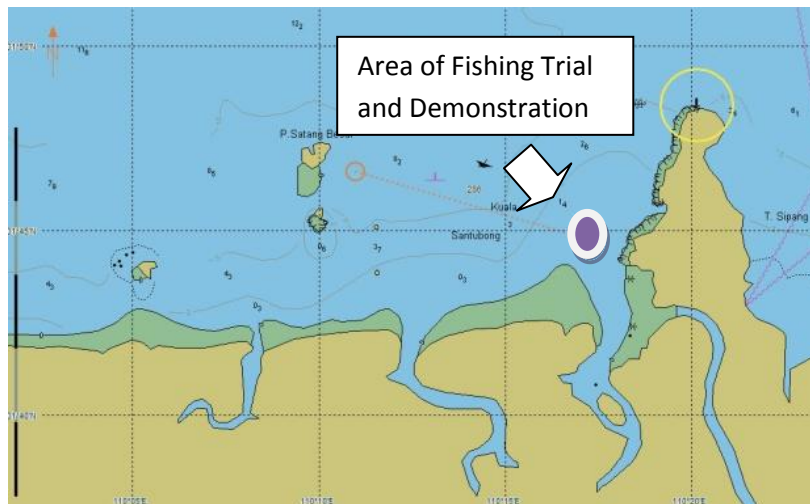


Figure 4: Santubong, the location of the area conducted fishing trial and demonstration



Figure 5: Preparation of the bait before shooring operation



Figure 6: Baiting and arrangement of the bottom longline fishing gear with c-hook before demonstration



Figure 7: Shooting operation of the bottom longline fishing gear with c-hook



Figure 8: Shooting operation of the bottom longline fishing gear with j-hook



Figure 9: Hauling operation of the bottom longline fishing gear with c-hook



Figure 10: Hauling operation of the bottom longline fishing gear with j-hook

**Fishing Trial and Demonstration on the Use of Circle Hook in Bottom Longline  
29 September – 1 October, Kuching, Sarawak 2009**



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## **Provisional Prospectus and Agenda Arrangement**

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### **Background and Rationale:**

Since August 2002, a campaign leading by protectionist group aims to raise public concern on the impacts of pelagic longline on sea turtles in the US. Their strategy is making appeals at the various international forum and mass media. Involving the UN Resolution is one of the strategy, such undertaking was previously successful with the global moratorium of drift net fishing. To avoid the application of the same strategy to the other fishing gear/activity, many studies on the use of circle hook (c-hook) in pelagic longline fishery have demonstrated that c-hook can significantly reduce sea turtles interactions as compared to the conventional j-shape hook (j-hook).

Under the support from the Government of Japan through the Trust Fund Program for Fishery, SEAFDEC Training Department (TD) has supports and promotes of responsible fishing and practices in the Southeast Asia, considered to study the mitigation of fishery – sea turtles interactions particularly on the efficiency of the c-hook in comparison with j-hook in longline fishery in the SEAFDEC Member Countries. The series of fishing trial and demonstration for promotion on the use of c-hook has been conducted in SEAFDEC Member Countries using local fishing boats together with local fishers in order to encourage its usage (i.e. trial and demonstration in Kuantan, Malaysia in 2007, and in Myanmar water in 2008).

### **Overall Objectives:**

- To raise awareness on the reduction of the sea turtles bycatch and their mortality by fishing activities.
- To promote the guidelines for reduction of sea turtle mortality in fishing operation.

### **Specific Objectives:**

- To promote the use of c-hook in ling fishing
- To study and obtain information on effectiveness in using c-hook for reduction of the sea turtles bycatch through fishing trial and demonstration

**Date and Venue:** 29 Sep – 1 Oct 2009, Sarawak, Malaysia

**Organizer:** SEAFDEC Training Department in collaboration with Department of Fisheries Malaysia

**Target Participants:** local fishers, local fishery officer, student of the local fishery collage/university, lecturer of the university, local NGOs, etc.

### **Tentative Program:**

*27 Sep. 2009, Sun*

*SEAFDEC/TD team members leave Bangkok for Sarawak*

*28 Sep. 2009, Mon*

- Fishing Gear Preparation and discussion among the organizers on arrangement of the fishing trial and demonstration

*29 Sep. 2009, Tue*

- Opening ceremony and introduction of the fishing trial and demonstration to the participants
- Lecture and general discussion on:
  - o Interaction between sea turtles and fisheries in the Southeast Asian region by SEAFDEC TD
  - o Interaction between sea turtles and fisheries in Sabah Malaysia by DOF Malaysia
  - o Introduction to gear/equipment and device for relieve sea turtle by SEAFDEC TD
- Fishing trial and demonstration at sea (by using local longliners) jointly by SEAFDEC TD, DOF-Malaysia and participants (if time is available)

*30 Sep. 2009, Wed*

- Fishing trial and demonstration at sea (by using local longliners) jointly by SEAFDEC TD, DOF-Malaysia and participants (Continued)

*1 Oct. 2009, Thu*

- Discussion on the result of the fishing trial and demonstration
- Conclusion and recommendation

*2 Oct. 2009, Fri*

*SEAFDEC/TD team members leave Sarawak for Bangkok*