



**SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER
TRAINING DEPARTMENT**

**REPORT ON THE THIRD REGIONAL TRAINING COURSE
FOR
FISHERY EXTENSION OFFICERS IN MARINE CAPTURE FISHERIES
26 JULY TO 17 SEPTEMBER 1982**

**Submitted by
the Training Department
Southeast Asian Fisheries Development Center
to
the Royal Government of the Netherlands**

**Samutprakarn, Thailand
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REPORT ON THE THIRD REGIONAL TRAINING COURSE

FOR

FISHERY EXTENSION OFFICERS IN MARINE CAPTURE FISHERIES

26 JULY TO 17 SEPTEMBER 1982

I. INTRODUCTION

Since the Royal Netherland Government gave support under the S.I.R. aid policy to SEAFDEC's Training Department in view of the common interest in enhancing the Fishery Technology to the inhabitants of developing countries, two Regional Training Courses in Marine Capture Fisheries for Fishery Extension Officers were held at Training Department, Samutprakarn, in 1981-1982. In consequence of these 2 successful trainings, the 3rd Regional Training Course for Fishery Extension Officers in Marine Capture Fisheries, with appropriate modification of syllabus to suit the immediate needs of the Region, has been again set up at the premises of SEAFDEC's Training Department from July 26 to September 17, 1982.

Four countries from SEAFDEC plus six other countries in the region, i.e. Burma, India, Indonesia, Bangladesh, Brunei, Sri Lanka, were notified of the course and invited to nominate their selected participants according to the following allocation of fellowships:

Bangladesh	2
Brunei	2
Burma	2
India	2
Indonesia	2
Malaysia	4
Philippines	4
Singapore	2
Sri Lanka	2
Thailand	8
Total	30

The response to invitation was quite satisfactory. Most countries had willingly filled in their given quotas except Bangladesh. Nevertheless, the total number of participants of this course was outstanding compared to the former 2 courses, i.e. 28 in all. The list of participants and instructors was given in Annex A.

II. OBJECTIVES OF THE TRAINING COURSE

The same objectives were maintained as in previous courses and strictly followed during the training, i.e.:-

1. To expose fishery extension officers from South and Southeast Asia to the problems facing the livelihood of small scale and coastal fishermen;
2. To familiarize them with techniques and methodology pertaining to extension work, and with the ways and means of assisting these small-scale and coastal fishermen;
3. To provide practical experience and knowledge relating to the development of coastal and inshore fisheries, with particular reference to the efficient and rational utilization of fisheries resources in these waters.

The curriculum was slightly differed from two previous courses in view of some modifications concerning supplementary subjects, aiming at improving its' effectiveness.

The principal subjects were either kept on the same coverage or on a larger scale based on the result of the past evaluations. It was observed that this modification was better suited to the requirement of the participants, although there were still few stray-ideas disagreeing with the cancellation of some supplementary subjects, such as engine installation, refrigeration, boat building, etc. The extra time gained was added to subjects and practice considered more essential to the course, i.e., Fishing Technology, Fishing Gear Designs and Methods were increased by approximately 22%, while shipboard training by 20% compared to the 2nd training course in January - March 1982. The proportion of training durations in Class Lecture : Shore and Sea Practice : Study Tour to places related to Fisheries was 39% : 47% : 14%. This course was, therefore, so conducted that more practical rather than theoretical training was achieved. Participants were able to apply simultaneously most of what they gained in the morning class room into the afternoon practice, as at sea during shipboard training. The field work on the Socio-Economics Survey of Marine Fishing Households also provided practical knowledge and understanding of the systems of fisheries extension work in marine capture fisheries.

III. COURSE OUTLINE

The same structure of course was followed as in the 1st and 2nd Regional Training Courses for Fishery Extension Officers held previously by the Training Department in 1981-1982, with the following main and auxiliary subjects:-

1. Target Group of Marine Fisheries Extension Work

Participants were made known of various fishing circles and people in order to understand their various basic problems. Instruction was given on the following groups:-

1.1 Fishing Communities

1.2 Fishery Cooperatives

After theoretical study, field trips were arranged for participants to fishing villages and fisherman's cooperatives to observe the actual conditions, interviewing the local fishermen, to gather informations that could lead to the understanding of their constraints, plight, and solutions.

2. Principles of Fishery Extension Work

The subject covered the following basic concepts of fishery extension work:-

2.1 Extension Philosophy

2.2 Extension Methodology

2.3 Extension Communication

Field trip was arranged to bring participants to the nearby fishing villages where they could practise the in situ application of their knowledge.

3. Resources of Marine Capture Fisheries

Two additional subjects were included to broaden the view in fisheries resources, i.e.,

3.1 Fisheries in General

3.2 Marine Fisheries Systems

Field trips to the Marine Fisheries Laboratory and the Bangkok Fish Market were made to observe local fish landings and to interview fishermen. The participants were also briefed on the national program for monitoring fish stocks and for conservation of the fisheries resources in the Gulf of Thailand at the Marine Fisheries Division of the Thai Department of Fisheries.

4. Technologies for Marine Capture Fisheries

Various related and auxiliary subjects were included to enhance participants knowledge in the field of fishery extension services, viz.:

- 4.1 Fish Catching Technology
- 4.2 Fishing net making and repair
- 4.3 Coastal Navigation and Basic Seamanship
- 4.4 Fuel Substitution
- 4.5 First Aid at Sea
- 4.6 Post-Harvest Technology
- 4.7 Socio-Economics Survey of Marine Fishing Households
- 4.8 Accounting and Business Management for Marine Fishermen

The list of lectured subjects of this course was given in Annex B.

IV. TRAINING PROGRAMME

1. Lectures and Practices

Training was carried out with all facilities and resources being fully utilized, both ashore and at sea (see Work Schedules in Annex C). In general, the daily training began at 0850 hrs. on weekdays with Class room lecture and discussion till 1200 hrs. For the afternoon session, either the continuation of class lecture, workshop practice at net loft, experiment or testing at laboratory, from 1300-1610 hrs., was conducted. Lectures on theoretical subjects were occasionally followed either by demonstration in the workshop, on board the training vessel, or by field trips to the relevant places, such as Net factory, canning factory, cold storage, etc. Six days were spent at sea on board M.V. PLATOO, the 67 GT. purse-seiner of the Training Department, to practise the fishing gears' operation, navigation and seamanship, as well as the additional orientation of the machine layout in the engine room and their functions.

External studies that could yield more benefit than the class room study were also carried out. These included the training on "First Aid at Sea" at Lerdsin Hospital; "Net Materials and Making" at a net factory - The Siam Brothers Net Co., Ltd.; "Fuel Substitution" at

the Ministry of Industry; "Post Harvest Technology at the Marine Fisheries Laboratory, Cold Storage Organization, and the Fish Market Organization. Extra-activities were also carried out after office's hour according to the request from participants such as the demonstration of cast net by M.V. PLATOO, the study of a local longtail motor boat in view of its' engine-installation, method of cooling, mechanism of gear, and shaft connection to longtail propeller, etc.

2. Field Trips

Various places related to fishing activities such as fishing villages in the provinces of Samutsakorn and Chumporn; fishing communities, with and without cooperatives; fish markets; fish processing plants in Bangkok and Samutprakarn, Cold storage, etc., were visited as followed:-

31st July 1982 : 0900-1000: Visited Fish Marketing Organization Head Office in Bangkok. Briefing of the Organization's activities was given by the Deputy Director of FMO who kindly took participants around to observe the fish landing and auction system of the fish market.

1300-1500: Visited Cold Storage Organization at Samutprakarn. Guided by the Cold Storage Manager, participants were able to observe various sections of the Organization, ice making plants, and various marine frozen products.

7th August 1982 : 0800-1000: Visited Fish Marketing Organization in Samutsakorn Province. Observing the fish landing activity, and discussed the matter with an FMO's Officer.

1030-1130: Visited the nearby local shrimp farms to observe the traditional types of shrimp culture in Thailand.

14th August 1982 : 0900-1200: Visited Siam Brothers Co. Ltd., a net making factory at Phrapradaeng - Samutprakarn, to observe the manufacturing of fishing net from the beginning, i.e. twine making, net weaving, net cutting, etc. Participants were much impressed with the manager's hospitality in views of his kind cooperation and willingness to offer knowledge.

21st August 1982 : 0930-1200: Visited the Fishermen's Association at Ban Lam District, Petchburi Province. Briefed by the Chairman of Fishermen's Association and the local fisheries officers concerning the fisheries industry and the activities of Fishermen's Association in the area, followed by a visit to shrimp farm.

1400-1530: Visited "Mae Klong Fisheries Cooperatives" of Samut Songkram Province to observe fish landing place owned by the Cooperatives and discussed the matter with a member of the Cooperatives' Committee.

9th September 1982 : 0900-1000: Visited fish farm in "Bang Pla" district at Samutprakarn Province. Observed fish culture and traditional fish processing (dried salted fish and fermented fish).

1030-1200: Visited "Union Seree Co., Ltd." to observe canning process for sardines and tuna.

1400-1530: Visited "Surapon Seafoods Co., Ltd." to observe freezing process of shrimp, prawn, squid, and fish for export. Several aspects were discussed with the company general manager.

11th September 1982 : 0900-1200: Excursion Trip to "Ancient City" in Samutprakarn Province.

3. Shipboard Training at Sea

The same pattern of training was carried out exactly as done on the 2nd Training Course, except with longer period in order to practise more thoroughly and effectively the training schedule. Training was carried out on board M.V. PLATOO on fishing operations with various types of fishing gear as well as practice on navigation and seamanship. The cruising area was in the Gulf of Thailand off the coast of Prachuab Kirikhan. Six-day-training took place on board as well as ashore from 23rd to 28th August 1982. The daily training began according to schedule, i.e., either at 0800 hrs. for the day-time operation or at 1800 hrs. for the night time operation depending on the type of fishing gear. Approximately 10-12 hrs. were spent daily at sea. Accommodation was booked in a local hotel for their rest period. The preparation of fishing gears was normally done by the participants

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- 4.3 Coastal Navigation and Basic Seamanship
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during sailing to the fishing ground. On the return trip, time was spent in practising the navigation and seamanship after the discussion on fishing operation for the day was concluded.

V. EVALUATION

At the end of the course, a questionnaire was distributed for completion by each participant in order to determine his overall opinion of this third Regional Training Course in Marine Capture Fisheries. The questionnaire was designed to cover all points of view for the purpose of improving the effectiveness of future courses. Participant were asked to express their opinions freely. The results of this inquiry are shown in Annex D.

The majority of participants agreed that this course was best suited to extension work. The times allotted to all subjects were quite appropriate, less few subjects that needed longer duration of lecture such as fishing net design and practice, navigation, extension subjects, etc. They also expressed their ideas concerning the need for less lecture in class room and more time for practice in the workshop as well as at sea, in spite of the fact that more time was already provided for practical work than theoretical study comparing to the first and second courses. Participants seemed to be in a rush applying the inadequate knowledge obtained from class room. More field-trips were also proposed. In addition, some participants still suggested the inclusion of some subjects previously rejected by the participants in the 2nd course, i.e. marine engineering, refrigeration, fishing boat construction, etc.

In view of the comments received, especially the recommendation of subjects beyond the scope of marine capture fisheries extension such as the Aquaculture, Design of Fishing Gear, Navigation, Marine Engineering, Fishing Boat for Purse-Seiner, Marine Resources, Fisheries Statistics, etc., the program for the similar training in future should be revised to match with the need of the regional demand. Particular emphasis on a specific subject, such as fishing technology, post-harvest technology, Socio-economics aspects or extension methodology, should receive high priority than a general subject in order to upgrade the existing technical Know-how more effectively for the extension workers in the region.

VI. CONCLUSION

The 3rd Regional Training Course in Fishery Extension was conducted efficiently as all the staff concerned were well acquainted with their responsibilities as well as the curriculum, although slightly changed from course to course as the result of adjustment. The unforeseen constraints to the training program were minimized with the experience gained from previous courses. Participants were satisfied with the sequence of subject arrangement and its contents,

as verified by their answers at the course evaluation. It was observed that most of the participants in this third course were engaged directly in the field of extension services. They all agreed that the course had provided valuable training in the field of fishery extension work.

It was also worth to note that the participants to this type of training were increased significantly from 19 in the 1st course. The participating countries also increased from 5 to 9 in the present course, which indicate the interest and support for such training programs in the region.

The evaluations, compiled by each participant at the end of training, mostly boiled down to the need for more in-depth lecture on several subjects whereas the scope of Fishery Extension Course was unable to cover to that extent. The subjects indicated by the participants were Fishing Gear and Methods, Fishing Net Design, Post-Harvest Technology, Coastal Navigation, Marine Engineering, Electronic devices for fishing gears. The suggestions made by participants could be realistic only if the special courses be held for intensive training in specific fields in the future.

In summary this 3rd Extension Course was in general quite satisfactory. Participants were interested and satisfied with their 2-month training at the SEAFDEC Training Department. All the objectives of the training were achieved as planned.

CONCLUSION VI

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LIST OF PARTICIPANTS AND LECTURERS

A. Participants

I. BRUNEI

1. Awang Jusif bin Abu Bakar
Senior Fisheries Licensing Officer
Jabatan Perikanan,
Bandar Seri Begawan
Brunei

2. Alias Shari
Fisheries Department
P.O. Box 2161, Bandar Seri Begawan
Brunei

II. BURMA

1. U Kyi Htwe
Instructor, Fishery Extension
Institute of Fisheries Technology
Project
Institute of Fisheries Technology
c/o People's Pearls and Fishery
Corporation 654, Merchant Street
Rangoon
Burma

2. U Kyaw Win
Asst. Instructor Fishery Extension
Techniques Institute of Fishing
Technology Project
Institute of Fisheries Technology
c/o People's Pearls and Fishery
Corporation 654, Merchant Street
Rangoon
Burma

III. INDIA

1. K. P. Biswas
Director of Fisheries (for) Andaman
and Nicobar
P.O. Port Blair, South Andaman
India

2. George Varghese
Director of Fisheries (for) Lakshadweep
Lakshadweep, Kavaratti 673555
India

IV. INDONESIA

1. Samtoro Putro
Head of Training Section
Fisheries Service of Central Java
Province
Jalan MPU Tantular No. 2
Semarang, Central Java
Indonesia

2. Agoes Irianto
Instructor of Marine Fisheries
Training Center
SPP - SUPM/BKPI
Jalan Martoloyd P.O. Box 22
Tegal, Central Java
Indonesia

V. MALAYSIA

1. Megat Mohd Fouzi
Fisheries Administrative Officer
Jabatan Perikanan Negeri Perak
JLN KG. Simee, Ipoh Perak
Malaysia

2. Ahmad Fuad bin Ahmad
Fisheries Services Officer
Jabatan Perikanan Negeri Kedah/Perlis
Wisma Persebutuan, Alor Setar, Kedah
Malaysia

3. Ling Nee Wen
Fisheries Officer
Marine Fisheries Department
Miri, P.O. Box 894, Sarawak
Malaysia

VII. SINGAPORE

4. Jephirin Wong
Head of Sandakan Fisheries Department
Fisheries Department
P.O. Box 1369
East Malaysia

VI. PHILIPPINES

1. Cesar C. Matulac
Supervising Fishery Extension
Specialist
Bureau of Fisheries
and Aquatic Resources (BFAR)
Iloilo
Philippines

VIII. SRI LANKA

2. Antonio R. Parras
Fishery Technologist
BFAR, Region I
District Fishery Office
Dagupan
Philippines

3. Pedro S. del Mundo
Jr. Fishery Biologist
(Extension Officers)
District Fishery Office
Lucena, City
Philippines

IX. THAILAND

4. Eriel E. Alegata
Sr. Fishery Technologist
BFAR, District Fishery Office Tagum
Davao del Norte
Philippines

VII. SINGAPORE

1. Ishak bin Sabar
Asst. Primary Production Officer
Jurong Fishing Port
Fishery Port Road
Singapore 2261

2. Yeo Toon Khee
Enforcement Officer for the Licensing
and Operation of Fishing Vessel
Jurong Fishing Port
Fishery Port Road
Singapore 2261

VIII. SRI LANKA

1. M.M.N. Hussain
District Fishery Susceptor
Ministry of Fisheries
Wyvishwike Road,
Mattakkuliya, Colombo 15
Sri Lanka

2. K.L.R. Jayasiri
Fishery Susceptor
Fishery Inspector
Ministry of Fisheries
Colombo - 15
Sri Lanka

IX. THAILAND

1. Dheerasak Wasuthapitak
Exploratory Fishing Division
Samutprakarn
Thailand

2. Issaro Veerakavudhi
Satun Fisheries Provincial Office
Satun
Thailand 91000

3. Mukda Uttarapong
Marine Fisheries Division
Soi Sapan-pla, Yannawa
Bangkok
Thailand

4. Piansiri Piyathirathitivorakul
Marine Fisheries Division
Soi Sapan-pla, Yannawa
Bangkok
Thailand

5. Piya Chulavidhyanukul
Satun Fisheries Station
Langu, Satun
Thailand 91110

6. Suchat Dechasajja
Conservation and Extension Division
Department of Fisheries, Bangkok
Thailand

7. Supatra Amornchairojkul
Marine Fisheries Division
Soi Sapan-pla, Yannawa
Bangkok
Thailand

8. Thongchai Patanakul
Fisheries Extension Officer
Phuket Brackish Water Station
Phuket
Thailand 83000

B. Lecturers

I. Training Department Staff

1. Dr. Veravat Hongskul
Secretary-General and Chief of
Training Department
(Lecturer on Marine Fisheries Systems)
2. Dr. Shigeaki Shindo
Deputy Secretary-General and Deputy Chief
of Training Department
(Lecturer on Fisheries in General)
3. Capt. Vudhi Sudhasaneya, RTN
Head of Training Division,
Marine Engineering Instructor
(Course Director)
4. Mr. Tomeyoshi Yamazaki
Head of Fishing Technology Section
Fishing Gear Instructor
(Lecturer on Purse Seine Net, Lift Net, and Set Net)
5. Mr. Masatake Okawara
Fishing Technology Section
Fishing Gear Instructor
(Lecturer on Gill Net and Line Fishing Method)
6. Mr. Prasert Masthawe
Fishing Technology Section
Fishing Gear Instructor
(Lecturer on Trawl Net, Purse Seine Net, Net Making and
Net Repair)
7. Mr. Kungwan Juntarashote
Head of Statistics and Socio-Economics Section
Training Department
(Lecturer on Fisheries Accounting and Management,
Course Director Assistant)
8. Mr. Chumpol Nakalaksana
(Adviser to Socio-Economic Survey)

II. Guest Lecturers

1. **Mr. Yasumatsu Miyake, Lecturer in Fisheries Cooperatives**
Kanagawa International Fisheries Training Center
Japan
(Lecturer in Fisheries Co-operatives, Fishing Communities,
and Socio-Economics of Small-Scale Fishermen)
2. **Mr. Thanoo Veecharungsun**
Director of Central Engine Registration Division
and Chairman of POWER ALCOHOL COMMITTEE
Ministry of Industry, Thailand
(Lecturer on Fuel Substitution)
3. **Captain Prathom Boontang, RTN.**
Naval Officer College
Royal Thai Navy, Bangkok
(Lecturer in Navigation and Seamanship)
4. **Dr. Kamthorn Sukapanpotharam, M.D.**
Head, Surgical Section
Lerdsin Hospital
Bangkok
(Lecturer on First Aid at Sea)
5. **Dr. Direk Rerkrai**
Office of Extension and Training
Kasetsart University, Bangkok
(Lecturer on Extension Methodology)
6. **Dr. Tatchai Sangsingkao**
Extension and Training Centre
Kasetsart University
(Lecturer on Extension Philosophy)
7. **Dr. Sophon Thanamai**
Faculty of Education
Kasetsart University
(Lecturer on Extension Communication)
8. **Mr. Suchote Daosukho**
Extension and Training Centre
Kasetsart University
(Lecturer on Media for Extension Worker)

9. **Dr. Poonsap Virulhakul**
Fisheries Technologist
Fisheries Technological Development Division
Department of Fisheries, Thailand
(Lecturer on Fish Handling and Quality Assessment)
 10. **Mrs. Rerngrudee Prudhiarnand**
Chief, Processing Section
Fisheries Technological Development Division
Department of Fisheries, Thailand
(Lecturer on Fish Products)
 11. **Mrs. Pongpen Rattagool**
Chief, Quality Analysis and Research Section
Fisheries Technological Development Division
Department of Fisheries, Thailand
(Lecturer on Fish Preservation)
 12. **Miss Prathip Kiatkangwankrai**
Fisheries Technologist, Processing Section
Fisheries Technological Development Division
Department of Fisheries, Thailand
(Lecturer on Fish Product)
1. Mr. Y. Kanagawa
Kanagawa International Fisheries Training Center
Japan
2. Mr. Thanoo Vacharungnuan
Director of Central Engine Registration Division
and Chairman of POWER MACHINERY COMMITTEE
Ministry of
3. Captain Prathom Boonlath
Naval Officer College
Royal Thai Navy, Bangkok
4. Dr. Kasitorn Sukapant
Head, Surgical Section
Lerdsin Hospital
Bangkok
(Lecturer on First Aid at Sea)
5. Dr. Direk Harkrai
Office of Extension and Training
Kasetsart University, Bangkok
(Lecturer on Extension Methodology)
6. Dr. Tatchai Sangsriphak
Extension and Training Centre
Kasetsart University
(Lecturer on Extension Philosophy)
7. Dr. Sophon Thanasri
Faculty of Education
Kasetsart University
(Lecturer on Extension Communication)
8. Mr. Suchotee Prasanna
Extension and Training Centre
Kasetsart University
(Lecturer on Media for Extension Worker)

Annex B

- List of Subjects
1. **Fishery in General : Relationship between "Marine Capture Fisheries" and the other subjects of the course by Flow Chart.**
 2. **Marine Fisheries Systems: Interrelationships between the marine ecological system, fishing system, post-harvest system and fishery extension system. The role of fishery extension workers in promoting maximum and effective utilization of resources.**
 3. **Net Making: General concepts, definitions, materials used in the workshop, knots used in mending, braiding of fishing net.**
 4. **Net Repair: Trimming a tear, elimination of knots on meshes, repair of the simplest tear, repair of a horizontal tear, mending of a vertical tear.**
 5. **Fishing Method of Gill Net : Introduction, Classification of gill net and the characteristics of each gill net, Factors required for gill net, Net casting and hauling methods, Specification of gill net.**
 6. **Line Fishing Method : Line fishing gear, Classification of line fishing methods and the specification of each type of fishing gear and the operation methods. Handline fishing, Pole and Line fishing, Longline fishing, Troll Line fishing.**
 7. **Trawl Net Design : Preliminary study of characteristics of Trawl Net construction in Thailand, Construction of two-seam trawl, Construction of four-seam trawl, Discussion on essential factors of trawl net, design of trawl net used on M.V. PAKNAM.**
 8. **Purse Seine Net Design: Factors governing purse seine net design, Fishing methods of purse seine, Necessary conditions for purse seining, How to design purse seine net.**

- 16.4 Quality Assessment of Fish : Problems in assessing quality, Methods of quality assessment (Physical test, chemical test, microbiological method, sensory method), Judgement.
17. Fishing Communities and Socio-Economic Conditions of Small-Scale Fishermen : Fishing Communities, Socio-Economic Survey on Fishing Households, Design and arrangement of survey. Identification and listing of fishing households. Interview with sample fishing households. Data processing and analysis. Fishery Cooperatives.
18. Fisheries Co-operatives : General considerations, Organization of fishermen's cooperatives, Activities of fishermen's cooperatives, Credit for fishermen, Fish Marketing, Questionnaire.
19. Extension Philosophy : Principal of Extension, Rural changes and poverty, Philosophy and Strategies, The Central Concept and Goals of Rural Development.
20. Extension Communication : Group approach, Use of mass media, Fishermen to fishermen.
21. Extension Methodology : Marine fisheries problems, Social factors and allied primary industries, Demonstration and development programs, Extension and appropriate technology, Extension and cooperative development.

Annex C

Work Schedules

(26 July to 17 September 1982)

26 July, Monday

- 0850 - 1200 : Opening Ceremony. Introduction of Staff and facilities. (Dr. Veravat and Capt. Vudhi)
- 1300 - 1610 : Orientation of the Course in general, film and slide show of fishing industries. (Capt. Vudhi, Mr. Okawara)

27 July, Tuesday

- 0850 - 1200 : Fisheries in General (Dr. Shindo)
- 1300 - 1610 : Marine Fisheries Systems (Dr. Veravat)

28 July, Wednesday

- 0850 - 1200 : Purse Seine Net Design (Mr. Yamazaki)
- 1300 - 1610 : Practice in Purse Seine Net Design (Mr. Yamazaki)

29 July, Thursday

- 0850 - 1200 : Lift Net Design (Mr. Yamazaki)
- 1300 - 1610 : Practice in Lift Net Design (Mr. Yamazaki)

30 July, Friday

- 0850 - 1200 : Lift Net Design (Mr. Yamazaki)
- 1300 - 1610 : Practice in Lift Net Design (Mr. Yamazaki)

31 July, Saturday

- 0850 - 1610 : Visit Bangkok Fish Market and the Fish Marketing Organization (FMO) and Cold Storage Organization (CSO) (Mr. Kungwan)

10 August, Tuesday

0850 - 1200 : Net Making (Mr. Prasert)
1300 - 1610 : Net Making Practice (Mr. Prasert)

11 August, Wednesday

0850 - 1200 : Net Repair (Mr. Prasert)
1300 - 1610 : Net Repair Practice (Mr. Prasert)

12 August, Thursday National Holiday

13 August, Friday

0850 - 1200 : Basic Seamanship (Capt. Prathom)
1300 - 1610 : - ditto - Marlinspike Seamanship (Capt. Prathom)

14 August, Saturday

0850 - 1610 : - ditto - Visit Net Making Factory in Phrapradaeng
(Siam Brothers & Co. Ltd.) (Mr. Kungwan)

15 August, Sunday Rest

16 August, Monday

0850 - 1200 : Coastal Navigation (Capt. Prathom)
1300 - 1610 : Application of Chart and Navigating
Instruments (Capt. Prathom)

17 August, Tuesday

0850 - 1200 : - ditto - Coastal Navigation (Contd.) (Capt. Prathom)
1300 - 1610 : - ditto - Ship's position by bearing (Capt. Prathom)

18 August, Wednesday

0850 - 1610 : - ditto - First Aid at Sea (at Lerdsin Hospital)
(Dr. Kamthorn)

19 August, Thursday

0850 - 1610 : Fisheries Co-operatives (Mr. Miyake)

20 August, Friday

0850 - 1200 : Fishing Communities (Mr. Miyake) - 0850

1300 - 1610 : Socio-Economics of Small-Scale Fishermen (Mr. Miyake) - 1300

21 August, Saturday

0850 - 1610 : Visit Fisheries Co-operatives and Fisherman Groups (Mr. Miyake & Mr. Kungwan)

22 August, Sunday

Leave Bangkok by bus to Chumporn

23 August, Monday

Training on board M.V. PLATOO on Fishing Gear and Fishing Operations in the Gulf of Thailand (Mr. Prasert)

24 August, Tuesday

- ditto - 1300 - 1610

25 August, Wednesday

- ditto - 14 August, Saturday

26 August, Thursday

- ditto - 0850 - 1610

27 August, Friday

- ditto -

28 August, Saturday

- ditto -

29 August, Sunday

Rest

30 August, Monday

0850 - 1610 : Socio-Economics Survey of Marine Fishing Households at Chumporn Province (Mr. Kungwan, Mr. Chumpol)

31 August, Tuesday

- ditto - 0850 - 1300

1 September, Wednesday

- ditto - 1300 - 1610

2 September, Thursday

- ditto - 18 August, Wednesday

3 September, Friday

- ditto - 0850 - 1610

4 September, Saturday

Leave Chumporn for Bangkok by bus

5 September, Sunday Rest 15 September, Wednesday

6 September, Monday Extension Methodology (Mr. Suchote) : 0850 - 1610
0850 - 1200 : Fuel Substitution (Mr. Thanoo)
1300 - 1610 : Demonstration of Engines with Substitute Fuel (Mr. Thanoo) 16 September, Thursday
(Dr. Shingo, Capt. Vudhi and Mr. Kungwan) 0850 - 1610

7 September, Tuesday Closing Ceremony 17 September, Friday
0850 - 1200 : Fish Handling (Mrs. Bung-Orn) Presentation of Certificates by the Ministry of the Royal Navy, Ambassador to Thailand
1300 - 1610 : Fish Preservation (Mrs. Bung-Orn)

8 September, Wednesday
0850 - 1200 : Fish Products (Mrs. Bung-Orn)
1300 - 1610 : Quality Assessment (Mrs. Bung-Orn)

9 September, Thursday
0850 - 1610 : Visit Fish Processing Plants in Bangkok and Samutprakarn (Mrs. Bung-Orn & Mr. Kungwan)

10 September, Friday
0850 - 1610 : Accounting and Business Management for Marine Fishermen (Mr. Kungwan)

11 September, Saturday
0850 - 1610 : Excursion

12 September, Sunday Rest

13 September, Monday
0850 - 1610 : Extension Philosophy (Mr. Kungwan, Mr. Suchote)

14 September, Tuesday
0850 - 1610 : Extension Communication (Mr. Kungwan, Mr. Suchote)

15 September, Wednesday

Rest

2 September, Sunday

0850 - 1610

Extension Methodology (Mr. Kungwan, Mr. Suchote)

Fuel Substitution (Mr. Thanoo)

0850 - 1200

16 September, Thursday

Demonstration of engine with

1900 - 1610

0850 - 1610

Evaluation (Dr. Shindo, Capt. Vudhi and Mr. Kungwan)

Fuel Substitution (Mr. Thanoo)

3 September, Tuesday

17 September, Friday

Closing Ceremony

0850 - 1200

Presentation of Certificates by His Excellency the Royal Netherland Ambassador to Thailand.

Quality Assessment (Mrs. Bung-Gin)

4 September, Wednesday

Fish Products (Mrs. Bung-Gin)

0850 - 1200

Quality Assessment (Mrs. Bung-Gin)

1100 - 1610

5 September, Thursday

Visit Fish Processing Plants in Bangkok and Samutprakarn (Mrs. Bung-Gin & Mr. Kungwan)

0850 - 1610

10 September, Friday

Accounting and Business Management for Marine Fishermen (Mr. Kungwan)

0850 - 1610

11 September, Saturday

Excursion

0850 - 1610

Rest

12 September, Sunday

Extension Philosophy (Mr. Kungwan, Mr. Suchote)

0850 - 1610

13 September, Monday

Extension Commission (Mr. Kungwan, Mr. Suchote)

0850 - 1610

14 September, Tuesday

Results of Evaluation
(Inquiry by Questionnaire)

1. How does the course suit you? In view of :-
 - 1.1 Training duration : too short (3), too long (4), fair (21).
 - 1.2 Number of subject : too many (4), too few (2), fair (22).
 - 1.3 Subjects : the content is too brief (6), too long (5), appropriate (17).
 - 1.4 Method of training : need more theory (1), more practice (17), efficient (10).
 - 1.5 Other comments
Training facilities and training site, etc. : Good (8), Fair (18), Insufficient (2).
2. Is there any particular subject, in your opinion, should be included for Fishery Extensions Service in Marine Capture Fisheries:-
 - For Yes (13) :- Boat Construction, Fishing Boat for Purse-seining, Engine Maintenance and Repair, Basic Engineering, Electrical Fishing Devices, Basic Knowledge on Marine Resources, Fisheries Law and Regulation, Basic on Fisheries Statistics, Fish Behaviour, Fisheries Economics, Stock Assessment, Aquaculture.
 - For No (15) :- The present subjects are quite adequate.
3. Is there any subject of this course which you feel not directly concern to your field of work as an extension officer?
 - For Yes (5) :- Quality Control and Assessment, Fish Preservation, First Aid at Sea, Fuel Substitution, Coastal Navigation.
 - For No (23) :- All subjects are directly concerned.

4. Are study trips to places related to fishery beneficial to you?

Results of Evaluation

The answers are all yes.

5. Which subjects are most relevant to the extension service in your local area of operation? Please state the location of area(s).

5.1 Extension Philosophy, Methodology, Communication (8).

5.2 Most of the subjects (8).

5.3 Squid Fishing Net (2 - Indian Participants - Andaman Sea)

5.4 All Fishing Gear & Fishery Cooperative (7 Thai)

5.5 Socio-Economics Survey (2 - Indian Participants)

5.6 Line Fishing and Gill Net (2 - Sri Lanka Participants)

5.7 Purse-seining and First Aid at Sea (3 - Philippines, Quezon)

6. Back at home, are you continuing to work in the field of Fishery Extension?

For Yes (22), For No (6)

7. If not, in what field are you expecting to be posted?

7.1 Fisheries Management

7.2 Administrative

7.3 Post Harvest Technologist

7.4 No idea

7.5 Directors of Fisheries (2 Indian Participants)

8. What part of the year (month) is most suitable to your home office in dispatching participants to take part in such a course abroad?

"Scattered through out the year"

9. Any suggestion for course improvement, e.g. need more detail instruction or more lecture period on any particular subjects, more practice, more shipboard training, or any other relevant matters.

9.1 More lecture on :- Navigation, Socio-Economics Survey, Post Harvest Technology, Fishing Gear and Method, Extension Subjects, Fishing Net Design.

9.2 More practice on:- Fishing Gear and Method, Navigation, Socio-Economics Survey, Shipboard Training especially on the location of ship's position, Purse-seining and Trawling, Fishing net Fabrication.

9.3 Additional Subjects : Marine Engineering and Refrigeration.

9.4 Others:

9.4.1 Extension Service in each country should be briefed by each participant.

9.4.2 More lecture notes in extension subjects to be distributed as reference by lecturers.

9.4.3 Proposed 30% lecture, 30% practice, 30% field trips, 10% excursion. Another proposal is

Theory : Practice = 60% : 40%

9.4.4 Longer course duration

9.4.5 While notifying the training course, it will be desirable to detail the nature of course, status of candidates, venue of training accommodation, allowances, etc., so that officials of appropriate levels could be selected and sent for the course.

9.4.6 The training vessel (M.V. PLATOO) is too small for 28 participants.

List of Reference Books and Lecture Notes

- | | | |
|-----|--|-------------------|
| 1. | Marine Fisheries Extension | Dr. Veravat |
| 2. | Fisheries in General | Dr. Shindo |
| 3. | Fisheries Resources and Optimum Utilization | Dr. Shindo |
| 4. | Purse Seine Net Design | Mr. Yamazaki |
| 5. | Lift net Design (Stick-held Dip net) | Mr. Yamazaki |
| 6. | Set net Design (Pound net) | Mr. Yamazaki |
| 7. | Weight list of net and material | Mr. Yamazaki |
| 8. | Kind of Floats | Mr. Yamazaki |
| 9. | Trawl net Design | Mr. Prasert |
| 10. | Purse Seining Method | Mr. Prasert |
| 11. | Study of net making | Mr. Prasert |
| 12. | Braid and mending of fishing net | Mr. Prasert |
| 13. | Shapingnetting | Mr. Prasert |
| 14. | Study of net repair | Mr. Prasert |
| 15. | Line fishing method | Mr. Okawara |
| 16. | Fishing Method of gill net | Mr. Okawara |
| 17. | Seamanship and Navigation | Capt. Prathom |
| 18. | International Conference on Revision Preventing 1972 | Capt. Prathom |
| 19. | Seamanship (Marlinspike) | Capt. Prathom |
| 20. | The Accident Victim (First Aid at Sea) | Dr. Kamthorn M.D. |

- | | | |
|-----|--|-------------------|
| 21. | Fishing Cooperatives | Dr. Kamthorn M.D. |
| 22. | Fishery Cooperatives Association
(Dr. Tadashi) | Dr. Kamthorn M.D. |
| 23. | Fishing Communities (Dr. Tadashi) | Dr. Kamthorn M.D. |
| 24. | Fuel Substitution | Mr. Thanoo |
| 25. | Solar Power | Mr. Thanoo |
| 26. | Fish Handling, Preservation
processing (Mrs. Bung-Orn) | Mrs. Rerngrudee |
| 27. | Fish Products | Mrs. Rerngrudee |
| 28. | Quality Assessment of Fish | Dr. Poonsap |
| 29. | Fish Preservation | Mrs. Pongpen |
| 30. | Introduction to Accounting and
Management for Sea Fishermen | Mr. Kungwan |

PUBLISHED FROM FAO (SCSP)

1. Equipment Review (The technology of small scale)
2. Statistics for Fisheries Development
3. Intermediate Technology and Alternative energy system
4. Some Technical Aspects of small-scale fish landing
Facilities
5. Fishing Method, Equipment & Deck lay out.