

ANNEX 17: REGIONAL TRAINING WORKSHOP ON LARVAL FISH IDENTIFICATION

PHASE I: LARVAL FISH IDENTIFICATION
(SPONSOR BY SEAFDEC/UNEP/GEF/FISHERIES REFUGIA)
 15-27 NOV 2022, SEAFDEC TRAINING DEPARTMENT

PROGRAM AND SYLLABUS

Date/Time	Training Activity/Topic	Resource Person
15 Nov. 22 - Tuesday		
	Participants arrive at SEAFDEC Training Department, Samut Prakan, Thailand	SEAFDEC Personnel
16 Nov. 22 - Wednesday		
0830-0900	Registration	SEAFDEC & SEAFDEC-Refugia
0900-0920	Opening ceremony & group photo	SEAFDEC & SEAFDEC-Refugia
0920-0940	Refreshment	SEAFDEC Personnel
0940-1000	Brief on schedule and anticipated output	SEAFDEC Personnel
1000-1200	Country report on the implementing plan of the fisheries resources refugia project (20 minutes each countries)	Participants (Cambodia, Indonesia, Malaysia, Philippines, Thailand and Vietnam)
1200-1330	Lunch break	SEAFDEC Personnel
1330-1500	Keynote Address: Early life history studies of the subtropical marine fishes in Okinawa, Japan (tentative)	Prof. Dr. Katsunori Tachihara (University of the Ryukyus)
1500-1520		
1520-1600	Case Study 2: Distributions and transportation of jack mackerel (<i>Trachurus japonicus</i>) larvae and juveniles in the East China Sea	Dr. Yoshinobu Konishi (former, Seikai National Fisheries Research Institute, Japan)
1600-1700	Case Study 3: Utilization of DNA barcodes for the identification of tropical larval fishes in Klang Strait, Straits of Malacca (tentative)	Dr. Cecillia Chu (University of Malaya)
1700-1800	Practical: DNA barcode collecting and preserving technique	Dr. Cecillia Chu (University of Malaya)
1830-2200	Welcome Dinner	SEAFDEC Personnel
17 Nov. 22 - Thursday		
0900-1000	Lecture: Review on morphological development of larval fish characters	Yoshinobu Konishi
1030-1200	Lecture: Identification methods of the Scombridae larvae and juveniles in the Southeast Asian region	Yoshinobu Konishi
1200-1330	Lunch break	SEAFDEC Personnel
1330-1700	Practice: Species identification and morphological description of the Scombridae larvae and juveniles - 1	Instructor Team

18 Nov. 22 - Friday		
0900-1200	Practice: Species identification and morphological description of the Scombridae larvae and juveniles - 2	Instructor Team
1200-1330	Lunch break	SEAFDEC Personnel
1330-1700	Practice: Species identification and morphological description of the Scombridae larvae and juveniles - 3	Instructor Team
19 Nov. 22 - Saturday		
0900-1000	Lecture: Identification methods of the Carangidae larvae in the Southeast Asian region	Yoshinobu Konishi
1030-1200	Practice: Species identification and morphological description of the Carangidae larvae - 1	Instructor Team
1200-1330	Lunch break	SEAFDEC Personnel
1330-1700	Practice: Species identification and morphological description of the Carangidae larvae - 2	Instructor Team
20 Nov. 22 - Sunday		
	Rest Day	
21 Nov. 22 - Monday		
0900-1200	Practice: Species identification and morphological description of the Carangidae larvae - 3	Instructor Team
1200-1330	Lunch break	SEAFDEC Personnel
1330-1430	Lecture: Identification methods of the Engraulidae larvae in the Southeast Asian region	Yoshinobu Konishi
1500-1700	Practice: Species identification and morphological description of the Engraulidae larvae - 1	Instructor Team
22 Nov. 22 - Tuesday		
900-1200	Practice: Species identification and morphological description of the Engraulidae larvae - 2	Instructor Team
1200-1330	Lunch break	SEAFDEC Personnel
1330-1700	Practice: Species identification and morphological description of the Engraulidae larvae - 3	Instructor Team
23 Nov. 22 - Wednesday		
0900-1200	Presentation of case study on early life history science based on the references for planning of future working subjects in participating countries	Participating countries
1200-1330	Lunch break	SEAFDEC Personnel
1330-1430	Lecture: Identification methods of the Lutjanidae, Siganidae and serranid Epinepharinae larvae in the Southeast Asian region	Yoshinobu Konishi
1430-1700	Practice: Species identification and morphological description of the Lutjanidae, Siganidae and serranid Epinepharinae larvae - 1	Instructor Team
24 Nov. 22 - Thursday		
0900-1200	Practice: Species identification and morphological description of the Lutjanidae, Siganidae and serranid Epinepharinae larvae - 2	Instructor Team
1200-1330	Lunch break	SEAFDEC Personnel

1330-1700	Practice: Species identification and morphological description of the Lutjanidae, Siganidae and serranid Epinepheninae larvae - 3	Instructor Team
25-Nov-22 - Friday		
0900-1200	Practice: Species identification and morphological description of the Lutjanidae, Siganidae and serranid Epinepheninae larvae - 4	Instructor Team
1200-1330	Lunch break	SEAFDEC Personnel
1330-1700	Preparation of presentation on species identification and morphological descriptions of examined larvae and juveniles, and on future working subjects to be planned	Yoshinobu Konishi Rangsan Chayakul Teerapong Duandee
26 Nov. 22 - Saturday		
0900-1200	Presentation on results of species identification and morphological descriptions of examined larvae and juveniles, and on future working subjects to be planned	Yoshinobu Konishi Rangsan Chayakul Teerapong Duandee
1200-1330	Lunch break	SEAFDEC Personnel
1330-1430	Training course evaluation	SEAFDEC-Refugia
1430-1500	Closing for Phase I	
27 Nov. 22 - Sunday		

**PHASE II: DETERMINE SPAWNING AND NURSING GROUND BASE ON SURVEY
RESULTS
(SPONSOR BY JAPANESE TRUST FUND)
28 NOV - 3 DEC 2022, SEAFDEC TRAINING DEPARTMENT**

PROGRAM AND SYLLABUS

28 Nov. 22 - Monday		
0900-1200	Principle of GIS and Vector data model	
1200-1330	Lunch break	
1330-1630	work with QGIS opensource software GIS and Map creation	
29 Nov. 22 -		
0900-1200	Raster data model in GIS	
1200-1330	Lunch break	
1330-1630	work with raster data and simple modelling	
30 Nov. 22 -		
0900-1200	the principle of prediction model	
1200-1330	Lunch break	
1330-1630	work with R statistic free software	
1 Dec. 22		
0900-1200	Introduction to Maxent plugin	
1200-1330	Lunch break	
1330-1630	Work with dummy data that SEAFDEC/TD prepared	
2 Dec 22 - Saturday		
0900-1200	Introduction of ageing analysis using otolith	
1200-1330	Lunch break	

1330-1630	cutting otolith of larvae sample (using grouper larvae sample from aquaculture,)	
3 Dec. 22 - Saturday		
0900-1200	Counting ring age using Image-J program	
1200-1330	Lunch break	
1330-1630	Back calculation to spawning ground using age data and current data	
1630-1700	Training course evaluation	
1700-1730	Closing for Phase I	
1830-2030	Farewell party	

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