



SEAFDEC Initiatives on Fishing Ground Survey

By

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Outline

- Research Vessels & Research Equipments
- Research Area and Publications
- Sample of the Fishing ground Survey Result on larval fish study in Southeast Asia Region
- Capacity Building on larval fish identification via Regional Training Workshop

Fisheries Research Vessels

- Regional research vessels
 - M.V. SEAFDEC (1993)
 - M.V. SEAFDEC2 (2003)



M.V. SEAFDEC

- Capacity
 - 1178 GT
 - 40 Researchers
 - 45 days at sea



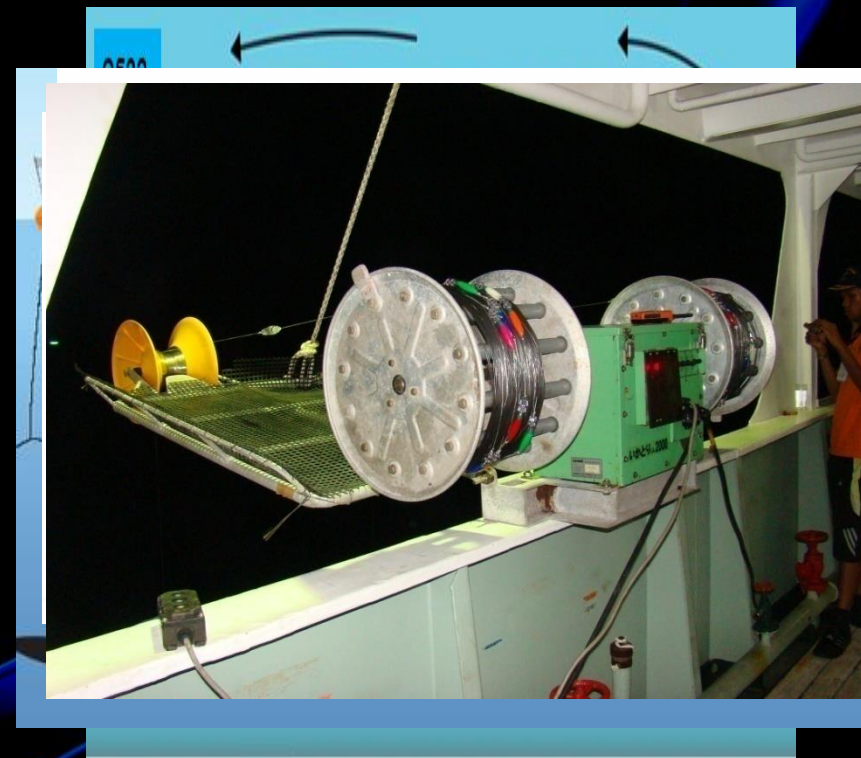
M.V. SEAFDEC2 (2003)

- Capacity
 - 211 GT
 - 22 Researchers
 - 9 days at sea



Research Equipments

- Fisheries resource data and fish sample
 - Tuna purse seine
 - Pelagic longline
 - Bottom vertical longline
 - Gill net
 - Otter Trawl net
 - Mid-water trawl
 - Trap
 - Automatic squid jigging



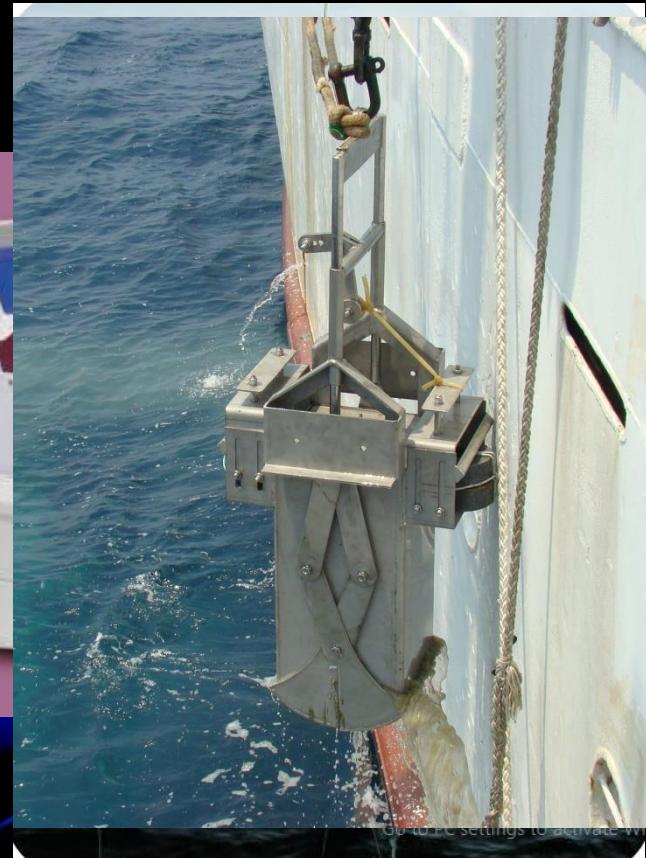
Research Equipments

- Oceanographic survey
 - CTD for water profile properties
 - Termosalino-graph for temperature salinity and fluorescence
 - PRR for light irradiance



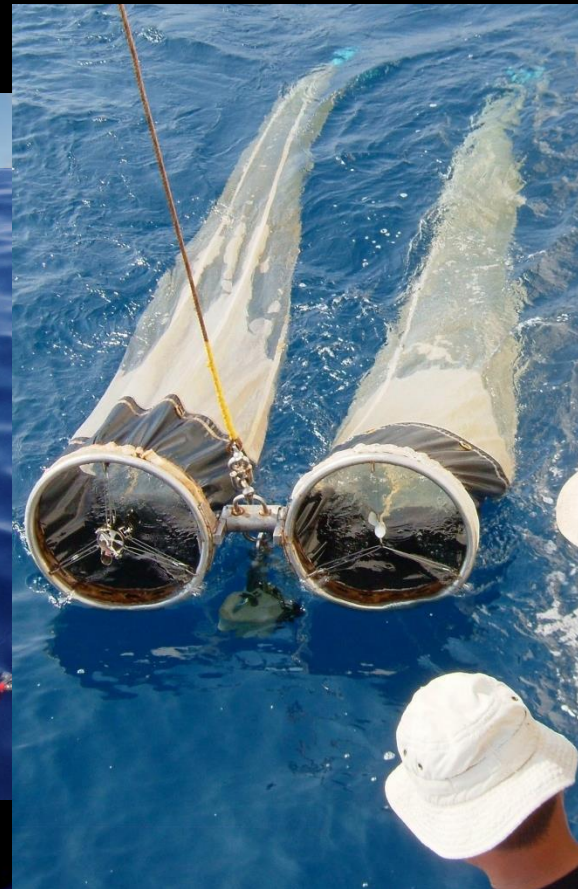
Research Equipments

- Oceanographic survey
 - ADCP for current profile
 - AA futura for nutrient
 - Box core for sediment sample
 - Piston core for sediment profile

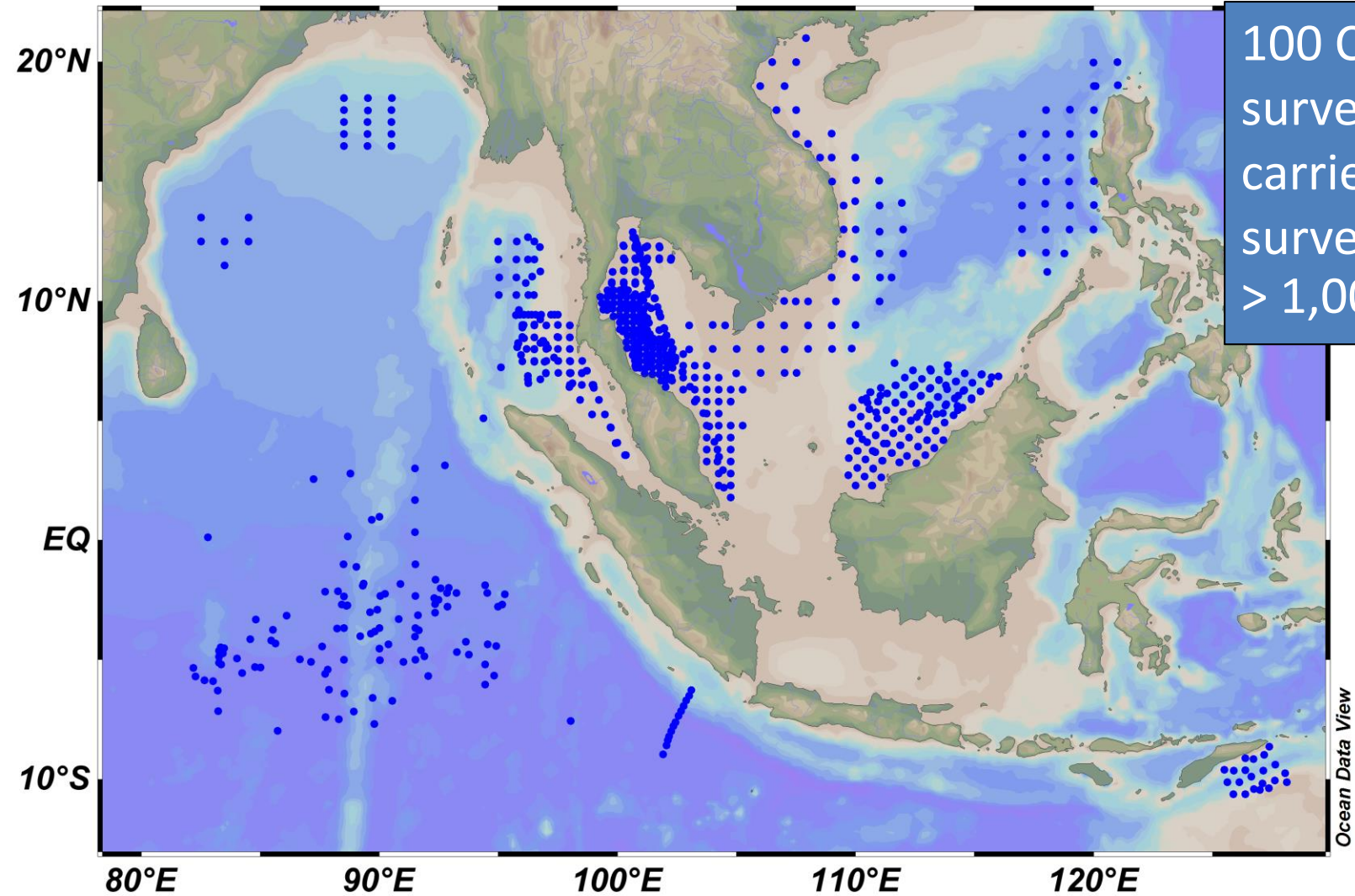


Survey activities

- Oceanographic survey
 - Smith McIntyre and Van veen for benthos
 - Neuston net for surface larvae
 - Bongo net for fish larvae and fish egg



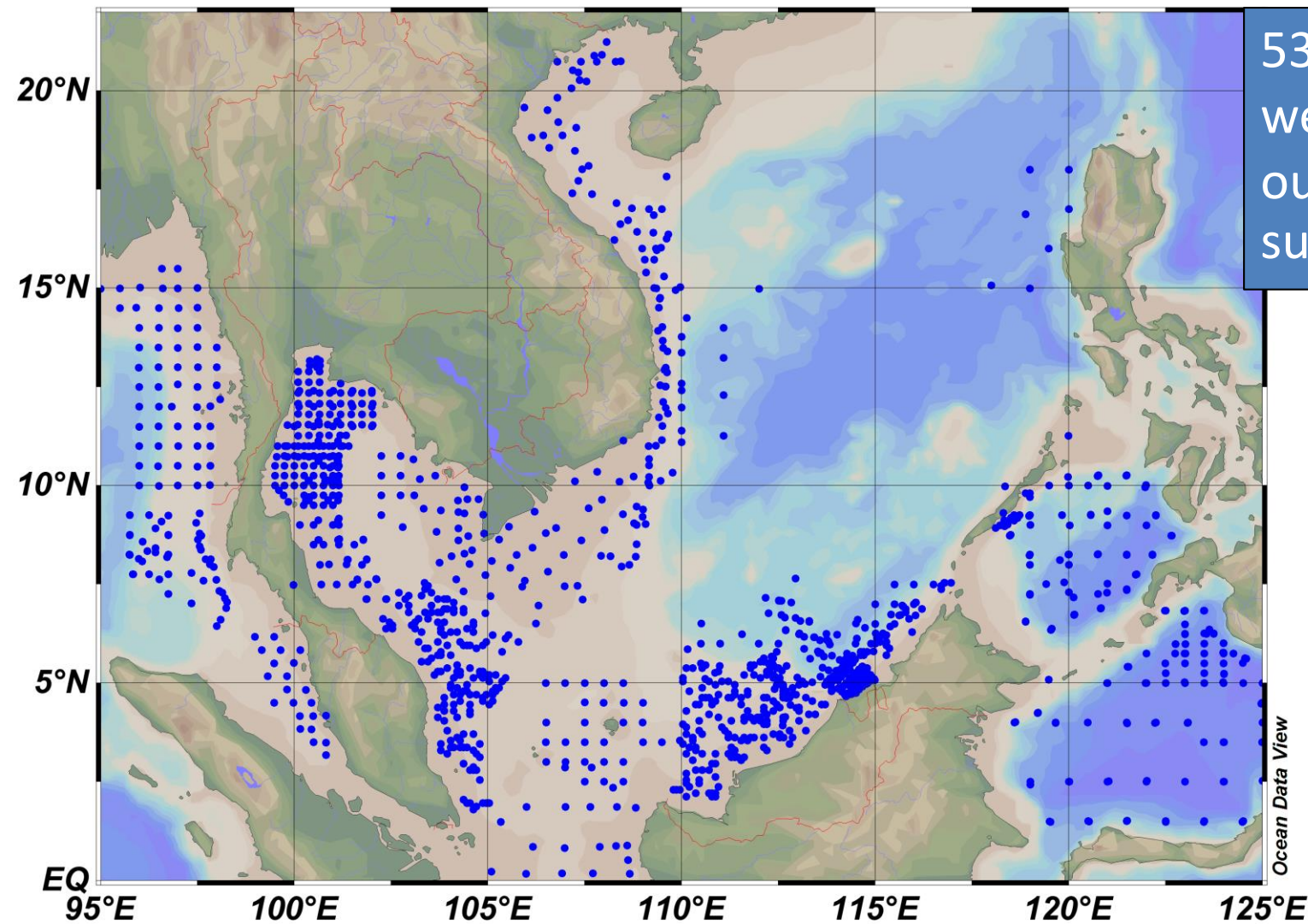
M.V. SEAFDEC



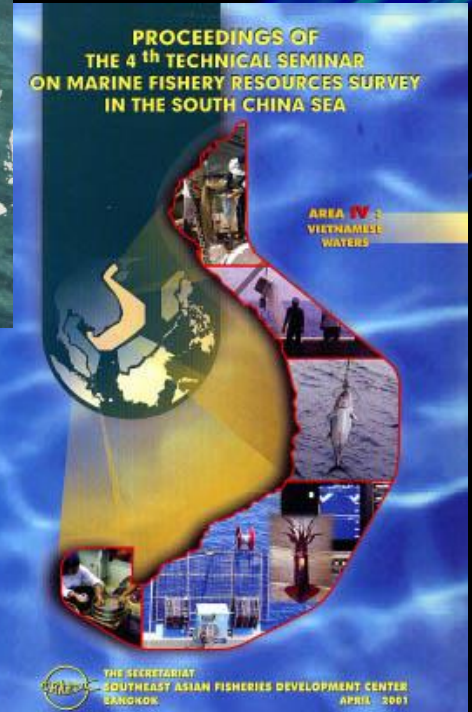
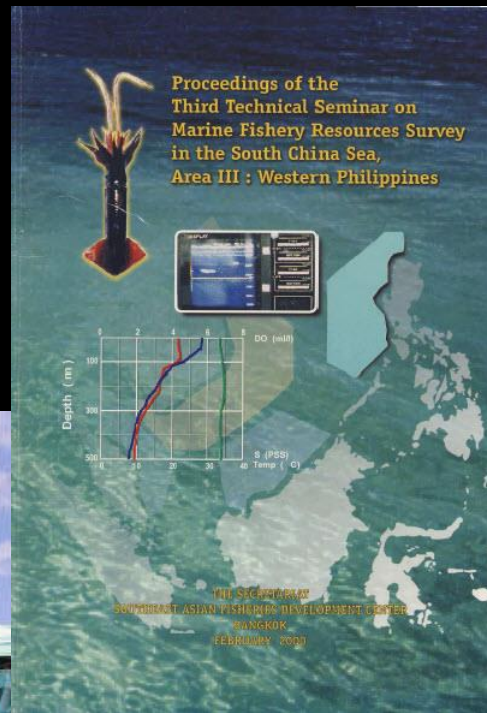
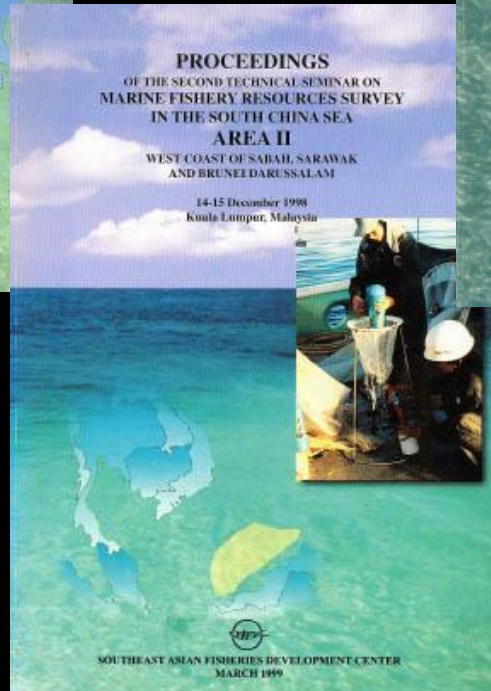
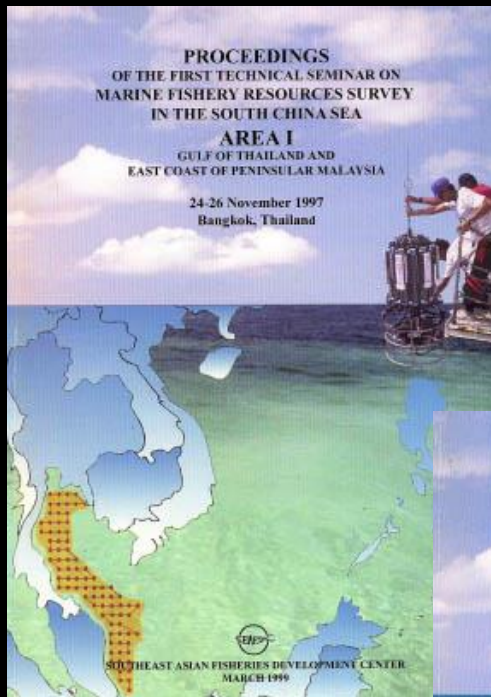
100 Cruise
survey were
carried out with
survey stations
> 1,000

M.V. SEAFDEC2

53 Cruise survey
were carried
out with 1486
survey stations

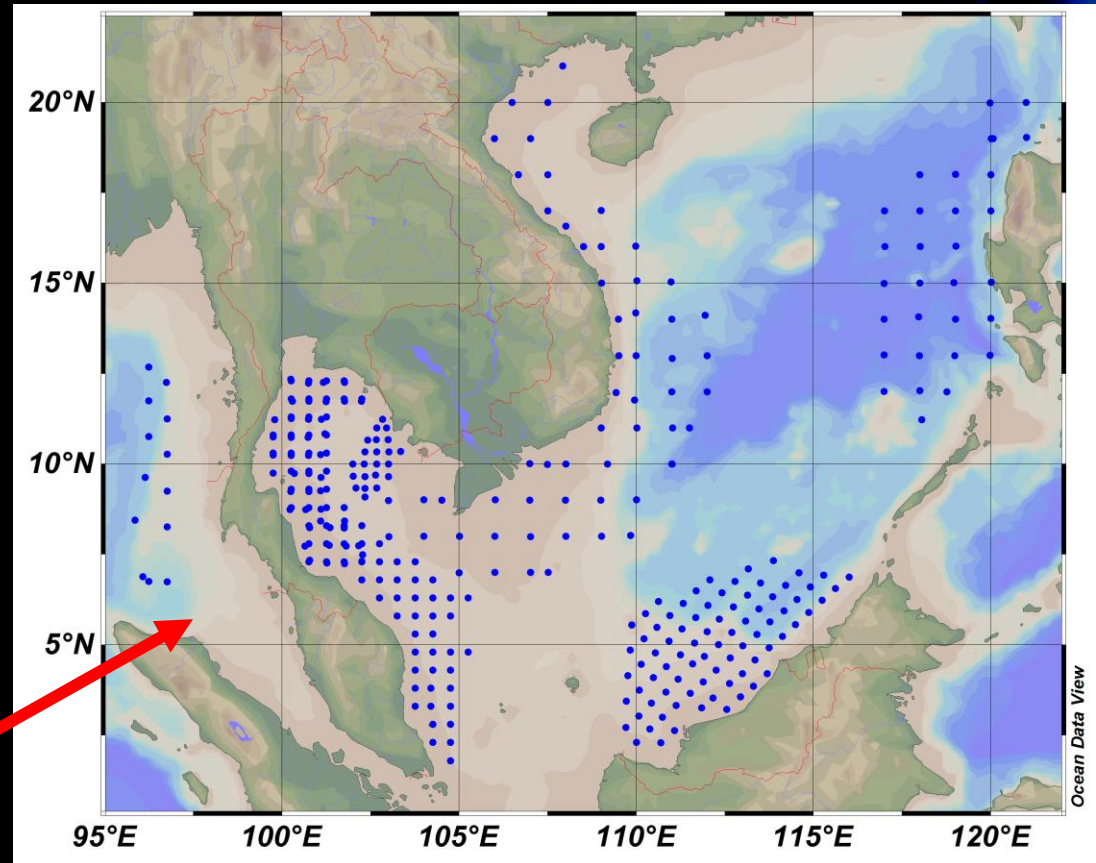


Survey result publication



Sample results of fishing ground (larvae)

- SEAFDEC support to SAM on fish larvae distribution study
 - Technical support to SAM through sample collection
 - Fully support to SAM through the whole process both sample collection and identification

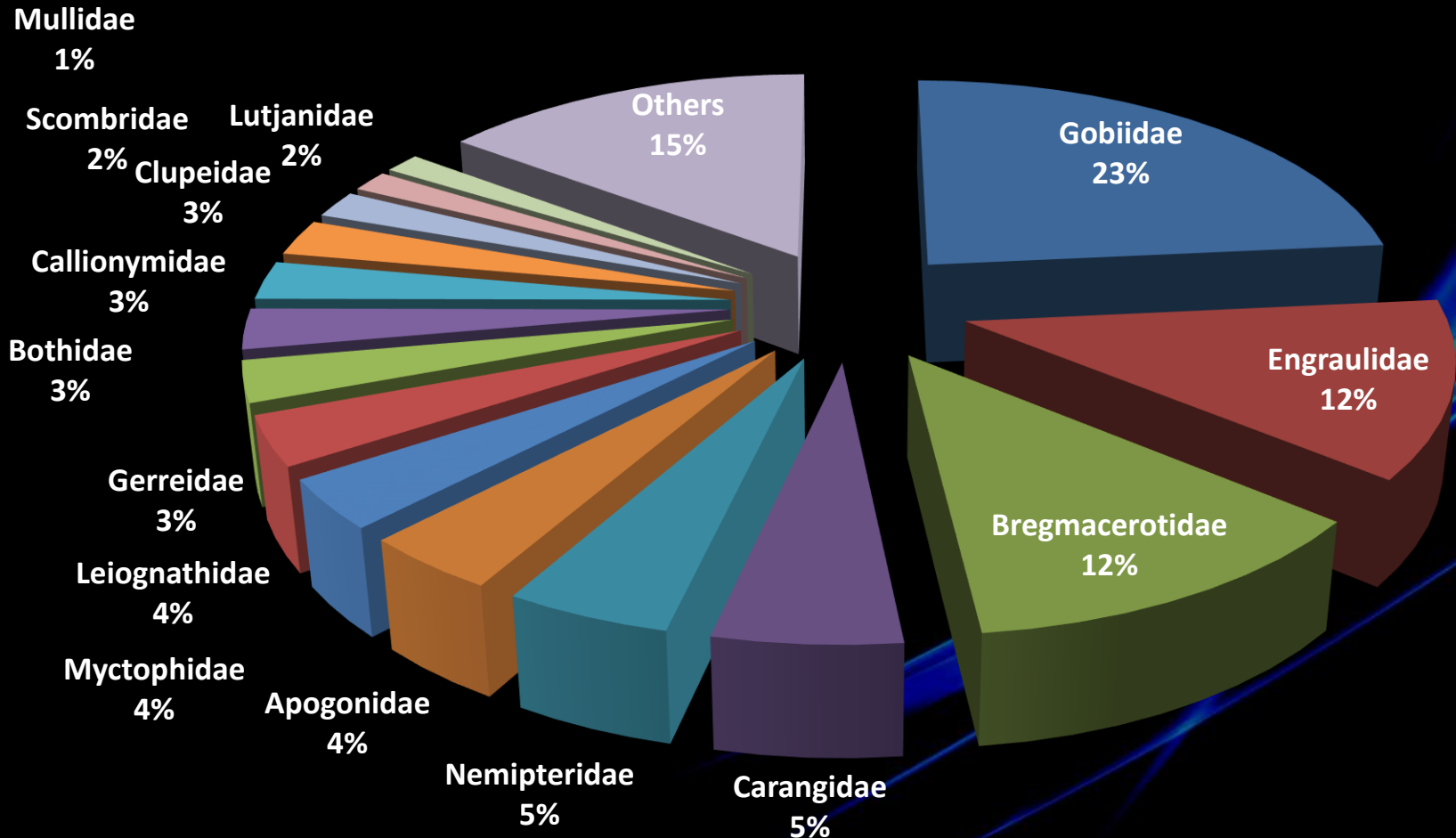


489 stations

Larvae study in SAM (family level)

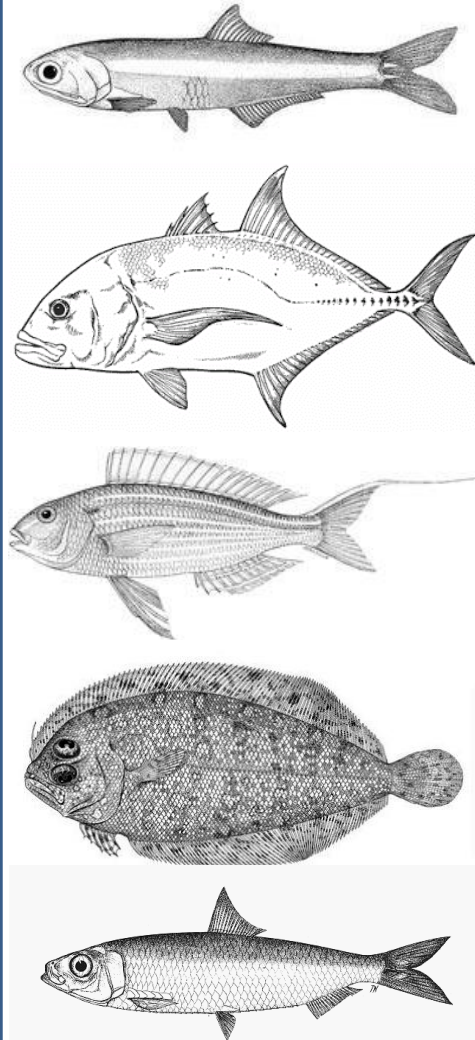
- There are 155 family found by oblique tow
- During pre-Northeast monsoon season survey, there are 123 family
- During post-Northeast monsoon season survey, there are 136 family

Larval composition (over all data)



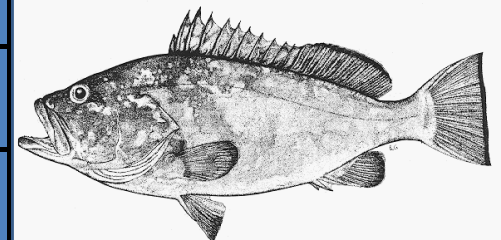
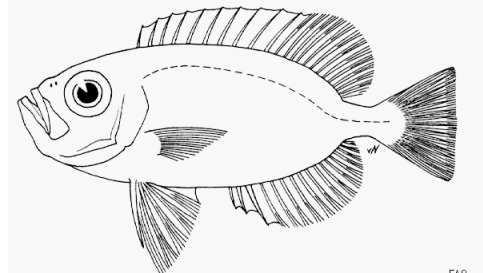
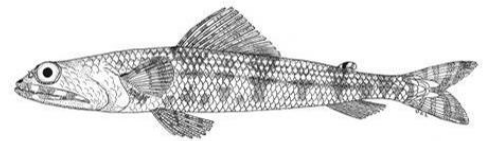
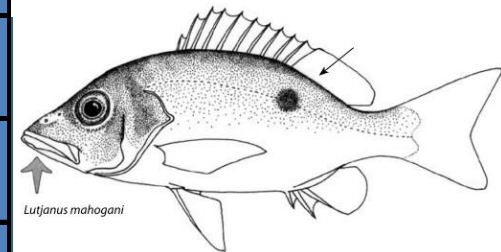
Economic larvae density (over all data)

Family	Percentage composition (%)	Larvae density (ind/1000 m ³)
Engraulidae	12.46	78
Carangidae	5.33	33
Nemipteridae	4.72	30
Bothidae	2.86	18
Clupeidae	2.57	16
Scombridae	1.94	12
Lutjanidae	1.50	9
Synodontidae	1.03	6
Priacanthidae	0.83	5
Serranidae	0.63	4



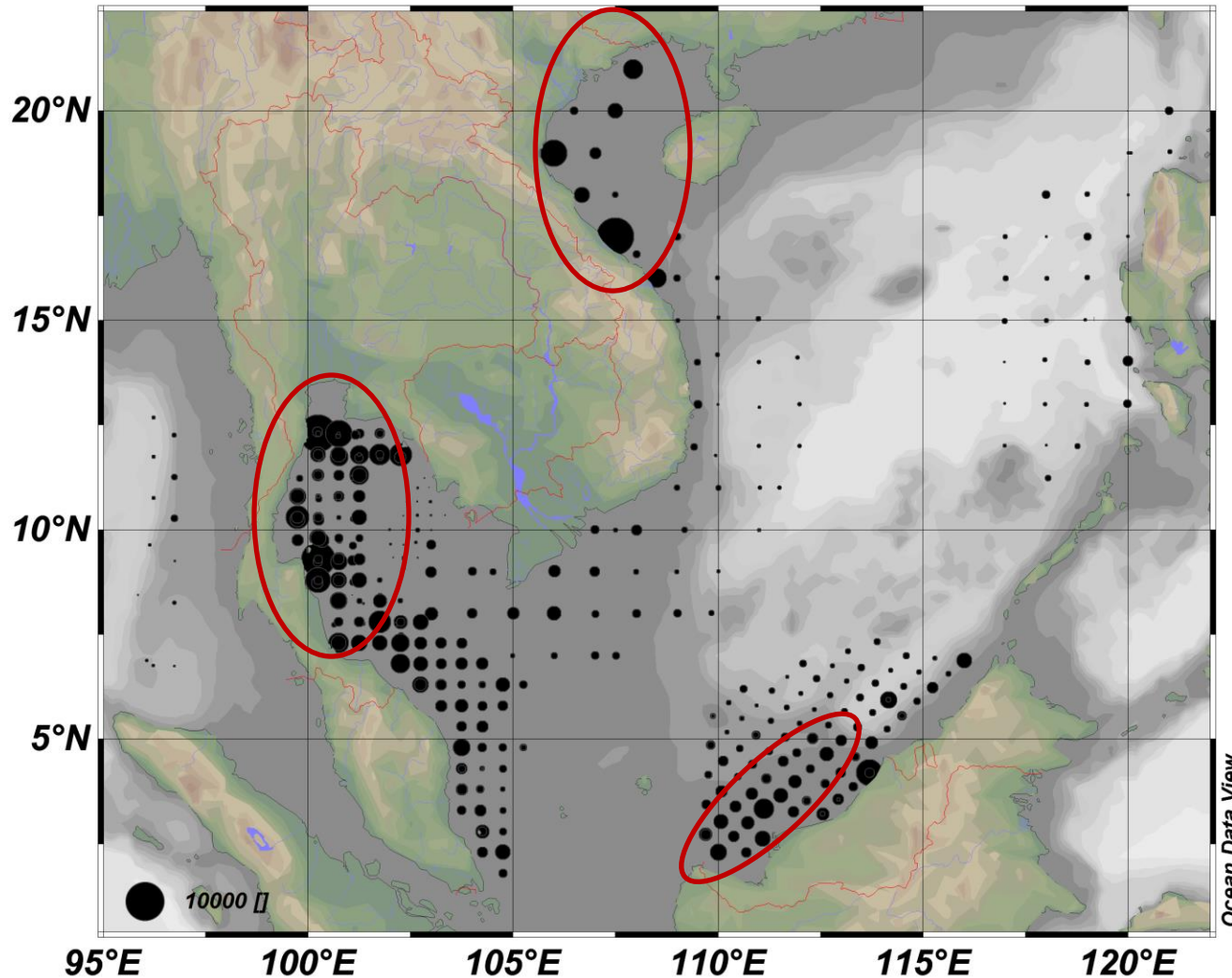
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Fish larvae distribution (over all data)

Abundance inv_1000m3 @ Depth=first

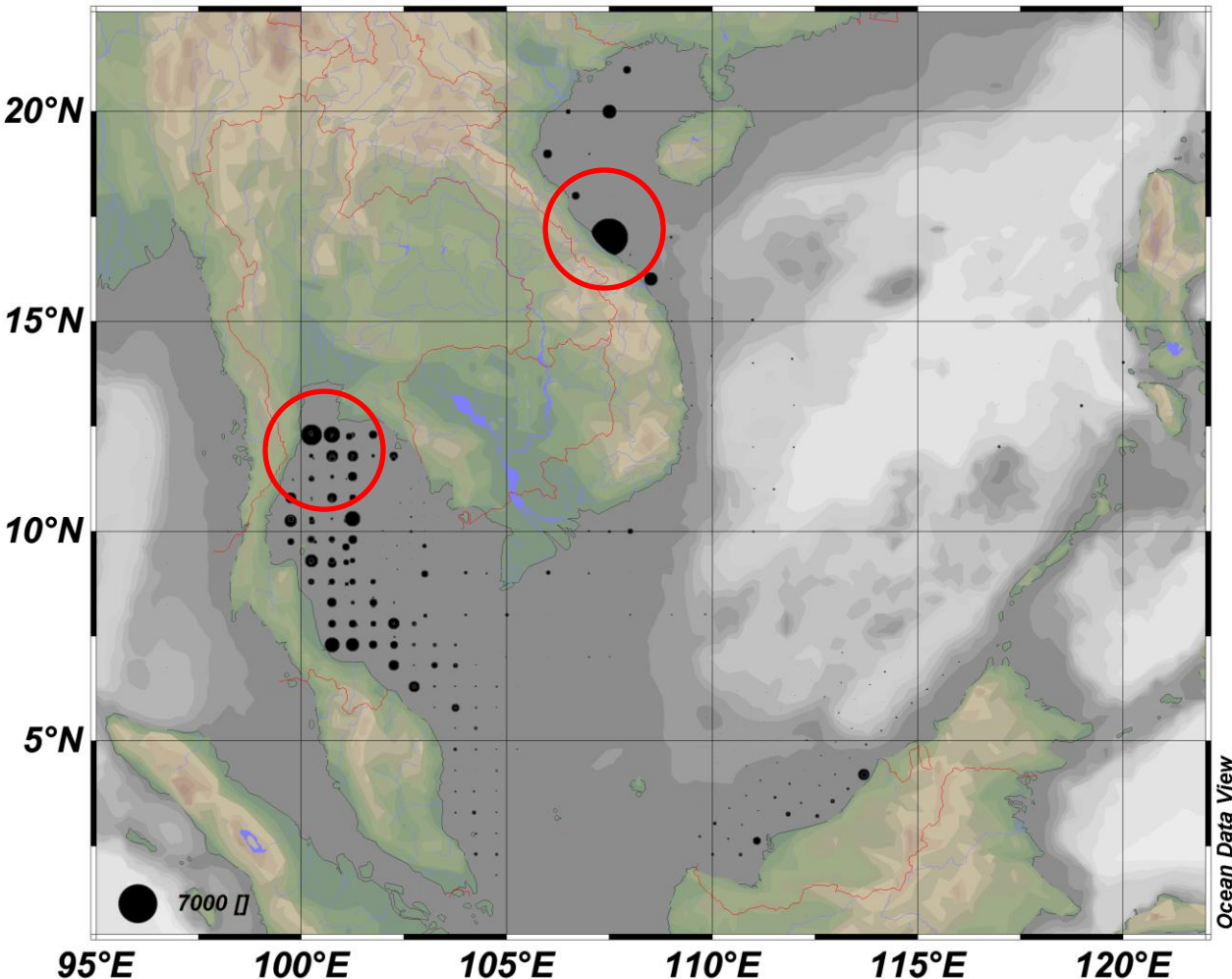


General trend of larval distribution in SAM concentrate along the cost line , particularly;

- 1) North of Vietnamese water
- 2) West of the Gulf of Thailand
- 3) West of SALAWAK

Engraulidae distribution

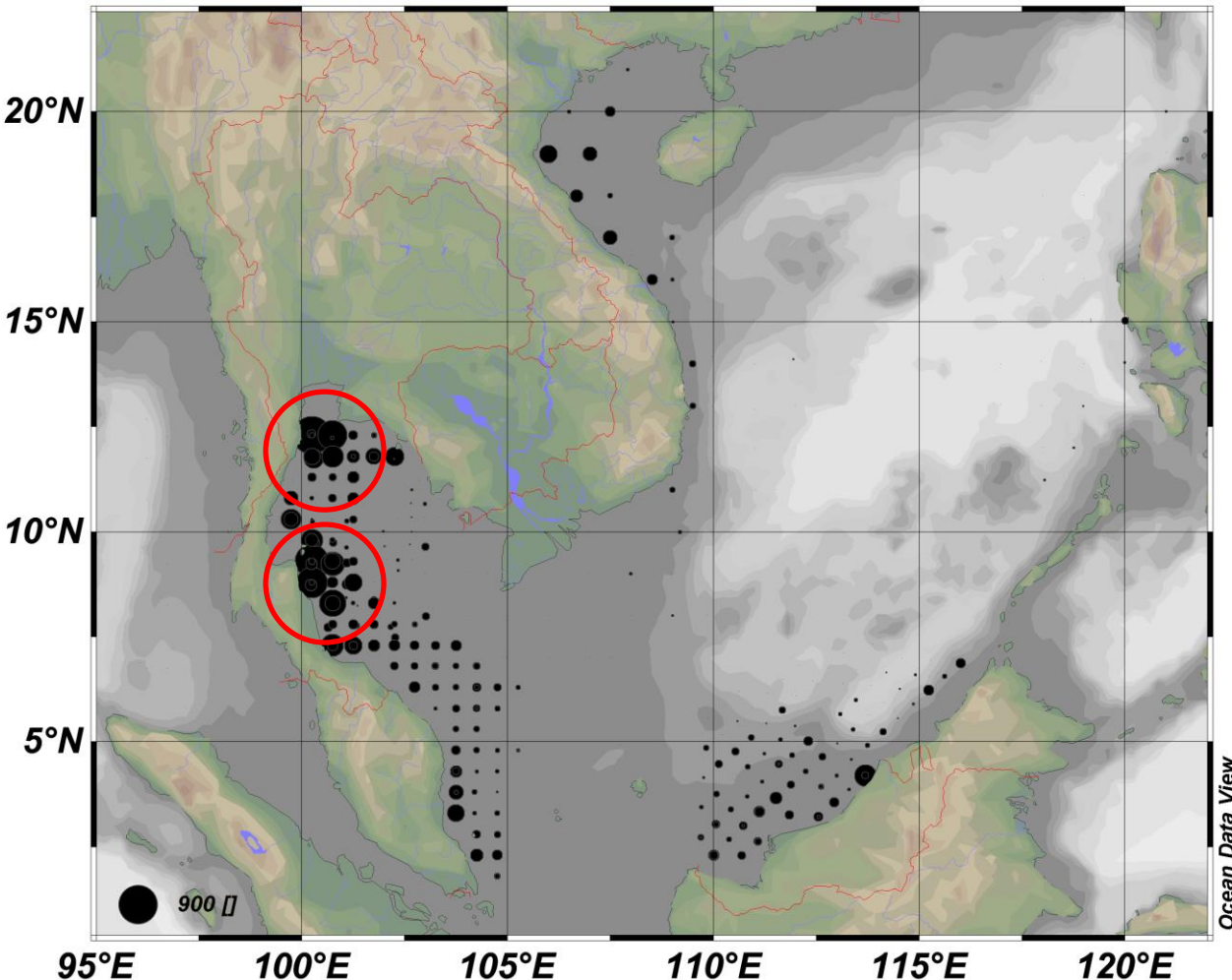
Engraulidae @ Depth=first



It scatter widely in the Gulf of Thailand and some area of the near shore of Vietnam, Malaysia and Philippine. The high density area found in North of Vietnam and Northwest of the Gulf of Thailand

Nemipteridae distribution

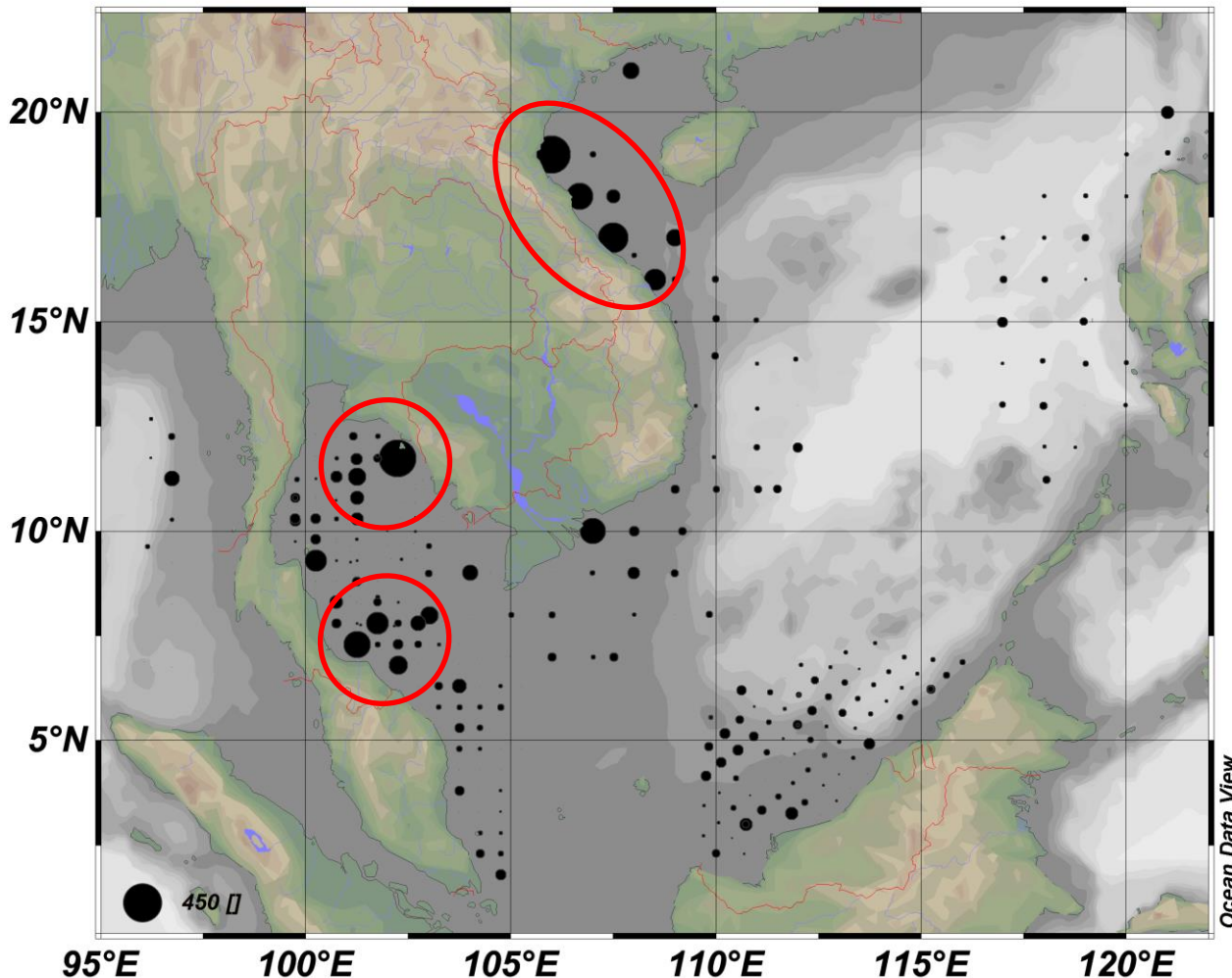
Nemipteridae @ Depth=first



It scatter widely in SAM but less density in the West of Philippine water. The high density area found in Thailand water in front of Prachuap Khiri Khan and Nakhon Si Thammarat Provinces

Scombridae distribution

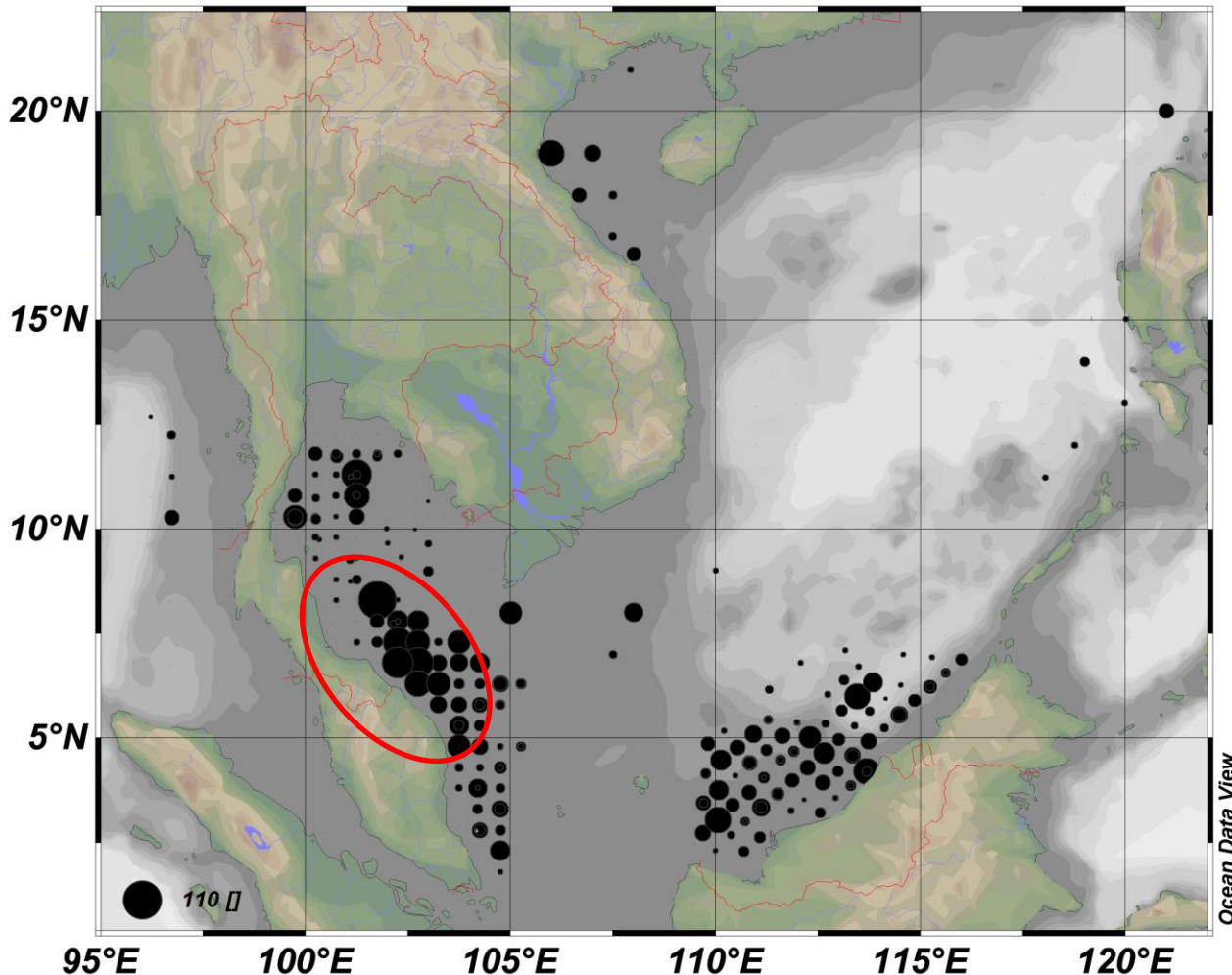
Scombridae @ Depth=first



It scatter widely in near and offshore. Western part often higher than the Eastern part of South China Sea. The High density area found in Vietnamese water from area of Me-Mat to Con Co island as well as transboundary area between Thailand and Cambodia and high in the South of Thailand water

Synodontidae distribution

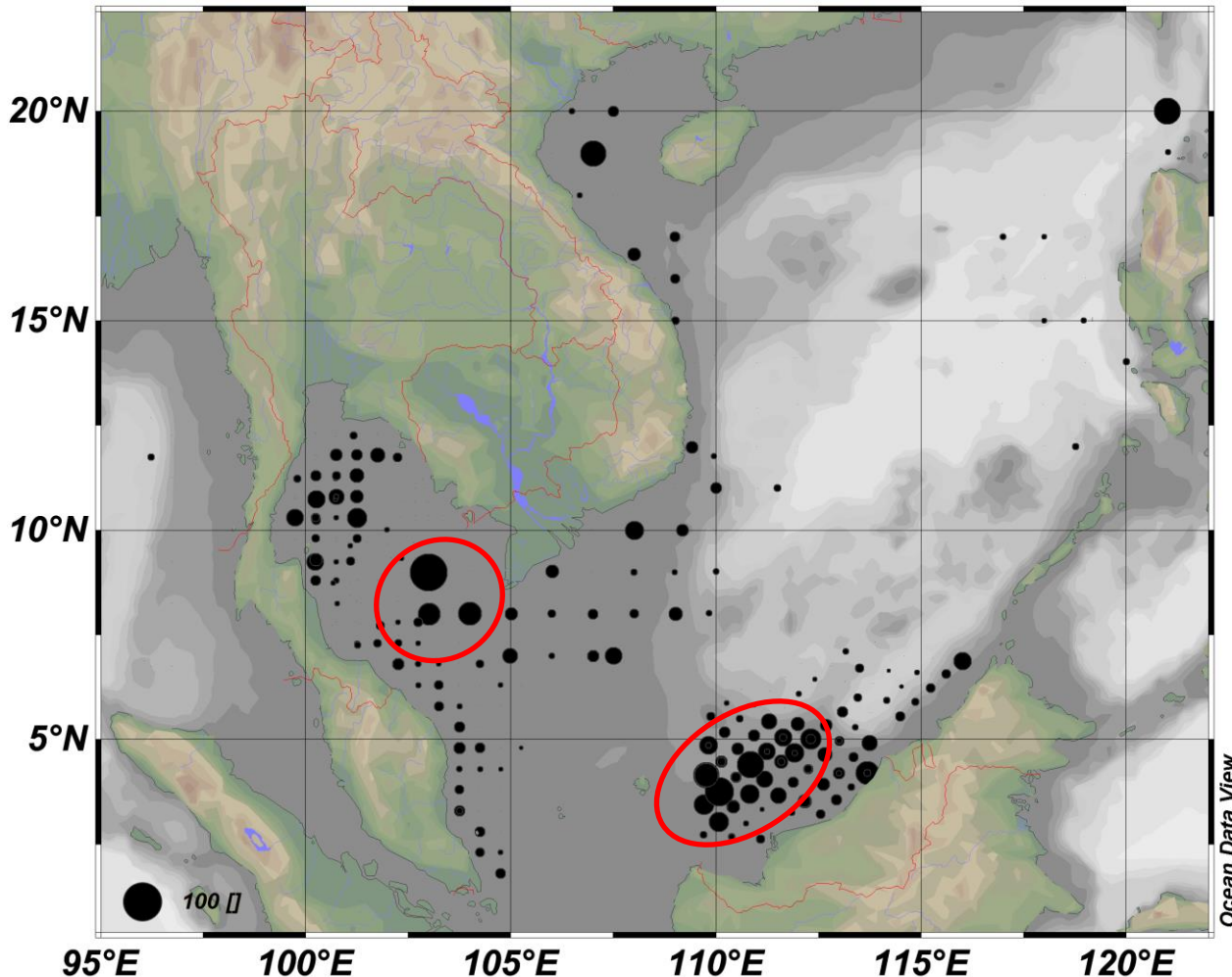
Synodontidae @ Depth=first



It scatter widely in near and offshore. The high density area found at transboundary area between Thailand and Malaysia, the Southwest of South China Sea

Serranidae distribution

Serranidae @ Depth=first



It scatter widely in near and offshore. The high density area found in the South of Vietnamese water and West of Sarawak, Malaysia water

Capacity Building for larval identification

- Objective : to enhance the capacity of fishery researcher on larval fish identification
- Participant: 44 people (Brunei Darussalam 1, Cambodia 7, Indonesia 3, Malaysia 8, Myanmar 2, Philippines 5, Thailand 11, Vietnam 7)



Content of Course

- Design of Surveys and Treatment of Samples
- Basic Morphology for Larval Fish Identification
- Identification methods
- Methods for Detection of the Spawning season and ground
- How to Relate Fish Larvae Distribution and Marine environment by Using Ocean Data View Program

Expected Outcome

- Survey activities of fish larvae in Southeast Asia region are improved and standardized
- Spawning, nursing ground and season in Southeast Asia region are determined based on the results of ichthyoplankton survey
- Development of fisheries resources conservation areas

Thank you

