



# **STATUS AND TRENDS OF NERITIC TUNAS IN THE SEA OF VIETNAM**

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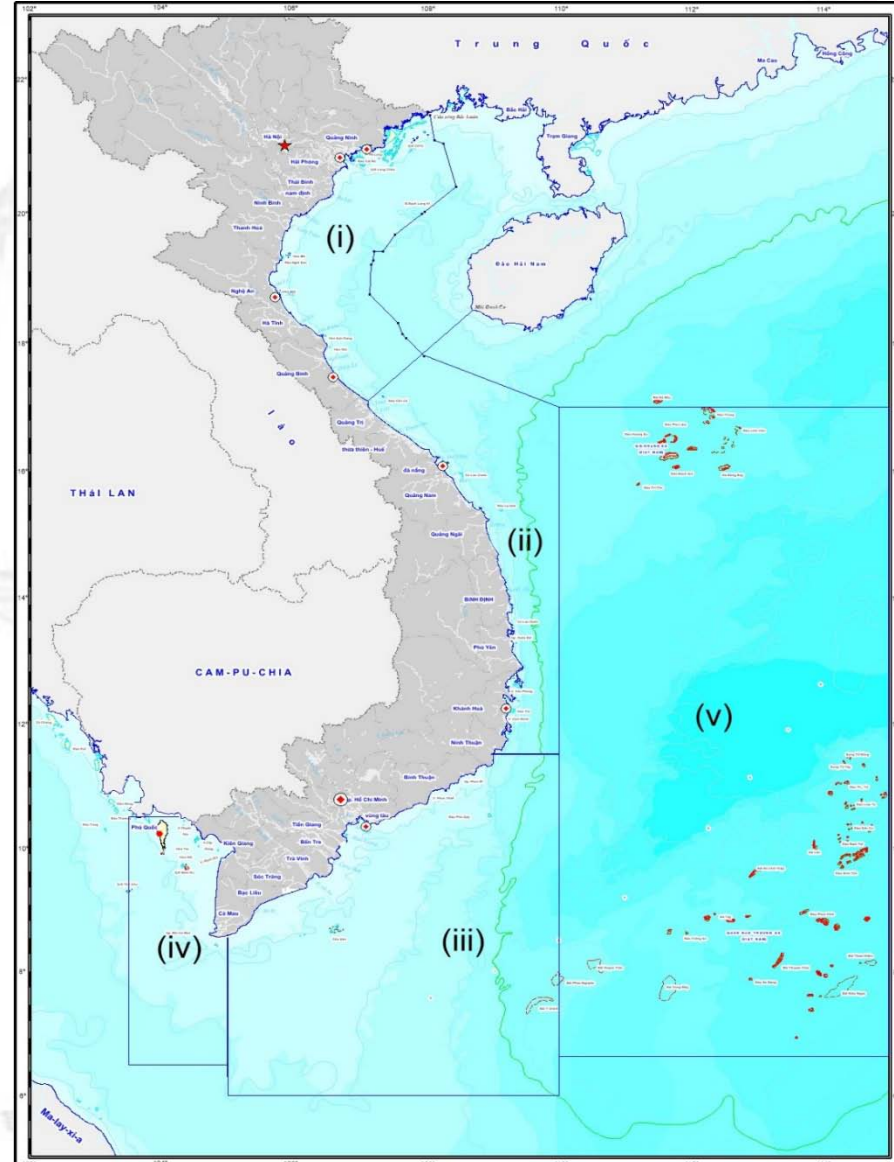
PHAM Hung

Department of Capture Fisheries



# OVERVIEWS

- Coastline of 3,260 km
- 28 coastal provinces
- The Sea of VN: divided into 5 management areas:
  - I. Tonkin Gulf
  - II. Central waters
  - III. Southeast waters
  - IV. Southwest waters
  - V. Offshore
- Main fishing gears:
  - Gillnet (35.7%)
  - Trawl (17.3%)
  - Purse seine (4.8%),
  - Hooks and Line (17.3%),
  - Others (24.9%),
- Small scale fisheries, multispecies;
- Oceanic tuna fishery: Binh Dinh, Phu Yen, Khanh Hoa;
- Neritic tuna fishery: from the North to the South.





# SURVEYS AND SAMPLING

- Fisheries Independent Surveys
  - Drift Gillnet Survey
  - Longline Survey
- Fisheries Dependent Surveys
  - Catch and Effort Surveys
    - Enumerator Data
    - Logbook Data
    - Observer Data
  - Port Sampling
    - Length Frequency Data
    - Biological Data



# Neritic tunas

+ Frigate tuna – *Auxis thazard*



+ Bullet tuna – *Auxis rochei*



+ Kawakawa – *Euthynnus affinis*



+ Stripped bonito – *Sarda orientalis*



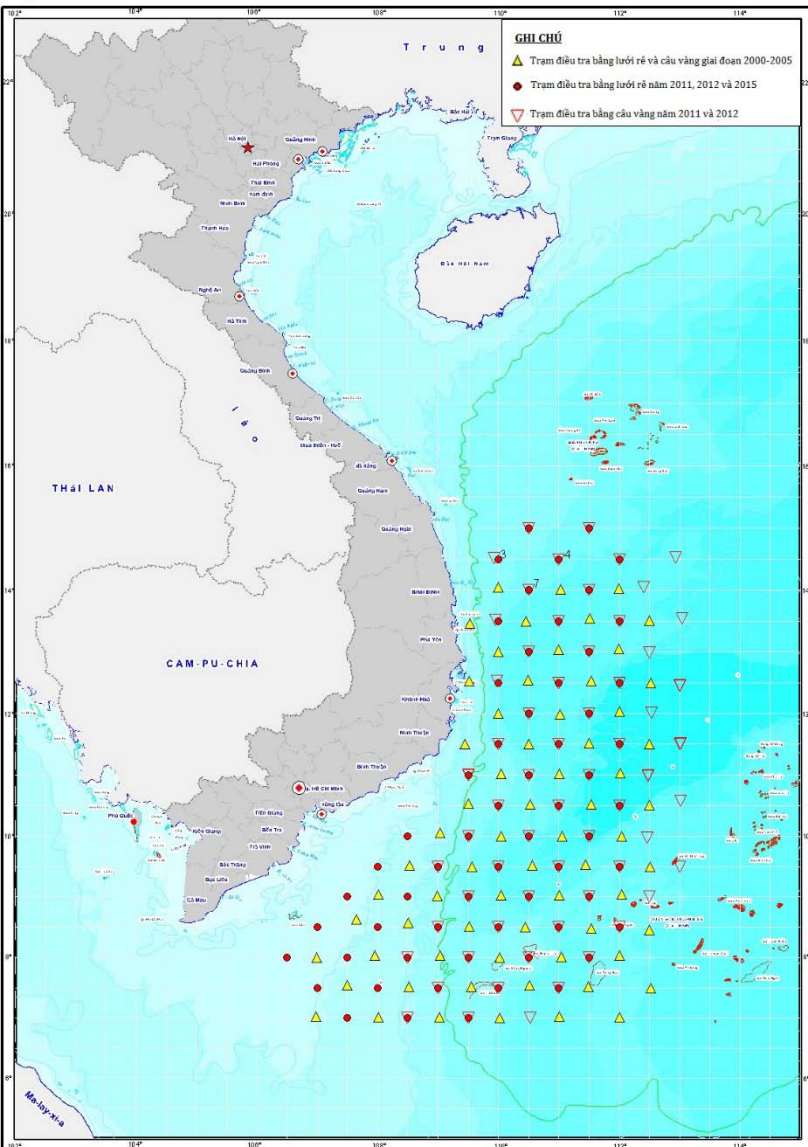
+ Long tail tuna – *Thunnus tongol*





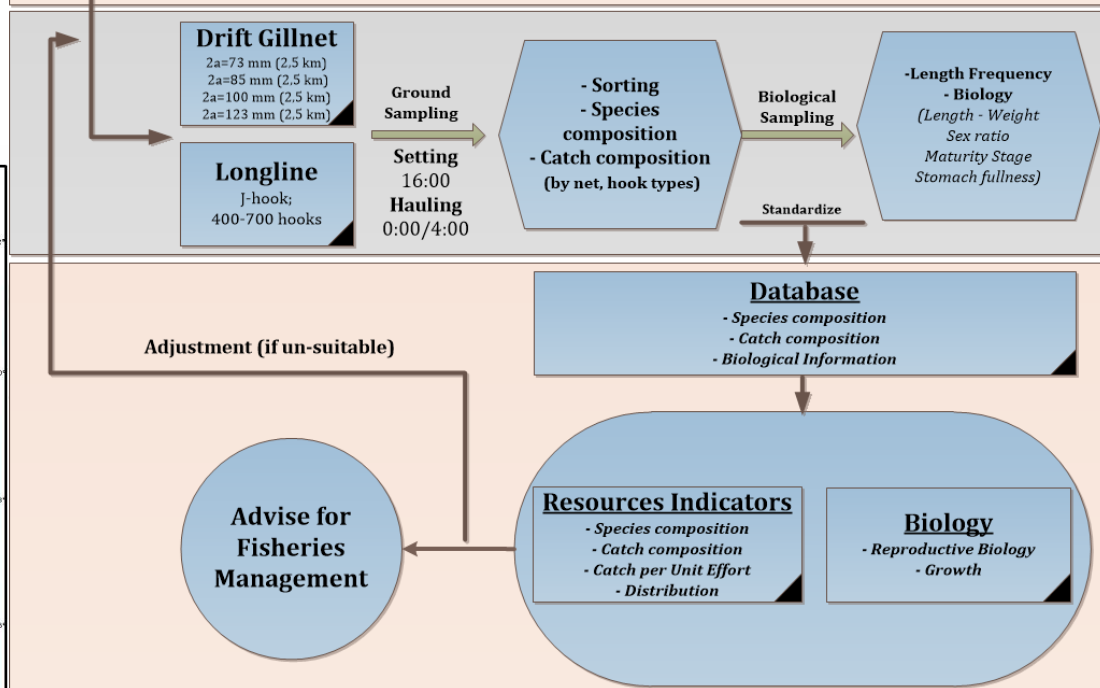
# Fisheries Independent Surveys

## 2000-2005; 2011-2015



### Pelagic Fishes Survey

**Survey Design:**  
 - Target Species  
 - Methods

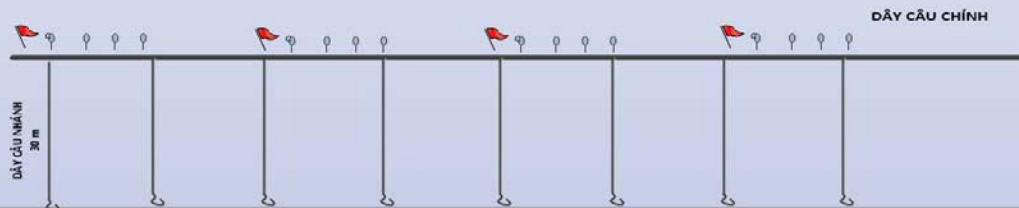


### MÔ PHÒNG VÀNG LƯỚI RỄ



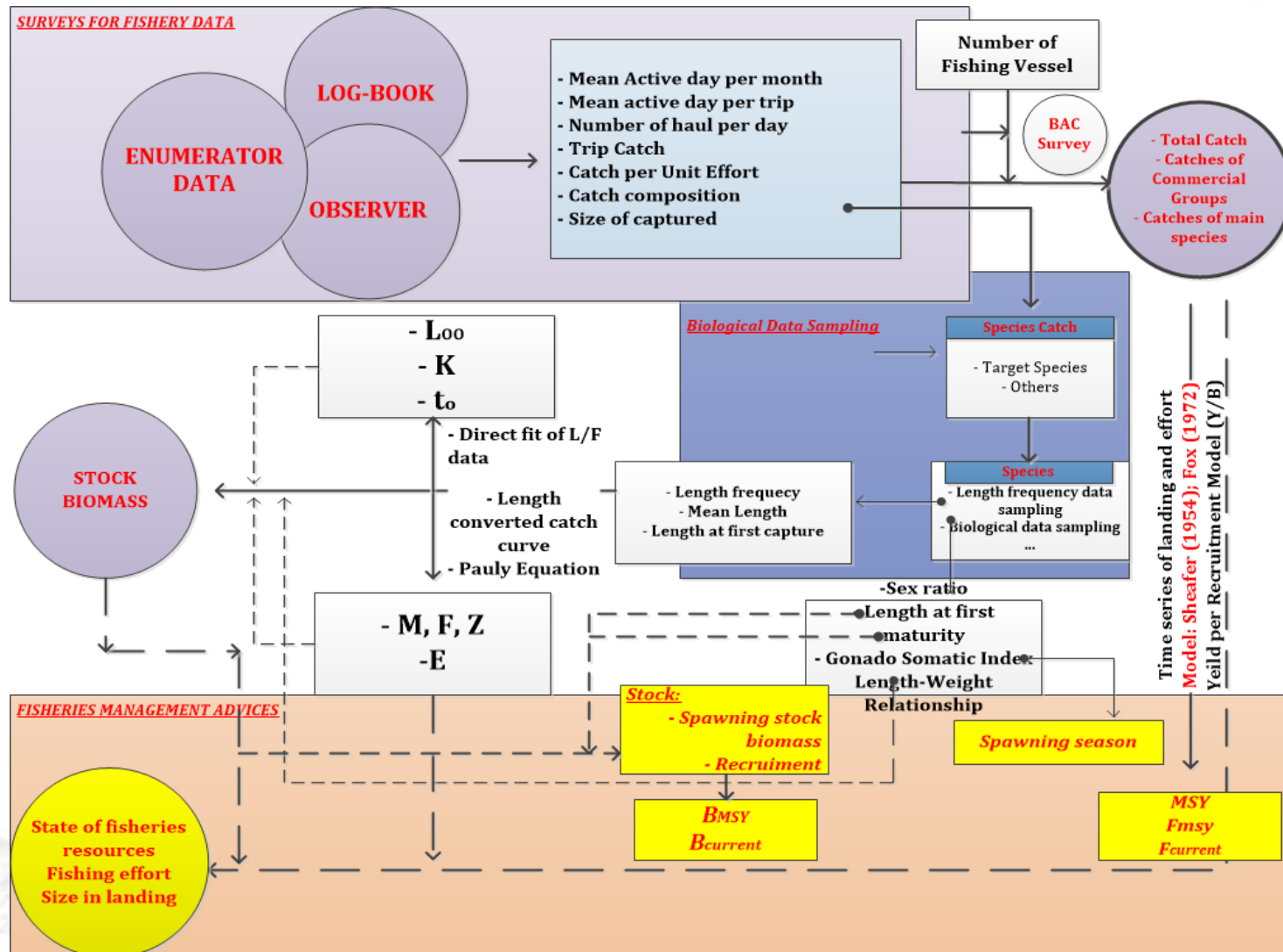
### MÔ PHÒNG VÀNG CẦU

- Khoảng cách giữa các lưới câu: 50m
- Khoảng cách giữa các phao ganh: 150m
- Dây phao ganh: 30m
- Dây câu nhánh: 30m



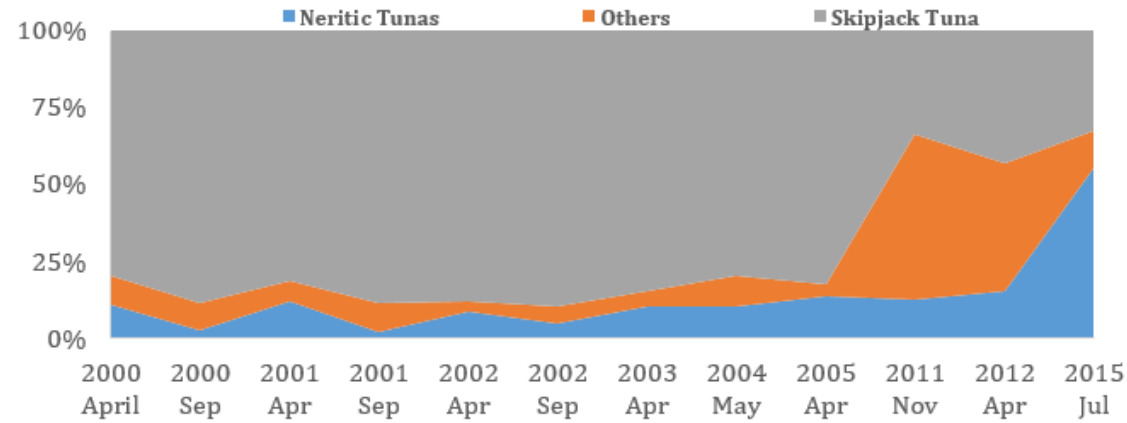


# Fisheries Dependent Surveys (2000-2005; 2014 - ...)

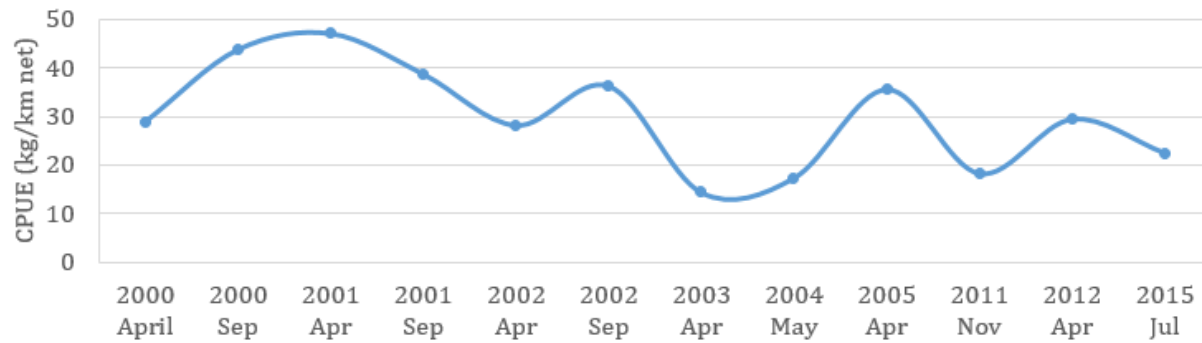




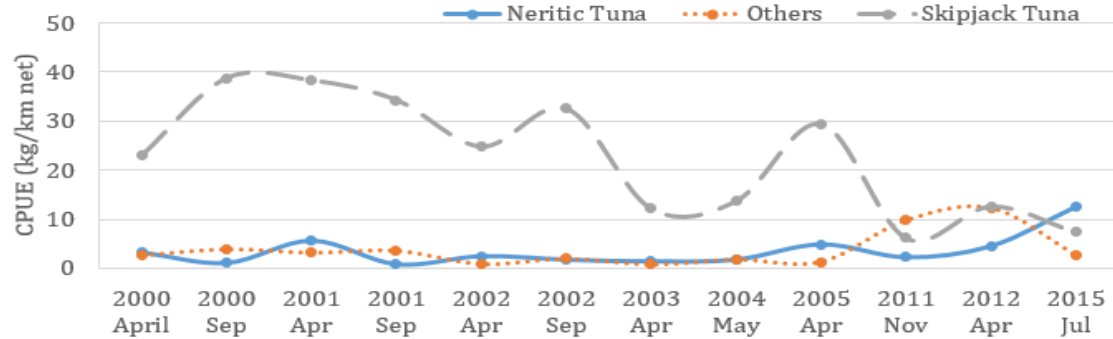
# STATUS AND TRENDS/Overall



Survey



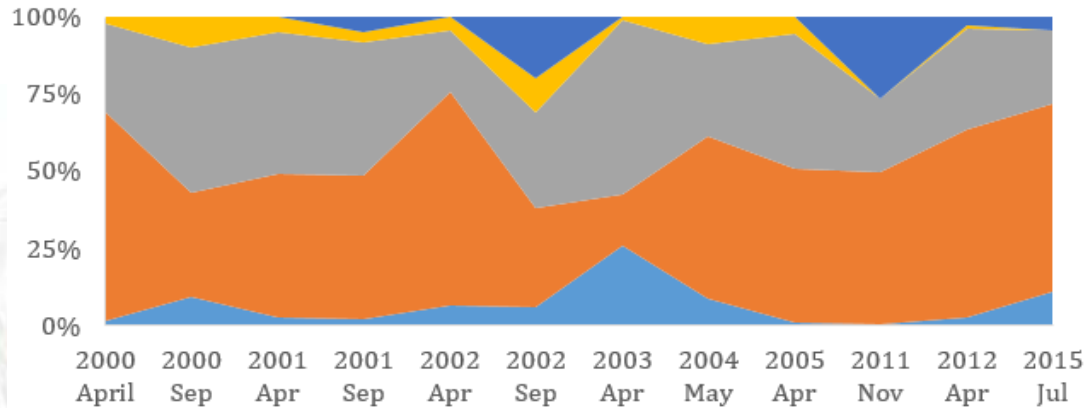
Survey



Survey

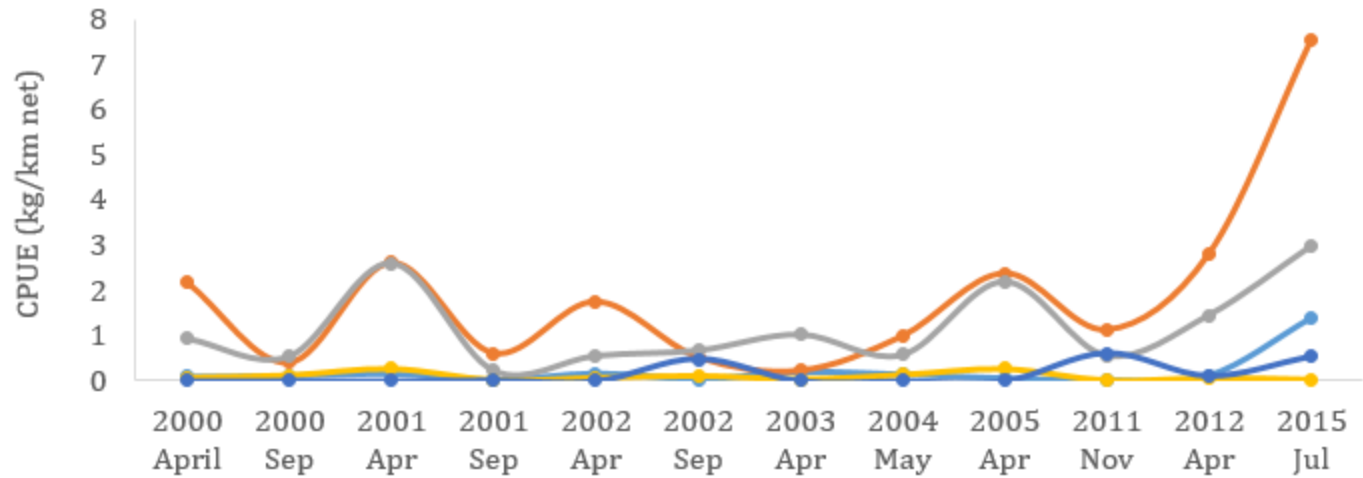


# STATUS AND TRENDS/Neritic Tunas



Sci Species Name  Survey

*Auxis rochei*  *Auxis thazard*  *Euthynnus affinis*  *Sarda orientalis*  *Thunnus tonggol*



Sci Species Name  Survey

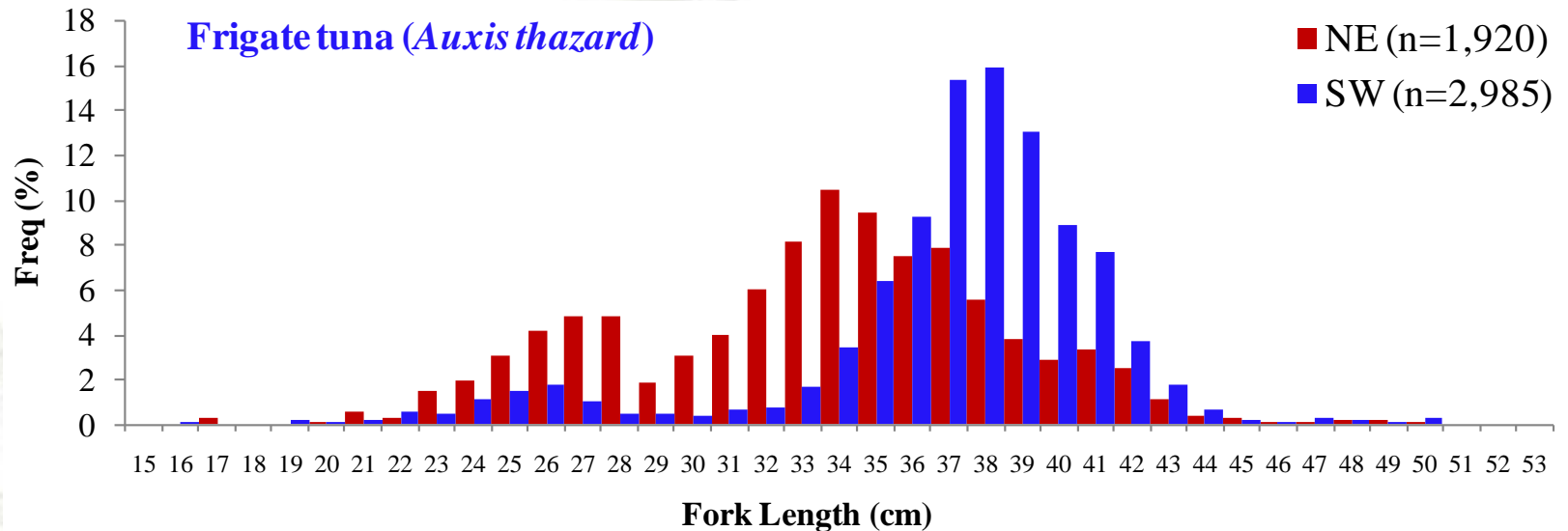
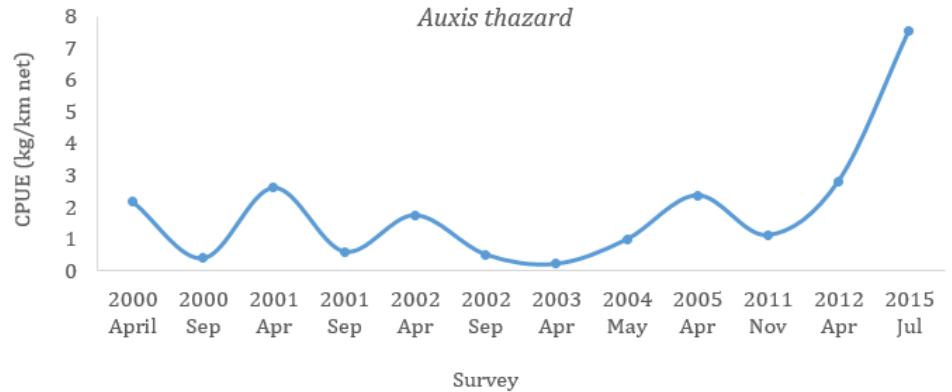
*Auxis rochei*  *Auxis thazard*  *Euthynnus affinis*  *Sarda orientalis*  *Thunnus tonggol*





# Catch per Unit Effort & Length Frequency

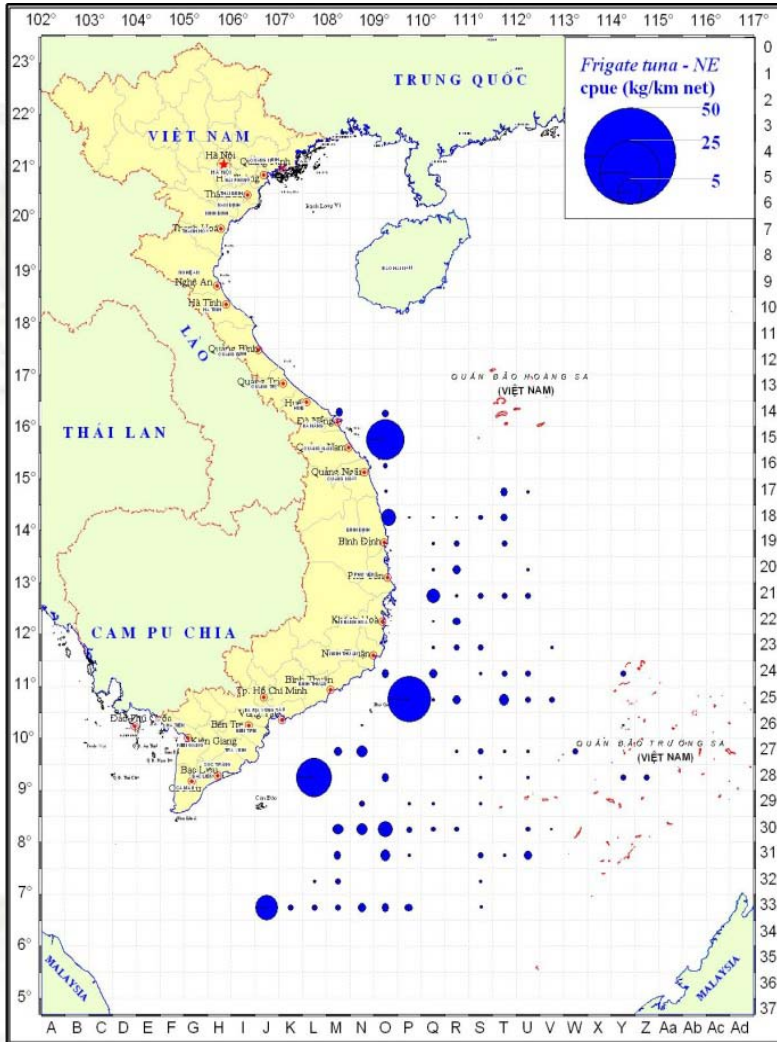
- Frigate tuna



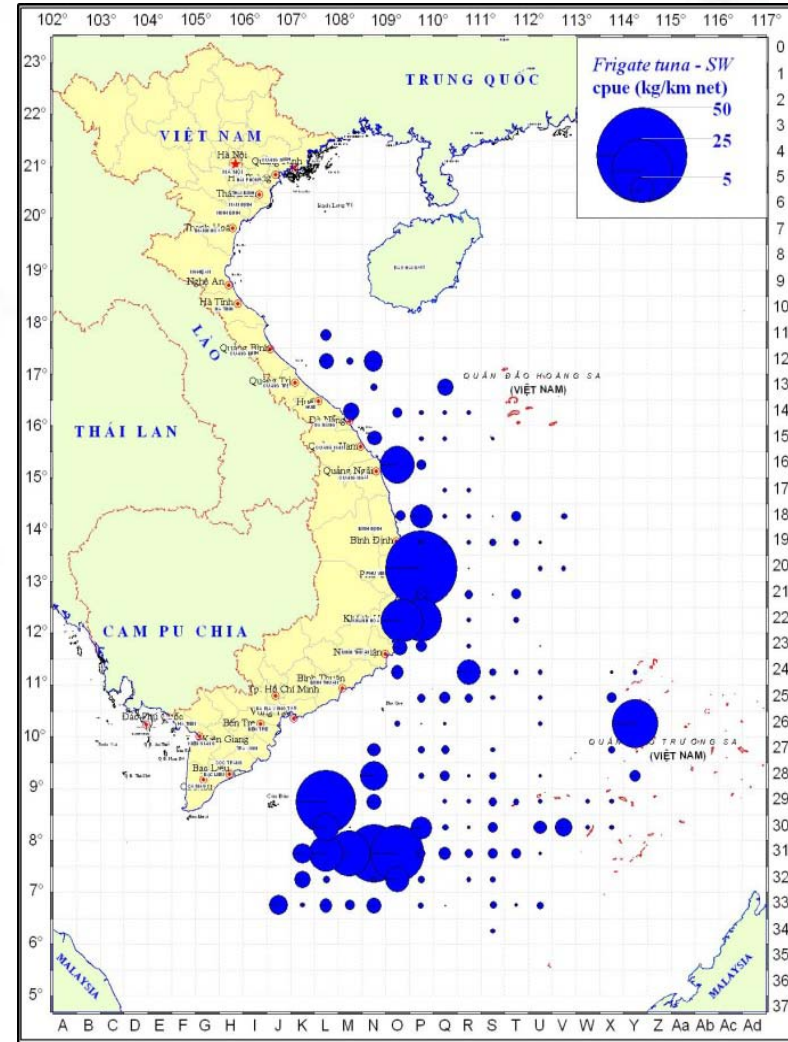


# Distribution

- Frigate tuna



Northeast Monsoon Season

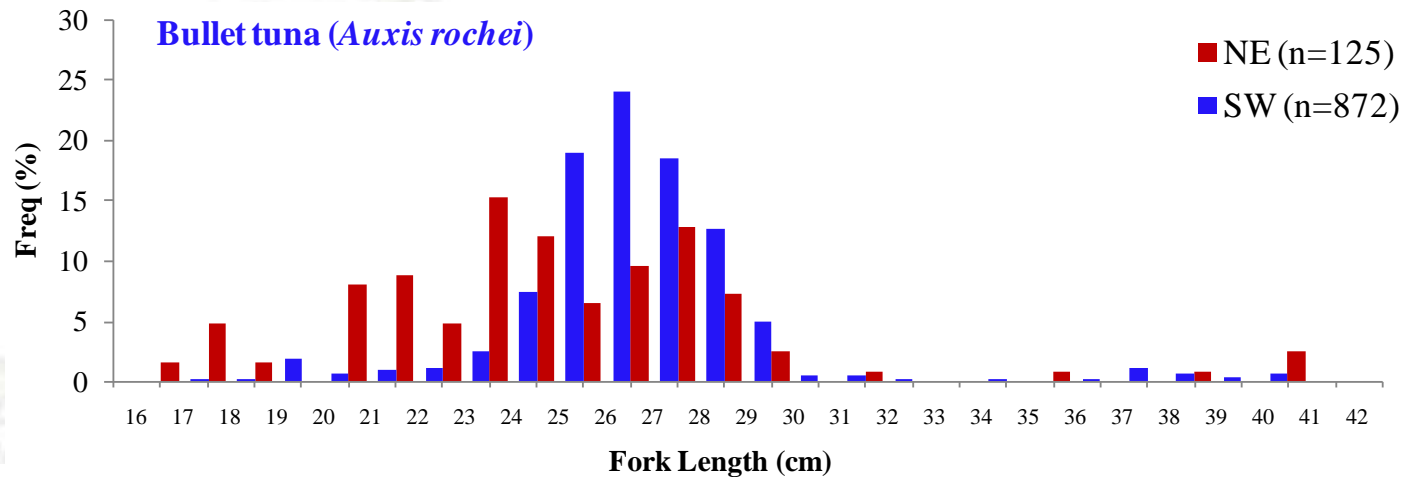
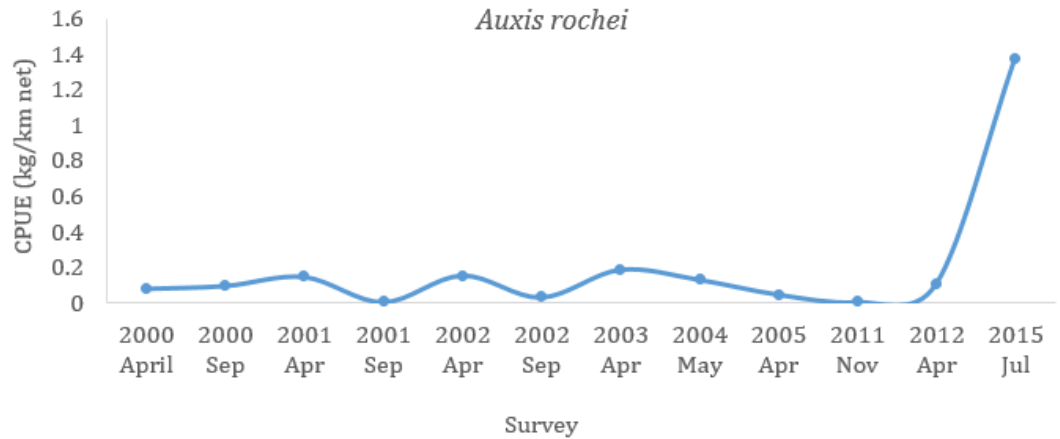


Southwest Monsoon Season



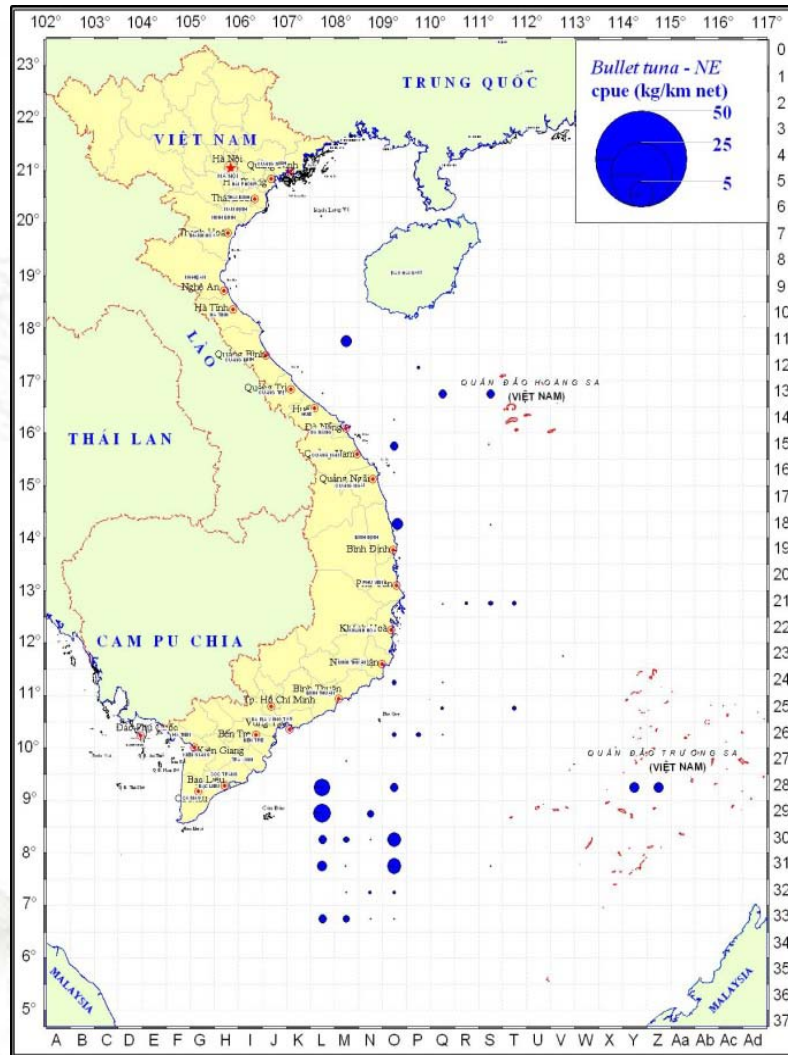
# Catch per Unit Effort & Length Frequency

- Bullet tuna

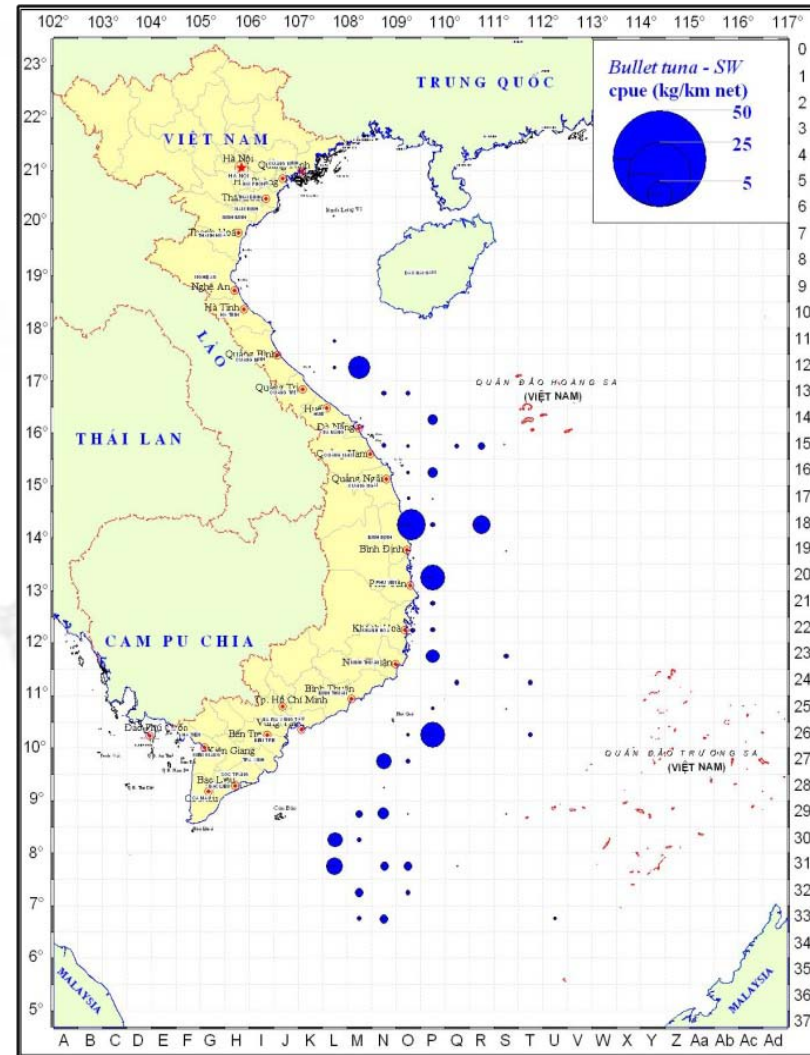




# Bullet Tuna



Northeast Monsoon Season

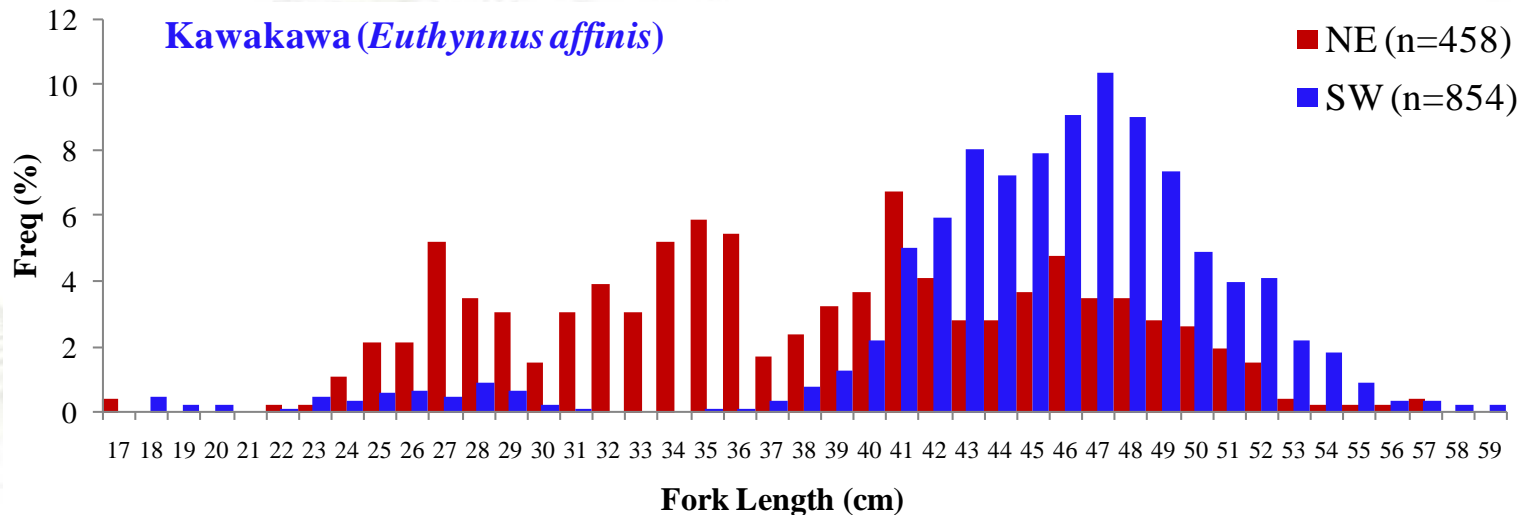
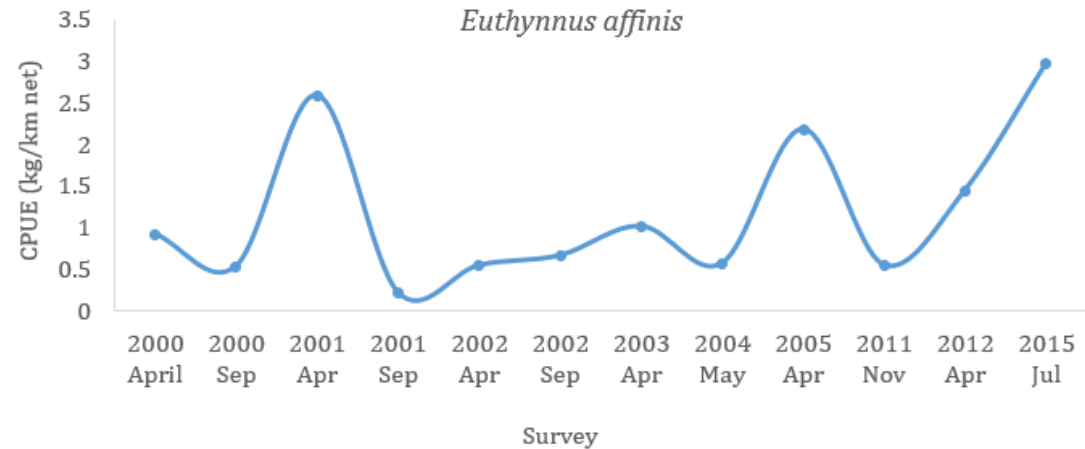


Southwest Monsoon Season



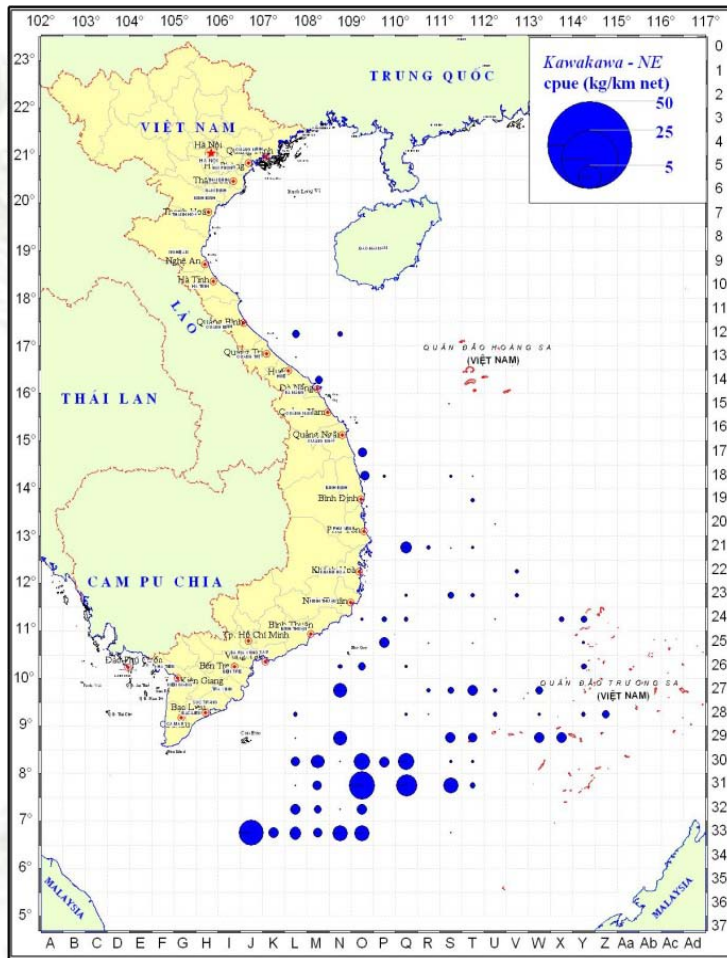
# Catch per Unit Effort & Length Frequency

- Kawakawa

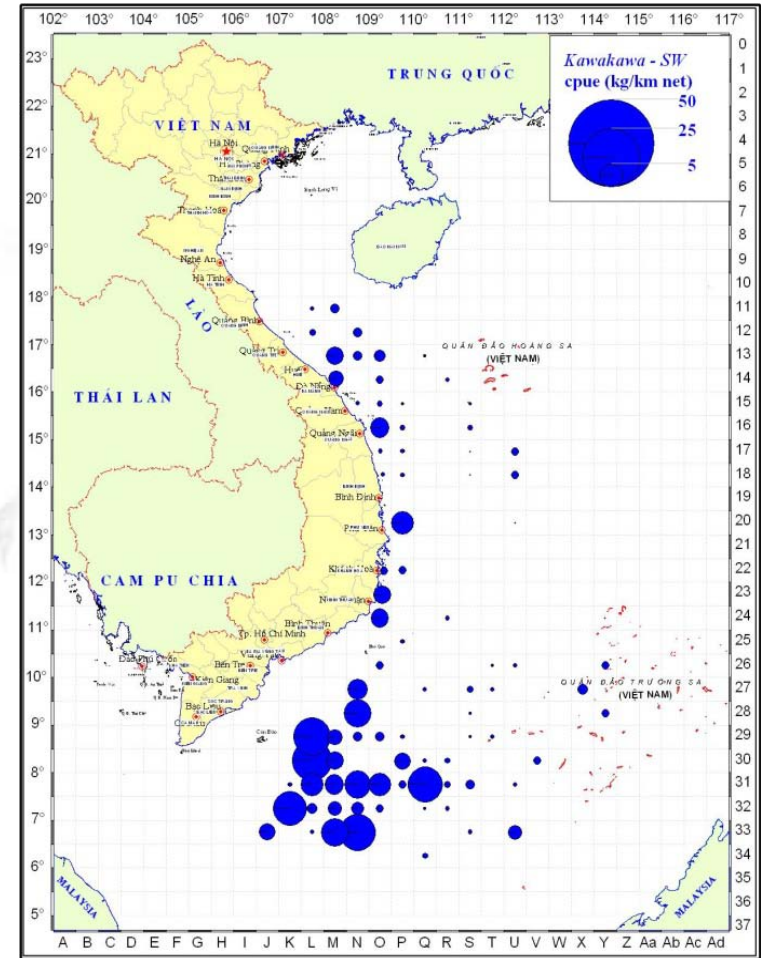




# Kawakawa



Northeast Monsoon Season

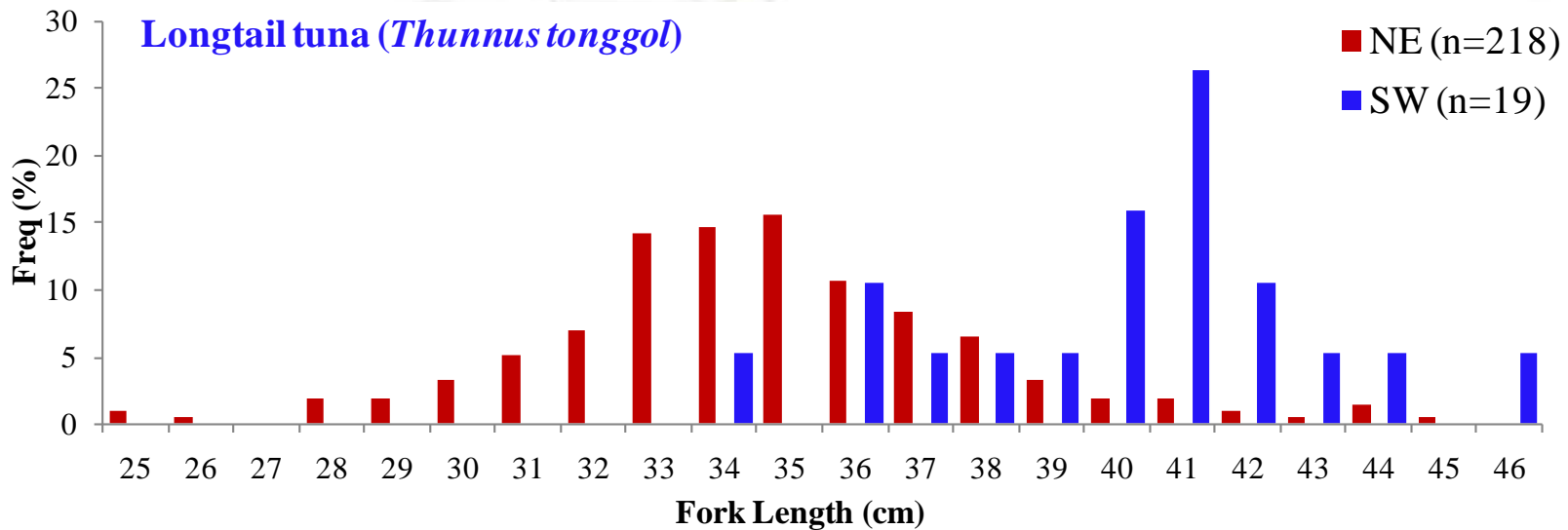
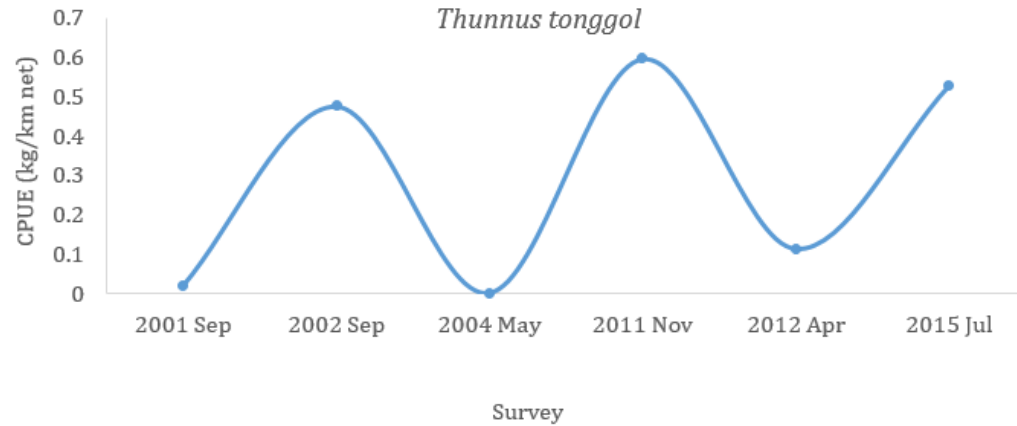


Southwest Monsoon Season



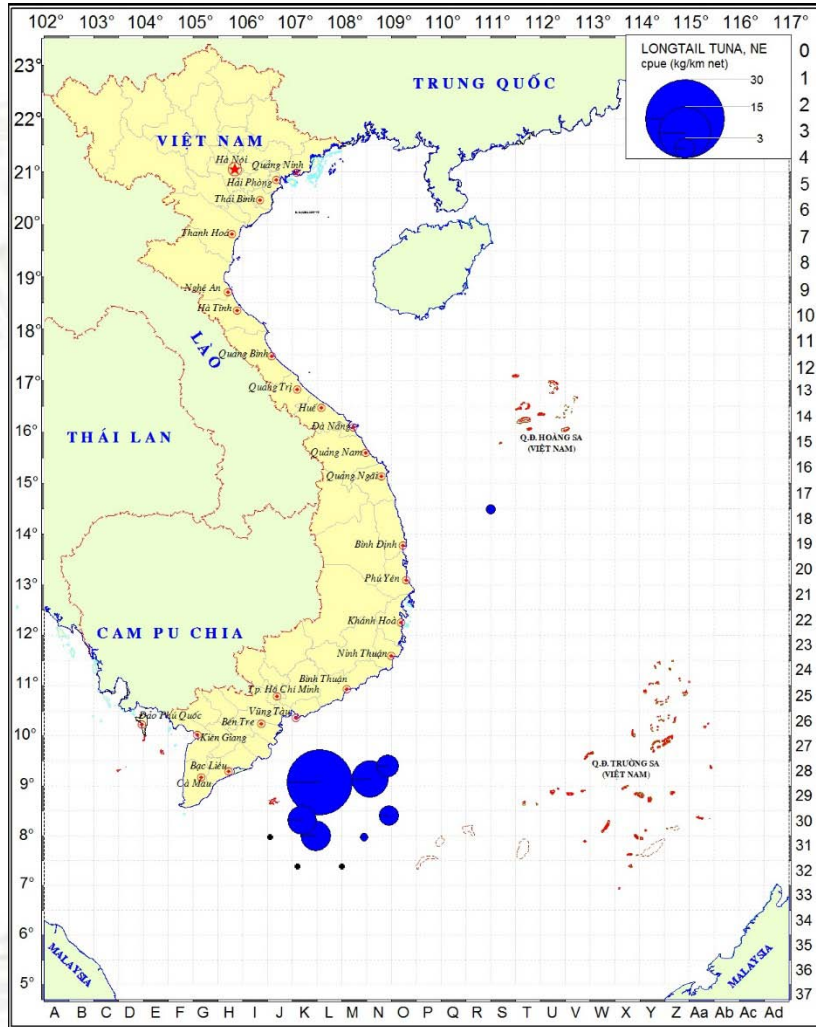
# Catch per Unit Effort & Length Frequency

- *Thunnus tonggol*

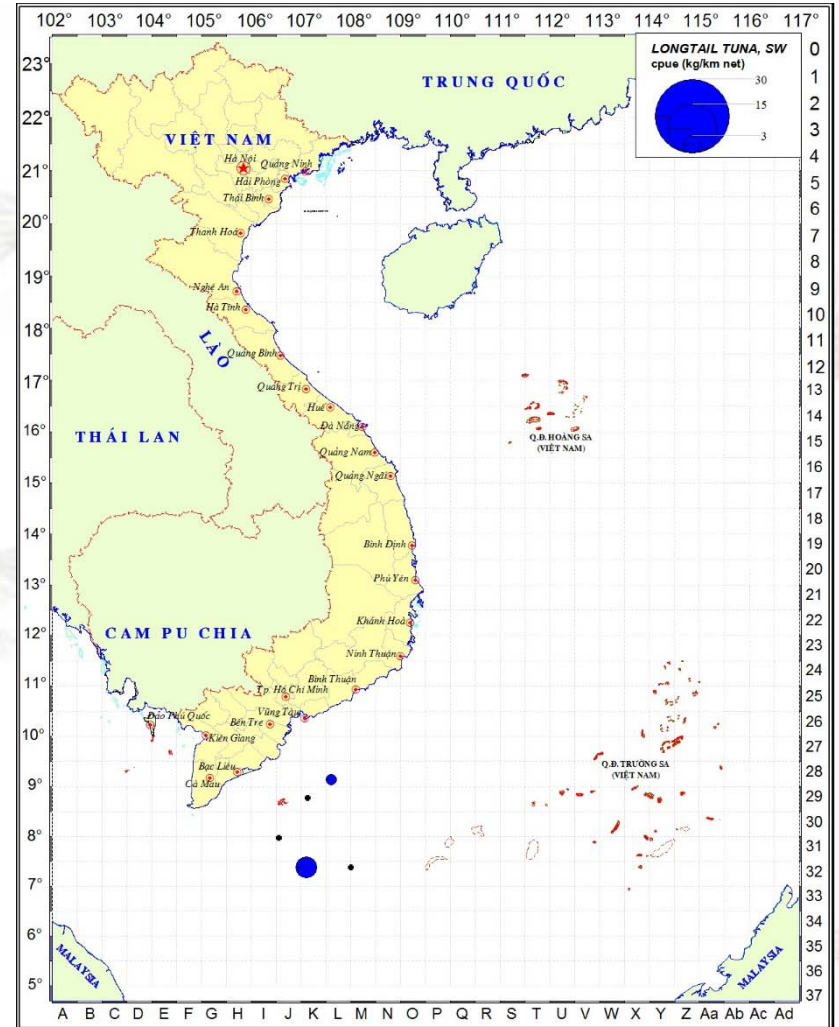




# Longtail Tuna



Northeast Monsoon Season

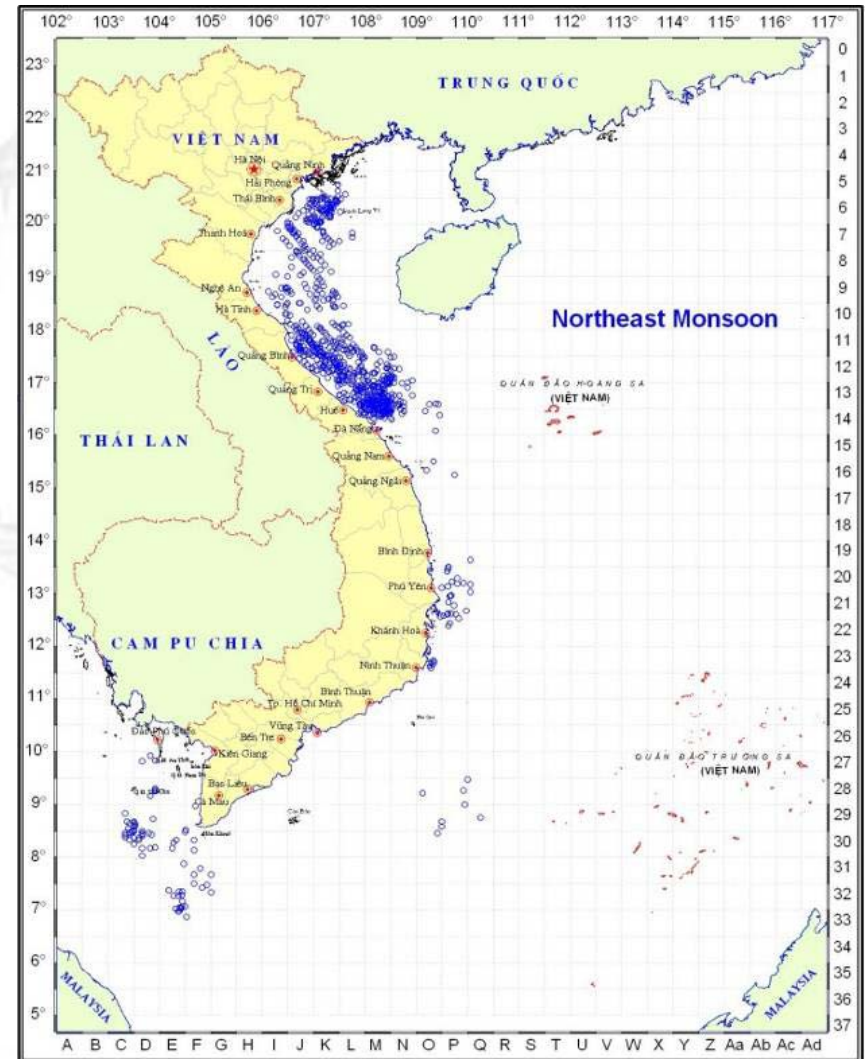
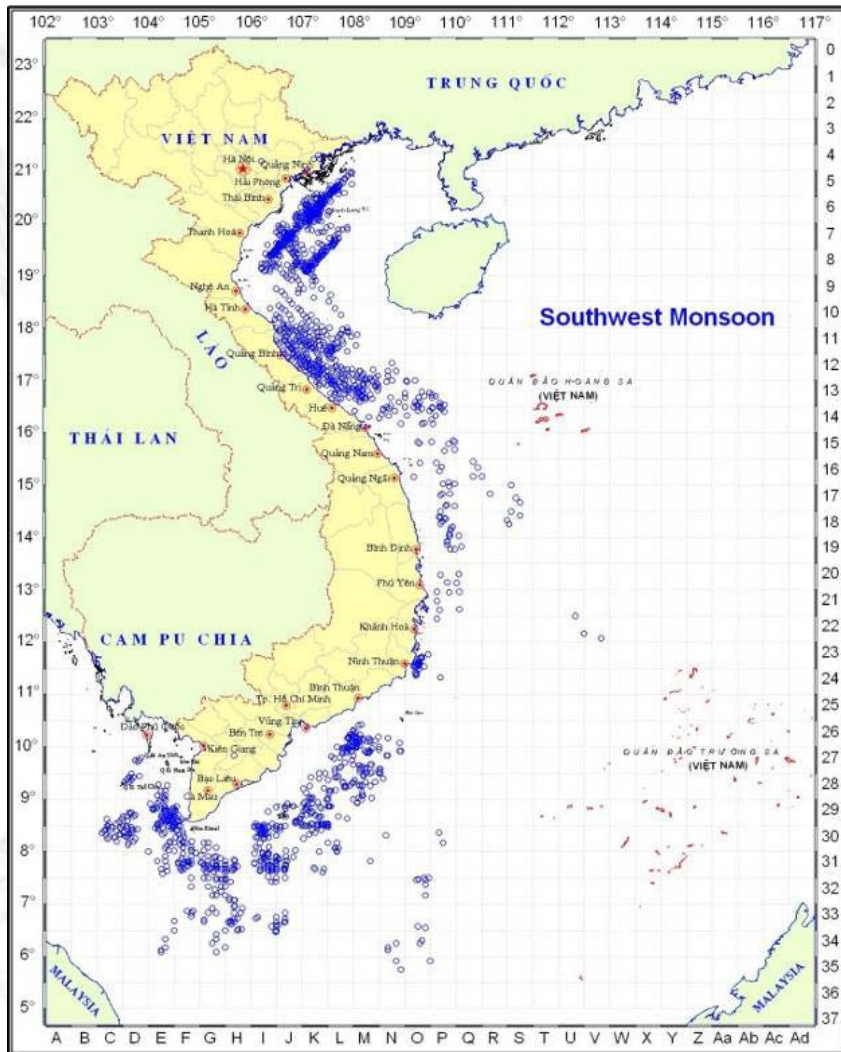


Southwest Monsoon Season





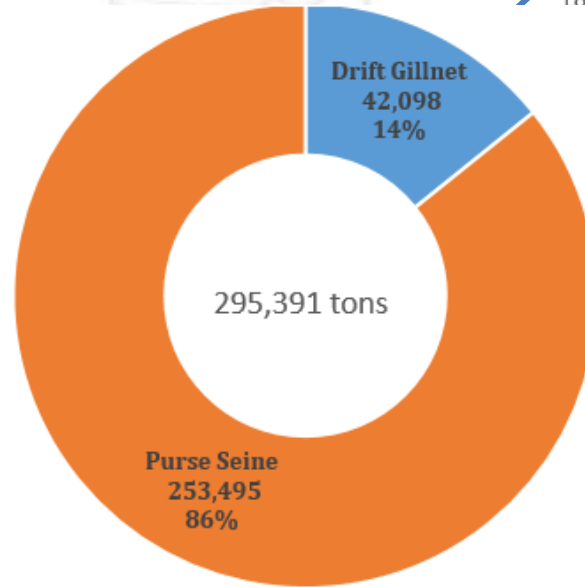
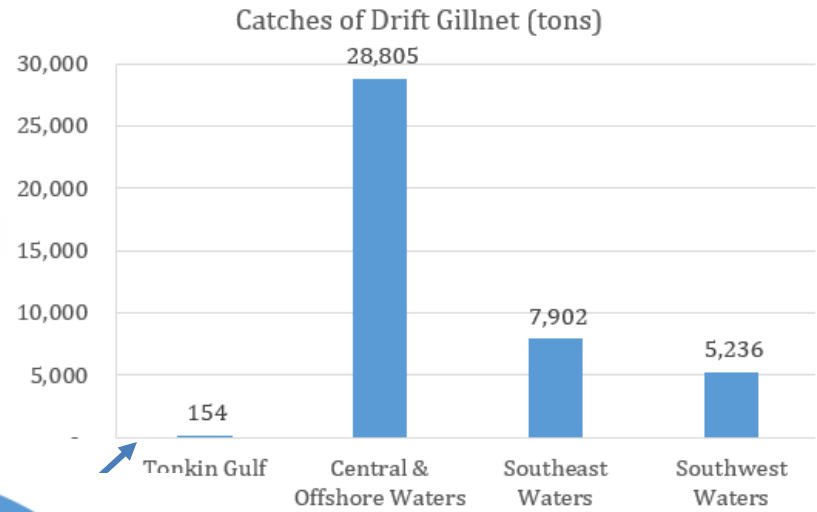
# Fishing Grounds for Neritic Tunas



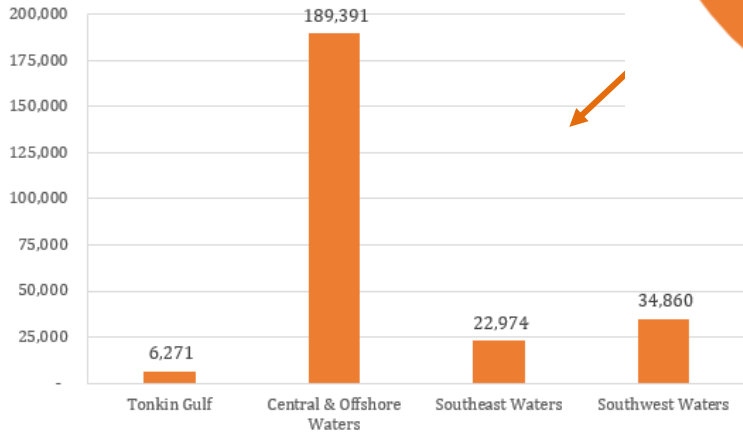


# TOTAL CATCH

(Jul 2014 – Jun 2015)



### Catches of Purse Seine (tons)





# Thank you!

