

**SUSTAINABLE FISHERIES
IN THE ANDAMAN SEA COAST OF
THAILAND**

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Introduction

- Fisheries have a long history in Thailand
- Fisheries are important to Thailand in terms of:
 - Food/Protein
 - Social structure/employment
 - International trade
- Fisheries in Thailand face severe problems requiring new and improved management efforts

Contents

1. Thailand Fisheries Status

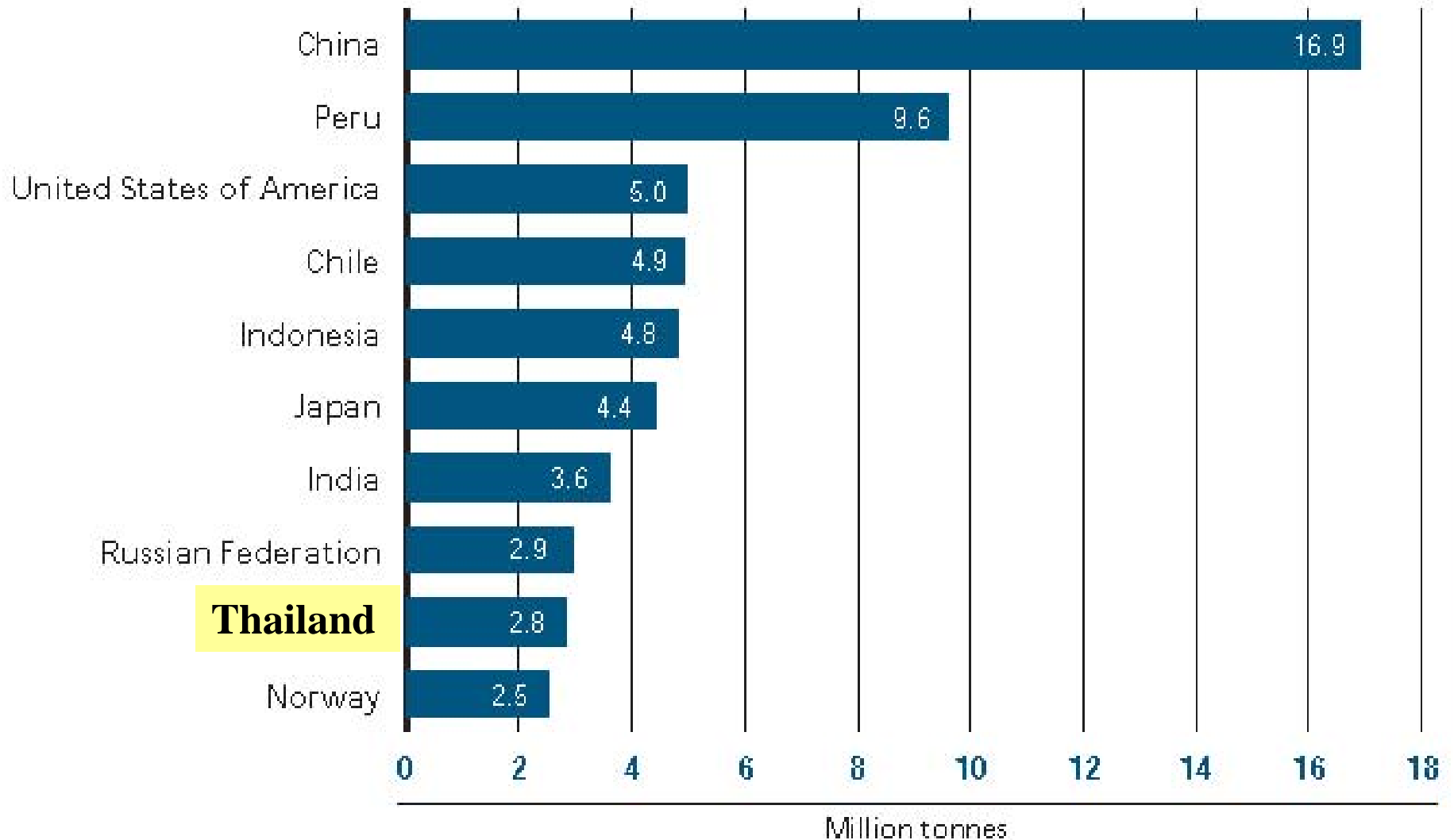
2. Andaman Sea Coast of Thailand Fisheries Status

3. Fisheries Framework

- The Global Level
- Regional Level
- National Level

4. Conclusion and Recommendations

Top Ten Producer Countries in 2004



Thai Fishery Production 1994 & 2004

capture

aquaculture

| Year | capture | | capture | | aquaculture | | aquaculture | |
|------|---------|-------------|---------|-------------|-------------|-------------|-------------|-------------|
| | marine | fresh water | marine | fresh water | coastal | fresh water | coastal | fresh water |
| | million | % | million | % | million | % | million | % |
| | tons | | tons | | tons | | tons | |
| 1994 | 2.804 | 79.6 | 0.203 | 5.8 | 0.346 | 9.8 | 0.170 | 4.8 |
| 2004 | 2.635 | 64.2 | 0.204 | 5.0 | 0.736 | 18 | 0.524 | 12.8 |

Marine Capture Fisheries in Thailand

1. Fishing in the Thai territorial sea and EEZ

2. Fishing outside the EEZ of Thailand

- EEZs of other coastal States
- High Sea Fisheries



Myanmar (Burma)

Lao

The Bay of Bengal

THAILAND

Paracel Islands

Cambodia

Vietnam

Sprattly Island

Gulf of

Thailand

304,000

km²

The Andaman Sea

116,280

km²

Malaysia

Brunei Darussalam

Indian Ocean

1027 km

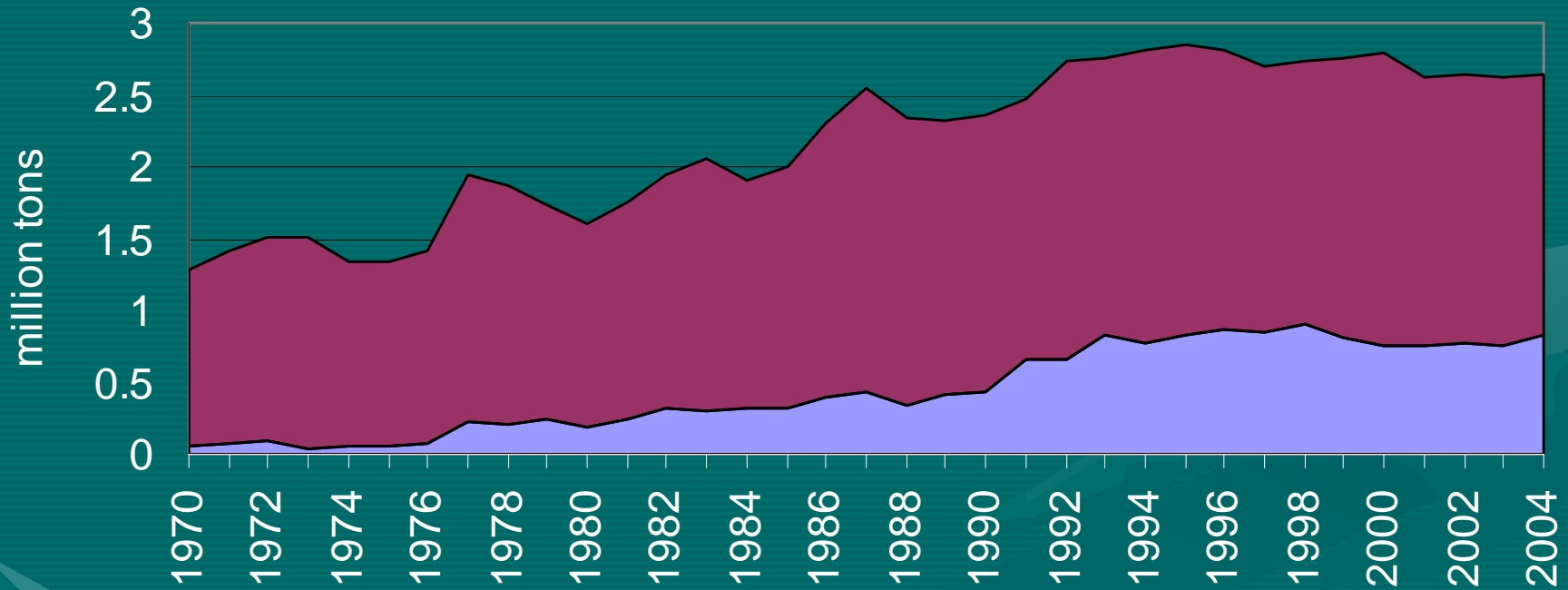


Image NASA
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Indonesia

marine capture fisheries production



■ The Andaman Sea ■ The Gulf of Thailand

Sustainable and actual fish yields in Thai waters in 1991

| Area | Fish Category | Sustainable Yield (tons) | Actual Yield (tons) | Overfishing (%) |
|------------------|---------------|--------------------------|---------------------|-----------------|
| Gulf of Thailand | Pelagic | 400,000 | 559,502 | 140 |
| | Demersal | 750,000 | 1,261,185 | 168 |
| Andaman Sea | Pelagic | 50,000 | 166,628 | 333 |
| | Demersal | 200,000 | 491,292 | 245 |

Fishing in EEZs of other coastal States

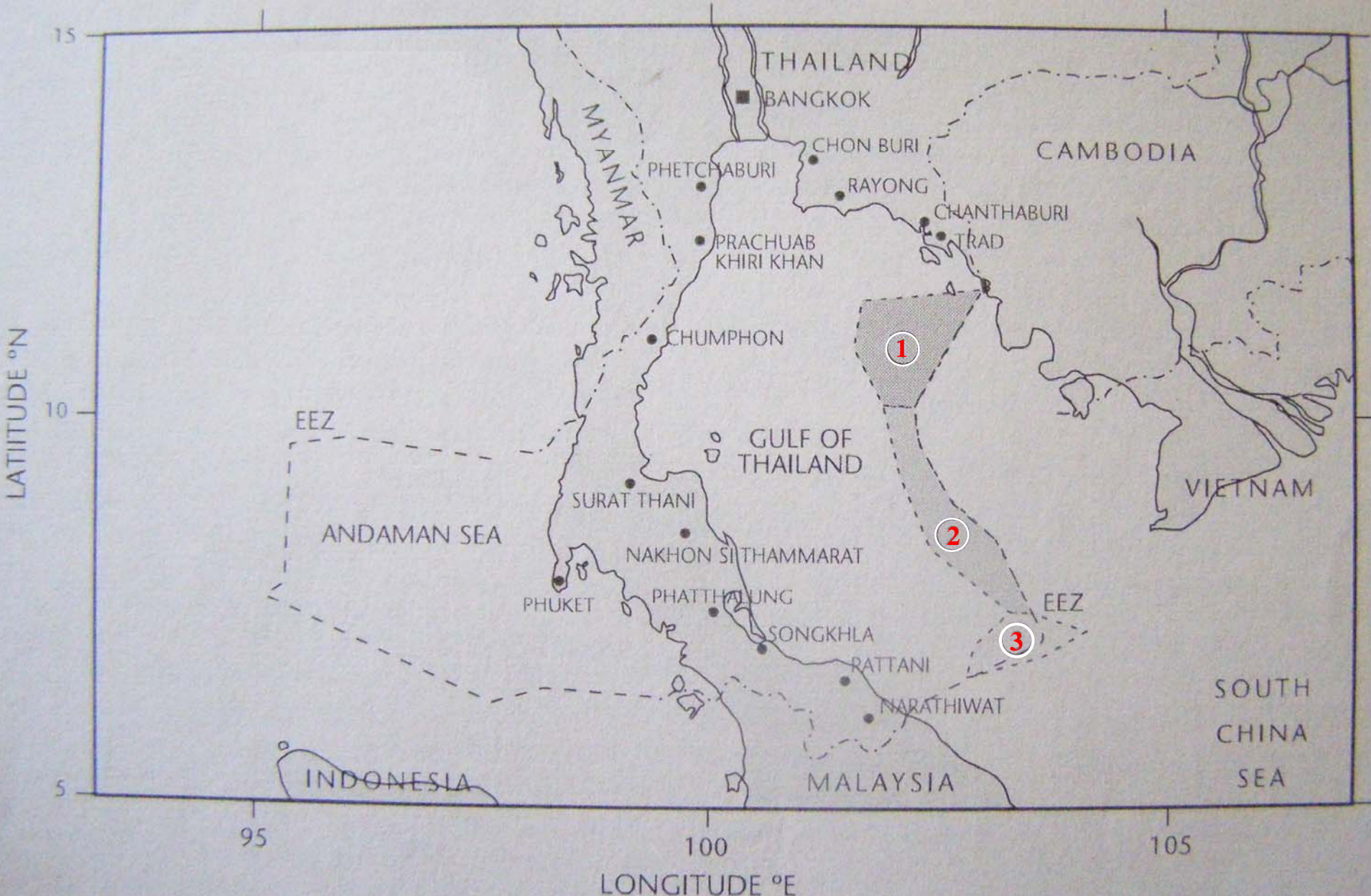
- Over 2,000 vessels having licenses to fish in waters of Myanmar, Malaysia, Indonesia, Vietnam, Cambodia, Bangladesh, India, Saudi Arabia and Madagascar

Thai boats and crews arrested by neighboring countries because they fished without a license

The causes for the illegal fishing

- Thailand lost access about 300,000 sq. mile after EEZs proclamation of other coastal States
- Boats and gear have high catch capacities
- Overlapping of Thailand's EEZ with neighboring coastal States

Overlapping of Thailand's EEZs with those of neighboring countries



Solution

- Agreements on delimitation of overlapping border
- Promote joint venture fishing with foreign countries
- Control the fishers who seek to fish in EEZs of other coastal States without license

High Sea Fisheries

Thai Tuna Vessels having licenses to fish in the Indian Ocean

- 6 tuna purse seiners
- 6 tuna longliners
- 3 research training vessels

Thai Tuna Fisheries production

| Year | Annual Catch (tons) | |
|------|---------------------|------------|
| | Purse Seiners | Longliners |
| 2000 | 1,530 | 385 |
| 2001 | 763 | 387 |
| 2002 | - | 94 |
| 2003 | - | 253 |
| 2004 | - | 514 |
| 2005 | 11,935 | 280 |

Andaman Sea Coast of Thailand Fisheries Status

Thailand

The Andaman Sea

Fisheries Law

Conclusion & Recommendations



Thailand

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Fisheries in the Andaman Sea

| Province | Fisher villages | No. of fishery establishment | No. of fishers during peak season | | | GPP for fisheries (mil baht) | GPP/capita (baht) |
|--------------|-----------------|------------------------------|-----------------------------------|---------------|---------------|------------------------------|-------------------|
| | | | Total | Family member | Employee | | |
| Total | 621 | 20,703 | 47,537 | 29,820 | 17,699 | 19,406 | 93,929 |
| Ranong | 59 | 2,279 | 6,471 | 3,051 | 3,402 | 4,439 | 78,856 |
| Phang-Nga | 132 | 4,667 | 9,382 | 6,964 | 2,418 | 2,569 | 104,053 |
| Phuket | 66 | 962 | 4,131 | 1,256 | 2,875 | 2,900 | 171,823 |
| Krabi | 116 | 4,908 | 9,205 | 7,502 | 1,703 | 1,253 | 81,282 |
| Trang | 132 | 3,789 | 8,459 | 4,739 | 3,720 | 3,948 | 76,165 |
| Satun | 116 | 4,098 | 9,889 | 6,308 | 3,581 | 4,297 | 73,026 |

The important group of fishing gears along the Andaman coast of Thailand 2004

| Fishing gears | Total | Provinces | | | | | |
|--------------------------|--------------|------------|------------|------------|------------|------------|------------|
| | | Ranong | Phang-Nga | Phuket | Krabi | Trang | Satun |
| Total | 2,210 | 256 | 330 | 283 | 127 | 393 | 821 |
| Trawls | 803 | 85 | 28 | 199 | - | 302 | 189 |
| Surrounding nets | 735 | 87 | 171 | 77 | 93 | 77 | 230 |
| Trammel nets & Gill nets | 666 | 80 | 131 | 7 | 34 | 14 | 400 |

Boat & Gear Registration

Department of Fisheries



GEAR

Department of Harbours



BOATS

only significant fishing gear

only inboard power boat

- Missed match data
- Many fisheries unlicensed, unrecorded (small scale fisheries)

Fisheries in the Andaman Sea

Commercial Fisheries

- inboard power boat > 10 gt



Small scale fisheries

- fishing without boat
- non power boat
- outboard power boat
- inboard power boat <10 gt



Fisheries in the Andaman Sea

Commercial Fisheries

- The owners have more than one boat
- Middleman, investor
- Related business (fishing port, ice plant, fish meal factory etc.)
- Loans or revolving funds from related businesses



Small scale fisheries

- More than one type of fishing gear for alternative use
- Take loans from middlemen
- Fish catch sold to middleman who control the price
- 75% of fishers are in debt



Problems & Stress Factors

Problems

- Decreasing of marine resources

1966 238.9↓ kg/hr.

1971 105.3↓ kg/hr.

1978 64.6↓ kg/hr.

2003 43.7 kg/hr.

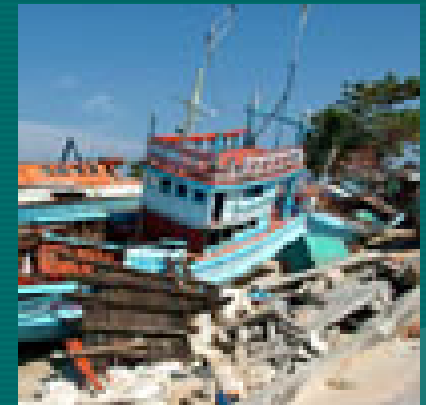
- Conflicts among fishers



Stress factors

- Tsunami 2004
- Fuel crisis
- Violation of regulations & illegal fishing

Tsunami, December 26, 2004



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Thailand

The Andaman Sea

Fisheries Law

Conclusion & Recommendations

Fisheries damage by Tsunami

| | Large fishing boat (>10 m) | Small fishing boat (<10 m) | Gear | Fishing port |
|--------------|----------------------------------|----------------------------------|--------------|--------------|
| Total | 894 | 6,568 | 6,998 | 60 |
| Ranong | 304 | 536 | 97 | 25 |
| Phang-Nga | 369 | 2,195 | 1,150 | 24 |
| Phuket | 176 | 1,070 | 761 | 6 |
| Krabi | 18 | 1,246 | 1,694 | - |
| Trang | 1 | 869 | 1,646 | - |
| Satun | 26 | 652 | 1,650 | 5 |

- DOF paid cash compensation to the owner
- NGOs and other donors replaced boat & gears



Replacement rate was **above** losses



New entry
fishers



More competition



- Selling boat or gear
- Touring boat



New occupation

Fuel crisis



Stop fishing



Adaptation

Saving fuel

- Selecting fishing ground carefully
- Reducing distance between setting areas
- Increasing fishing days
- Hauling hourly instead 4 hours/haul (trawler)
- Transshipment catch and supply at sea
- Using paddle
- Changing fishing gear to lower cost of fuel
- Using sail

Increasing effort

- Increasing fishing sets
- Increasing fishing days
- Increasing type of gears

Catch much more **trash fish** better than
catch nothing!

Solution

Fuel Subsidies

Green Fuel Program

- commercial boat
- tax free
- supply by tankers in continuous zone

Purple Fuel program

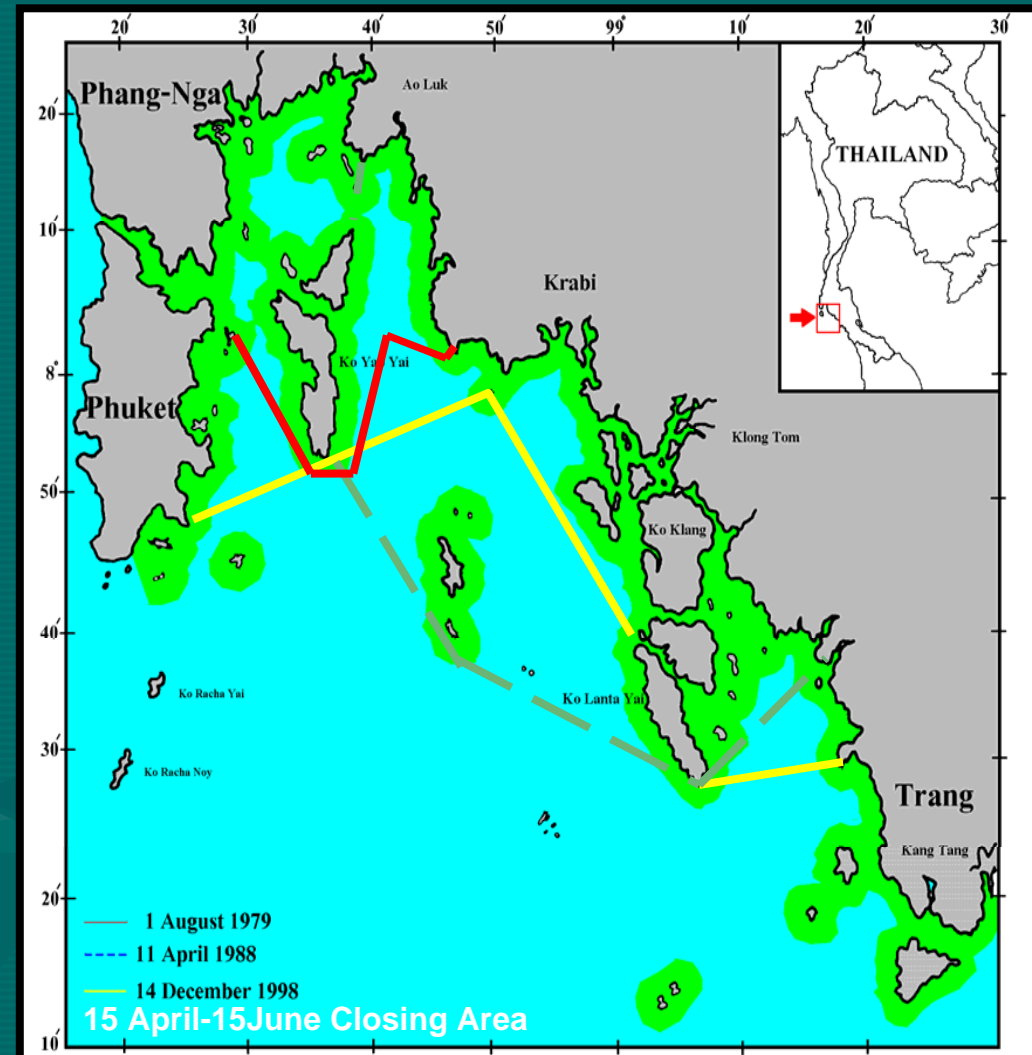
- small scale boat
- special grade of fuel (lower sulfur dioxide)
- 2 baht/liter less than normal fuel

Sail & Biofuel



Violation of regulations & illegal fishing

- Encroachment within 3 km. from shoreline by commercial fisheries
- Fishing during closed period
- Illegal fishing gears
- Illegal mesh size
- Setting FADs illegally & obstacle transportation
- Moving of boats from the GoF during closed period





**The estimated cost of illegal fishing in the Andaman Sea Coast is
over 100 million baht/year**

Fisheries Law



Thailand

The Andaman Sea

Fisheries Law

Conclusion & Recommendations

The Global Framework

- The **LOSC**
- Chapter 17, Agenda 21 in **1992 UNCED**
- **FAO Compliance Agreement**
- **UNSEFA**
- The 1995 **CCRF**
- **FAO International Plans of Action**
 - IPOA-seabird
 - IPOA-sharks
 - IPOA-capacity
 - IPOA-IUU

Regional Framework

- Indian Ocean Tuna Commission (**IOTC**)
- Bay of Bengal Large Marine Ecosystem Program (**BOBLME**)
- Asia-Pacific Fisheries Commission (**APFIC**)
- Coordinating Body in the Sea of East Asia (**COBSEA**)
- Southeast Asian Fishery Development Centre (**SEAFDEC**)

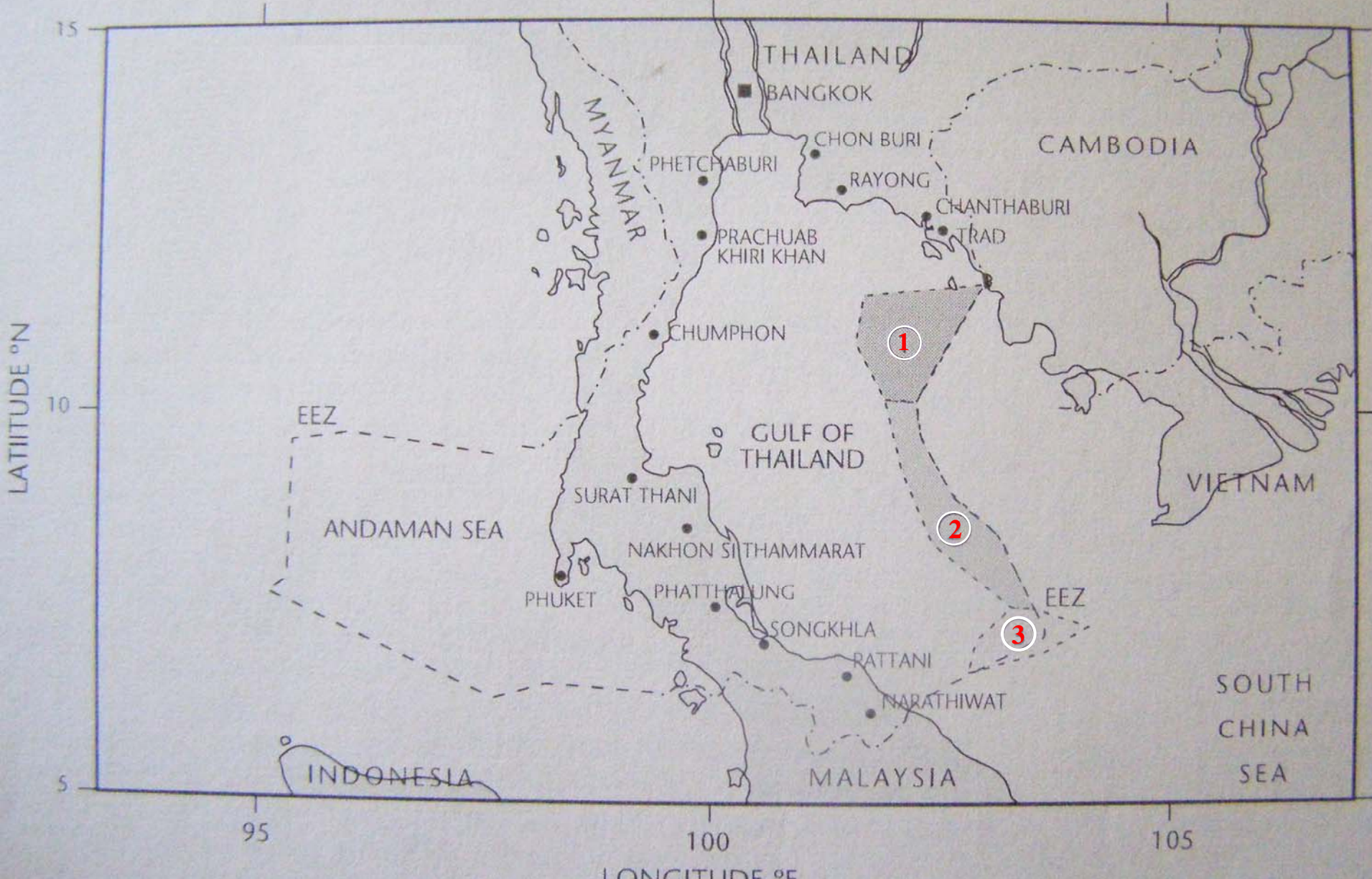
National Framework

- **The EEZ Proclamation**
- **National Fisheries Law**

The EEZ Proclamation

- Thailand proclaimed the establishment of the EEZ in 1981
- Agreements on the delimitation of marine boundary with bordering countries including; **India**, Indonesia, **Myanmar** Malaysia and **Vietnam**

Overlapping of Thailand's EEZs with those of neighboring countries



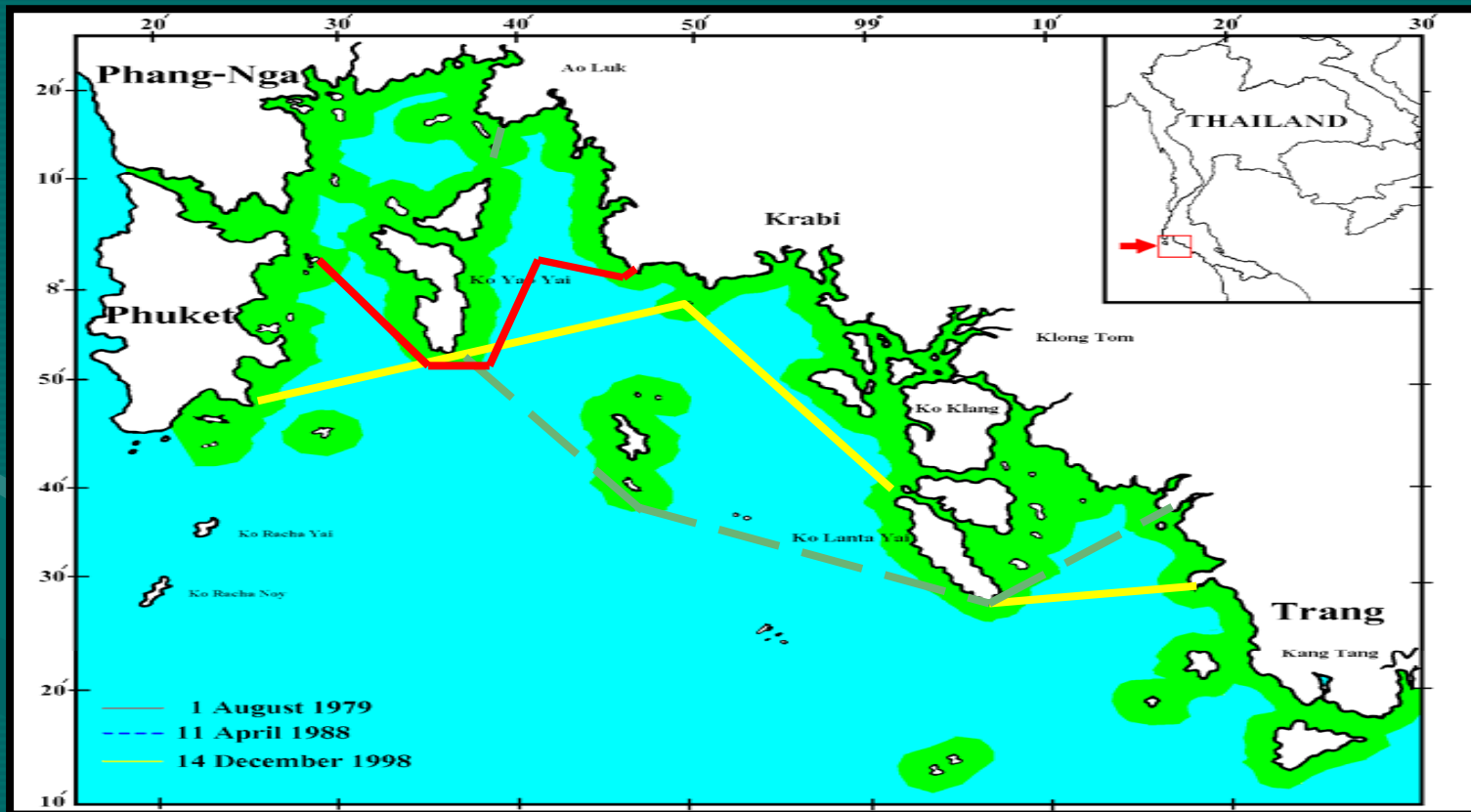
National Fisheries Law

The fisheries Act, B.E. 2490 (1947)

The fisheries Act, B.E. 2490 (1947)

- The principle law for fisheries in Thailand
- Empower **Minister of Agriculture and Cooperatives** and **provincial Governor** to regulate and enforce the activities fisheries by mean of administrative power, i.e. issuing regulations and decrees

- Prohibition of the horseshoe crab fisheries in the spawning season
- Establishment of a closed spawning and nursery season
- Prohibition the use of trawl and push net in Phang nga Bay
- Prohibition of the Anchovy light luring fishery



Current Situation

- Limited acceptance by fishers of law and regulation
- Violation of regulations
- Conflicts among fishers

Obstacle of the fisheries Act, B.E. 2490 (1947)

- Does not support the stakeholders to participate in the fisheries resources management & establishment of fisheries law
- Does not effect to present situation of marine capture
 - The development of fishing gears and methods
 - There are no provisions concern fisheries outside Thai's EEZ
 - Taxes and fees are **VERY low**
 - Taxes and fees **not dependent on the capacity of the gears**

Conclusion

- Thailand faced with **decline of fisheries resources**, overcapacity, the use of **destructive fishing gear**, overexploitation, **fuel crisis**, violation of laws and regulations and
- The Andaman Sea is in the same situation as seen in other coast of Thailand and **tsunami impact** is one of stress factor
- The fisheries problems in the Andaman Sea involves the fisheries within the Thai EEZ and those beyond the Thai waters
- The fisheries problems in the Andaman Sea need a comprehensive regime at national level

RECOMMENDATIONS

- Ratification the international conventions
- Implement the international and regional instruments for effectives effort in fisheries management
- Reform national fisheries law

Recommended potential approaches for sustainable fisheries managements

- Decentralized management
- Rights-based fisheries management
- Ecosystem-based management
- Community based management
- Co-management

Sustainable Fisheries Management in the Andaman Sea



Thailand

The Andaman Sea

Fisheries Law

Conclusion & Recommendations



THANK YOU