SUSTAINABLE FISHERIES
IN THE ANDAMAN SEA COAST OF
THAILAND

Sampan Panjarat

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OFFICE OF LEGAL AFFAIRS, THE UNITED NATIONS
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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

- China: 16.9 million tonnes
- Peru: 9.6 million tonnes
- United States of America: 5.0 million tonnes
- Chile: 4.9 million tonnes
- Indonesia: 4.8 million tonnes
- Japan: 4.4 million tonnes
- India: 3.6 million tonnes
- Russian Federation: 2.9 million tonnes
- Norway: 2.8 million tonnes
- Thailand: 2.5 million tonnes
Thai Fishery Production 1994 & 2004

<table>
<thead>
<tr>
<th>Year</th>
<th>capture</th>
<th></th>
<th></th>
<th>aquaculture</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>marine</td>
<td>fresh water</td>
<td>coastal</td>
<td>fresh water</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>million</td>
<td>%</td>
<td>million</td>
<td>%</td>
<td>million</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>tons</td>
<td>tons</td>
<td>tons</td>
<td>tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>2.804</td>
<td>79.6</td>
<td>0.203</td>
<td>5.8</td>
<td>0.346</td>
<td>9.8</td>
</tr>
<tr>
<td>2004</td>
<td>2.635</td>
<td>64.2</td>
<td>0.204</td>
<td>5.0</td>
<td>0.736</td>
<td>18</td>
</tr>
</tbody>
</table>

Thailand The Andaman Sea Fisheries Law Conclusion & Recommendations
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
Malaysia
Myanmar (Burma)
Cambodia
Vietnam
Lao
Gulf of Thailand
304,000 km²
The Andaman Sea
116,280 km²
Indian Ocean
The Bay of Bengal
The Andaman Sea

The Gulf of Thailand
### Sustainable and actual fish yields in Thai waters in 1991

<table>
<thead>
<tr>
<th>Area</th>
<th>Fish Category</th>
<th>Sustainable Yield (tons)</th>
<th>Actual Yield (tons)</th>
<th>Overfishing (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gulf of Thailand</td>
<td>Pelagic</td>
<td>400,000</td>
<td>559,502</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>Demersal</td>
<td>750,000</td>
<td>1,261,185</td>
<td>168</td>
</tr>
<tr>
<td>Andaman Sea</td>
<td>Pelagic</td>
<td>50,000</td>
<td>166,628</td>
<td>333</td>
</tr>
<tr>
<td></td>
<td>Demersal</td>
<td>200,000</td>
<td>491,292</td>
<td>245</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Catch (tons)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Purse Seiners</td>
<td>Longliners</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>1,530</td>
<td>385</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>763</td>
<td>387</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>-</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>-</td>
<td>253</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>-</td>
<td>514</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>11,935</td>
<td>280</td>
<td></td>
</tr>
</tbody>
</table>

**Thailand**

**The Andaman Sea**

**Fisheries Law**

**Conclusion & Recommendations**
Andaman Sea Coast of Thailand Fisheries Status
Thailand
The Andaman Sea
Indian Ocean
Malaysia
Myanmar (Burma)
Cambodia
Vietnam
Lao
Gulf of Thailand
Indian Ocean
Malaysia
The Bay of Bengal
The Andaman Sea
Gulf of Thailand
Thailand
Paracel Islands
Spratly Islands
Brunei Darussalam
Indonesia
Conclusion & Recommendations
### Fisheries in the Andaman Sea

<table>
<thead>
<tr>
<th>Province</th>
<th>Fisher villages</th>
<th>No. of fishery establishment</th>
<th>No. of fishers during peak season</th>
<th>GPP for fisheries (mil baht)</th>
<th>GPP/capita (baht)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>Family member</td>
<td>Employee</td>
</tr>
<tr>
<td>Total</td>
<td>621</td>
<td>20,703</td>
<td>47,537</td>
<td>29,820</td>
<td>17,699</td>
</tr>
<tr>
<td>Ranong</td>
<td>59</td>
<td>2,279</td>
<td>6,471</td>
<td>3,051</td>
<td>3,402</td>
</tr>
<tr>
<td>Phang-Nga</td>
<td>132</td>
<td>4,667</td>
<td>9,382</td>
<td>6,964</td>
<td>2,418</td>
</tr>
<tr>
<td>Phuket</td>
<td>66</td>
<td>962</td>
<td>4,131</td>
<td>1,256</td>
<td>2,875</td>
</tr>
<tr>
<td>Krabi</td>
<td>116</td>
<td>4,908</td>
<td>9,205</td>
<td>7,502</td>
<td>1,703</td>
</tr>
<tr>
<td>Trang</td>
<td>132</td>
<td>3,789</td>
<td>8,459</td>
<td>4,739</td>
<td>3,720</td>
</tr>
<tr>
<td>Satun</td>
<td>116</td>
<td>4,098</td>
<td>9,889</td>
<td>6,308</td>
<td>3,581</td>
</tr>
</tbody>
</table>
## The important group of fishing gears along the Andaman coast of Thailand 2004

<table>
<thead>
<tr>
<th>Fishing gears</th>
<th>Total</th>
<th>Provinces</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ranong</td>
</tr>
<tr>
<td>Total</td>
<td>2,210</td>
<td>256</td>
</tr>
<tr>
<td>Trawls</td>
<td>803</td>
<td>85</td>
</tr>
<tr>
<td>Surrounding nets</td>
<td>735</td>
<td>87</td>
</tr>
<tr>
<td>Trammel nets &amp; Gill nets</td>
<td>666</td>
<td>80</td>
</tr>
</tbody>
</table>

*Note:* The Andaman Sea Fisheries Law

**Conclusion & Recommendations**
Boat & Gear Registration

Department of Fisheries

Department of Harbours

GEAR

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

Thailand The Andaman Sea Fisheries Law Conclusion & Recommendations
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
### Fisheries damage by Tsunami

<table>
<thead>
<tr>
<th></th>
<th>Large fishing boat (&gt;10 m)</th>
<th>Small fishing boat (&lt;10 m)</th>
<th>Gear</th>
<th>Fishing port</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>894</td>
<td>6,568</td>
<td>6,998</td>
<td>60</td>
</tr>
<tr>
<td>Ranong</td>
<td>304</td>
<td>536</td>
<td>97</td>
<td>25</td>
</tr>
<tr>
<td>Phang-Nga</td>
<td>369</td>
<td>2,195</td>
<td>1,150</td>
<td>24</td>
</tr>
<tr>
<td>Phuket</td>
<td>176</td>
<td>1,070</td>
<td>761</td>
<td>6</td>
</tr>
<tr>
<td>Krabi</td>
<td>18</td>
<td>1,246</td>
<td>1,694</td>
<td>-</td>
</tr>
<tr>
<td>Trang</td>
<td>1</td>
<td>869</td>
<td>1,646</td>
<td>-</td>
</tr>
<tr>
<td>Satun</td>
<td>26</td>
<td>652</td>
<td>1,650</td>
<td>5</td>
</tr>
</tbody>
</table>
• DOF paid cash compensation to the owner
• NGOs and other donors replaced boat & gears

Replacement rate was **above** losses

- New entry fishers
- Selling boat or gear
- Touring boat
- More competition
- New occupation

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**Thailand**

**The Andaman Sea**

**Fisheries Law**

**Conclusion & Recommendations**
Fuel crisis

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

Stop fishing

Thailand
The Andaman Sea
Fisheries Law
Conclusion & Recommendations
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

The Andaman Sea

Thailand

Fisheries Law

Conclusion & Recommendations
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
The Global Framework

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

Conclusion & Recommendations
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 effective 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