

# Tsunami Impact on Fisheries and Aquaculture in Malaysia<sup>1</sup>

## Affected Areas

The northern states of the west coast of Peninsular Malaysia have been badly affected. These include Kedah, Penang, Perlis and Perak. Penang and Kedah suffered the most damage.

About 5,200 fishers lost an estimated value in facilities (boats and gears) of RM 29.3 million (US\$ 7.71 million); 155 fish farmers lost around RM 23.9 million (US\$ 6.3 million) worth of facilities and standing crop. Some 4,696 people were evacuated in Kedah and 1,600 in Penang.



<sup>1</sup> **Disclaimer:** This report has been jointly developed by staff from NACA, FAO, SEAFDEC and BOBP-IGO for internal use. Every possible effort has been made, considering the circumstances, to verify the information. The report is considered appropriate at the time of its preparation. It will be updated as necessary in light of further knowledge gained at subsequent stages of the evolution of the situation. The organizations concerned make no warranty, express or implied, as to the accuracy, reliability or content of the material, text and any graphics in this document. They also decline all responsibility for updating the material and assume no responsibility for errors and omissions in the material provided in the document.

## Photos

### Pre-tsunami Photos

1. Floating cage farms in Kedah which grow various marine fish species located at the river mouth could have been destroyed by the tsunami. These large-scale operations employed hundreds of people from the local community. (S Y Sim, NACA)
2. Small fishing village by the river mouth in Kedah. The tsunami would have destroyed the houses, fishing boats and the coastal fishery resources. (S Y Sim, NACA)
3. Fishing ground for bivalves and floating cage farms (behind) in Penang, providing livelihoods and income for many, would all have been destroyed by the tsunami. (S Y Sim, NACA)

### Post-tsunami Photos

1. Dead groupers littering a Penang beach, most likely from aquaculture (because of their uniform size). (From a CNN website)
2. One of the fish cages floating off the coast of Sungai Aceh in Penang after it was ripped apart on Sunday, 26 December. Only the store house is left afloat. (*Star*, 30 December)
3. Fishing boats smashed about like boxes piled up at the Kuala Cenang fishermen's jetty in Langkawi Island, Kedah. (*Star*, 27 December)

## Fisheries

| State        | District | Village |                 |                  | Landing centers (damaged)      | Number of fishers <sup>2</sup> | Human losses (missing) | Fishing vessel <sup>3</sup> |                 |                |                 |
|--------------|----------|---------|-----------------|------------------|--------------------------------|--------------------------------|------------------------|-----------------------------|-----------------|----------------|-----------------|
|              |          | Total   | Fishing village | Village affected |                                |                                |                        | Mechanised                  |                 | Non-mechanised |                 |
|              |          |         |                 |                  |                                |                                |                        | Total                       | Lost or damaged | Total          | Lost or damaged |
| Penang       | 5        |         |                 |                  | 2,162                          |                                | 1,237                  | 360                         | 4               | RM 4.6 m       |                 |
| Kedah        | 3        |         |                 |                  | 5,645                          |                                | 1,341                  |                             | 0               |                |                 |
| Perlis       | 1        |         |                 |                  | 5,279 (2,000 fishers affected) |                                | 587                    |                             | 0               |                |                 |
| Perak        | 4        |         |                 |                  | (1)                            | 7,511                          | 4,068                  | 164 <sup>4</sup>            | 43              |                |                 |
| <b>Total</b> | 14       |         |                 |                  |                                | 20,597                         | 7,233                  |                             | 47              |                |                 |

### Penang, Kedah, Perlis and Perak

- In Penang, fishing villages in Teluk Kumbar, Gertak Sanggul, Pulau Betong and Kuala Sungai Burung areas are worst affected.
- In Perak, fishing villages in Tanjung Piandang and Bagan Datoh areas are worst affected and one fishermen cooperative landing center in Bagan Datoh is damaged.

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<sup>2</sup> Number of fishers working on licensed fishing vessels (Annual Fisheries Statistics 2000, Volume 1, Department of Fisheries Malaysia)

<sup>3</sup> Number of licensed fishing vessels

<sup>4</sup> This figure may include non-mechanised vessels

- The majority of the 2,000 inshore fishers at Kuala Perlis have been reporting poor daily catches since the tsunami, less than 5 kg (post-tsunami) compared to 10 kg (pre-tsunami).
- Fishers earn RM 30-50 per day.
- The pre-tsunami Penang recorded fish catch was valued at around RM 150 million per year. In 2002, the total fisheries catches (marine fish) accounted for RM 129.89 million.

## Aquaculture

### State of Penang

| Area           | Number of fish farmers | Cage farms  | Oyster cages                    |
|----------------|------------------------|---|---------------------------------|
| Tanjung Dawai  |                        | Total loss  |                                 |
| Bukit Tambun   |                        | RM 10 million   |                                 |
| Pulau Aman     |                        | Some damage and loss of fish                                  |                                 |
| Tanjong Tokong |                        | Most cages broken and fish dead                               |                                 |
| Sungai Aceh    | 110                    | Water surface area of 120 ha, estimated loss of RM 10 million |                                 |
| Penang area    |                        |   | RM 20,000 (based on one farmer) |

- The annual pre-tsunami production for Sungai Aceh, Penang area alone was around 600 tons of marine finfish.
- Total aquaculture production for Penang in 2002 was valued at around RM 66.11 million, divided according to these systems:
  - Marine/brackishwater cage culture: RM 38.38 million
  - Brackishwater pond culture: RM 17.21 million
  - Freshwater pond culture: RM 1 million
  - Ornamental fish: RM 2.28 million
  - Cockles and oysters: RM 7.24 million

### Government Assistance Programs

The Malaysian government has promised aid to fishing communities and others affected by the tsunami:

- RM 20,000 for each victim killed
- RM 500 for each of the 206 fish breeders and 102 farmers (paddy) affected as aid
- RM 530,000 for fish breeders for their losses as assessed by the Department of Fisheries
- Partially damaged house: RM 2,000
- Completely destroyed house: RM 5,000
- Damaged fishing boats: RM 1,000
- Destroyed fishing boats: RM 3,000

For the repair of jetties and bridges, the Government has allocated RM 4.2 million for essential facilities for fishers affected by the tsunami to enable them to resume their livelihoods. RM 2.2 million will go to Kedah, and the rest to Penang.

Technical and financial assistance will be provided to fishers interested in venturing into other businesses, including aquaculture.

### **Key Information Resources**

- Socio Economic and Environmental Research Institute, August 2004, Volume 6, Issue 8  
<http://www.seri.com.my/main.htm>
- <http://www.thestar.com.my>
- <http://malaysianews.net/>
- <http://www.digitalglobe.com/>
- Department of Fisheries, Malaysia
- Dr. Leong Tak Seng, Penang
- Dr. Wing-Keong Ng, School of Biological Sciences Universiti Sains Malaysia, Penang

### **Information Gaps**

- Details of numbers of fishers and aqua-farmers affected in each state are not available at this time, nor are details of damages and losses.