COMMUNITY RESPONSES TO CLIMATE CHANGE IN MALAYSIA

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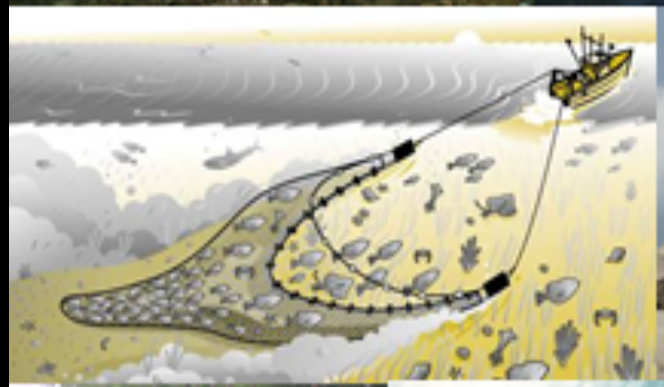
Member of Friends of the Earth International

THREATS TO FORESTS & BIODIVERSITY

THREATS TO COASTAL AREA AND FISHERIES



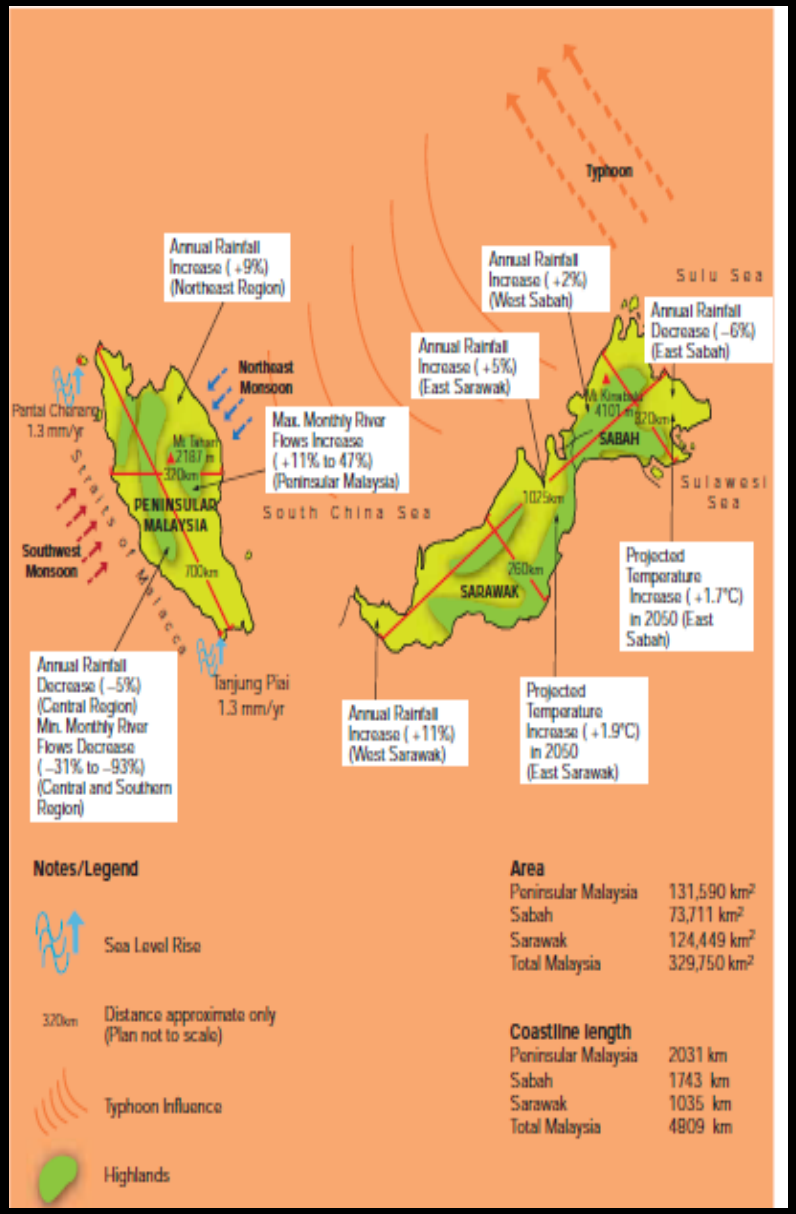
MALAYSIA: OBSERVED AND PROJECTED CLIMATE CHANGE

	Observed	Projected (by 2050)
Temperature	0.6-1.2 °C per 50 years (1969-2009)	• 1.5-2 °C increase
Rainfall (amount)	no appreciable difference	• (-) 5% to (+) 9% change in regions within PM • (-) 6% to (+) 11% change in regions within Sabah and Sarawak
Rainfall Intensity	Increased by 17% for 1 hour duration and 29% for 3 hour duration (2000-2007 compared to1971-1980)	• Increase in extremes within wet cycles • Increase in frequency of extreme weather
Sea Level Rise (SLR)	1.3 mm/yr (1986-2006, Tanjung Piai, Johor)	• 0.5m rise (Global high worst case at 10mm/yr)

Malaysia Second National Communication to the UNFCCC (Softcopy version at nc2.nre.gov.my)

CLIMATIC PATTERNS & PROJECTED CHANGES

Malaysia Second National Communication to the UNFCCC



“TOTAL FOREST COVER” IN MALAYSIA

MANGROVE FOREST DESTRUCTION IN PENINSULAR MALAYSIA

Table 3. Development of the Permanent Reserved Mangrove Forest in Peninsular Malaysia in 1996-2003 (in hectares).

State	*1996*	*2003*	*Loss/gain*	*% loss/gain*
Perak	43,502	41,617	-1,885	-4%
Johor	17,029	16,658	-371	-2%
Selangor	15,096	14,897	-199	-1%
Kedah	7,949	8,257	308	4%
Pahang	2,483	2,416	-67	-3%
Terengganu	1,295	1,295	0	0%
Pulau Pinang	451	376	-75	-17%
Negeri Sembilan	599	204	-395	-66%
Melaka	338	80	-258	-76%
Kelantan	-	-	-	-
Perlis	-	-	-	-
Total	88,742	85,800	-2,942	-3%

Source: Forestry Department Peninsular Malaysia (1996, 2003).

Kuala Selangor mangrove swamps under threat

By Meena L. Ramadas

HARMFUL effluents being discharged by six aquaculture farms operating near Kampung Api-Api in Kuala Selangor are threatening to destroy mangrove swathes in the surrounding area.

These swamps are host to firefly colonies that feature the rare and unique synchronised blinking firefly species in addition to other marine life.

A source from the Selangor Fisheries Department who spoke to *theSun* on conditions of anonymity said the six farms were found to have released waste with high amounts of organic load rich in nitrates and urea from shrimp farming.

The high amount of urea and nitrates in the organic load causes the riverbed to harden, threatening the fertility of mangrove swathes in the area.

"The farms clean their ponds with chlorine and release the untreated waste water into the sea, and this affects the mangroves located near the Sungai Selangor river mouth," the officer from the department said, adding that small fishermen in the area were also affected by the destruction of these mangroves as this caused depletion of marine life. The six companies operate on about 1,000 ha of land and have more than 1,000 ponds collectively.

According to the fisheries department officer, despite existing laws undermining aquaculture operations, there is a lack of monitoring. Kuala Selangor Nature Park manager R. Nagarajan said the mangrove swamps in Kuala Selangor is divided into two areas called the North Central Coast which has 28,000 ha of mangrove swathes, and South Central Coast, which although occupied by aquaculture farms, also houses the 96 ha Kuala Selangor Nature Park. He said although the nature park is located some distance away from the aquaculture farms, the mangrove swamp within the park, will in the long term, be affected by the pollutants discharged by the farms.

Selangor state executive councillor Yaakob Sapari said he could only confirm that one of the six companies – JW Properties – had conducted unsustainable operations by clearing a substantial amount of the mangrove reserves in the Kuala Selangor Nature Park and discharging harmful effluents into the sea.

Yaakob said the state government had discontinued JW Properties operations three months ago and took back state-owned land from which the company operated.

The Selangor Agricultural Development Corporation was also instructed to terminate its agreement with the company which was signed during the administration of the previous state government.

The company claimed they had followed standards set by the International Organisation for Standardisation, Yaakob said. "But the state government decided to stop the company's operations after it was found to have encroached into the Nature Park and discharged untreated waste into the sea," he said.

He said the company had been instructed to replant the mangroves and repair all damages. Yaakob said an officer from the Malaysian Fisheries Development Board under the Agriculture and Agro-based Industry Ministry works with the state's Department of Environment to enforce laws concerning aquaculture operations.

The Kuala Selangor Nature Park and firefly sanctuary are facing danger in the form of pollution from aquaculture farms.

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By Wong We

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MISLEADING STATISTICS: PLANTATIONS REPORTED AS FORESTS

Malaysia: Size of gazetted production forests 2008 - 2013 (million hectares)

	2008	2009	2010	2011	2012	2013
Peninsula	2.81	2.84	2.83	2.10	2.10	2.10
Sabah	2.99	2.99	2.88	2.88	2.58	2.52
Sarawak	5.00	6.00	6.00	6.00	6.00	6.00
TOTAL	**10.80**	**11.83**	**11.71**	**10.98**	**10.68**	**10.62**

- From 2008 to 2013, no sharp changes can be detected on the size of gazetted production forests in Malaysia.
- 'Forest plantations' remain as gazetted production forests and will be accounted for as a such.
- Misleading statistical practice.

Sources: *Statistics on Commodities 2008, 2009, 2010, 2011 & 2013*, Ministry of Plantation Industries and Commodities (2008), (2009), (2010), (2011) & (2013), Table 7-2 for all years. Original sources cited: Forestry Departments of Peninsular Malaysia, Sabah and Sarawak.

FLOODS IN MALAYSIA (END OF 2014 EARLY 2015)

COMMUNITY INITIATIVES 2 EXAMPLES

COMMUNITY BASED MANGROVE MANAGEMENT

- Management of mangrove nursery
- Mangrove replanting programme
- Monitor mangrove health and potential harm
- Mangrove awareness programme

MANGROVES ARE IMPORTANT TO SUSTAIN PRODUCTIVITY OF COASTAL FISHERIES

ECOSYSTEM SERVICES, SUPPORT COMMERCIAL FISHERIES

- 400 km² area of Matang Mangroves supports fisheries worth US$100 million a year or US$250, 000/km²/year
- United Nations Environment Programme, 2006 report noted that ecosystem services provided by mangrove forests in Thailand are worth US$35,000 per hectare.
- Assessments of the links between mangrove forests and the fishery sector suggest that for every hectare of mangrove forests cleared, nearby coastal fisheries lose some 480 kg of fish per year (MacKinnon & MacKinnon, 1986).

PENANG INSHORE FISHERMEN WELFARE ASSOCIATION (PIFWA) MANGROVE NURSERY IN SG CHENAAM, PENANG

PIFWA MANGROVE EDUCATION CENTRE

JARING'S MANGROVE NURSERY AND REPLANTING ACTIVITIES

REPLANTING FOR THE FUTURE

Replanted

PIFWANITA IS CURRENTLY WORKING ON FOOD PRODUCTS PRODUCED FROM MANGROVES WHICH CONSIST OF BUAH BEREMBANG JAM, JERUJU TEA, BISCUITS FROM POKOK API-API AND CAKES BASED ON RAW MATERIAL SOURCED FROM MANGROVES

AGRO ECOLOGY WITH INDIGENOUS COMMUNITIES

INDIGENOUS TREES PLANTED IN THE NURSERY

Planting of tree saplings during a recent RA workshop on 6 - 7 July 2015

Medicinal plants at SAM's Training Centre / Botanical garden in Lubuk Nibung, Marudi, Sarawak


AYU ENGK
AYU KAPUR
KAYU

PRODUCING NATURAL FERTILISERS

Vermi-home for worms

Vermi-home wash

Some of the natural fertilisers produced during workshop

Experienced farmer from Peninsular Malaysia train local farmers in Sarawak about organic fertilisers.

These chilly plants were grown with our organic fertiliser. Instead of using chemical pesticides, we used vermi-wash to prevent pests

COMMUNITY PROJECT IN LONG MIRI, SARAWAK

Project centre built with resources from the forest

THANK YOU


PROJCK BAKAU
USAHASAMA
NELAYAN DAN
PERSATUAN KEBAJIKAN
NELAYAN PANTAI
PULAU PINANG
(PIFWA)