Damage reversal

Vast areas of mangrove forest have been cleared over the years in the name of development but a group of concerned citizens is going about restoring the areas with saplings.
Move to restore mangrove forests

Group helps by planting saplings in damaged areas

Story and photos
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YEARS ago, the whole of the Pulau Indah coastal area off Klang, was covered with mangrove trees. Now, only about 20% of the trees remain.

"This island used to be covered with 2,000ha to 3,000ha of mangrove forest but now only a small portion of it is left."

"Part of the area, which used to be a forest reserve had been gazetted a few years ago, allowing development but at the cost of these mangroves."

"Even areas that were not supposed to be affected suffered damage," said Global Environment Centre (GEC) director Faizal Parish.

The trees were chopped to make way for development which also involved land clearing to provide access to the site.

Water flow into the mangrove forest was also interrupted due to the creation of an access road and this contributed to the damage.

"Some of the areas are recovering naturally, in others, the damage is still visible," added Faizal.

In efforts to restore the mangroves, GEC together with the Selangor Forestry Department have started replanting activities in the area.

The first activity was launched on Saturday with about 1,500 bakau kurap (Rhizophora mucronata) saplings planted in the eastern tip of the island.

About 300 people, including the local community and students from Sekolah Menengah Kebangsaan Tengku Ampuan Jemaah, Sekolah Menengah Kebangsaan Pandamaran Jaya and Sekolah Menengah Kebangsaan Perempuan Raja Zarina, took part in the exercise.

In addition to creating awareness on the importance of preserving the mangroves and its eco-system, the programme also hoped to instil a sense of ownership among the participants.

Despite the early morning drizzle, the participants got into the mud-flats for the tree-planting.

"We want them to know how difficult it is to plant this tree and as such should not be chopped down easily."

"It is a living thing and they have to realise that there is a possibility that it might not survive," said Faizal.

He hoped that the participants, especially the students, would come back to visit the trees that they had planted and help ensure their survival.

Faizal said they had chosen the site after finding it suitable for restoration.

He said although the area was damaged due to the nearby development, it had high potential for restoration.

"The water flow has improved and this will help the trees to survive. In some areas, we can see new trees, indicating that the area is recovering naturally.

"So these saplings that we are
Starting early: Khairul Nizam Shafuiz Bahari, nine, and Norhan Adli Haziq Haebullah, 10, learning how to plant the mangrove tree during the tree-planting activity on Saturday.

planning will complement those that are growing naturally,” he said.

However, Faizal said it would take between three and four years for the restoration efforts to show results.

Mangroves are tropical trees and shrubs growing on sheltered coastlines, mudflats and riverbanks. They cover some 14 million hectares worldwide and are concentrated within 25 degrees North and South of the Equator.

According to the Food and Agriculture Organisation of the United Nations, in 2007, about one third of the world’s mangroves were found in Asia (39%) followed by Africa (21%) and North and Central America (15%).

Mangrove forests in Selangor are found mainly along the coastline of the Selangor river, Kuala Selangor, Klang, Kuala Langat and Sepang.

Almost 72% of mangrove forest reserves in Selangor are located in the Klang district. They are the Kepan, mangrove forest, Klang mangrove, Teluk Gedong and Juga Bli Bli 1.

In Selangor, mangroves cover 18,088ha with 5,612ha of it in the islands off Klang and 2,356ha in Pulau Ketam.

Both Pulau Tengah and Pulau Che Mat Zin each have about 1,400ha of mangrove forest.

The Klang islands (4 groups of islands) are mangrove islands in the estuary of the Selangor river with mudflats and sandflats. Klang islands are of national importance because these are excellent examples of an estuarine mangrove mudflat system.

The islands are also the most important site for migratory shorebirds and bird-breeding areas which support coastal fisheries activities.

Recently, the Selangor government announced that they will no longer issue permits for logging on government land, effective from next year.

This also covers logging activities for all inland and the mangrove forests in the state.

As the most developed and highly populated state, mangroves in Selangor have faced tremendous pressure from land development and pollution.

“It is estimated that from 1980 to 1998, almost 47% of the original mangrove forest reserve in Selangor has been lost to agriculture, housing and industrial development,” said Faizal.

Despite the salinity and water levels that can change daily, mangroves in Selangor have adapted well to cope in this environment and thrive.

With roots clustered together to form a natural barrier to break the strong waves from hitting the shore, these mangroves also house various species of marine life, making them a haven for both fishermen and shore birds.

Destroying the mangrove forests will significantly reduce these marine life such as prawns and mud crabs and would affect the livelihood of mangrove fishermen.

Mangroves have one of the most unique reproductive strategies in the plant world. It disperses its ova-shaped propagules (seed) via water.

All the sappings for the replanting programme came from a nursery in Klang. The department’s deputy director for silviculture and forest protection, Samsu Amur Nawi, said the mangrove sappings were kept at the nursery for about four months before being planted.

He said the bakau kurap (Rhizophora mucronata) was chosen for the programme because these have a higher market value and are commonly used for construction and to make charcoal.

The species is used for piling at construction sites.

“We are concentrating on government land due to the damage done from the development surrounding the mangrove areas.

“Previously we carried out several activities in Selangor and this is the first time we are carrying it out in Pulau Indah,” he said.

The replanting programme is part of efforts to restore the rich bio-diversity of the forests to provide an ecosystem for fish, crabs, birds and other creatures and plants.

Studies have also shown that the mangroves could protect coastal areas from rising tides, storms and natural erosion.

The trees have a high storage capacity for carbon, which helps to regulate the quantity of carbon dioxide in the environment.

They function like carbon factories by absorbing carbon dioxide from the atmosphere and converting them into organic material.

The organic materials are then absorbed into trees, mudflats and nearby waterways, reducing the amount of greenhouse gases. Harvesting mangroves is allowed in the country, with the logging permit issued by the relevant state Forestry Department.

According to the Malaysian Nature Society, only 1.8% of Malaysia’s land is covered in mangroves, with over 50% of these mangroves lost between 1950 and 1985.

Forestry Department statistics show that Peninsular Malaysia had 85,000ha of mangrove swamp forest in 2003, down from 86,497ha in 2002.

The Selangor Forestry Department statistics show that last year, 18,088ha of the coastal area in the state was covered with mangrove forest.

Under Section 15 of the National Forestry Act, 1984 (Amendment 1993) those who conduct illegal logging can be fined up to a maximum of RM500,000 and mandatory imprisonment of one to 20 years.

Meanwhile, those who are caught having this wood without the documentation can be fined up to RM50,000.