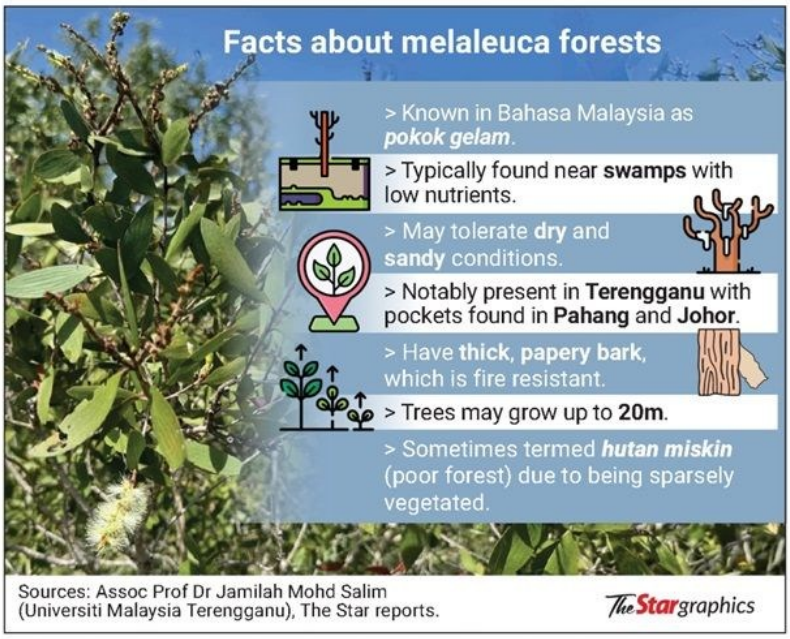
The Star
people's paper

Green drive for Terengganu state park

By **FARID**
METRO NEWS
Tuesday, 24 Sep 2024

A team of researchers from UMT taking a boat ride across Tasik Berombak in Setiu during a research expedition. — Photos courtesy of Benua Hijau Sdn Bhd and Universiti Malaysia Terengganu

TUCKED away in the wilderness of Setiu district in Terengganu is Tasik Berombak, which few people know about except for the locals. This freshwater lake is surrounded by vast swathes of melaleuca forest, known as hutan gelam in Bahasa Malaysia. Melaleuca forests help maintain water quality and provide habitats for aquatic species while also enhancing overall ecosystem health. The trees thrive in sandy and low-nutrient soil, a common feature of the land in this part of the peninsula's east coast.



The area is nestled within the 1,574ha Setiu Wetlands State Park, which is part of the larger 23,000ha wetlands that lines Setiu's shore. However, over some decades, huge tracts of the melaleuca forest were seen cleared to make way for plantations and aquafarms. A study by environmental group World Wide Fund For Nature (WWF) between 2008 and 2011 estimated that one-fifth of it was lost to development.

Efforts have since been made to reverse the decline, with an initiative to plant 100,000 melaleuca trees within five years. Last year, the Terengganu State Parks Management Council (MPTN) and Setiu Land and District Council signed an agreement with Straits Energy Resources Bhd to undertake the programme. In a social media post in January, Terengganu Mentri Besar Datuk Seri Dr Ahmad Samsuri Mokhtar said this would create jobs via sustainable harvesting of forest resources, ecotourism and cottage industries.

Sustainability drive

Straits Energy Resources Bhd, a manufacturer of oil and gas equipment, set up Benua Hijau Sdn Bhd as its corporate social responsibility arm for the project. Benua Hijau project director Dr Paul Yap said the company wanted to work on a long-term sustainability project. “Many companies have been involved in such programmes and we too have been planning to follow suit. “We began looking for degraded forests to restore and eventually approached MPTN to plant mangroves in Setiu.

Yap (left) and Nurhusnina tending to young melaleuca shoots at the nursery in Kampung Pengkalan Gelap in Setiu

“However, they proposed that we plant melaleuca trees at Tasik Berombak instead,” he said, adding that they were allotted an 80ha area. The company liaised with local universities to recruit interns and a few were then hired as permanent employees. The tree-planting project that started late last year took off with one supervisor and three interns. Yap said more workers and interns would be recruited to meet their objective of planting 20,000 saplings a year. “As of September this year, we have managed some 2,200 saplings,” he said, adding that planting would be ramped up. To date, planting at Tasik Berombak has been carried out thrice -- in November last year and July and September this year. The team is currently renting a plot of land in Kampung Pengkalan Gelap to be used as a base of operation and nursery. Apart from MPTN, the company also received support from Universiti Malaysia Terengganu (UMT) that provided training and expertise.

Learning curve

To ensure their optimal growth, strict quality control was employed in the nurturing of the melaleuca shoots and saplings, said project coordinator Nurhusnina Azni. She said the seeds were harvested from Tasik Berombak and planted at the nursery. “The seedlings are stored inside an enclosed space to minimise exposure to sunlight and to maintain moisture levels. “This is the germination phase and takes about seven days, during which they are sensitive to heat,” she explained. Next, the newly grown shoots are moved to a greenhouse where they are kept for three months until they grow into saplings, said Nurhusnina.

Melaleuca saplings grown in Kampung Pengkalan Gelap before they are planted at Tasik Berombak

As they are still young and sensitive, the temperature inside the greenhouse is maintained at 40°C with fans being used to cool the place. The saplings will subsequently be transferred into polybags and moved into open air where they will be nurtured until they reach 90cm in height and ready for planting at Tasik Berombak. This could take months, though Nurhusnina said her team was constantly experimenting to speed up the process. “We are using soil collected from the lake. However, we discovered that water seeps through easily due to its high sand content.

“So we improvised by mixing in some coconut peat to enhance the water retention capacity,” she said, adding that they also recently began using NPK fertiliser, which was found to double the growth rate. (NPK fertiliser contains nitrogen, phosphorus and potassium, which are primary nutrients required by plants to grow). At press time, there were 4,000 shoots and saplings at the nursery.

Local involvement

The programme also roped in locals who shared their expertise and lent their hand to ensure its success. Intern Nur Nabila Daud, who is Setiu-born, said the project pushed her to combine her knowledge and soft skills when dealing with the local folk. “We regularly exchange ideas on how to nurture the melaleuca saplings and work together during trips to the lake to plant them. “In fact, it was the locals who suggested we mix coconut peat to improve water retention inside the polybags,” said Nur Nabila.

Muhammad Naim measuring the height of a melaleuca sapling before planting it at Tasik Berombak.

However, not all locals are fully onboard with the initiative, according to project assistant coordinator Muhammad Naim Mustaqqim Mohamed. He said some had expressed concerns that the project was not profit-making and that other species should be planted instead. “We explained that melaleuca trees will produce resources such as cajuput oil and honey, which they can harvest in the future,” he said. Cajuput oil has curative properties and is often used in the making of medicated oil, he said. Melaleuca forests are also a habitat for wild bees that produce madu gelam, a type of honey popular in Terengganu.

A former intern, Muhammad Naim said that raising awareness about environmental preservation required consistent communication. “The locals are simply curious; once they learn about the positive effects, they will be supportive,” he said.