

## **Better intact than fallen**

The Star 5/4/2005 By TAN CHENG LI

Even as a huge wave of public outcry followed the destruction of forests surrounding the Bukit Cahaya agricultural park in Selangor, another piece of greenery nearby is fighting for survival.

The number of applications received by the Selangor Forestry Department to convert the little that is left of the Ayer Hitam Forest Reserve into commercial use is in the “hundreds,” says director Nik Mohd Shah Nik Mustafa.

The only thing preventing the department – which declined to reveal the actual number of applications – from signing away the tract of greenery in Puchong is a 1996 memorandum of understanding (MoU) which gives Universiti Putra Malaysia (UPM) “custody” of the reserve for 80 years for use in education and research.

But with stacks of development proposals on the table, UPM scientists can but rest easy. They fear history may be repeated. In 1995, they had lost their original patch of research site in the forest reserve and with it, two decades’ worth of scientific work, when the Selangor Government took back the parcel of forest with the expiration of a 20-year lease. The old research site was given away for residential development.



Houses are creeping ever closer to the lush green slopes of the Ayer Hitam Forest Reserve in Selangor. – Picture by Lim Tow Ken

And five years ago, the existence of the MoU did not prevent the state government from approving the construction of a highway which effectively sliced the reserve into two.

UPM scientists remain uneasy about the future of Ayer Hitam, to say the least. They need to argue their case that keeping the forest intact is better than paving it with concrete. And what better way then to do an economic valuation to compare between the two.

Their conclusion: conserving the forest is worth twice as much as logging it and building houses. They found that developing the site will bring in revenues of RM65mil from logging and RM926mil from house sales. On the other hand, the forest is worth RM2.3bil annually if left untouched – with the amount derived from values estimated for wild game and medicinal plants collected by the orang asli, as well as conservation and recreational benefits. (*See table*)

The figures were tabulated using methods commonly used in assessing the economic values of forest goods and services.

Dr Awang Noor Abd Ghani of the forestry faculty says the revenue from logging and housing is one-off whereas those from the other benefits are sustainable – so long as the forest remains intact.

“More importantly, the revenues and benefits from preserving the forest are shared by society instead of a handful of developers.”

He says assessing a forested area only in terms of timber revenue and ignoring the value of other forest products and services will not provide the true worth of the forest.

“A thorough forest valuation which gives a monetary value to the many functions performed by forests such as absorbing carbon, providing wildlife refuge and as a source of genetic material is important as it provides the benefits and costs of alternative land use.”

But the reserve had been slowly cut up and given out for grazing, agriculture, landfill and housing. Its size has dwindled from 6,268ha in 1965 to 1,176ha today, with the latest 50ha given out for a burial ground.

Scientists want Ayer Hitam to be conserved because it is one of three remaining lowland (below 300m) dipterocarp forests in Selangor. The other two, the Bukit Cerakah and Sungai Buloh forests, are similarly threatened by housing development. There is reason to conserve all three sites since each hosts a unique subtype of lowland rainforest. Ayer Hitam, for example, is dominated by the kelat-kedondong species.

Ayer Hitam was logged selectively from the 1930s to the 1960s but given time, has regenerated. Its biological wealth surprises even the scientists. It has a third of the tree species found in the country, including 20 species endemic in the peninsula. A species of moss, *Fissidens guandongensis*, previously known only in southern China and Japan, was found there five years ago.

Its fair share of wild flora and fauna, coupled with its accessibility, makes Ayer Hitam an important and convenient site for studies in forestry, environment, zoology, botany and related fields. And as most of the Klang Valley is paved over, scientists urge the preservation of whatever little green lung that is left. The proximity of Ayer Hitam to residential estates makes it a suitable recreation and environmental education site for urban dwellers.

One other benefit of forests is their role in curbing global warming, as Dr Ismariah Ahmad, a senior research officer at the Forest Research Institute Malaysia (FRIM), points out. She says forests can absorb one-tenth of global carbon emissions into their biomass, soils and products. The Ayer Hitam forest is no exception. By calculating tree growths, Ismariah estimates that tree trunks and branches in each hectare of the forest store 87 tonnes of carbon annually.

“If we leave the forest there, we do not contribute to emissions. But if we cut it down, carbon is released.”

### **Ousted community**

If Ayer Hitam is sacrificed for more houses, one of the main victims will be the Temuans. Already, one of the two Temuan settlements adjacent to the forest reserve has had to make way for housing development. Those from Kampung Sungai Rasau Hilir were resettled at Taman Orang Asli Saujana Puchong, while talks on relocating the inhabitants of Kampung Sungai Rasau Hilir are ongoing.

The orang asli retain a close attachment to the Ayer Hitam forest. A survey by Dr Norini Haron of FRIM reveals that about half of the 117 orang asli families there still depend on the forest for food and traditional cures as well as cultural and social gratification.

“Some of us now work in factories but we still need to go into the forest every few days to hunt, fish or just to rest. We also go there when ill. The forest has healing powers and the water there is clean and pure,” says Peei Batil, the village head of Taman Orang Asli Saujana Puchong.

Norini valued the orang asli’s collection of animals such as pigs, squirrels, monkeys, mousedeers, porcupines, monitor lizards, snakes, frogs, tortoises, deer, jungle rats, terrapins, birds and fish as well as medicinal plants, fruits and rattan at some RM77,310 annually.

Peei says the collection is consumed personally or sold to other orang asli. He says, however, that their catch of animals and collection of medicinal plants have dwindled as a result of land-clearing and diminishing forest cover.

“The forest may not provide the orang asli with their main source of income but the value shown indicates the importance of the forest in their daily lives.

“Because of the community’s close attachment to the forest and that decisions made will affect them, their views and opinions should be fully taken into account when formulating and implementing forestry policies,” says Norini, a senior research officer.

Through the economic evaluation, scientists are convinced that preserving the Ayer Hitam forest will be more lucrative than logging it and building houses. But will they be able to convince the state government?

### **Why the Ayer Hitam Forest Reserve should be preserved**

- One of three lowland forests in Selangor
- Provides a green lung for urban areas
- A site for research and education for UPM
- Role in public environmental education programme
- For wildlife habitat and in situ conservation
- An orang asli cultural site
- Role in recreation and eco-tourism
- Role in micro-climate regulation
- Role in carbon sequestration
- A water catchment

### **Its biological wealth**

- 430 plant species
- 127 timber tree species
- 98 species of medicinal plants
- 39 moss species, one-third of the 136 species found in Selangor
- 14 small mammals such as rats, squirrels, tree shrews and the slow loris
- 13 bats
- 5 of the 10 species of primates found in the peninsula: the banded-leaf monkey, dusky-leaf monkey, white-handed gibbon, and the pig-tailed and longtailed macaque
- 10 reptile species
- 18 amphibians
- 10 fish species
- 160 bird species

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