

Earth Matters: A central bank for our biodiversity

By Sarah Sabaratnam

Despite Malaysia having a rich biodiversity, we still do not have the necessary resources, system or infrastructure to audit our zoological and botanical heritage. **SARAH SABARATNAM** writes. RESEARCHERS discovered several dozen new species in Singapore last year, the bulk of which were insects.

If Singapore, devoid of much forest or mangrove, can hold so much diversity, what more Malaysia, one of the 12 Mega Biodiversity centres of the world?

Singapore's discovery drove our curiosity: How many new species were stumbled upon in Malaysia last year? The answer is anybody's guess. There is currently no central agency which registers or indexes all new species discovered in the country.

There is also no local institution devoted to biodiversity research, unlike the Raffles Museum of Biodiversity Research at the National University of Singapore, where a huge collection of zoological, botanical and culture specimens are kept and recorded.

Malaysia is missing some very important basic data and it was a shocking discovery.

"This bothers me too," says Datuk Dr Abdul Latiff Mohamad, dean and professor of botany at University Kebangsaan Malaysia's Faculty of Science and Technology.

"We should have a focal point for this kind of information. All our information on our biodiversity is fragmented," he said

Latiff says we started off well. Ten years ago, we ratified the Convention on Biological Diversity which is one of two key agreements to come out of the 1992 World Summit on Sustainable Development, also known as the Rio Earth Summit.

At the national level, we initiated the National Policy on Biological Diversity, which was launched in 1998.

More progress was made when four drafts were drawn up on the state of the country's biodiversity. Unfortunately, only one of the four drafts were published.

At this point, our efforts at understanding the value of our biodiversity seemed to have stopped dead in its tracks. However, Goh Siok Eng, deputy director to the Ministry of Science, Technology and Environment's division of environment and conservation begs to differ. "The CBD had three objectives: conservation, sustainable use of biological resources and fair and equitable sharing of benefits from the utilisation of these resources. We have done a lot to come up with programmes to meet these objectives."

For instance, she says, we have more protected areas now than we did 10 years ago. We also have new wildlife reserves and wetlands of international importance.

In terms of sustainable use, we have stricter guidelines on logging and we do try to balance between the environment and development.

But she reluctantly concedes that we have yet to come up with a systematic, centralised inventory of our biodiversity.

"We realise that before we utilise our resources, we must take stock. But this is a mammoth task and very expensive. Many countries have not done it yet."

She said that some kind of inventory is being done at the state level by the various agencies such as Fisheries, the Forestry and Wildlife departments. Efforts are underway to review the need of a national agency to focus only on biodiversity research.

"At the moment, the ministry is the national focal point and we are looking at how we can aggregate all the information that is being collated at the state level."

But even at the state level, the information is fragmented. For instance, we called the Forestry Department's headquarters in Kuala Lumpur to find out if they discovered any new species last year and the information could not be provided. "The information is with the state forestry departments," said a spokesperson, who added that it would take a long time for each of the departments to pull out the information they are supposed to have.

If you want to know about fishes, one would need to go to fisheries, and for wild animals, to state wildlife departments (all 13 of them individually!) and for domestic animals, the Department of Agriculture.

Latiff says he cannot stress more the need for a central agency where one can extract any information on Malaysian biodiversity. He also says that we are lacking other important centres for the collating and exhibition of our rich heritage.

"Where is our Museum of Natural History, our botanical gardens or national herbarium?" he asks.

With much ballyhoo, we trumpet the fact that our biodiversity is one of the richest in the world, but are we doing justice to such wealth?

"If I were a rich man," says Latiff, "but I sat around all day, and didn't invest my money properly, it would go to waste. There would be nothing left for my children because I did not think about how to make the money work for the future."

The same goes for our biodiversity. "We are custodians of a rich biodiversity. We are not supposed to just sit back and say, yes, we have this wealth."

Instead, we need to know what we have. "How many ecological systems do we have? What are our hot spots? Which areas house the richest biodiversity? What species do we have?"

Latiff says that without this information, we will not know where to invest our resources, much less exploit them. "For a rich man to invest, he must first have knowledge of the right places to put his money, only then he can make gains."

Instead we have a National Biotechnology Directorate, which is ready to exploit the wealth before we know which are the best places to invest in.

"The basics are not there. We don't have a plan to increase human resources in basic science. We do not have research institutes with the mandate to study and discover our biodiversity."

Latiff says what we should be doing is setting up institutes dedicated to biodiversity research in every state as the latter has jurisdiction over land. Then, the state agencies can feed the data they have collected to the central agency — a National Biodiversity Directorate possibly — which houses the national database.

The New Straits Times had a difficult time trying to locate all the new species discovered last year. We finally found some data at the Forest Research Institute Malaysia's herbarium, UKM, the Malaysian Nature Society and the World Wide Fund for Nature.

The findings, however, were disappointing. We were clearly not putting enough effort into uncovering what we have. What is scary is that foreign experts on the other hand, seem to be very interested in our biodiversity.

In his paper *Priorities and Strategies for Malaysian Botany II: An assessment of recent contributions by taxonomists in Malaysia* (Folia Malaysiana Vol 2(2) 2001: 59-66), Latiff points out that in his five years (1996-2000) of study on species discovery in Malaysia, only 20 Malaysian taxonomists were involved in the description of new species compared to 77 non-Malaysian taxonomists.

"Our resources are in public domain. People are coming in and taking samples. They have been doing it for years. And they get the limelight because they are doing the work and they have the resources to do it."

Pharmaceutical and biotechnology companies are actively sending spies and scientists to countries rich in biodiversity to look for plants, microbes and insects with potential for commercial value. The Convention on Biological Diversity recognises this threat and provides mechanisms for countries to protect their resources from biopiracy.

Meanwhile, we need to buck up.

In his paper, Latiff notes that there is much more to be discovered in Malaysian forests.

"Over (a) five-year period (1996-2000), 336 new species of Malaysian seed plants were described by various authors, giving an average rate of 67 new species per year. This is very commendable considering that it is getting more difficult in discovering new species... If more collections were made and more serious monographic and revision works are undertaken in many other families, other new taxa would be described."

Yet every single day in Malaysia, ecosystems are being disturbed, forests are being logged over or converted, devastating our biodiversity heritage.

"We may lose many species and ecosystems before we find them. The rate of species discovery is not in balance with the rate of destruction that goes on," says Latiff.

Perhaps after the seventh meeting of the parties to the Convention on Biological Diversity which begins next week, our policymakers will find inspiration for renewed commitment in the area of biodiversity research. For there must be focus on inventory before exploitation; basic science before applied science; biodiversity before biotechnology. Only then can we be truly proud of what we have.

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