

# Cooperation between USM and ITB, on Aquatic Resources

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People have quoted that if the world was a book, those who do not travel read only a page – something I could not agree more!

I was involved in the inaugural symposium between ITB and USM on 20 - 21 December 2010 as my paper on "The release of Orangutans (*Pongo Pygmaeus*) to BJ Island; A case for ex-site conservation study" was accepted for the event. On the final day, Dr. Gede Suantika from ITB invited us to visit his study site at Jatiluhur Lake. The results of the visit ended in plans for ITB and USM to team up in the future to study river basins and man-made lakes.

The trip to Jatiluhur Lake was really exciting and opened up our minds on what we should learn from other people when travel to their places. Jatiluhur Lake, which is located halfway between Bandung and Jakarta, happens to be the main water supply for Jakarta and is also used to generate electrical power for the region. Besides that, the lake is used to irrigate paddy fields in surrounding areas. Furthermore, the lake, which has a water level of up to 100m in depth, is used commercially to breed fish such as goldfish, carp fish and tilapia.

The fish cages were made in two layers. The upper section of the cage is meant for carps, while the lower part is for tilapias. Breeders often provide food five times a day in two cycles. The oddment from the first layer will be eaten by fish from the second layer, and this is the main factor why the lake is still clean although there are thousands of fish cages at any one time in the lake. Breeders earn hefty returns by employing these techniques, roughly about IDR16 billion (RM10,000) per month. Perhaps we also may be able to employ this method in our country not only because of the returns we stand to gain, but also to maintain and conserve lakes or ponds from being polluted.



The fish cages at Jatiluhur Lake.



Cages are made from bamboo - prevent from rotten.



USM and ITB team.

## Macfadyena unguis-cati (Bignoniaceae) Cat's Claw

Native to the Greater and Lesser Antilles, Mexico, Central America and South America and Argentina, the Cat's claw is a woody vine or occasionally a scrambling shrub. The name comes from the tripartite, hooked tendrils resembling an animal's claw. The Cat's claw has a strong and flexible stem that is brown in colour. The stems produce adventitious roots to anchor them tightly. Each leaf has two leaflets with the clawed tendril. Flowers have five lobes and are bright yellow with red-orange lines in the throat. The plant has a flattened capsule that produces winged seeds.

Usage : As an ornamental plant in USM .



The 'Pound Mark' red clay tile  
(Source: Indian Trade Mark Journal)



The simplicity of form and shape makes the tile ideal for funneling and draining water from the roof

The roof of *Rumah Tetamu* (Guest House) lends on as air of old world charm



## Common koel *Eudynamys scolopacea*

A parasitic bird that prevents house crows from nesting and roosting in the campus. His a territorial bird with males producing a very loud "ko-el" territorial call. The male has a glossy blue-black plumage, a stout apple green beak and distinguished red eyes. The female coel is considered a shy bird with overall blackish-brown and heavy whitish streaks, spots and bars on the body.

## Something 'Tile-ish'

Sometimes things that are obvious are also the easiest to overlook. The old roofs of Minden Barrack buildings are one instance where they help to project the ageing buildings in an aura of grand and conspicuous eminence on the campus scene. Their roof tiles have resisted years of weathering. Nothing is comparable to the warm red clay tiles that only come with age. Although they appear weather-stained, these red tiles add some of the ambience and colour to the old Minden Barracks.

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# NAGOYA 2010



## Convention on Biodiversity COP 10; Future of our World

By Prof. Mashhor Mansor  
School of Biological Sciences

The Convention on Biodiversity (CBD) which was held in Nagoya Congress Center from 18<sup>th</sup> to 29<sup>th</sup> October 2010 concluded with mixed outcomes. However, the one concern shared by all participants was the well being of our blue planet, which brought policy makers from all four corners of the earth together in efforts to solve impeding global environmental issues at various international, regional and local levels.

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The 18th Lower Mekong Universities Networking instructors.



(From left) Professor Mashhor Mansor, Karam Singh Walia, Dato Sri Ghani Othman, Tun Abdullah Badawi.

About 8000 participants from 193 countries were there to discuss one of the most crucial current issues – extinction of biodiversity. It was interesting to note that efforts of nature conservation and protection among both rich and poor nations, appeared to be similar although each nation had differing values on the matter. Most, however voiced out their deep concerns on the biodiversity losses.

It was concluded that extinction of certain living species is apparently beyond our control. Currently it is estimated that the rate of extinction is some 40,000 species annually. This unfortunate consequence is mostly due to human activity, most of which revolve around the exploitation of natural resources in an unmanageable and uncontrollable manner.

In the long run, such activities are bound to affect our food security.

At the fundamental level, problems lie in the fact that there are gaps of information regarding all living things in this earth. Currently it is estimated that there are about 80 million living species in the world. The species range from virus, bacteria, plants and animals. However based on the Millennium Assessment (MA) only 1.8 million are recorded and named. Without information on the remaining species, it is difficult to protect them. Therefore the role of field biologists and taxonomists is extremely important to provide correct information to the global society especially the policy makers.

The Federal Government's stand in conserving and protecting Malaysia's rich biodiversity is clear. However, wouldn't it be better if we had an Ecological Planning Unit (EPU) or an Environmental Planning Unit (EPU) in addition to Economic Planning Unit (EPU) at the National and State levels? At the moment we have several laws and legislations dealing with environmental issues, but the enforcements are still lacking due to a number of impeding problems where in some instances certain State biodiversity policies do not tally with those of the Federal Government, where rules and regulations on biodiversity are formulated and clearly spelled out. When it comes to putting these policies into practice, such issues are often marginalised at the State levels.

Perhaps the time has come to prioritise scientific research in the field of biodiversity. At the moment, most field scientists are poorly rewarded for the challenges they have to face. Besides risking their lives in studying wildlife and their habitats, gathering field data is truly a difficult exercise. However, someone has to do the work as this scientific data is needed for the policy makers to make informed decisions particularly on matters dealing with biodiversity and conservation. This is especially important in Malaysia where the country is one of the richest nations in terms of biodiversity, but most of the species unknown or undocumented.

This situation however, presents an excellent opportunity for USM to take the lead on issues concerning biodiversity. Since the year has only just began, we can start small by just documenting species found on the campus. The team at ECO-HUB is always ready to assist if needed.

I had a discussion with Professor Yussuff Halim. He is 85 years old eminent scientist who is still active in his algal research.

## Towards a "greener" Malaysia

By Nur Syuhada Mohd Ataa  
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Going green is not as difficult as you think. However, it is difficult if you do not have the awareness and cooperation of other people, which is why I choose to write about this topic. The reason is simple: as a young person, I feel the need to "wake" my fellow Malaysians to increase their awareness in taking care of the earth.

To me, going green is to take initiatives towards preserving the beauty of Mother Nature. For a start, we need to instill awareness among youngsters and children so that they can begin to preserve the earth's splendor for their future generations. The main reason why I focus on youngsters in developing their "green thinking" is because they will be leaders in the future. Should we not change our attitudes towards the earth now, we will most probably leave them with concrete buildings, artificial trees and perhaps, plastic animals.

I would also like to touch on the issue of uncontrolled deforestation in Malaysia, which is something that needs to be addressed before it is too late. I feel that in order to sustain our rain forests, the relevant authorities need to develop realistic scenarios for future development based on scientists' research findings in this area for example, in 2004, scientists studying Indonesia's tropical forests documented a 56 percent decline in tropical lowland forests in protected areas of Borneo between 1985 and 2001. Furthermore, they have studied the causes and consequences of deforestation, including the unintended deforestation resulting from road-building, accidental fires, selective logging, and economic development incentives such as timber concessions and agricultural subsidies.

In my opinion, besides making research-based decisions to sustain our rain forests, it is also a crucial time for us to rise up young ecologists towards developing a "greener" Malaysia. Starting our youth to love ecology will educate them to love our earth. Therefore, wake up Malaysians! The earth needs a little attention from you so let us take care of her.

## Polystyrene

By Nura Adila Mohd Rosli  
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Polystyrene is an aromatic polymer made from the aromatic monomer styrene. It is a hydrocarbon liquid that is commercially manufactured from petroleum by chemical industries. Polystyrene is a kind of plastic that is widely used nowadays for food containers as well as for other packaging purpose. Many restaurants use polystyrene to pack food but are unaware of the damaging effects to one's health in the long term.

Polystyrene is made up of various types of dangerous chemical substances that are harmful to humans. One of them is benzene which is used to produce ethylbenzene from styrene. Benzene is a known carcinogen, a cancer causing agent. When hot food comes into contact with polystyrene, chemical reactions occur resulting in the styrene being absorbed into the food!

Most people unknowingly consume food containing styrene. As the compound enters our body, it may cause abnormal cell growth and can slowly develop becoming a cancer. One may not feel the effects now, but as time goes by anything can happen. People are still not aware about this due to lack of information regarding this matter. Most of the time, they take things for granted and are not concerned about their food as long as they can eat whatever they want.

Furthermore, polystyrene is a non-biodegradable substance. By abstaining from using these materials, we can save our earth from being further polluted and maintain the balance in our ecosystem. In my opinion, we should ban polystyrene to safeguard our health. We can see many organisations and universities that have reduced the use of polystyrene. Universiti Sains Malaysia, for example, has taken measures to prevent polystyrene being used within its campus. Many students use other types of containers whenever they need to pack food. These sort of efforts should be kept up.



## Low awareness on mycotoxins pose a health hazard



Prof. Baharuddin Salleh, a lecturer at the School of Biological Sciences, Universiti Sains Malaysia (USM), said that mycotoxins are toxic substances produced by fungal growth on food and agricultural products that are not properly protected or stored. According to him, the presence of mycotoxins in food has long-term adverse effects on human health, including the risk of cancer, kidney failure, liver cancer and even death.

"Therefore, proactive action should be taken to create public awareness as to the importance of food cleanliness and safety to prevent the growth of toxic fungi," he said. He stated this during the press conference in conjunction with the First International Mycotoxin Conference 2010, which was held in Asia. The conference was officiated by Prof. Asma Ismail, the Deputy Vice Chancellor (Research and Innovation) USM.

Prof. Baharuddin added that even more alarming is the fact that mycotoxins grow easily in hot and wet climatic conditions, such as that experienced in Malaysia. "Mycotoxins can withstand high temperatures and are accumulative in nature, that is, they cannot be destroyed completely and when they attach themselves to a human organ, they will continue to proliferate until they cause organ failure," he said.

High risk foods and those often contaminated by mycotoxins include canned food, rice, bread, processed meat, baby formula, animal feed and others. Prof. Baharuddin who is also the co-chairperson of the conference said diseases that are very often associated with mycotoxins are liver cancer and kidney failure.

"This conference is the best platform for scientists and professionals to discuss and find the most appropriate methods to tackle this problem and prevent it from continuing to affect people, especially the rural community and those in the low income bracket," he explained.

Meanwhile, more than 200 participants worldwide, including experts such as the Director of the Nutrition and Consumer Protection Division, FAO, Italy, Ezzedin Boutrif; the Co-ordinator of MycoRed, Etienne Duveiller; and the President of ISM, Deepak Bhatnagar took part in the 4-day conference, held from 1-4 December 2010.

This conference was co-organised by EU MycoRed, International Society of Mycotoxicology, International Maize and Wheat Improvement Center (CIMMYT) Mexico, Food and Agricultural Organization of the United Nations (FAO) and the Institute of Sciences of Food Production of the National Research Council (ISPA-CNR), Italy.

source: [www.researchsea.com](http://www.researchsea.com)



Students say "no" to polystyrene food containers in USM.

Prof. Asma officiating the conference by sounding a gong.