

Green light for going green

These university students have been lauded for championing environmental causes in their respective countries and have come together to get further exposure to modern conservation methods.



All about plastics: (left) Metal fabrication foreman Michael Oberkersch instructing Wan Nurhidayat on how to use the injection-molding machine at Baylab Plastics, a student laboratory that offers students hands-on experience on how plastic products get made.

BY PRIYA KULASAGARAN
educate@thestar.com.my

ARE young people becoming less vocal and more "neutered"? This is what United Nations Environment Programme (UNEP) Division of Communications and Public Information acting director Nick Nuttall is worried about.

"I'm old enough to know when young people really went out and demonstrated, or sat down in front of bulldozers when they didn't like what was happening to the forests.

"If you see something in your community that you don't like, mobilise.

"You've got social networks — get out there, and make a fuss, and upset people a bit," he said.

Nuttall was speaking to a room full of 2012 Bayer Young Environmental Envoy (BYEE) programme participants at BayKomm, Bayer AG's communication centre in Leverkusen, Germany.

While not suggesting that students start staging protests, he called for more action to follow up talk of conserving the environment.

But the young people Nuttall was addressing are indeed stirring things up in their own way.

Be it through scientific projects, community outreach or social entrepreneurship, these students are pushing against apathy to create change.

First set up in Thailand in 1995, the BYEE programme is an environmental awareness programme established by the multinational company Bayer in partnership with the UNEP.

Part competition and part immersion-education, the programme aims to expose university students to modern environmental conservation methods as well as the science behind them.

Young people who have feasible ideas on environmental conservation and actually



Peeking under the microscope: Students soak in some knowledge on molecular science at the Discover Science exhibition room in BayKomm.

implement these ideas, are given the chance to showcase their projects at the country-level.

From there, finalists from the respective countries are selected for a field trip at Bayer in Germany.

Of the 1,400 young people who took part in the competition this year, a total of 50 participants (or envoys) were short-listed from 19 countries across Africa, Asia, and Latin America to take part in the study trip.

For four activity-packed days, the envoys were occupied with discussions and excursions in a crash course on environmental conservation, efficient energy use, and everything else green.

Big ideas

A main purpose of the trip was to showcase Bayer's science and research capabilities, as well as what Germany was doing right in environmental protection.

Aside from meeting key Bayer executives and scientists, there were also workshops conducted by personnel from local environmental agencies on Germany's environmental monitoring framework.

It was an eye-opener for participants of the "clean air" workshop for instance, to learn that every vehicle in the state is required to display a sticker classifying the level of emissions they produce.

But many of the envoys had a larger question in mind - how did Germany arrive at its current state of environmental consciousness?

This was particularly in focus during a question-and-answer session with Eberhard Jacobs, the public relations head of the North Rhine-Westphalia State Agency for Nature, Environment and Consumer Protection.

Hands-on activities aside, the trip served as a platform for students to exchange new ideas and engage in deeper debate on how to push the green agenda forward.

At the "green economy" panel discussion, Nuttall put forth the notion of placing an economic weightage to the environment through "ecosystem services".

Ecosystem services refers to the benefits people can get from ecosystems, such as clean water, medicine, and tourism, and attempts to place a price tag on such services.

The idea is that one can then see the concrete economic cost to a community if such environmental resources deteriorate or are destroyed.

Currently, the common reference point for the definitions and value of ecosystem services is the United Nations' 2005 Millennium Ecosystem Assessment.

Nuttall explained how one can put a price on the environment by using the Mau Forest complex in Kenya as an example.

"Our people (at the UNEP) have been chronicling the destruction of the forest, as well as assessing the rivers, plants and animals it houses, the timber it produces, as well as the ecotourism and cultural significance the forest has for the community.

"At the end of it, we told the government there that the forest was worth US\$1.3bil (approximately RM3.95bil) a year; and now we see that the Kenyan authorities are very interested in ensuring the forest is protected," he said.

But Dr Philipp Schepelmann of the Wuppertal Institute of Climate, Environment and Energy was disdainful of the science behind such measurements, and argued for action based on clear rights and wrongs.

"But if that's what drives politicians, then I suppose it could work.

"I hope that we will eventually do things because it is the right thing to do," he said, adding that not everything can be measured by economic benefit alone. While agreeing with the ethical value of environmental protection, Nuttall pointed out that "after 40 years of the planet being in the red ... it is interesting to see when you bring economics into the picture, governments are more responsive."

Another inescapable takeaway of the BYEE trip was how the programme was

structured to give science a sort of "coolness" factor.

From site visits to the AVEA (Leverkusen Municipal Waste Management) which showed how waste can be either recycled, used for power generation, composted or burnt, to hands-on experiments demonstrating the power of chemistry in developing new sources of energy, there was plenty of stimulus to pique the interest of even the most science-averse individual.

Among the experts the envoys particularly reacted to was Ottmar Hartwig, the founder of the ecomobile Lumbricus, a mini-bus that acts as a mobile classroom to teach schoolchildren about nature.

Despite its humble exterior, the inside of the Lumbricus is a makeshift classroom-cum-curiosity shop of all manner of gadgets; microscopes, water contaminant detectors, sound level detectors, and charts of past experiments fill the walls and workbench tables.

Hartwig himself is a larger-than-life character, who animatedly shared his vision for why he was doing what he did. "I want children to get their hands dirty, to go out into nature and experience it for themselves.

"When they discover the wonder of the environment around them, it is then easier for them to understand why all of it is worth preserving," he said.

Putting dreams into action

The highlight of the programme was arguably the participants themselves.

While they are required to carry out their ideas in the real world to qualify as envoys, most of the students have gone above and beyond by implementing long-term plans for their projects.

Law Yu Hui for instance, has successfully taken her "Floating Wetlands" idea



Explosive learning: Chemist Dr Ingrid Fischler conducts a chemistry experiment to demonstrate to students how small chemical reactions can produce energy.



Getting to know you: Nur Hazirah 'Aqilah (left) having a chat with South African student Ashley van Heerden during a 'speed-dating' session where the envoys had the chance to be properly introduced to each other.

to her city council in Singapore, where the project has been running for a year.

"We use plants to absorb contaminants in water, thereby eliminating the need to use chemical treatment methods.

"Since water is a very precious resource for us, we were able to convince the government to get on board — we've even encouraged other students to do further research to make it better," she said.

Phethang Mabebe meanwhile, runs an eco-friendly construction company called Siquo Eco Builders in the Western Cape, South Africa.

Using mud bricks and recycled material, Phethang explained that she and her team built homes that not only suited the local climate, but were also cheaper than regular houses.

"We've also just finished a new project, where we built three homes that are energy-efficient and have proper insulation and solar panels to minimise energy wastage.

"I started with next to no knowledge of the construction business, and I'm still learning, but hopefully I can make this grow into something bigger.

"It's not just about being environmentally-friendly, it's also about giving employment opportunities in my community," she added.

Following the devastation of Typhoon Frank in Iloilo City, the Philippines, Marylour Avila felt like she had to do something to help children's voices from affected communities be heard.

"My project is basically the 'Green Dream Board', where I run creative workshops for young children to tell their stories and hopes for their future and the environment.

"Some of these children don't even have homes, but they still care about the environment.

"When we take their artwork and stories on exhibitions, it makes people stop and think about why we need to do more environmental conservation — it really does mean life or death for people who are directly affected by climate change," she said.

Coming from a family of glass artisans,

Oscar Muñoz Cofré of Chile decided to use his glass-making skills with a recycling element in his "Green Glass" project.

With his team, Oscar collects glass bottles from all over the city to his workshop where he converts them into attractive products such as lamps, dishes, and even jewellery.

"It's hard work juggling university and my business, but I enjoy it!" he said.

"I think with the world being in the state that it is in, young people really need to stand up and do something about it because we really can't depend on the 'adults' any more - we don't really have a choice.

"If you have a particular skill or knowledge, just use it to help the environment, that's the only way things are going to change."

As the post-awards night party wore down on the last night of the programme, the envoys were wistful about parting ways with each other.

"It was great being here because everyone is on the same page," said Universiti Putra Malaysia student Nur Hazirah 'Aqilah Ramli.

"The real work is when we get back and keep trying to get everyone else on board to protect the environment.

"But it has been really inspiring to meet such amazing people; I hope we can all stay in touch and continue to support each other."

They may not be marching through streets demanding for change any time soon, but these young environmentalists are staging a quiet revolution of their own.

By forging ahead with their projects, in the face of indifference and other challenges, all the envoys represent the impact that can be made by the passionate individual with a big idea.

As Venezuelan envoy Diego León puts it: "If you want something to be better, you need to participate and not stay in the margins ... we have to think as a society, not just as individuals, and the environment is the one thing we can all be united about."



Junk-ing around: The envoys having a look at how waste gets sorted before being recycled or burned at the AVEA waste management site.