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Mazlan looks to space

Dazman Manan

HER office is suspended on a ledge, "hanging" amidst towering trees overlooking the road leading to her workplace in Jalan Perdana, Kuala Lumpur.

The aerial sense of drift and buoyance provides a perfect ambience for Prof Datuk Dr Mazlan Othman, director-general of the newly-set-up National Space Agency (NSA).

"I'm happy to be working here. The scenery is breathtaking," she says.

The view from the top probably reminds her of her childhood days in Seremban where, she discloses, climbing trees was a routine.

She still climbs, but on a higher scale. "We just got back from an expedition to Mount Kinabalu," says Mazlan.

"Yeah, we climbed right to the top of it," her seven-year-old daughter Elida Izani Ibrahim interjects.

The bright-eyed girl, who speaks fluent German and is into Indian classical dance, shares the same passion as her mother. "When I grow up I want to become an astrogeologist."

Quite a mouthful for a little lass but this is no surprise when you consider that Mazlan's eldest child, Adi Johan Salehudin, 21, is studying aerospace engineering at the University of Washington, Seattle. Her husband Prof Dr Ibrahim Komo is director of the Institute for Environment and Development at Universiti Kebangsaan Malaysia (UKM).

Mazlan and her family are high achievers. Her name was mentioned first by Prime Minister Datuk Seri Dr Mahathir Mohamad when he spoke of achievements of Malaysian women at the Umno general assembly two years ago.

Although Dr Mahathir also named other successful women, many would have been forgiven if they had thought Mazlan was a man. Her name was coined from Malaysia and New Zealand, where her father was when she was born.

An astrophysicist by profession, Mazlan returned to Malaysia two-and-a-half weeks ago from Vienna, Austria where she was the first woman from a developing country to be appointed director of the United Nations Office for Outer Space Affairs there. She was chosen from over 100 international candidates for this post.

Prior to that, she was director-general of the Outer Space Studies Division of the Ministry of Science, Technology and Environment.

This short-haired active woman, who earned her stripes in studies and sports at Tunku Kurshiah College, studied at the University of Otago in New Zealand where she specialised in astrophysics.

After obtaining her doctorate, Mazlan returned to serve at UKM's Department of Applied Physics until her appointment as director-general at the Ministry.

During her nine years at the Ministry, Mazlan was instrumental in setting up the National Planetarium and spreading the message on the importance of space science.

Of her stint of two years and eight months in Vienna, which is more diplomatic than managerial, the 50-year-old oversaw UN space activities to promote peaceful uses of space and space technology.

"My Vienna experience was more of international networking. If I had stayed here, it would be 10 years before I could make the same sort of international connections.

"After all, the Office for Outer Space Affairs is in Vienna and the

committee for the peaceful uses of outer space meets in Vienna three times a year."

She says it was "great fun working with governments and trying to see space on a global context".

Now that she is back, her current position requires her to see space in a national context and she is elated.

Similar to the National Aeronautics and Space Administration (Nasa) in the US, the NSA's main aim is to co-ordinate Malaysia's requirements in aerospace and satellite technology.

It has also been entrusted with the tasks of identifying necessary infrastructure, formulating a national space policy, and planning space and satellite programmes.

The agency, which is under the Ministry of Science, Technology and Environment, may eventually be located in Putrajaya in a few years' time and it will be linked with the universities, industries as well as other Ministries.

On the fact that some quarters feel that Malaysia is too small a country to have something like the NSA, she says: "It's not a matter of size. We are looking at the opportunities there are in space; scientific, technological and business.

"You have to look at what the present space infrastructure can provide us and you'll see very quickly that what they have in place is not necessarily suitable for us.

"If you look at the present satellites right now and the services they provide us, you may find that not all the services suit us. For example, we are not able to get information fast enough or often enough. And, to get these we have to think of a solution that will best suit us. The agency is there to make sure we have the solutions."

Mazlan stresses that one has to view space in the context of the future. She says that even now, it is a multi-billion dollar industry. So, why should we not get a part of that because it is economic development as well as technological, she asks.

"If you look at the American space programme, they claim that for every dollar they put in, they get back between US$22 and US$27 in terms of spin-offs of space technology.

"This is what we should be looking at. There are various aspects of space industry - electronics, software, materials, etc. Space is one enterprise that pushes technology."

One of the goals of the agency is also to sell the space business to the world. At present, Malaysia and Thailand are the only Asean countries with their own satellites.

"Malaysia's Measat 1 and Measat 2 sell telecommunication services and that is taken care of by Astro, Binariang and Maxis. We want to come to a point where we will be selling our space technology.

"The agency can look into issues like what do we need to put in place so that we have a viable and profitable space industry.

"We want to study what is required so that the information we get from space becomes a part of day-to-day decision-making in fields like agriculture, defence, maritime surveillance and many more."

The NSA is linked with many countries including the US, Britain, France, China, South Korea and Indonesia.

"We already have the international connection through various activities that are going on right now.

"For a start, we have Measat 1 and Measat 2 (built by the American Hughes Corporation) both launched by the Ariane rocket (a European rocket mainly owned by the French).

"And we now have another satellite, a micro-satellite called TiungSAT,

built with the British (University of Surrey) and launched by the Russians."

She is optimistic that Malaysia would send its first astronaut into space by the year 2020. She says the astronaut - possibly on a mission to Mars - could be trained either by the Americans or Russians.

"Our astronaut programme will involve several agencies. However, there are no details yet on the scope of research," she says, adding that the programme would be submitted to the Cabinet for approval.

She hopes that a Malaysian would also be selected to participate in manned missions by other countries to explore Mars.

"This is our expectation - that a Malaysian will be able to venture forth and step onto another planet as a representative of humanity."

Her love for the space wasn't as definite as her children's. "When I was younger there wasn't much exposure to space as it was hard to gain access to books.

"I went to school in the early 60s and there wasn't much awareness about space then. I charted this path as a result of my love for physics, not space," she explains.

"Having gone through physics which has a variety of aspects to it, I discovered that astrophysics offered me the scope I wanted because I was interested in its arts (there is a clear beauty in space) and philosophy (there are lots of philosophies about the universe as it relates to civilisation, religion, etc).

"All these, to me, make astrophysics the most exciting branch of physics as a whole."

According to her, there are now many students interested in astronomy and astrophysics. However, she says there are various ways to access the study of space - space engineering as well as science.

"Today, you can learn some aspects of space even if you are a geologist because if you're talking about Mars, the focus is on its geology.

"Or, if you are a climatologist, the most important aspect of Mars that we need to know now is its climate.

"Another thing that is important to space currently is medicine as in order to survive in space, we need to know how the body functions in space. Similarly, we need to know biology in order to find out whether life can exist in Mars."

She adds that one can access space through many fields in science, not just physics.

"That's the exciting part about space. It encompasses and embodies all of the sciences."

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