

KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH: 5 JANUARI 2015 (ISNIN)

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Karnival Sains, Matematik SK Putrajaya Presint 11 (1) meriah

SEKOLAH Kebangsaan Putrajaya Presint 11 (1) Putrajaya menganjurkan Karnival Sains & Matematik Sekolah Berprestasi Tinggi Peringkat Kebangsaan di perkarangan sekolah itu baru-baru ini.

Lebih 10 buah sekolah berprestasi tinggi sekitar Lembah Klang turut menyertai program itu yang berlangsung selama dua hari.

Terdapat pelbagai aktiviti yang aturkan untuk murid-murid daripada sekolah yang terlibat antaranya lawatan sambil belajar, kuiz sains, kuiz matematik, puisidra sains, Sudoku.

Selain itu, terdapat juga pa-

meran-pameran daripada agensi luar seperti perbadanan, **MOSTI**, Zoo Negara, AADK, Kementerian Kesihatan dan banyak lagi.

Sempena program itu, pihak Zoo Negara memperkenalkan 'Program Education Outreach' yang antara lain usaha pihak terbabit mempromosikan Zoo Negara dalam kalangan murid sambil menimba ilmu.

Majlis penutupan Karnival Sains & Matematik di Dewan Komuniti Presint 11 pada hari kedua disempurnakan Pengarah Jabatan Pendidikan Wilayah Persekutuan Putrajaya, Rosni Ab. Jalil.



MURID tidak melepaskan peluang bergambar dan beramah mesra dengan maskod Zoo Negara yang ditampilkan khas pada Festival Sains & Matematik di SK Putrajaya Presint 11 (1), baru-baru ini.

KERATAN AKHBAR
HARIAN METRO (SETEMPAT) : MUKA SURAT 7
TARIKH: 5 JANUARI 2015 (ISNIN)

Amaran hujan lebat

Kuala Lumpur: Penduduk di kawasan berisiko banjir diminta berwaspada berikutan amaran hujan lebat mungkin melanda beberapa lokasi kerana episod hujan angin monsun yang dijangka berlaku Rabu dan Khamis ini.

Pengarah Jabatan Meteorologi Malaysia (Met Malaysia) Datuk Che Gayah Ismail berkata angin Monsun Timur Laut itu berkemungkinan membawa taburan hujan berterusan selama dua hingga tiga hari di negeri seperti Johor, Sabah dan Sarawak.

"Kawasan rendah terutama berisiko banjir kerana angin monsun dikesan dari China bakal membawa hujan lebat untuk beberapa hari.

"Namun, kejadian luruhan monsun ini hanya dapat dipastikan dua atau tiga hari sebelum tarikh itu," katanya.

Beliau berkata, pihaknya turut menempatkan pegawai meteorologi di Majlis Keselamatan Negara untuk memberi perkembangan terkini berhubung fenomena cuaca termasuk episod hujan monsun yang mungkin berlaku.

Dam at 70% but don't celebrate yet

Klang Valley folk advised to use water wisely as dry season expected soon

By YUEN MEIKENG
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PETALING JAYA: The level at the Sungai Selangor dam – the state's largest – has touched the 70% mark but water experts say there is no reason for Klang Valley folk to celebrate just yet.

Association of Water and Energy Research president S. Piarapakaran said the authorities and consumers must continue to be on alert as the dry season was expected to kick in.

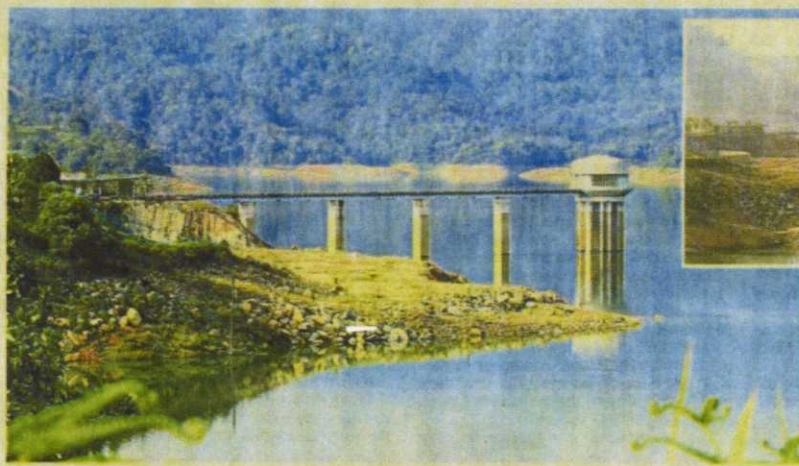
Furthermore, there was the expected higher usage by domestic users and industries in preparation for Chinese New Year and Ramadan, he said.

"The current 70.18% level does not guarantee anything. The heavy reliance on the Sungai Selangor dam to service about 50% of consumers in Selangor, Kuala Lumpur and Putrajaya will cause water to be used up quickly.

He pointed out that the level also stood at about 70% in January last year, before the prolonged dry weather led to water rationing imposed on 6.7 million users in the Klang Valley.

"We may still be at risk of water rationing. If possible, cloud seeding should be done as a precaution instead of doing it during the dry season when no suitable clouds are available," he said when contacted.

Forum Air Malaysia, an organisation



Up and down: The Sungai Selangor Dam near Kuala Kubu Baru yesterday and (inset) the water level in June last year.

tion that assists the National Water Services Commission, also raised concern about the Sungai Tinggi dam, which supplements the Sungai Selangor dam.

The organisation's senior executive Foon Weng Lian said the Sungai Tinggi dam recorded a rather low level of 63.42% on Saturday.

"If the hot and dry weather hits us again like last year, we may be in

trouble. Not only do we need more rain to fall into the dams but people must continue using water wisely," he said.

Meteorological Department spokesman Dr Hisham Mohd Anip said Malaysians could expect the current wet weather to be replaced by the dry season between January and March.

"This period is usually considered

as dry months for the country except for Johor, Sabah and Sarawak.

"Normally, the highest temperature will be recorded in March or April over the northern states in the peninsula and ranges between 36°C and 38°C," he said.

Dr Hisham said during this period, northern states would experience the least rain of about 50mm a month while other parts of

Malaysia would receive low rainfall of between 100mm and 200mm monthly.

However, he said the dry season would not severely affect the dam levels in Selangor as it was only a short period before the rainy inter-monsoon starts in April.

"Normally, we have a problem with water shortage during the southwest monsoon between June and September.

"This is another dry period for the country and we usually experience haze then. However, it is too soon to predict if it will be hotter or drier in this period."

On El Nino, he said it had yet to fully develop in Malaysia and could only be confirmed in April.

"The El Nino's initial phase started in November. Now, it is in the developing process but so far, it is expected to be a weak El Nino," he said.

Hujan lebat punca banjir

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■ KOTA BHARU 4 JAN.

KERAJAAN Pas Kelantan menyangkal teori atau pendapat sesetengah pihak yang mengaitkan pembalakan berleluasa di Tanah Tinggi Lojing, Gua Musang sebagai punca banjir besar di negeri ini.

Menteri Besar, Datuk Ahmad Yakob berkata, lakwaan itu tidak berasas kerana kerja-kerja pembalakan di kawasan tersebut telah dibekukan pihaknya sejak 2006.

Beliau berkata, banjir itu sebaliknya mungkin terjadi disebabkan hujan lebat berterusan di Gua Musang selama tiga hari berturut-turut bermula pada 21 Disember.

"Pada 21 hingga 23 Disember lalu, Jabatan Pengairan dan Saliran negeri merekodkan taburan hujan tinggi, iaitu 1,295 milimeter yang bersamaan dengan taburan hujan bagi 64 hari.

"Jabatan Meteorologi juga telah

mengemaskini amaran Jinnga iaitu hujan lebat di semua daerah bermula 20 hingga 24 Disember ekoran peningkatan paras air di hampir semua sungai utama di Kelantan," katanya dalam kenyataan di sini hari ini.



AHMAD YAKOB

Mingguan Malaysia hari ini melaporkan Majlis Keselamatan Negara (MKN) mengesahkan bencana banjir terburuk dan tanah runtuh yang berlaku ketika ini ada kaitan dengan kegiatan pembalakan dan kemusnahan hutan di beberapa tempat serta penerokaan tanah haram di Cameron Highlands.

Tindak balas semula jadi itu berlaku akibat kerakusan 'tangan-tangan manusia' sendiri kerana permuakaan bumi kehilangan pelindung, daya pengikat dan cengkaman tanah, sekali gus mengakibatkan struktur tanah menjadi longgar dan cerun-cerun bukit tidak stabil.

Kemusnahan hutan punca banjir terburuk

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■ KUALA LUMPUR 3 JAN.

DENCANA banjir terburuk dan tanah runtuh yang berlaku ketika ini disahkan ada kaitan dengan kegiatan pembalakan dan kemusnahan hutan di beberapa tempat serta penerokaan tanah haram di Cameron Highlands. Setiausaha MKN Keselamatan



Banjir dan pembalakan memang ada kaitan. Kita lihat sendiri paras air naik amat luar biasa iaitu palteruk selepas kejadian bencana banjir berlaku pada 1967 dan 19

KERATAN *Mingguan Malaysia* semalam.

Menurut Ahmad, bencana yang kini memasuki fasa pasca banjir merupakan ujian yang begitu berat, namun rakyat negeri ini diminta menginsafi 'isyarat' daripada Allah SWT itu dan segera mencari jalan menambah pahala, bukan dosa. "Ini adalah kekuasaan Allah Taala yang tel-

ah menurunkan hujan pada kadar amat banyak dalam jangka waktu singkat. Kekuasaan Allah mengatasi segalanya. Dia menurunkan ujian ini untuk kita merenung kembali kekuasaan-Nya.

"Dalam fasa selepas banjir ini, sama-samalah kita membantu untuk memulihkan semula kawasan yang musnah dan menolong mangsa-mangsa banjir yang kehilangan kediaman dengan cara memenuhi keperluan asasi mereka," katanya.

Bencana Banjir



PRIME NEWS

3 states on monsoon surge alert

ON STANDBY: National Security Council operation centres reactivated

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THE National Security Council's operation rooms have been reactivated, while rescue personnel are now on standby because of a forecast monsoon surge in Johor, Sabah and Sarawak.

People in flood-prone areas were advised to be on alert via news tickers and crawlers on television, which also broadcast instructions to evacuate in the event of floods.

A Meteorological Department senior officer Ambun Dindang said the reactivation of NSC operation centres was in anticipation of the monsoon surge on Wednesday and Thursday.

The surge is likely to bring heavy rainfall for up to three days over the three states.

He said areas which had not previously flooded could be inundated this time around as water levels at rivers could rise.

He cited southern Sarawak as an area that should be on high alert for floods.

"We saw what happened in Kelantan when thousands of people were stranded because they couldn't evacuate in time.

"Therefore, we urge the people to act fast," he told the *New Straits Times*.

"We cannot rely on rescuers to come for us at the last minutes because they, too, will be dealing with their own con-

straints and complications."

He said the Meteorological Department would release updates on the weather condition, water levels at rivers and water flow so that the public can take the necessary actions in case of any eventuality.

In Kudat, Deputy Defence Minister Datuk Abdul Rahim Bakri advised the public in flood-prone areas to immediately evacuate to relief centres if ordered to do so by the authorities.

Rahim told Bernama that the people should not wait until floodwaters had reached an alarming level before moving out of their homes.

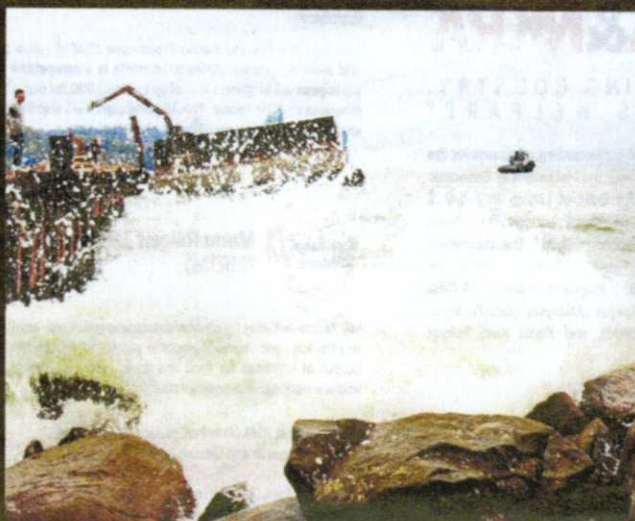
"A flood disaster relief committee has been set up in every district, involving all the relevant government agencies, and is chaired by the respective district officers," said Rahim, who is also Kudat member of parliament, after visiting a flood relief centre at SK Sikuati and distributing food and drinks to the over 900 evacuees there.

Rahim advised all village chiefs and chairmen of village development and security committees to be prepared to face the floods and to contact the district flood operations rooms should an emergency surface.

He said the 5th Infantry Brigade based in Sabah had deployed 64 soldiers and a medical team as well as six boats and eight three-tonne trucks to help out in the event of floods in northern Sabah, especially Kota Belud, Pitas and Kudat.



Mohamad Hussin, 83, showing his damaged trishaw, which served as his only means of income before the floods, in Kota Baru yesterday.



Strong waves seen along the coastal road in Tanjung Lipat, Kota Kinabalu. Monsoon rains coupled with strong winds are expected to hit Sandakan, Kudat and the interior districts of Sabah as early as tomorrow.

sains

SATELIT radar antara teknologi penting dalam mengurus bencana.

Kegunaan satelit

MAKLUMAT yang boleh dipercayai dan tepat pada masanya amat penting untuk pengurusan banjir. Dalam kes ini, data satelit penderiaan jauh (*remote sensing*) boleh memberikan maklumat berguna dalam menyediakan peta banjir bagi kawasan yang besar. Kelebihan utama penggunaan data penderiaan jauh adalah liputan kawasan yang besar, kepelbagaian data dan perolehan berulang-ulang.

Imej dan data yang diperolehi daripada satelit boleh digunakan untuk:

- Menyediakan peta asas dan keadaan permukaan waktu aman
- Menilai tahap atau corak kerosakan dalam kawasan bencana.
- Menilai kesan kepada populasi dan infrastruktur kritikal.
- Memantau dan menilai sejauh mana kawasan ditenggelami banjir.
- Menyediakan maklumat kawasan potensi banjir.
- Kesedaran sokongan situasi di kawasan tidak boleh diakses.
- Menilai magnitud sesuatu insiden bencana seperti banjir.

Secara amnya, imej satelit ada dua jenis iaitu optik yang menggunakan sumber cahaya seperti kamera serta satelit radar yang menggunakan sumber gelombang.

Pemetaan banjir daripada imej satelit optik atau radar adalah berdasarkan langkah-langkah berikut:

- Penyediaan peta kawasan ketika normal atau waktu aman.
- Pengekstrakan kawasan air yang boleh dilihat daripada imej semasa berlaku banjir.

Kebaikan pemetaan banjir daripada satelit ini adalah:

- Keupayaan untuk memperoleh data di mana-mana lokasi di dunia, yang meliputi kawasan yang luas dalam jangka masa yang singkat.
- Keupayaan untuk memperoleh data di bawah keadaan cuaca dan setiap malam (bagi satelit radar).
- Keupayaan untuk memantau evolusi pasang surut air sepanjang hari atau minggu berikutan kejadian.

Bagaimanapun, pemetaan banjir daripada satelit juga mempunyai batasan seperti berikut:

- Keupayaan pengesanan banjir yang terhad di kawasan bandar dan kawasan hutan (satelit radar)
- Keupayaan mendapatkan imej ketika banjir berlaku.
- Pengesanan banjir dalam kes kehadiran awan yang tebal (satelit optik)



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Teknologi mendepani banjir

Malaysia perlu sistem pengurusan bencana yang memanfaatkan teknologi terkini

MALAYSIA memerlukan satu sistem untuk mengurus bencana pada masa akan datang selepas kejadian banjir besar yang melanda beberapa negeri Semenanjung.

Sistem tersebut perlu memanfaatkan segala kemudahan teknologi yang ada, termasuk kepakaran tempatan bagi mengurus termasuk meramal dan mendepani perubahan cuaca luar jangka.

Ketua Pengarah Agensi Angkasa Negara (Angkasa), Dr. Noordin Ahmad berkata, antara perkara yang perlu diberi keutamaan adalah penggunaan teknologi komunikasi yang sesuai bagi menghadapi kemungkinan hubungan terputus ketika bencana.

"Sebagai contoh penggunaan radio amatir ketika berlakunya bencana dan satelit tidak dapat dielakkan," katanya.

Dr. Noordin berkata, Malaysia memerlukan satelit dan pada masa yang sama, agensi yang berkaitan penggunaan teknologi tersebut bergabung sebagaimana dalam Majlis Keselamatan Negara (MKN) untuk membantu mengurus dan berdepan sebarang kemungkinan.

Banyak agensi tempatan yang menggunakan data satelit ketika ini dengan melanggan imej daripada pihak luar antaranya Agensi Remote Sensing Malaysia (ARSM) dan Astronautic Technology Sdn. Bhd. (ATSB).

Beliau berkata, perkara yang lebih penting ialah perlunya satu pemetaan pengurusan bencana termasuk banjir dan tanah runtuh.

Pemetaan kawasan berisiko seperti banjir dan bencana boleh dilakukan dengan menggunakan satelit antaranya seperti SPOT dari Perancis dan satelit

radar yang menggunakan gelombang untuk menerima data dalam suasana berawan.

"Peta tersebut mengezon kedudukan satu-satu kawasan sama ada berada dalam kawasan atau zon bahaya dan sebagainya mengikut tahap risikonya," kata beliau.

Penduduk boleh menggunakan peta tersebut untuk mengetahui kedudukan mereka sama ada bahaya, atau terlalu bahaya selain menentukan gerografi mereka, jauh dari laut sungai dan sebagainya.

Beliau berkata, sistem tersebut telah diamalkan di luar negara bagi mengetahui tahap seriusnya risiko bencana yang penduduk hadapi di sesuatu kawasan.

Malah, sistem pengezonan tersebut menetapkan kadar insurans yang berbeza berdasarkan tinggi risiko yang ditanggung.

Dr. Noordin berharap dengan menggunakan satelit tertentu, banyak paramater dan data yang dicerap, dianalisis bagi menghasilkan satu peta pengurusan bencana dan kegunaannya juga adalah pelbagai.

Sebagai contoh, kedudukan tanah tinggi taburan hujan, kedudukan sungai dan laut, jenis tanah dan penempatan di kawasan tersebut juga diambil kira sama ada berisiko tinggi atau sebaliknya.

Pada masa yang sama, beliau berharap, agensi terbabit dalam pengurusan bencana perlu menyelaraskan tindakan mereka apabila berdepan dengan satu-satu bencana supaya tidak menjejaskan atau merencatkan semua tindakan tersebut.

Beliau turut mengakui, Malaysia perlu mempunyai beberapa jenis satelit pada masa akan datang seperti komunikasi radar dan juga optik.

Need for disaster risk management

FLOOD SOLUTIONS:

Many ideas have been proposed, but how do we translate them into reality?

NATURAL disasters have become more prevalent these days. Some blame climate change for the extreme weather conditions afflicting the world. Not everyone agrees.

There are sceptics who do not believe in global warming. They put the blame on the natural global climate cycle. They do not see the activities of man as being responsible for the changing climate. They do not believe it is the burning of fossil fuels that is contributing to the increasing levels of greenhouse gases in the atmosphere.

This explains why the global attempt to rein in greenhouse gas emissions has not been very successful. These are also the reasons why the international climate change agreements have not been truly effective.

Notwithstanding the unbelievers, extreme weather conditions which culminate in natural disasters continue to haunt the world. No country is spared from such occurrences. Both developed and developing nations have been hit by such disasters. And there is no technology which can prevent such natural calamities.

Some countries have worse experience than others. Take the Philippines for example. Almost every now and again, we hear news of threats from typhoons. Not to mention earthquakes and tremors. Malaysia is quite fortunate. We are quite free from typhoons and earthquakes. But floods continue to create havoc in the country. They can be flash floods or the more damaging monsoon floods. Not to mention landslides.

One thing is for sure. We will never be rid of such floods especially the ones brought by the monsoon rains. What we need is to have a system to minimise the damage from such floods.

This year, the monsoon floods which hit mainly the east coast



Soldiers carrying relief supplies from a helicopter at Kuala Krai in Kelantan on Tuesday. Reuters pic

states of the peninsula are unusually strong. Kelantan is the worse affected with displaced persons exceeding 120,000. This time, the time it takes for the waters to recede is much longer than usual. As a result, we hear stories of food distribution difficulties.



Dr Ahmad Ibrahim
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*Academy of
Sciences Malaysia*

We also hear of clean water shortage in some of the relief centres. Add to that the fact that there have been widespread cuts in electricity supply, which are necessary for safety reasons, and one can imagine the kind of emotional pressure those staying at the relief centres have to cope with.

By now, we should all be aware of the many risks posed by such disasters. Top of the list is the risk to lives. This is followed by risk to property, risk to infrastructure, risk to business, risk to health and of course, risk to the whole economy. How then do we reduce such risks to the minimum?

Early warning is what we need to save lives. People living in flood vulnerable areas must be educated on the necessary procedures to follow in the event of floods.

Some countries are known to have developed simulation models to predict rising flood waters as a result of heavy rain or even resulting from the necessary release of dam water.

The predictions are then shown to the people to convince them of the need to vacate their houses.

In the current floods, there have been reports of residents hesitating to leave. They often vacate only at the last minute.

This does not give enough time to suitably prepare their households to minimise damage.

One excellent idea which was recently proposed is for the government to build proper relief centres preferably on high grounds to cater to the flood victims.

During normal times, such buildings can serve other functions including as a community centre, sports complex or even as schools. But they must be equipped with proper flood relief facilities.

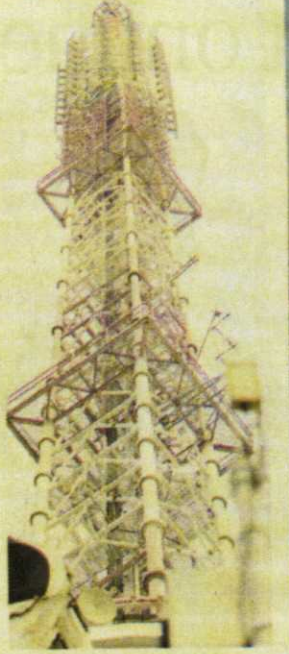
These include the provision of generator sets, proper kitchen, proper landing for helicopters, standby water treatment systems for clean water and other necessary amenities.

Design of houses in flood-prone areas should be flood-friendly. It is not far fetched to develop a packaging technology which protects clothing, television and other electrical equipment from water damage. Ideas about some kind of vacuum packaging have been suggested. It is quite obvious there are many ideas for research.

A national research centre on disaster risk management would help translate such ideas into practical reality.

KERATAN AKHBAR
NEW STRAITS TIMES (LIFE & TIMES) : MUKA SURAT 8
TARIKH: 5 JANUARI 2015 (ISNIN)

Drones will be a great help for telecommunication tower related work.



In a secluded incubation building at Technology Park Malaysia, Kuala Lumpur, technopreneurs Mohd Izmir Yamin and Jabarullah Rahim are busy preparing their drone, a three pronged twin-rotor flying machine with video and picture-taking capabilities.

They call it ReGiD for Report Generating Drone.

One of the pioneer drone makers in the country, Mohd Izmir, 32, and Jabarullah, 28, have been working on ReGiD since early 2013. They aim to offer their drone data collection service to industries such as telecommunications, oil and gas, and mining.

ReGiD may look like a technopreneur's hobby but it's more than a big boy's toy. It is capable of taking videos and photos and at the same time, producing reports and analyses, hence its name.

THE DREAM

What started as a hobby for the friends has turned into a remarkable innovation.

"During my university years, I used to play remote control aircrafts," says Mohd Izmir who has a degree in mechanical engineering and a diploma in aerospace engineering from Universiti Institut Teknologi Mara (UITM).

He also took up Business Administration from the Illinois Institute of Technology in the US.

He is currently pursuing a Master's degree in aerospace engineering at a local university.

Meanwhile, Jabarullah has a degree in actuarial science from Purdue University in the US. His dream to build drones came about while flying and seeing the Earth from above.

"I always take pictures from the window of an aeroplane, and I used to wonder if I could build something that could fly and take pictures as well

The ReGiD drone is modular, hence it can be customised.



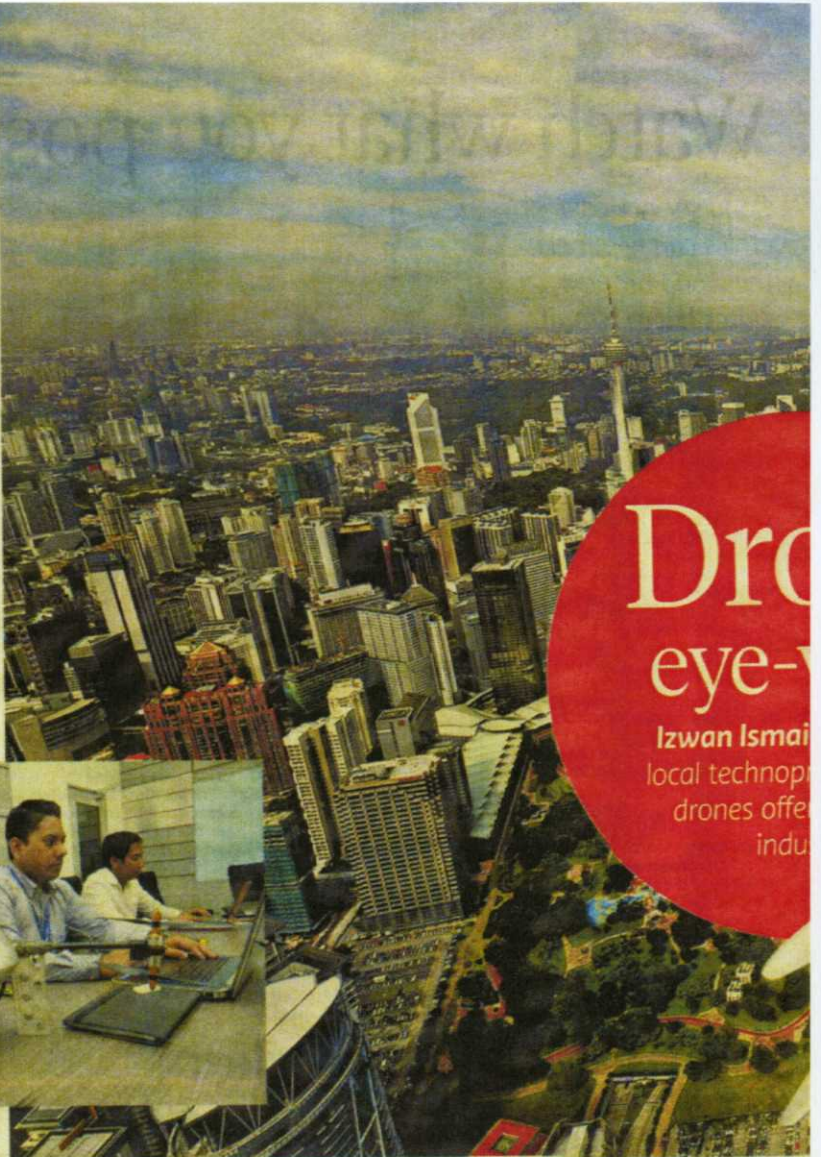
videos. The idea excites me," he says.

Mohd Izmir and Jabarullah have been friends since their student days in the US.

Mohd Izmir worked as a project engineer at Strand Aerospace Malaysia doing projects on the latest Airbus aircrafts like the A380 and A350, while Jabarullah was a pricing analyst at a telco in the US.

But they could foresee a future in drones. So they founded Pulsar UAV in 2013 to realise their dream.

"Using creativity in technology, I feel that I could bring change to the world," says Mohd Izmir who has experience in rocket propulsion and robotic control system.



Dro
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Izwan Ismail
 local technopreneurs
 drones offer
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"Using creativity in technology, I feel that I could bring change to the world."

Mohd Izmir Yamin



The ReGiD drone is capable of taking aerial videos and photos.

KERATAN AKHBAR
NEW STRAITS TIMES (LIFE & TIMES) : MUKA SURAT 9
TARIKH: 5 JANUARI 2015 (ISNIN)



Jabarullah (left) and Mohd Izmir with the ReGiD drone.

With the help of antenna and computers, the ReGiD drone can fly far.

CHALLENGES

Developing drones like ReGiD is not easy.

"A sound knowledge in flying mechanics and programming is needed as you're dealing with many sub-systems and have to make them work together. Besides that, you need to abide with the law of flight mechanics, and regulations where we cannot operate in areas or regions that are not allowed," says Mohd Izmir.

What differentiates the drones Mohd Izmir and Jabarullah created to the ones available off the shelves is that theirs are modular.

"We can add sub system and control the software. We have it down to the source code, which is something you cannot get from drones in the shops," he says.

Next, their drones are designed to fly as far as 40km, with the help of antenna and notebooks to track their position.

They have crashed the drones several times in the process of making it perfect. "We check on sub components and see what needs to be rectified and improved," says Mohd Izmir.

Last November, Mohd Izmir and Jabarullah entered the World Startup Summit in South Korea and became one of the semi-finalists with their drone.

Seventy per cent of the drones are made by Pulsar UAV, with the help of seven interns from local and international universities.

Mohd Izmir says he is looking at producing three units of drones soon and eventually 10.

FUTURE

Drones are just the beginning for Mohd Izmir and Jabarullah.

"We want to be a data collection and measurement company and for a start, drones are used to do the job," says Mohd Izmir. In the long run, the innovative technopreneurs plan to enter the satellite arena, for precision farming, fishery.

"As for the drones, we plan to enhance it. In particular, increasing its flying time capability from the current 12 minutes to two hours, by using a fixed wings model," he says.



The Pulsar UAV team.

MAKING THE DRONES

The idea to make drones popped up after Mohd Izmir and Jabarullah entered the Google Lunar XPrize (GLXP) competition in the US, where

Mohd Izmir was the front man for the Malaysia team.

The team called for privately-funded self-flight teams to compete to successfully launch a robotic spacecraft than land and travel across

the surface of the moon while sending specified images and other data back to Earth.

"We've been pondering the idea and collecting data and doing studies for a few years before we actually

started to build ReGiD," says Mohd Izmir.

So far, they've completed building ReGiD Mark I, their first drone model.

"The first model took us eight months to build and now we're started building the Mark 2 version, which improves on various aspects of the first model," says Mohd Izmir, who is the CEO/CTO of Pulsar UAV.

Their efforts earned them the support of Cradle, which funded RM150,000 for the project.

Other organisations that support the project include Coach and Grow, TPM and MaGic.

"In the telecommunications industry, the drone can be used to help in the process of installing antennas, generating line of sight report which is normally done by workers climbing up the tower," says Mohd Izmir.

"Using drones is safer and could save time considering many telco towers are in remote areas," he says.