

**KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH: 17 DISEMBER 2015 (KHAMIS)**

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Inovasi, kreativiti bidang penting - Najib

Oleh SAIFULIZAM MOHAMAD
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■ PUTRAJAYA 16 DIS.

ASPEK inovasi dan kreativiti akan menjadi dimensi penting dalam visi baharu pembangunan negara selepas terlaksananya Wawasan 2020.

Perdana Menteri, Datuk Seri Najib Tun Razak berkata, justeru pihak yang terlibat dengan setiap sesi percambahan fikiran berhubung pelaksanaan visi pasca 2020 memberi tumpuan kepada aspek tersebut dalam usaha menyemai benih-benih inovasi dan kreativiti dalam apa jua tindakan.

Katanya, langkah tersebut perlu dimulakan sekarang tanpa perlu menunggu terlaksananya wawasan 2020 dalam usaha mengangkat kemampuan rakyat negara ini untuk berfikir dan bertindak berasaskan nilai tambah inovasi dan kreativiti.

"Tidak lama lagi kita akan me-

mulakan percambahan fikiran berhubung pasca tahun 2020 iaitu hala tuju baharu negara yang juga merupakan proses untuk menentukan konsensus nasional ke arah visi baharu Malaysia selepas tahun tersebut.

"Saya yakin dan percaya dalam percambahan fikiran itu sudah tentu aspek inovasi dan kreativiti akan muncul sebagai salah satu dimensi amat penting," katanya ketika berucap dalam majlis Anugerah Inovasi Perdana Menteri 2015 di Pusat Konvensyen Antarabangsa Putrajaya (PICC) di sini, hari ini.

Yang turut hadir, Timbalannya, Datuk Seri Dr. Ahmad Zahid Hamidi; Ketua Setiausaha Negara, Tan Sri Dr. Ali Hamsa; Panglima Angkatan Tentera Malaysia (ATM), Jeneral Tan Sri Dr. Zulkifeli Mohd. Zin dan Menteri Pengangkutan, Datuk Seri Liow Tiong Lai.

Dalam majlis tersebut juga, ATM telah diumumkan sebagai pemenang tempat pertama dalam pertandingan Anugerah Inovasi Per-

dana Menteri (AIPM) pada tahun ini.

Perdana Menteri berkata, berikutan itu juga kerajaan telah mengambil beberapa langkah untuk memantapkan kemampuan negara dalam bidang inovasi dan kreativiti.

"Langkah-langkah yang telah kita lakukan termasuk peruntukan yang diluluskan dalam Bajet 2016 iaitu peruntukan RM100 juta kepada Agensi Inovasi Malaysia, RM200 juta kepada Malaysia Debt Ventures Capital Bhd. di bawah skim lonjakan teknologi dan inovasi.

"Begitu juga peruntukan RM35 juta kepada Pusat Inovasi dan Kreatif Global Malaysia (MaGIC) sebagai peneraju hab keusahawanan dan inovasi serantau. Selain itu kerajaan juga menunjukkan komitmen dalam menggalakkan aktiviti inovasi melalui peruntukan geran penyelidikan dan pembangunan (R&D)," ujarnya.

Dalam perkembangan berkaitan Perdana Menteri berkata, Malaysia kini berada pada kedudukan ke-32 daripada 141 negara dalam bidang

inovasi dengan skor sebanyak 45.98.

Beliau berkata, pencapaian Malaysia itu tercatat dalam Laporan Indeks Inovasi Global 2015 yang merupakan hasil kerjasama antara Cornell University, Insead dan Pertubuhan Harta Intelek Sedunia (WIPO).

Beliau berkata, pencapaian negara itu turut merekodkan iaitu daripada 79 petunjuk yang dianalisis, sembilan daripadanya berada pada kedudukan 10 terbaik.

"Dalam Laporan Daya Saing Global 2015/2016 yang diterbitkan oleh Forum Ekonomi Dunia (WEF) pula telah meletakkan Malaysia di tempat ke-18 daripada 140 negara dengan skor sebanyak 5.23.

"Kaedah laporan ini meletakkan kedudukan negara-negara berkenaan berdasarkan kepada indeks daya saing mereka menerusi 12 teras utama dan salah satu daripadanya adalah inovasi," katanya.

Dalam teras itu ujar Perdana Menteri, Malaysia berada pada kedudukan ke-20 dengan mendapat skor 4.80.



NAJIB TUN RAZAK menyampaikan piala, sijil berserta cek berjumlah RM1 juta kepada Zulkifeli Mohd. Zin pada majlis Anugerah Inovasi Perdana Menteri 2015 di PICC, Putrajaya, semalam. Turut hadir Ahmad Zahid Hamidi (tiga dari kiri), Ali Hamsa (dua dari kiri) dan Liow Tiong Lai (kiri). - UTUSAN/ZAKI AMIRUDDIN

PM stresses on innovation

Creativity also needed to survive challenging climate, says Najib

By JOSEPH KAOS Jr
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PUTRAJAYA: As Malaysia prepares to plan beyond 2020, Datuk Seri Najib Tun Razak has stressed on the need for more innovation and creativity to survive a more "challenging climate".

The Prime Minister said that with the year 2020 drawing ever closer, Malaysia must start its post-2020 discourse now rather than later.

"Today, the world is witnessing a very challenging economic environment. If we want Malaysia to be a country that is respected, we need to compete with the best in order to survive this competitive world.

"To achieve higher than other countries, we have no choice but to ensure that everything we do is based on high innovation and creativity.

"The post-2020 discourse needs to start early and we should not wait until 2020 arrives.

"While we plan on the country's future direction, I am confident that innovation and creativity will be an important dimension in this discourse," he said in his speech at the Prime Minister's Innovation Awards 2015 (AIPM) here yesterday.

The Government, he added, had taken all kinds of steps to enhance Malaysia's capabilities as a country, and to think and act innovatively.

Creating wealth, Najib said, did not only rely on hard work and productivity.

"That 'quantum leap' can only be made if our hard work and efforts are based on innovation and creativity.

"As the renowned inventor Edward de Bono once said: 'As competition intensifies, the need for



Well done: Gen Zulkifeli (third from left) receiving the AIPM award from Najib in Putrajaya. Also present are (from far left) Transport Minister Datuk Seri Liow Tiong Lai, Chief Secretary to the Government Tan Sri Ali Hamsa, Deputy Prime Minister Datuk Seri Dr Ahmad Zahid Hamidi (on Najib's right, in suit) and other Government leaders.

creative thinking increases. It is no longer enough to do the same thing better, no longer enough to be efficient and solve problems," he said.

Malaysia, he said, was ranked 32nd overall in this year's Global Innovation Index and 18th out of 140 countries in the Global Competitiveness Report 2015-2016.

"One of the 12 pillars in this Global Competitiveness Report is innovation. And in this aspect, Malaysia ranked 20th with a score of 4.80," said Najib.

The Government, he said, had taken several measures to drive innovation in the country and this

was reflected in the recent Budget 2016 announcement.

"The Budget set aside RM100mil to the National Innovation Agency, RM200mil to Malaysia Debt Ventures Bhd under the funding scheme for technology and innovation acceleration and RM35mil to the Malaysian Global Innovation and Creativity Centre as a leading regional entrepreneurship and innovation hub," said Najib.

He also reminded government agencies that they needed to avoid overlapping jobs and roles in order to optimise government spending.

Later, Najib presented the AIPM

2015 award to the Armed Forces for their "Program Jiwa Murni" rural infrastructure project.

Armed Forces chief Gen Tan Sri Dr Zulkifeli Mohd Zin received the award trophy from Najib, which also came with a cash prize of RM1mil.

Under the programme, the Armed Forces built over 269km of roads and 45 bridges in about 108 villages in Sarawak, Pahang, Terengganu and Perak using "fast track" method that emphasised on cost-effectiveness. The total cost incurred to build those roads and bridges was RM319.03mil.

Galakkan kreativiti, inovasi lebih tinggi

» Kerajaan sedia geran penyelidikan, pembangunan

Oleh Irwan Shafrizan Ismail
dan Zanariah Abd Mutalib
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► Putrajaya

Aspek inovasi dan kreativiti, akan menjadi dimensi penting dalam perbincangan dan sesi percampuhan fikiran pasca Wawasan 2020, yang akan diadakan tidak lama lagi, kata Datuk Seri Najib Razak.

Perdana Menteri berkata, berikutan itu kerajaan me-

ngambil langkah memantapkan kemampuan negara dalam berfikir dan bertindak berasaskan nilai tambah inovasi serta kreativiti.

"Langkah yang telah kita lakukan termasuklah peruntukan dalam Bajet 2016 iaitu RM100 juta kepada Agensi Inovasi Malaysia, RM200 juta kepada Malaysia Debt Ventures Sdn Bhd dan RM35 juta kepada Pusat Inovasi dan Kreatif Global Malaysia (MAGIC).

"Kerajaan juga tunjukkan komitmen dalam menggalakkan aktiviti inovasi melalui peruntukan geran penyelidikan dan pembangunan. Sejumlah dana juga sudah lama diperuntukkan untuk melaksanakan penyelidikan asas, gunaan dan eksperimen," katanya.

Beliau berucap pada Majlis

Anugerah Inovasi Perdana Menteri 2015 di sini, semalam. Yang turut hadir Timbalan Perdana Menteri, Datuk Seri Dr Ahmad Zahid Hamidi dan Ketua Setiausaha Negara, Tan Sri Dr Ali Hamsa.

Perdana Menteri berkata, bagi mencapai hasrat dan tindakan lebih berkesan, agensi kerajaan perlu mengelak melakukan tugas yang sama antara satu sama lain.

Penyusunan semula

"Penyusunan semula bidang yang sudah dikenal pasti dapat mengoptimumkan perbelanjaan dana kerajaan dan menjadikan proses inovasi itu lebih bermakna lagi.

"Saya harap langkah tertentu boleh diambil untuk menjadikan semua agensi kerajaan fokus dalam menentukan usa-

ha terbabit lebih berjaya lagi," katanya.

Beliau berkata, sekiranya ingin melihat Malaysia mendahului negara lain dalam persaingan dunia yang semakin kompetitif, apa jua yang dilakukan mesti berasaskan nilai inovasi dan kreativiti yang lebih tinggi lagi.

"Bagi mencipta lebih keayaan, ia juga bergantung kepada kemampuan kita, bukan saja kerja lebih kuat, produktiviti dengan lonjakan berganda akan dapat diraih sekiranya usaha berpaksi kepada nilai tambah dan kreativiti yang lebih tinggi.

"Kita perlu menyemai benih inovasi dan kreativiti dalam apa jua tindakan untuk mewujudkan perkhidmatan awam yang berdaya saing dan selangkah ke hadapan," katanya.

Selain itu katanya, Malaysia kini berada pada kedudukan ke-32 daripada 141 negara dalam Laporan Indeks Inovasi Global tahun ini.

"Laporan ini hasil kajian bersama antara Cornell University, INSEAD dan Pertubuhan Harta Intelek Sedunia (WIPO) 2015 yang mana negara mendapat skor sebanyak 45.98," katanya.

Inovasi **tunjang** pelan pasca-Wawasan 2020

■ Proses tentu konsensus kebangsaan baru Malaysia

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Putrajaya

Aspek inovasi dan kreativiti akan menjadi satu dimensi penting dalam percambahan fikiran dan wacana untuk merangka pelan serta visi pasca-Wawasan 2020.

Sehubungan itu, Perdana Menteri Datuk Seri Najib Razak berkata, benih inovasi dan kreativiti perlu disemai dalam kalangan penjawat awam dari peringkat awal bagi mewujudkan perkhidmatan awam berdaya saing yang sentiasa berada selangkah di hadapan.

"Saya sudah membayangkan tidak lama lagi kita akan memulakan wacana dan percambahan fikiran mengenai pasca 2020 yakni hala tuju baru untuk negara kita,

“ Saya sudah bayangkan tidak lama lagi kita akan memulakan wacana dan percambahan fikiran mengenai pasca 2020 ”

Najib Razak

jadi proses untuk menentukan konsensus kebangsaan ke arah visi baru Malaysia selepas 2020 perlu dimulakan lebih awal lagi.

"Saya yakin dan percaya dalam percambahan fikiran dan wacana itu (kelak) sudah tentu aspek inovasi dan kreativiti akan muncul sebagai satu daripada dimensi

yang amat penting," katanya ketika berucap pada Majlis Anugerah Inovasi Perdana Menteri (AIPM) 2015 di Pusat Konvensyen Antarabangsa Putrajaya (PICC) di sini, semalam.

Turut hadir Timbalan Perdana Menteri Datuk Seri Dr Ahmad Zahid Hamidi; Ketua Setiausaha Negara Tan Sri Dr Ali Hamsa dan Ketua Pengarah Perkhidmatan Awam Tan Sri Mohamad Zabidi Zainal.

Pada majlis itu, Angkatan Tentera Malaysia (ATM) diumumkan sebagai pemenang Anugerah Inovasi Perdana Menteri (AIPM) 2015, sekali gus menerima hadiah wang tunai berjumlah RM1 juta, trofi dan sijil penghargaan.

Najib berkata, kerajaan sudah mengambil langkah awal untuk memantapkan ke-

mampuan negara dengan bertindak berasaskan kepada nilai tambah inovasi dan kreativiti.

Katanya, antara langkah berkenaan termasuk meluluskan peruntukan dalam Bajet 2016 iaitu RM100 juta kepada Agensi Inovasi Malaysia; RM200 juta kepada **Malaysia Debt Ventures Bhd** di bawah skim lonjakan teknologi dan inovasi.

"Selain itu, RM35 juta kepada Pusat Inovasi dan Kreatif Global Malaysia (MaGIC) sebagai peneraju hab keusahawanan dan inovasi serantau.

"Selain itu kerajaan juga sudah menunjukkan komitmen dalam menggalakkan aktiviti inovasi melalui peruntukan geran penyelidikan dan pembangunan (R&D) untuk melaksanakan penyelidikan asas,gunaan dan eksperimen," katanya.



HUSM Laksana Program Derma Darah Monsun Tampung Keperluan Musim Banjir

KOTA BAHARU, 16 Dis (Bernama) -- Hospital Universiti Sains Malaysia (HUSM) Kubang Kerian akan menganjurkan Program Derma Darah Monsun pada 22 Dis ini bagi menampung keperluan darah sepanjang musim tengkujuh tahun ini.

Penyelaras Unit Perubatan Transfusi HUSM Prof Madya Dr Noorhaslina Mohd Noor berkata program itu penting kerana hospital itu akan berdepan kesulitan untuk mengumpul darah jika berlaku banjir.

"Program ini sebagai persiapan awal mengumpul darah untuk kegunaan pesakit jika berlaku banjir kerana stok darah sedia ada hanya mencukupi untuk keperluan dua minggu sahaja," katanya pada sidang akhbar di HUSM Kubang Kerian di sini, Rabu.

Dr Noorhaslina berkata pada musim banjir tahun lepas, HUSM terpaksa mendapatkan bekalan darah dari Hospital Universiti Malaya (HUM) dan Pusat Tabung Darah Negara berikutan kegagalan mengumpul darah kerana banjir.

"Mengikut ramalan [**Jabatan Meteorologi**](#), hujan lebat akan berlaku pada 25 Dis ini, jadi kita mengambil pendekatan membuat persiapan awal bagi mengelak pengalaman tahun lepas berulang," katanya.

Beliau berkata HUSM memerlukan sekurang-kurangnya 250 beg darah seminggu dan keperluan itu meningkat jika ada kes kemalangan atau bersalin.

Katanya selain sel darah merah, HUSM juga sedang meneliti strategi untuk mengumpul sel platlet bagi kes tertentu.

"Selain penderma tetap, kita harap orang ramai dapat tampil menderma pada hari tersebut bagi membantu HUSM menambah stok darah untuk keperluan pesakit," katanya.

Dalam perkembangan berkaitan, beliau berkata HUSM berjaya mengumpul 11,500 beg darah sepanjang tahun lepas.

-- BERNAMA



Amaran Angin Kencang Berterusan Sehingga Ahad Ini

KUALA LUMPUR, 16 Dis (Bernama) -- Amaran angin kencang dan laut bergelora di kawasan perairan Sabah iaitu di Kudat, Pantai Barat dan Pedalaman serta Labuan dijangka berterusan sehingga Ahad ini.

Jabatan Meteorologi Malaysia dalam kenyataan hari ini berkata angin kencang Timur Laut dengan kelajuan 50 hingga 60 kmsj dengan ombak mencapai ketinggian sehingga 4.5 meter dijangka berlaku di kawasan itu.

Sementara itu, angin kencang berkelajuan 40 hingga 50 kmsj dengan ombak mencapai ketinggian sehingga 3.5 meter dijangka berlaku di kawasan perairan Kelantan, Terengganu, Pahang, Johor Timur dan Sarawak.

Keadaan itu berbahaya kepada bot-bot kecil, rekreasi laut dan sukan laut.

Kawasan pantai di Kelantan, Terengganu, Pahang dan Johor Timur juga terdedah kepada kenaikan paras air laut yang dijangka bermula esok sehingga Sabtu.

-- BERNAMA

KERATAN AKHBAR
UTUSAN MALAYSIA (DALAM NEGERI) : MUKA SURAT 14
TARIKH: 17 DISEMBER 2015 (KHAMIS)

Fenomena air pasang bukan punca banjir

KUALA LUMPUR 16

Dis. - Jabatan Meteorologi menyifatkan fenomena air pasang yang berlaku di negara ini bukan fenomena luruan monsun Timur Laut yang membawa hujan lebat sehingga menyebabkan banjir.

Ketua Pengarahnya, Datuk Che Gayah Ismail berkata, fenomena air pasang merupakan keadaan normal yang berlaku dua kali setiap bulan iaitu pada bulan baharu dan bulan purnama.

"Namun begitu, banjir boleh berlaku sekiranya pertembungan antara hujan lebat yang disebabkan luruan monsun Timur Laut semasa air pasang pada masa yang sama.

"Kami telah mengeluarkan amaran hujan lebat peringkat kuning bagi Terengganu, Pahang, Johor dan barat Sarawak selama tiga hari bermula hari ini," katanya ketika dihubungi di sini, hari ini.



CHE GAYAH ISMAIL

Hari ini, *Utusan Malaysia* melaporkan Kelantan bakal menghadapi banjir besar sekali lagi sekiranya fenomena air pasang besar yang diramal berlaku pada 25 sehingga 28 Disember ini bertembung dengan hujan lebat lebih dua hari berturut-turut.

Mengulas lanjut, Che Gayah berkata, pemantauan pihak bertanggungjawab di seluruh negara akan terus digiatkan dan amaran akan dikeluarkan sekiranya keadaan memerlukan.

"Orang ramai yang tinggal di kawasan rendah dan mudah dinaiki air dinasihatkan supaya lebih peka dengan maklumat dan amaran yang disalurkan melalui radio, televisyen dan laman web kami," katanya.

Sementara itu, dalam satu kenyataan yang dikeluarkan jabatan itu, amaran hujan lebat dan ribut petir peringkat kuning yang dikeluarkan pada 14 Disember lalu masih berkuat

kuasa sehingga hari ini.

"Satu luruan dijangka berlaku sehingga 17 Disember ini dan boleh menyebabkan tiupan angin Timur Laut menjadi lebih kencang.

"Ribut petir, hujan lebat berserta angin kencang di Selangor (Daerah Sepang), Negeri Sembilan (Daerah Rembau, Seremban dan Port Dickson) dan Melaka (Daerah Alor Gajah) dijangka berterusan sehingga lewat petang ini," katanya.

Katanya kenyataan itu, tinjauan cuaca sehingga 22 Disember ini menunjukkan, bermula 19 Disember ini, beberapa kawasan serantau negara dijangka kembali menerima tiupan angin Timur Laut dengan kelajuan lemah dan sederhana.

"Ini boleh menyebabkan hujan di satu dua tempat di negeri-negeri pantai timur Semenanjung dan bahagian barat Sarawak pada awal pagi.

"Pada waktu petang dan senja pula, dijangkakan hujan dan ribut petir di kebanyakan tempat di negeri-negeri pantai barat Semenanjung dan bahagian barat Sarawak serta bahagian pedalaman dan pantai barat Sabah," jelasnya.

Sabah bracing for tail end of typhoon

KOTA KINABALU: Residents living off Sabah's western zones including Kudat, the interior and Labuan have been warned against going out to the sea due to Typhoon Melor.

Sabah Meteorological Department director Abdul Malek Tusin said the state is predicted to feel the effects of Typhoon Melor, which has slammed through the Philippines a few days ago.

"Strong winds have been reported at Kudat and the surrounding coastal areas," he said.

"We expect to feel the effects from the tail end of Typhoon Melor soon," he said, add-

ing that flash floods were very likely to occur.

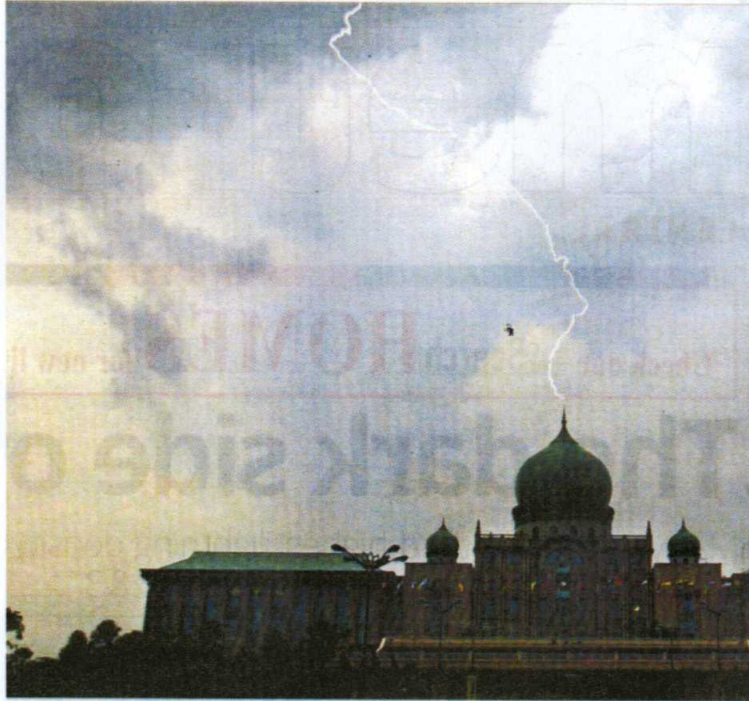
"All sea activities should be put on hold for safety reasons," said Abdul Malek.

The typhoon is expected to bring winds up to 80kph and heavy rain to Sabah's interior, west coast and Kudat today and tomorrow.

Waves of up to 3.5m in the Sulu Sea and South China Sea are also expected.

Abdul Malek urged residents on the west coast to keep updated with the latest Typhoon Melor news at <http://www.met.gov.my/> or call the hotline at 088-413 960.

KERATAN AKHBAR
THE STAR (NEWS) : MUKA SURAT 02
TARIKH : 17 DISEMBER 2015 (KHAMIS)



When nature strikes

Experts' share details on the deadly bolts and its frequency in Malaysia

story by
SHEILA SRI PRIYA

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MANY may not be aware that Malaysia ranks third in the world for lightning density.

The most recent case was in September when a 15-year-old boy from Kuala Terengganu died and three others were injured when lightning struck them while they were in a goat shed.

Based on a scholarly report for Optical Transient Detector Lightning by Dr Hugu J. Christian in 2003, Malaysia has 48.3 flashes/km²/yr lightning.

The country with the highest lightning density in the world is Rwanda at a place called Kamembe which has 82.7 flashes/km²/year.

This is followed by three locations in the Republic of Congo - Boende, Lusambo, Kananga - with 66.3, 52.1 and 50.3 flashes/km²/year respectively.

One of the main reasons these countries are at the top of the list is because they are on the equator.

The Malaysian Meteorological Department (MetMalaysia) revealed that the inter-monsoon periods between April to May and October

Death caused by lightning in Malaysia

May 2006

Hezril Remmy Ng, 14, was struck by lightning and was killed while playing football in Jalan UPS 12, Subang Jaya. His three friends were injured.

Nov 2012

Daniel Rodie, 34, a hearse driver was struck by lightning at a hut in Taman Century Cemetery in Luyang Kota Kinabalu.

Feb 2013

R. Dinesh Kumar, a Form Five student was killed while his friend suffered serious burns when they were struck by lightning while playing football in their school field in Taiping.

March 2013

Muhamad Zawawi Zolkefli, 13, was waiting at the bus stop opposite SMK Methodist Boys' in Jalan Air Itam, George Town, when he was struck by lightning and died instantly.

Sept 2013

A man lost his life after the hut he took shelter in near SJKC Jernang, Kota Samarahan, Sarawak, was hit by lightning.

Oct 2014

Pallinappan Srinivasan, 42, was killed by lightning while jogging at Taman Tasik Titiwangsa in Kuala Lumpur.

Sept 2015

Mohd Zamrudin Ismail, 15, died while three others were injured when lightning struck the goat shed they were in. The deceased was from Kampung Pak Katak, Bukit Tinggi, Kuala Terengganu.

May 2015

Two men waiting to pick up their children after school were killed by lightning while they took shelter in a hut during a thunderstorm at Batu Pahat, Johor.

April 2015

At Kilong Telok, N. Arumugam, 42, and V. Suresperumal, 56, died on the spot while they took shelter at a temple when the lightning occurred.

has the most lightning occurrences. Lightning is more frequent between June and September during the south-west monsoon.

There are fewer cases of lightning from December to March during the north-east monsoon.

Types of lightning and what to do
There are basically four types of lightning.

The most dangerous is the cloud-to-ground lightning.

It can kill humans, animals and damage property.

The second type is the inter-cloud lightning which is lightning from

one cloud to another and it does not hit anything on the ground.

Intra-cloud lightning is the third type of lightning where the lightning takes place within the same cloud.

Then there is the cloud-to-the-sky lightning where one sees the lightning flash from the clouds.

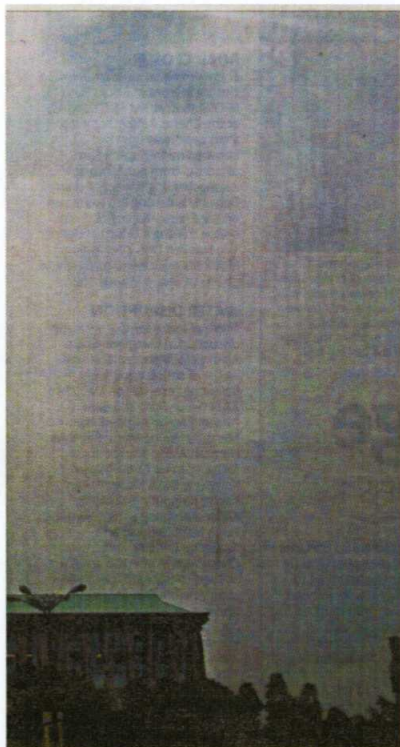
According to MetMalaysia, clouds are formed due to the heating of the air surface.

In urban areas such as the Klang Valley, which includes Petaling Jaya, Kuala Lumpur and Subang Jaya, there are more concrete buildings, hence the convection activities are stronger.

SAMBUNGAN...

THE STAR (NEWS) : MUKA SURAT 03

TARIKH : 17 DISEMBER 2015 (KHAMIS)



Malaysia has the third highest lightning density in the world.—filepic

Safety not up to par

SOME 80% of the buildings in the country are using the non-conventional lightning protection systems (LPS) which is against international standards.

The non-conventional system does not provide the optimum building protection.

Lightning expert Hartono Zainal Abidin told *StarMetro* that the international practice is to use the MS IEC 62305 series.

However most buildings in the country were still using the Enhanced or Early Streamer Lightning Protection (ESE).

Universiti Putra Malaysia, Faculty of Engineering, Deputy Dean (Research & Innovation) Professor Mohd Zainal Abidin Ab Kadir agreed that all international standards were against the usage of the ESE.

"Yes, not only the Scandinavian countries but worldwide authorities are against this system," he said.

Prof Mohd Zainal said based on the recent studies that were conducted and published, almost 75-80% used non-conventional systems, which include the ESE.

However, since the release of the circular by the manufacturer of ESE on Sept 2011 and the release of the Guidebook

on Lightning Protection System For Building by the Energy Commission in 2014, many consultants and users were aware of the serious problem with ESE and other non-conventional systems.

Prof Mohd Zainal said the MS IEC 62305 series offers a proper LPS installation.

Asked who would be able to carry out the enforcement on LPS, he said in terms of policy, the Energy Commission was in charge.

"There is no Act particularly linked to this requirement.

However, they are working to come up with a law," he said.

Prof Mohd Zainal added the Urban Wellbeing, Housing and Local Government Ministry or the local governments should be able to enforce this guideline but it would still be difficult since they fall under the respective state governments.

He said at the moment, only Selangor made it compulsory to use MS 62305 series for LPS.

He added most of the vendors were reluctant to change or adhere to the recognised simply because of the profit margin.

The older LPS were also easier in terms of maintenance and installation.

This causes lightning during a thunderstorm.

On the safety aspect, lightning expert Hartono Zainal Abidin said simple shelters such as huts in parks may not be installed with lightning arrestors.

However, a simple lightning protector system could protect those who seek shelter there.

He said in many cases, the copper light arrestors were stolen from the building rooftops because of its resale value.

"A simple lightning arrestor system for a gazebo would cost less than RM2,000 and it can help save lives.

"The cheaper way is to use the normal galvanised wire. It is less attractive than copper," he said.

However, these galvanised wires may erode within five years depending on the environment.

He also advised the public not to take shelter under trees when there was lightning.

Lightning strikes the highest point and in most cases it would be a tree in the field or park.

Hartono said staying in the car would be a better option in case lightning strikes.

Changes in climate pattern

MetMalaysia revealed that in January last year, peninsular Malaysia experienced exceptionally cooler weather than usual with Kuala Krai, Kelantan having extremely low temperature of 18.5°C, 19.0°C, and 17.2°C respectively on Jan 19, 21 and 22 as a result of low cloud coverage and colder wind from Siberia and Central China.

February 2014 also experienced cooler and drier weather than normal.

The lightning count in February 2014 was exceptionally low.

The water level at Sungai Selangor Dam and Klang Gate Dam, which supplies water to

Damage caused by lightning in Malaysia

Sept 29, 1992

> Lightning struck the electrical power grid near Paka, Terengganu causing a blackout in peninsular Malaysia. 80% of the population was left without electricity for 33 hours.

April 28, 2006

> Lightning struck a 90,000 liter petrol tank at the Petronas Dagangan depot at the Pasir Gudang port in Johor. The fire spread to two other tanks and the flames could be seen from Singapore.

Nov 19, 2007

> Two oil storage tanks at the Shell Malaysia refinery in Port Dickson caught fire after being struck by lightning.

April 11, 2010

> Lightning was believed to have caused a fire on the roof at the Orthopaedic Ward 3C of Putrajaya Hospital. Some 14 patients were evacuated.

May 20, 2014

> Malaysia Airlines flight MH1348 was struck by lightning during its flight from Kuala Lumpur to Langkawi. The flight landed safely at the Langkawi International Airport.



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Kuala Lumpur and Putrajaya, dropped below the 50% level.

When the levels dipped further to 30% and 40%, the Selangor government implemented water rationing in March until end of April.

Some meteorological stations, such as at Langkawi and Butterworth, recorded more than 30 days without rainfall.

Singapore also experienced a record dry spell in February 2014 with it being the driest month there since 1869.

It recorded the most windy month in the last 30 years with average wind speed of 13.3km/hr and set a new record for the lowest average daily relative humidity of 74.5%.

The lower-than-normal air temperature, strong wind and dry atmosphere contributed to extremely low lightning count.

Lightning survivor

The Sportsman of the Year award winner in 1965 and 1966, Datuk M. Rajamani, was struck by lightning while training for the Mexico Olympics at the Kuala Lumpur Police Depot at Gurney Road on March 21, 1968.

She was a track and field athlete. Rajamani shared with *StarMetro* her memories of the incident.

She said during one of her trainings, she saw her fellow athlete who was running in front of her being struck by lightning, and died on the spot.

Dos and don'ts during thunderstorm and lightning

Lightning expert Hartono Zainal Abidin has written and co-authored over 50 reports and conference papers on building lightning protection. He also took the lead role in a forensics analysis of lightning damages to electronic and IT systems. Here are some of his tips to safeguard against lightning strikes.



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At that moment, Rajamani did not know that lightning had also struck her.

She regained consciousness only after five days.

"I did not even know why I was hospitalised and no one told me. I thought it was because of a throat infection," she said.

However, she learnt about her lightning attack from a girl who showed her a newspaper article

about the incident.

"I still had no memory of the incident. I also had no memory of my boyfriend, who is now my husband."

"Somebody told me that when they asked if I remembered my boyfriend, my reply was that I thought I had seen him before," said Rajamani.

Now, the 72-year-old spends her time with religious activities.

Perlu berjaga-jaga walaupun diramal tidak banjir teruk

KUALALUMPUR - Walaupun kaji cuaca meramalkan negeri-negeri di Pantai Timur tidak akan mengalami banjir besar seperti tahun lalu, namun penduduk di kawasan berkenaan tetap diingatkan agar berjaga-jaga dengan sebarang kemungkinan banjir.

Ketua Pengarah Jabatan Meteorologi Malaysia (MetMalaysia), Datuk Che Gayah Ismail berkata, jabatan tersebut telah mengeluarkan arahan hujan lebat peringkat kuning bagi negeri Terengganu, Pahang, Johor dan bahagian Barat Sarawak bermula pada semalam sehingga esok.

"Amaran tersebut dikeluarkan disebabkan ada tanda-tanda luran angin sejuk monsun dari benua China untuk sampai ke Malaysia pada tempoh tersebut.

"Berikutan fenomena itu, saya cuma mengaitkan hujan lebat

akan berlaku dan kemungkinan akan menyebabkan banjir tetapi tidak teruk seperti banjir di Kelantan pada penghujung tahun lalu," katanya kepada *Sinar Harian*.

Katanya, ia berikutan fenomena El Nino kuat sedang berlaku dan akan mempengaruhi jumlah hujan di negara Malaysia dan rantau ini.

"Saya juga mengingatkan bahawa amaran banjir bukan di bawah bidang kuasa MetMalaysia tetapi Jabatan Pengairan dan Saliran (JPS) di bawah Kementerian Alam Sekitar (NRE).

"Jadi penduduk di kawasan berkaitan hendaklah sentiasa mengamalkan sikap berhati-hati serta peka dengan amaran yang dikeluarkan oleh agensi terlibat bagi memastikan keselamatan diri dan keluarga terjamin," katanya.