

**KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH:11 NOVEMBER 2013 (ISNIN)**

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KERATAN AKHBAR
UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 8
TARIKH: 11 NOVEMBER 2013 (ISNIN)

Sabah disahkan selamat ancaman taufan Haiyan

KOTA KINABALU 10 Nov. - Meskipun Sabah disahkan selamat daripada sebarang ancaman taufan Haiyan yang melanda tengah negara Filipina baru-baru ini, nelayan di negeri ini dinasihatkan untuk terus berwaspada.

Pengarah Jabatan Meteorologi Sabah, Malik Tussin berkata, biarpun taufan membawa kelajuan angin mencecah 300 kilometer sejam itu telah melepasi laluan negeri ini dua hari lalu, sikap berwaspada dan mengambil berat berhubung berita terkini perlu ada dalam kalangan nelayan.

Katanya, kesan daripada taufan tersebut terhadap negeri ini hanya melibatkan hujan lebat di beberapa kawasan tepi pantai, selain menyebabkan air laut bergelora.

Menurutnya, taufan Haiyan kini bergerak menuju ke Vietnam selepas membadai Filipina.

"Masyarakat di negeri ini tidak perlu risau mengenainya kerana semua berada dalam keadaan terkawal.

"Meskipun begitu, saya ingin mengingatkan nelayan agar lebih berhati-hati dan tidak turun ke laut memandangkan kesannya masih boleh dirasai dengan keadaan laut yang bergelora," katanya yang dihubungi di sini hari ini.

Taufan Haiyan kelmarin dikesan melalui negeri ini di Timur Laut Sandakan pada pukul 11 pagi dan bergerak ke arah barat dengan anggaran kelajuan 35 kilometer sejam.

Mengulas lanjut, Malik berkata, amaran laut bergelora di tahap kedua iaitu setinggi 4.5 meter akan berterusan sehingga Selasa ini tetapi tidak akan membahayakan keadaan di negeri ini.

**KERATAN AKHBAR
KOSMO: MUKA SURAT 2 & 63
TARIKH: 11 NOVEMBER 2013 (ISNIN)**

Amaran angin kencang, laut bergelora di Sabah

KUALA LUMPUR - Jabatan Meteorologi mengingatkan orang ramai yang menjalani aktiviti di laut seperti nelayan, syarikat perkapalan dan pekerja pelantar minyak di perairan Pantai Barat Kudat dan Sandakan, Sabah supaya berhati-hati dengan tiupan angin kencang dan laut bergelora.

Menurut kenyataan jabatan itu semalam, amaran kategori ketiga itu dikeluarkan setelah pihaknya mera-

malkan angin kencang bertiup melebihi 60 kilometer sejam dan laut bergelora melebihi ketinggian 5.5 meter sehingga Selasa ini ekoran Taufan Haiyan yang mepadai bahagian tengah Filipina kelmarin.

Taufan itu telah menyebabkan berlaku tiupan angin kencang dan laut bergelora di perairan Laut China Selatan, Laut Sulu dan Laut Sulawesi.

"Taufan tersebut berada pada ke-

dudukan kira-kira 207 kilometer ke tenggara Da Nang, Vietnam dan 1,478 kilometer dari arah barat laut Kudat, Sabah pada pukul 2 petang ini (semalam).

"Taufan berkenaan sedang bergerak merentasi Laut China Selatan ke barat laut Vietnam dengan anggaran kelajuan 30 kilometer sejam," katanya di sini semalam.

Amaran kategori kedua turut dikeluarkan di kawasan perairan Wi-

layah Persekutuan Labuan dan Sarawak (Rejang, Mukah, Bintulu dan Miri), manakala amaran kategori pertama dikeluarkan bagi kawasan perairan Kelantan, Terengganu, Pahang, Johor (timur), Sarawak (Kuching dan Limbang) dan Sabah Pedalaman dan Tawau.

Menurutnya lagi, semua amaran angin kencang dan laut bergelora di kawasan-kawasan berkenaan dijangka berterusan sehingga hari Selasa ini.

Haiyan gives Sabah a miss

CLOSE SHAVE: Authorities maintaining high seas alert as typhoon heads for Vietnam

**ROY GOH
AND FAZLEENA AZIZ**
KOTA KINABALU
news@nst.com.my

MALAYSIANS can breathe a sigh of relief as Typhoon Haiyan diverts its path from Malaysia.

Although the typhoon is headed north for Vietnam, the Meteorological Department has maintained its high seas warning in Sabah.

Rough seas with waves of up to 7.5m are expected in the South China Sea and Sulu Sea, off Kudat.

The department will also maintain its warning for ships and fishing vessels until tomorrow.

Typhoon Haiyan passed near the state two days ago as it headed north for Palawan island in southern Philippines.

Strong winds and rough sea conditions were expected to continue until tomorrow, said the depart-

ment's weather forecast centre director, Muhammad Helmi Abdullah.

The shores of Sabah and Sarawak reportedly experienced rough sea conditions and strong winds when the typhoon was moving 1,362km northwest of Kudat at an estimated speed of 30kph.

Strong southwesterly winds of more than 60kph with huge waves measuring 5.5m are expected in the waters off Sabah (west coast, Kudat and Sandakan) until tomorrow.

Helmi said the department would maintain a category-three typhoon warning until tomorrow.

"By morning (today), the typhoon would have landed in Vietnam.

"The sea and wind conditions would change. The affected areas would return to normal.

"Warnings issued for Kelantan, Terengganu, Pahang, east Johor, Sarawak, Sabah and Labuan will be maintained until tomorrow."

The Sulu and South China Seas



Residents walking past damaged houses and bodies in Tacloban, Leyte island, in Philippines, yesterday. More than 10,000 people are believed to be killed after Typhoon Haiyan struck on Friday. AFP pic

are still experiencing strong winds and rough sea conditions.

"These conditions are dangerous for shipping and coastal activities, including fishing and ferry services," Helmi said, adding that no incidents had been reported so far.

Jimbo Julsali of Pulau Banggi, near Kudat, said rough seas and downpour in the past two days had kept villagers alert.

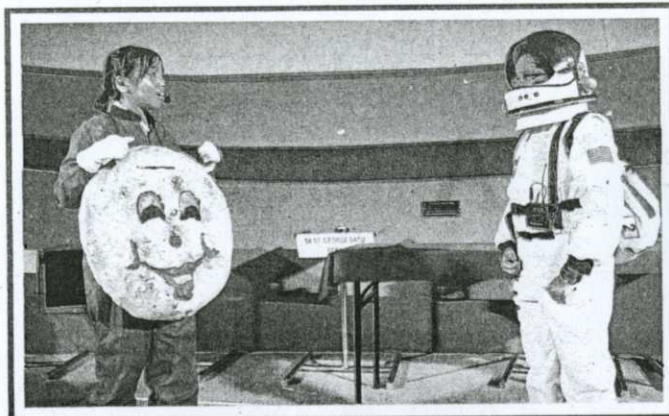
"On Friday night, it rained heavily for 15 to 20 minutes and continued until Saturday morning. We are used to rough weather but it's

different with the typhoon hitting the Philippines."

Fisherman Hamat Asmal said most residents planned to take refuge in a nearby hospital if the storm hit their shores.

"It's better to be ready than to be caught off-guard."

KERATAN AKHBAR
 UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 21
 TARIKH: 11 NOVEMBER 2013 (ISNIN)



PARA peserta turut dinilai berdasarkan kreativiti persembahan dalam Cabaran Angkasa Peringkat Kebangsaan Trofi Piala Perdana Menteri 2013 di Planetarium Negara.

Oleh NOOR DIANA AZIS
 Gambar MOHD. AZIM RAHMAN

SETIAP tahun khususnya pada bulan Oktober, Planetarium Negara akan menganjurkan pelbagai program menarik bersempena sambutan Minggu Angkasa Sedunia yang mana merupakan sambutan di peringkat antarabangsa dalam bidang sains dan teknologi.

Tarikh 4 hingga 10 Oktober dipilih sebagai minggu sambutan berikutan persefahaman yang dicapai pada persidangan oleh Pertubuhan Bangsa-bangsa Bersatu (PBB) pada 1999.

Permulaan minggu sambutan pada 4 Oktober adalah sebagai memperingati tarikh kejayaan manusia meneroka angkasa dengan pelancaran Sputnik 1. Sementara 10 Oktober pula merupakan tarikh



AZREENA AHMAD

Sambutan Minggu Angkasa Sedunia

Pelajar berpeluang mengenali dunia angkasa

tandatangan triti angkasa lepas.

Pelbagai program menarik telah dianjurkan Agensi Angkasa Negara (Angkasa) bersempena sambutan minggu tersebut terutamanya yang melibatkan penyertaan daripada sekolah rendah seluruh negara.

Sebagai contoh, Sekolah Kebangsaan St Francis, Melaka telah dinobatkan sebagai johan bagi acara National Space Challenge ke-16, Piala Perdana Menteri

mengalahkan empat buah sekolah lain selain memenangi kategori terbaik Pertunjukkan Sains Angkasa dengan membawa pulang teleskop StarMax 127EQ Maksutov, sijil dan plak.

Program kerjasama Kementerian Pelajaran itu juga turut disertai oleh Sekolah Rendah Jenis Kebangsaan (C) Han Chiang, Pulau Pinang, Sekolah Kebangsaan Puteri, Negeri Sembilan, Sekolah Kebangsaan St George (1), Perak,

dan Sekolah Kebangsaan Convent (2), Selangor.

Selain itu, Angkasa turut mengadakan program lintas langsung telekomunikasi bersama Pusat Kawalan Misi (MCC) yang disertai kira-kira 80 peserta yang terdiri daripada para pelajar dan guru serta orang awam.

Program yang berlangsung selama 30 minit itu bermula pada pukul 4.15 petang menggunakan aplikasi Google Hangout untuk berkomunikasi bersama pegawai MCC, Joshua Nelson yang kini berada di Innsbruck, Austria.

Acara kemuncak bagi sambutan minggu angkasa ini adalah peluang berkomunikasi dengan Angkasa Agensi Angkasa Eropah (ESA), Luca Parmitano menggunakan fasiliti Amatir Radio yang terdapat di bangunan Mikrosatelit, Planetarium.

Parmitano, 38, yang kini berada di Stesen Angkasa Antarabangsa (ISS), merupakan angkasawan Itali pertama yang menjalankan spacewalk Extra-vehicular (EVA) keluar daripada ISS.

Semasa menjalankan EVA, beliau berpeluang menaiki Mobile Servicing System untuk memasangkan beberapa radiator 'grapple bars' sebelum diterbangkan pada misi SpaceX CRS-2.

Menurut Pengarah Planetarium Negara, Azreena Ahmad, program sebegini akan diteruskan setiap tahun dalam usaha memupuk minat terutama golongan pelajar sekolah rendah dalam dunia sains angkasa.

"Setiap tahun Planetarium akan dianjurkan pelbagai aktiviti menarik khususnya berkaitan dengan sains angkasa yang memperlihatkan penyertaan dari pelajar sekolah rendah seluruh negara.

"Dengan adanya aktiviti seperti ini sedikit sebanyak dapat membantu mereka mengenali lebih dekat dunia sains angkasa di samping memberi idea mengenai dunia asing itu," katanya.



SK ST FRANCIS Melaka dinobatkan sebagai johan dalam Cabaran Angkasa Peringkat Kebangsaan Trofi Piala Perdana Menteri 2013.

KERATAN AKHBAR
UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 8
TARIKH: 11 NOVEMBER 2013 (ISNIN)

> MegaSains

Kepentingan undang-undang angkasa

Memahami dan memanfaatkan kepentingan peraturan antarabangsa

Siri VI

SIRI akhir ini menyentuh mengenai undang-undang angkasa yang jarang mendapat perhatian.

Pembaca yang ingin menyertai kuiz ini perlu menjawab soalan berdasarkan artikel yang disertakan.

Oleh MD. AZEZI HUSAIN

UMUMNYA, masyarakat amat sinonim dengan undang-undang keselamatan, jalan raya atau pun peraturan yang melibatkan hak individu, pengguna, pekerja, syarikat dan sebagainya. Aspek angkasa juga mempunyai undang-undang tersendiri yang perlu diketahui dan difahami.

Penerokaan dan penggunaan ruang angkasa lepas tidak dapat dielakkan sehingga mengundang kepada permasalahan perundangan tertentu, sekali gus mewujudkan keperluan kepada penubuhan suatu perundangan untuk menangani isu-isu berkaitan.

Penerokaan ruang angkasa lepas oleh manusia dengan kewujudan bidang sains dan teknologi yang semakin maju seiring dengan perkembangan saintifik dan teknikal yang pesat memerlukan kepada suatu keperluan undang-undang yang dapat mengawal kesan dan akibat daripada penemuan dan eksploitasi di dalam perkara-perkara berikut iaitu:

- Kedaulatan sesebuah negara.
- Persempadanan sesebuah negara.
- Kerjasama dalam penggunaan ruang angkasa lepas.
- Penggunaan orbit Bumi.

Prinsip am

Sejak tahun 1957, apabila ruang angkasa lepas mula ditawan oleh satelit buatan manusia yang pertama iaitu Sputnik 1, undang-undang antarabangsa memainkan peranan penting di dalam

menjaga perkembangan pesat teknologi ruang angkasa lepas dan mewujudkan satu asas pengetahuan disiplin baru yang dikenali sebagai Undang-undang Angkasa. Undang-undang tersebut adalah satu cabang undang-undang yang merangkumi undang-undang di dalam negara dan juga antarabangsa berkenaan aktiviti-aktiviti angkasa lepas.

Kronologi Pasca Perang-Dingin iaitu semasa era perlumbaan penjelajahan ruang angkasa:

- USSR: Sputnik 1, 1957.
- Yuri Gagarin, 1961.
- USA: Neil Armstrong 1969.

Undang-undang angkasa ditakrifkan sebagai satu set undang-undang antarabangsa dan undang-undang yang mengawal hubungan sesebuah negara dengan satu sama lain dan dengan organisasi antarabangsa dan hubungan rakyat dengan organisasi yang terlibat dalam aktiviti-aktiviti yang berkaitan dengan penerokaan ruang angkasa lepas.

Pembangunan

Bilakah Fasa Pertama zaman angkasa lepas? Fasa tersebut bermula dengan pelancaran Sputnik 1 pada tahun 1957 dan telah dipercirikan oleh aktiviti-aktiviti penerokaan kuasa-kuasa besar yang bertujuan untuk mencari prestij dan penguasaan di Bumi.

Program-program angkasa lepas Amerika Syarikat (AS) dan Soviet Union (ketika itu) adalah berdasarkan kepada premis bahawasanya penerokaan angkasa lepas merupakan satu persaingan yang utama dimana ganjaran utamanya adalah untuk memiliki prestij politik di Bumi.

Dalam tempoh tersebut undang-undang angkasa berpusat di sekeliling topik dan isu-isu undang-undang antarabangsa.

Dipengaruhi oleh konteks politik perang dingin, undang-undang angkasa antarabangsa telah diwujudkan melalui pencarian ke arah konsensus minimum di antara kuasa-kuasa besar dunia dimana keutamaannya bertumpu kepada

pengawasan penerokaan angkasa lepas untuk tujuan keamanan.

Pertubuhan Bangsa Bersatu (PBB) memainkan peranan penting di dalam pembangunan undang-undang angkasa pada peringkat pertama kalinya ini.

Pada tahun 1958, Perhimpunan Agung PBB (UNGA) telah mewujudkan satu jawatankuasa dinamakan *Committee on the Peaceful Uses of Outer Space* (COPUOS), yang mana Undang-undang Angkasa Antarabangsa akan dibincangkan dan direkodkan. COPUOS telah dibahagikan kepada dua jawatankuasa kecil:

- Jawatankuasa Kecil Undang-undang.
- Jawatankuasa Kecil Sains dan Teknikal.

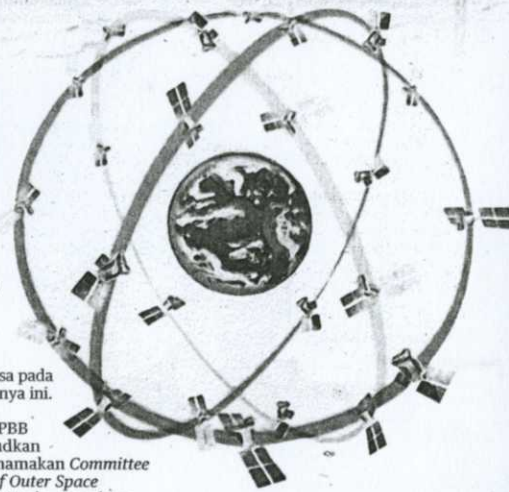
COPUOS telah menjadi forum utama bagi perbincangan dan perundingan mengenai perjanjian antarabangsa yang berkaitan dengan angkasa lepas.

Susulan daripada program-program yang diwujudkan itu, undang-undang ruang angkasa (iaitu melalui COPUOS) lima konvensyen/triti angkasa antarabangsa telah dikeluarkan/diperkenalkan.

Walaupun, tidak meliputi setiap satu isu di dalam undang-undang angkasa lepas, namun ia telah menjadi titik tolak rujukan formal dan yang boleh dipercayai di dalam bidang ini.

Malah, memberikan asas yang baik dan sesuai untuk kemajuan di dalam undang-undang ruang angkasa dan telah menjadi peranan yang amat penting dalam secara teratur dan berskala menerusi pelbagai aktiviti-aktiviti utama ruang angkasa sehingga kini.

Status setiap satu daripada lima konvensyen dan perjanjian di bawah setakat 1 Januari 2009 akan cuba diperjelaskan di sini:



SEMUA negara yang melancarkan objek ke angkasa perlu memaklumkan kepada PBB.

1 Perjanjian angkasa lepas
Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies telah diterima pakai oleh UNGA pada tahun 1966.

Perjanjian ini telah disahkan oleh sembilan puluh sembilan negara dan telah menerima 26 tandatangan.

Menurut perjanjian ini, mana-mana objek yang membawa bahan nuklear atau apa-apa jenis senjata pemusnah besar-besaran ataupun yang seumpama dengannya tidak boleh diletakkan di orbit sekitar Bumi atau yang mengelilingi Bumi.

2 Perjanjian menyelamatkan
Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space telah diterima pakai oleh Perhimpunan Agung PBB pada tahun 1967.

Ia telah disahkan oleh 90 negara dan ditandatangani oleh 24 negara manakala dua negara telah menerima atau memperakui hak dan tanggungjawabnya.

Ia telah menguatkuasakan kewajipan negara-negara untuk memberikan

SAMBUNGAN... KERATAN AKHBAR UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 9 TARIKH: 11 NOVEMBER 2013 (ISNIN)



bantuan dalam operasi-operasi mencari dan menyelamatkan dan mengembalikan dengan selamat dan segera angkasa lepas atau mana-mana objek angkasa lepas.

3 Konvensyen liabiliti

Convention on International Liability for Damage Caused by Space Objects telah diterima pakai pada tahun 1971.

Konvensyen ini memastikan mana-mana negara yang telah melancarkan *Space Objects* bertanggungjawab untuk membayar pampasan bagi apa-apa kerosakan akibat daripada aktiviti-aktiviti angkasa oleh negara terbabit.

Dalam erti kata lain, negara tersebut mesti menanggung suatu tanggungjawab antarabangsa ke atas *Space Object* yang telah dilancarkan ke ruang angkasa di dalam wilayah mereka.

Konvensyen ini telah disahkan oleh 87 negara dan ditandatangani oleh 23 negara manakala tiga negara telah menerima/memperakui hak dan tanggungjawabnya.

4 Konvensyen Pendaftaran

Diterima pakai pada tahun 1975, *'Convention on Registration of Objects Launched into Outer Space'* memberi tumpuan kepada penubuhan pendaftaran negara dengan negara-negara anggota untuk objek-objek yang dilancarkan ke angkasa lepas.

Dalam erti kata lain, kesemua negara yang melancarkan objek ke angkasa lepas bertanggungjawab untuk memberikan maklumat-maklumat di bawah kepada Setiausaha Agung PBB dengan secepat mungkin:

- Nama Negara pelancaran.
- Satu pereka bentuk yang bersesuaian ke atas objek angkasa atau nombor pendaftaran.
- Tarikh dan wilayah atau lokasi pelancaran.
- Parameter asas orbit termasuk nodal period, kecenderungan orbit, *object's apogee dan perigee*.
- Fungsi asas objek angkasa.

Konvensyen ini telah mewajibkan negara-negara anggota untuk mengekalkan kuasa dan kawalan ke atas *space object* ketika mana berada di angkasa lepas. Lima puluh satu buah negara telah mengesahkan konvensyen

ini manakala empat negara telah menandatangani dan dua yang lain telah menerima/memperakui hak dan tanggungjawabnya.

5 Perjanjian Bulan

Moon Treaty adalah perjanjian PBB yang terakhir berkenaan angkasa lepas setakat ini. *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* telah diterima pakai pada tahun 1979.

Sejak itu, 13 buah negara telah mengesahkan perjanjian ini manakala hanya empat telah menandatangani. Kebebasan penerokaan saintifik di Bulan sebagai 'wilayah' bagi semua manusia dan tiada had kebebasan untuk mengeksploitasi alam semula jadinya.

■ Pembangunan modal insan

i. Pendidikan didalam undang-undang angkasa akan meningkatkan kesedaran akademik dan orang awam yang akan meningkatkan pemahaman semua bangsa dan entiti mengenai hak orang ramai untuk menggunakan angkasa lepas secara aman.

ii. Ianya juga akan menggalakkan kerjasama serantau ke arah pendidikan Undang-undang Angkasa dan teknologi angkasa lepas dimana ianya amat perlu bagi pertumbuhan ekonomi dan pembangunan yang mampan.

iii. Walau bagaimanapun, pendidikan Undang-undang Angkasa tidak diambil berat oleh kebanyakan negara, usaha-usaha ke arah pengenalan Undang-undang Angkasa secara terperinci.

iv. Adalah amat penting kesemua negara maju serta negara membangun bekerjasama didalam program pendidikan Undang-undang Angkasa di peringkat asas, pertengahan dan lanjutan.

v. Peruntukan pengetahuan berkenaan ruang angkasa di dalam kedua-dua konteks teknologi dan undang-undang akan membolehkan sesebuah negara terbahit memenuhi keperluan negaranya dan negara serantau dan ini akan membolehkan negara yang berkenaan memperolehi cara-cara yang diperlukan bagi pembangunan yang mampan.



Soalan dwimingguan

SOALAN 1: Yang manakah merupakan salah satu Pasca Perang-Dingin penjelajahan ruang angkasa?

- A) USSR: Sputnik 1, 1957
- B) New York, 1966
- C) Vienna, 1971

JAWAPAN: _____

SOALAN 2: Piagam Bangsa-Bangsa Bersatu ditubuhkan berdasarkan keperluan kepada cabang ilmu ini Undang-undang angkasa di dalam aktiviti-aktiviti yang berkaitan dengan penerokaan ruang angkasa lepas.

- A) Betul
- B) Salah

JAWAPAN: _____

* (Tarikh tutup penghantaran borang 15 November 2013)

Soalan terkumpul

(Jangan hantar dulu, tunggu hingga siri VI)

SOALAN: Berikan lima konvensyen dan perjanjian yang telah dipertemaskini sehingga 1 Januari 2009:

JAWAPAN: _____

■ Keamanan dan keadilan

i. Keperluan kepada pendidikan bahawasanya ruang angkasa lepas hanya untuk kegunaan keamanan adalah amat perlu diterapkan didalam sistem pendidikan sesebuah negara maju, juga di negara membangun.

ii. Semasa kursus-kursus Undang-undang Angkasa diadakan, hendaklah dianalisis bawasanya keamanan tanpa keadilan akan membawa kepada konflik dan gangguan kepada integriti politik dan wilayah sesebuah negara serta gangguan antarabangsa yang lain.

■ Keselamatan.

i. Penerapan pembelajaran berkenaan undang-undang yang sedia ada ke atas setiap rakyat dan juga penerapan perasaan kasih serta tanggungjawab setiap individu ke atas keselamatan negara adalah satu kaedah yang amat berkesan bagi menangkis sebarang ancaman tentera dan bukan tentera.

ii. Trend berbahaya seperti ini akan menghadkan skop penggunaan angkasa lepas secara aman. Pendidikan harus dilihat sebagai langkah pencegahan terhadap ketidaksamaan dalam konteks keselamatan kolektif.

• Penulis adalah Pengarah Undang-Undang dan Pengurusan Risiko ATSB

Kuiz Aplikasi Satelit 2013

Hadiah Utama
Baucer premium BSN bernilai RM1,000
Iphone
Notebook

Hadiah saghati
Baucer premium BSN bernilai RM300
untuk 12 pemenang

Hadiah Mingguan
Baucer premium BSN RM100 untuk 102 pemenang

Cara Menyertai Peraduan >>

Untuk soalan dwimingguan:

- a) Dua soalan objektif disediakan berdasarkan artikel.
- b) Jawapan yang betul dan pemenang akan dipilih secara rawak.

Untuk soalan terkumpul:

- a) Satu soalan disediakan setiap dua minggu

Nama (seperti dalam kad pengenalan)

Alamat Rumah

Negeri Poskod

No. Kad Pengenalan

Pekerjaan

No. Telefon (Bimbit)

KERATAN AKHBAR
 THE SUN (SPEAK UP) : MUKA SURAT 10
 TARIKH: 11 NOVEMBER 2013 (ISNIN)

CONFERENCE & EXPOSITION



WIF KL

WORLD INNOVATION FORUM
 KUALA LUMPUR

THE FUTURE WE DESIRE

HEADLINE SPEAKERS



Göran Persson
 Former Prime Minister of
 Sweden



Mark Gallagher
 Grand Prix Motor Racing
 Boss



Sugata Mitra
 Global Education Superstar



Morinosuke Kawaguchi
 Innovation & Competitive
 Strategy Consultant

FORUM

The World Innovation Forum Kuala Lumpur (WIF-KL) is the region's premier annual event on innovation that aspires to create a new culture of innovation, and is to be held at the epicenter of economic growth, emerging technologies and innovation in Asia, Kuala Lumpur. The event runs over three days and consists of conference, exhibition and award ceremony. The event brings together innovation leaders, policy makers, industry players, thinkers and innovators from around the world to share ideas and discusses issues related to innovation. The forum was an ideal platform for high-level stakeholders to share on experiences, as well as discuss and deliberate on issues and strategies for inclusive innovations.

EXPOSITION

The WIF-KL 2013 Exposition is a world class exposition covering the entire cycle of innovation which include grassroots, education, commercialization and integration of innovation to propel the region toward high-income, advanced economy nation.

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**KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH:10 NOVEMBER 2013 (AHAD)**

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2.	Laut bergelora: 3,600 Nelayan Kelantan Dinasihati Tidak Ke Laut	Bernamea.com
3.	Sabah fishermen spared Super Typhoon Haiyan's wrath	The Star
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7.	A money-spinner in our backyard	The Star
8.	Budget boost for bioeconomy	The Star

1001 kehebatan tamadun Islam

■ Pameran sajian ciptaan mengagumkan hasil kreativiti cendekiawan Islam merentasi pelbagai benua

Oleh ANIZA ZAINUDIN
 anizazainudin@mediapri-
 ma.com.my

Tarian lincah burung merak di atas bumbung tandu membuatkan 'telurnya' jatuh bergolek ke dalam mulut si burung helang, sebelum ia persembahkan kepada naga merah.

Satu daripada dua ekor naga bergayut berhampiran si pencatat minit itu bertindak memasukkan telur ke dalam belanga tembaga terletak di sisi lelaki yang 'menunggang' gajah.

Penunggang gajah menggoyangkan kedua-dua batang besi di tangannya. Satu kitaran lengkap itu menunjukkan masa 30 minit sudah berlalu dan proses berlaku dengan kekerapan berkenaan berfungsi sebagai jam kepada masyarakat dulu kala.

Ciptaan hebat jurutera Muslim kelahiran Turki, Badi al-Zaman Abu al-'Izz Isma'il ibn al-Razzaz al-Jazari atau lebih terkenal dengan al-Jazari dipanggil jam gajah direka sekitar 1206 Masihi, iaitu 84 tahun lebih awal ber-



banding ciptaan jam mekanikal ketika era Renaissance di Eropah.

Tatkala masyarakat Barat melalui zaman kegelapan yang merujuk kepada era kejatuhan empayar Rom Barat dan kebangkitan semula Eropah, tamadun Islam pula

mengalami kegemilangan dengan pelbagai ciptaan inovasi, pendidikan dan kreativiti hasil eksperimen ahli saintifik tegar.

Tempoh masa 452 tahun berjaya dimanfaatkan orang Islam dengan pelbagai ciptaan hebat yang menjadi asas teknologi moden hari ini. Manakala masyarakat Eropah hanya berjaya 'mencuri' hasil kajian tamadun Islam pada 1096 Masihi sewaktu perang salib pertama terçetus.

Kebebaran terungkuai dan rasa kagum dengan kehebatan saintis serta cendekiawan Islam terçetus sebaik penulis masuk ke pameran 1001 Inventions: Kegemilangan Tamadun Muslim yang berlangsung di Pusat Sains Negara sejak 31 Ogos lalu hingga 28 Februari 2014.

Pameran merangkumi bidang kejuruteraan, matematik, perubatan, seni bina, astronomi dan geografi menyajikan ciptaan mengagumkan hasil kreativiti cendekiawan Islam merentasi pelbagai benua dari Sepanyol di benua Eropah hingga ke China.

Pameran bertaraf antarabangsa dari United Kingdom ini dibawa khas oleh Kementerian Sains, Teknologi dan Inovasi menerusi Pusat Sains Negara dengan kerjasama

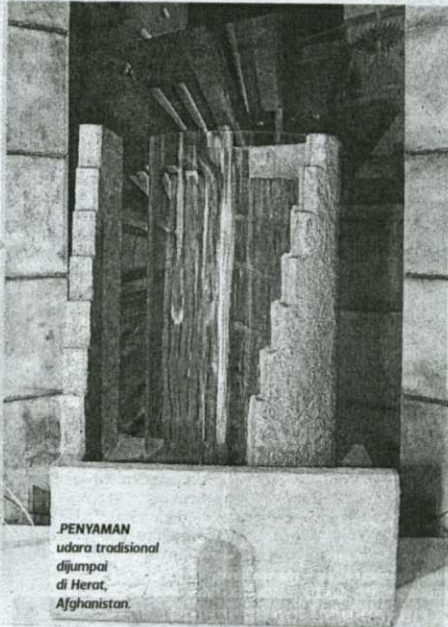
Science Discoveries Sdn Bhd turut menerima sokongan Kementerian Pendidikan dan Kementerian Pelancongan dan Kebudayaan Malaysia.

Pengarah Operasi, Science Discoveries Sdn Bhd, David Oh berkata Malaysia menjadi negara pertama di rantau Asia Pasifik bagi penganjuran pameran ini selama tiga tahun.

"Pameran ini diiktiraf sebagai 'The World's Best Touring Exhibition' menerusi Anugerah Kecemerlangan Warisan dan Muzium 2011 dan mendapat sambutan menggalakkan di London, New York, Doha, Istanbul dan beberapa bandar besar lain.

"Bagi menarik perhatian pengunjung terutama golongan muda, pameran menyediakan 60 bahan pameran berbentuk interaktif, video, panel maklumat dan replika artifak di lima zon utama iaitu alam semesta, hospital, kejuruteraan, sekolah dan dunia.

"Sejak pameran ini dibuka, kita menerima hampir 11,000 pengunjung yang terdiri daripada pelbagai lapisan masyarakat, antaranya pelajar sekolah sama ada pra-sekolah, sekolah rendah mahupun menengah serta orang ramai," katanya ketika ditemui.

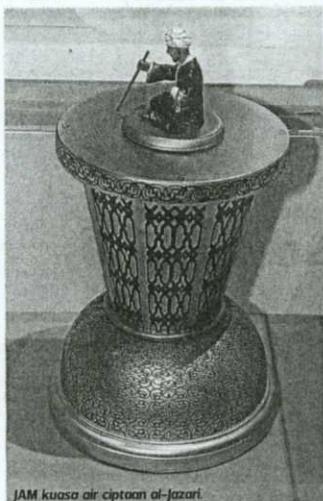


PENYAMAN
 udara tradisional
 dijumpai
 di Herat,
 Afghanistan.

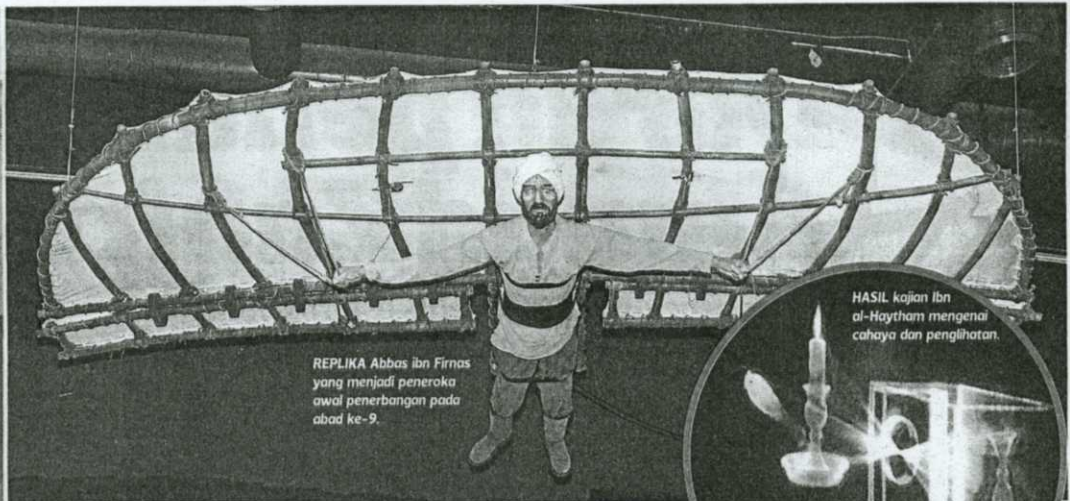


JAM gajah rekaan al-Jazari yang menjadi asas jam moden hari ini.

SAMBUNGAN... METRO AHAD (RENCANA) : MUKA SURAT 46 TARIKH: 10 NOVEMBER 2013 (AHAD)



JAM kuasa air ciptaan al-Jazari



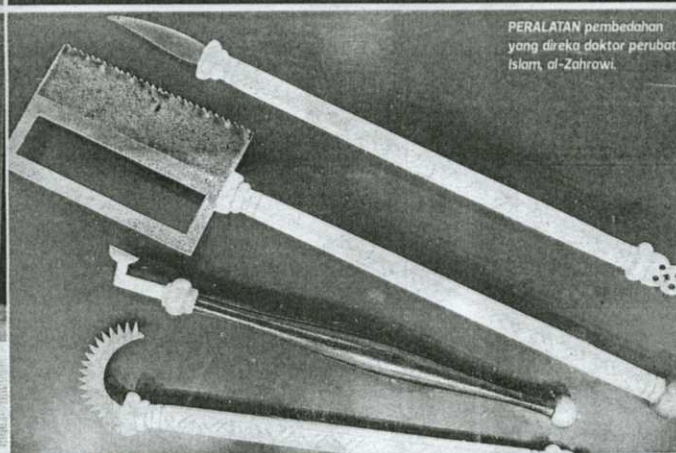
REPLIKA Abbas ibn Firnas yang menjadi peneroka awal penerbangan pada abad ke-9.



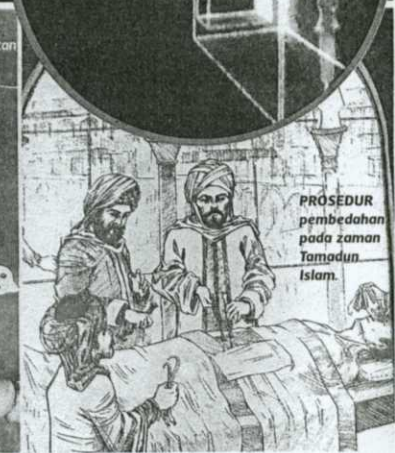
HASIL kajian Ibn al-Haytham mengenai cahaya dan penglihatan.



SISTEM angka moden berasal daripada angka Arab hasil inspirasi sistem angka India purba.



PERALATAN pembedahan yang direka doktor perubatan Islam, al-Zahrawi.



PROSEDUR pembedahan pada zaman Tamadun Islam.

Sebaik melangkah masuk ke pameran, pengunjung di-sajikan tayangan video selama lima minit memaparkan persepsi masyarakat Barat mengenai zaman kegelapan turut dialami negara Islam, sedangkan ia sebaliknya.

Meskipun saiz pameran tidak terlalu besar, dekorasi tersusun lengkap dengan replika, video dan maklumat beraja membuatkan pengunjung 'berhenti' untuk menyaksikannya lebih dekat.

Peralatan pembedahan moden hari ini sebenarnya mengalami sedikit evolusi daripada peralatan yang dihasilkan pakar bedah Muslim, al-Zahrawi dari Cordoba, Sepanyol, antaranya pisau bedah, gergaji, pengikis, gerudi dan forsep pada abad ke-10.

Dikenali masyarakat Barat sebagai Albucaasis, al-Zahrawi berjaya memperkenalkan lebih daripada 200 alat pembedahan bagi merawat penyakit tulang, ketumbuhan, batu karang, luka serta proses kelahiran.

Lebih menarik lagi, al-Zahrawi adalah individu pertama menggunakan tali tangsi secara sistematik da-

lam pembedahan, yang kini menjadi amalan pakar bedah dunia untuk menjahit hirisan dalam.

Bagi memastikan penemuannya boleh dijadikan rujukan masa depan, beliau menulis 30 jilid ensiklopedia perubatan peribadi, 'al-Tasrif' sebelum ia diterjemah dalam bahasa Latin malah digunakan sebagai manual pembedahan di beberapa sekolah perubatan selama beberapa abad.

Pada 1628, Dr William Harvey dikatakan orang pertama menemukan proses darah manusia beredar apabila menerangkan secara terperinci sistem peredaran darah berlaku. Sedangkan pada abad ke-13, Ibn al-Nafis seorang doktor perubatan Muslim terlebih dulu menemukan kajian berkenaan dan diterjemahkan ke dalam teks Arab, 'Sharh Tashrih al-Quran'.

Cendekiawan Islam hebat, Ibn Sina atau Avicenna menulis ratusan buku sepanjang hidupnya, 43 topik daripadanya adalah perubatan. Bijak pandai yang terkenal pada abad ke-11 ini menasihatkan tidak terus menganduh anggota badan yang patah sebaliknya melaku-

kannya selepas lima hari, mengagumkan apabila langkah itu dijadikan prosedur sedunia pada hari ini.

Di zon kejuruteraan, pendedahan menarik mengenai penghasilan jam, kamera dan penyaman udara menjadi asas kepada teknologi moden beraja menafikan kehebatan masyarakat Barat bermain di fikiran penulis.

Al-Jazari terkenal dengan jam gajah yang direka hasil gabungan elemen tradisi dunia termasuk India (digambarkan melalui gajah), China (naga), Mesir (burung merak) dan Arab (patung berpakaian) dan diterjemahkan ke dalam bentuk teks iaitu 'Book of Knowledge of Ingenious Mechanical Devices' pada 1206.

Selain jam gajah, cendekiawan ini juga bertanggungjawab membina peranti berkuasa air serta sistem engkol dan rod penyambung yang menjadi elemen penting kepada pam dan enjin.

Masjid Selimiye di Edirne, Turki menjadi bukti kehebatan arkitek Muslim, Sinan. Menjawat tugas penting sebagai ketua arkitek Empayar Ottoman, lelaki yang lahir pada 1489 ini berjaya mereka-

dan membina lebih 470 bangunan sepanjang hidup termasuk sekolah, masjid dan bangunan awam berkonsepkan keharmonian antara seni bina serta lanskap.

Bagi bidang astronomi, kehebatan Muslimah, Merriam al-Ijlai yang memilih untuk meneruskan legasi bapa sebagai pelatih kepada pembuat alat kaji bintang terkenal di Baghdad. Akhirnya wanita ini berjaya mencipta sejarah apabila menghasilkan alat kaji bintang di Aleppo, Syria.

Penguasaan dan pengembangan di lautan turut dimulakan nakhoda Muslim, iaitu Laksamana Zheng He di abad ke-15, apabila mengemudikan tujuh pelayaran epik dunia menggunakan kapal kayu terbesar pernah dibina.

Armada berkenaan mampu menampung ratusan anak kapal dan muatan seperti sutera, tembikar dan emas, sekali gus menempuhi tujuh pelayaran memakan masa 28 tahun membolehkan Zheng He mengunjungi negara seluruh Asia, Timur Tengah dan Afrika Timur.

Diibaratkan 'naga berenang', ukuran panjang armada ini mencecah 134 meter berbanding 23 meter ka-

pal dinaiki Christopher Columbus.

Pertembungan dua tamadun mengakibatkan berlaku peminjaman perkataan. Kebanyakan bahasa Inggeris hari ini mempunyai kaitan dengan bahasa Arab, Parsi dan Hindi.

Antaranya, 'cheque' (cek) berasal dari perkataan Arab 'sakk' iaitu perjanjian untuk melunaskan bayaran barangan; 'giraffe' (perkataan Arab, 'zarafa'); 'orange' (perkataan Parsi, 'narang'); 'traffic' (perkataan Arab, 'taraffa'); 'shampoo' (perkataan Hindi, 'champo') dan 'yoghurt' (perkataan Turki, 'yogurt').

Perkara sama berlaku memabitkan sistem nombor moden juga dikenali sebagai angka Arab yang tersebar ke seluruh Eropah bermula abad ke-10. Berbeza bagi cendekiawan Muslim yang memanggil nombor berkenaan sebagai 'angka India' kerana ia dibangunkan menerusi sistem India purba.

Dunia pendidikan merangkumi ilmu sains dan matematik turut diterokai cendekiawan Islam seperti kimia (Jabir ibn Hayyan, al-Razi dan al-Kindi, abad ke-9), trigonometri (al-Kh-

warizmi, al-Battani dan al-Biruni, abad ke-9 hingga 11) dan algebra (al-Khwarizmi dan al-Karaji, abad ke-9).

Sumbangan besar dalam bidang pendidikan turut dilakukan Fatima al-Fihri apabila membelanjakan keayaan bapanya untuk membina masjid dan kompleks perguruan, al-Qarawiyyin di Fez, Maghribi sekali gus menjadi universiti tertua dunia pada 859.

Inisiatif dilakukan pemerintah Islam di Baghdad menubuhkan akademi pengetahuan, 'House of Wisdom' beraja menarik kedatangan pencinta ilmu dan memanfaatkan koleksi buku sains, perubatan dan falsafah.

Berdasarkan pemerhatian penulis, pameran ini berjaya memberi manfaat dan membuka mata pengunjung terutamanya orang Islam mengenai kehebatan masyarakat terdahulu dalam memberi sumbangan untuk kemajuan hari ini.

Selain itu, ia juga berjaya memberi inspirasi dan motivasi kepada pengunjung muda untuk berkecimpung dalam bidang sains, kejuruteraan, astronomi mahupun perubatan kelak.

BERITA ONLINE
BERNAMA.COM
TARIKH: 10 NOVEMBER 2013 (AHAD)



Laut Bergelora: 3,600 Nelayan Kelantan Dinasihati Tidak Ke Laut

PASIR PUTEH, 10 Nov (Bernama) -- Kira-kira 3,600 nelayan tradisional dan laut dalam di Kelantan dinasihati tidak turun ke laut berikutan keadaan laut yang bergelora dan berbahaya kepada aktiviti menangkap ikan.

Pengarah Lembaga Kemajuan Ikan Malaysia Kelantan (LKIM) Wan Mohd Adnan Wan Ibrahim menasihati mereka supaya mematuhi arahan pihak berkuasa, terutama Jabatan Meteorologi Malaysia.

"Saya tidak menolak kemungkinan sebilangan kecil, terutama nelayan bot laut, tetap ke laut hari ini... saya berharap mereka segera menghubungi Agensi Penguatkuasaan Maritim Malaysia (APMM) jika berlaku kecemasan di samping sentiasa memakai jaket keselamatan," katanya.

Jabatan Meteorologi Malaysia mengeluarkan amaran angin kencang dan laut bergelora (kategori pertama) dengan angin kencang dijangka mencapai kelajuan 40 hingga 50 kilometer sejam manakala ombak setinggi 3.5 meter di perairan Kelantan, Terengganu, Pahang dan Johor Timur pada Ahad.

Fenomena itu dijangka berlaku sehingga Selasa ini dan ia berbahaya kepada bot kecil, kegiatan sukan dan rekreasi laut.

-- BERNAMA

Sabah fishermen spared Super Typhoon Haiyan's wrath

KOTA KINABALU: Fishermen here were relieved that Super Typhoon Haiyan, which ravaged the Philippines, did not make much impact in the state.

Most of them were able to return to sea despite an earlier warning by the Malaysian Meteorological Department of severe weather conditions due to the super typhoon.

Kudat Fishermen Association chairman Jais Hassan said the weather in the northern regions was generally calm, except for intermittent rain.

"We are able to go out to sea to

fish. This is a good sign for fishermen," he said when contacted yesterday.

He said that while the weather was gloomy, there was no indication so far that something worse was going to hit the area.

"We hope the effects of this typhoon will not be felt too much here as that will impact our livelihood," he added.

Likewise, Sandakan Fishermen Association chairman Asnaul Gindong said the weather in the area did not show any sign of danger resulting from the super typhoon.

We are on full alert and will take the necessary steps.

— ASNAUL GINDONG

"However, we are on full alert and will take the necessary steps should the situation change for the worse," he said.

Asnaul said the association was relieved that most fishermen were able to go out to sea yesterday

despite a slight drizzle.

Typhoon Haiyan, possibly the strongest typhoon ever to hit land, slammed into central Philippines on Friday, causing massive damage to properties.

Over 100 people were killed and many more injured.

The Category 5 super typhoon is now barrelling out of the Philippines towards Vietnam.

It has weakened to Category 4 after making several landfalls in the Philippines.

However, forecasters said it could strengthen again over the South

China Sea.

Vietnam is now making preparations in anticipation of the typhoon.

Authorities in 15 provinces in Vietnam have started to call back boats and prepare for possible landslides. Nearly 300,000 people were evacuated to safer areas in Da Nang and Quang Nam provinces alone.



**For more stories:
See Pages 33 & 35**

Terengganu sets up more relief centres to deal with floods

MARANG: The number of flood relief centres and frontline bases in Terengganu has been increased as the state prepares for the monsoon.

State deputy Health, Women's Development, Family and Community Committee chairman Mahdi Musa said the centres could accommodate 10,000 more evacuees compared to last year.

"This year, we have set up 437 flood relief centres, which is 40 more than last year.

"There are now 118 frontline bases, which is five more than last year. These centres can accommodate 63,172 people.

"We took heed of what occurred last year when we did not have enough centres to accommodate all flood victims," Mahdi said after inspecting the Welfare Department's supply storage depot at Pulau Kerangga where aid items were kept.

The department has prepared more than 100 types of aid items such as sleeping mats, blankets and toiletries.

The aid items had all been prepared and were ready to be distributed to flood victims, said Mahdi.

The Meteorological Department is expecting five waves of floods in Terengganu this monsoon season, which is expected to end in March.

The first wave, predicted to occur this week, had so far passed without any flooding incident despite days of heavy rain and high tide.

The public can obtain information on the weather, sea conditions and flood warnings via www.met.gov.my.

Typhoon coming over here

DANGEROUS: People advised to stay away from the sea

AVILA GERALDINE
AND KRISTY INUS
KOTA KINABALU
news@nst.com.my

WINDS of up to 60kph and waves as high as 5.5m could hit several states as Typhoon Haiyan was detected hovering 600km northeast off Kudat yesterday.

No negative reports were received as of yesterday but weather conditions that are dangerous to fishing and coastal activities as well as to ships and offshore platforms can be expected until Wednesday, according to a warning issued by the **Meteorological Department**.

The west coast of Sabah, Kudat and Sandakan, are expected to be pounded by strong south-westerly winds from 60kph and choppy waters with waves up to 5.5m in sea areas north of the state, such as Condore, Reef North, Palawan, Layang-Layang and Sulu.

In Labuan and several districts in Sarawak such as Rejang, Mukah, Bintulu and Miri, bad weather conditions are also expected until Tuesday, with winds between 50kph and 60kph and waves up to 4.5m.

This would be dangerous for shipping and fishing activities as well as the ferry services.

The warning was also extended to those in Terengganu, Kelantan, Pahang, east Johor, Sarawak and other districts in Sabah, such as Tawau and Sipitang, where winds between 40kph to 50kph are expected and waves up to 3.5m.

This would be dangerous for recreational activities at sea and small boats, especially those operated by traditional fishermen.



Residents looking at a damaged village hall after Typhoon Haiyan hit Janiway in central Philippines yesterday. Reuters pic

On Pulau Mantanani in Kota Belud, dive resort operator spokesman Charles Kok said they suspended diving activities based on choppy seas and the prevailing strong winds.

Boat transport operator Idrus Idris of Pulau Gaya said the downpour and rough seas the last two days prompted many fishermen to stay at home but shuttle boats ferrying passengers on the islands here still continued.

In **Kuching**, Sarawak, oil and gas workers stationed off the coast are on alert for a possibility of strong winds heading their way.

The Meteorological Department had forecasted that the typhoon's

tail wind, between 50kph to 60kph, will hit the coast of Miri, Bintulu and Mukah in the next few days.

Shell operations technician Healsca James Buma said the situation at his platform 270km away from Miri was normal so far.

Petronas operation technician Bertolli Bryan said they were told the eye of the storm was moving towards Vietnam and the possibility of bad weather at sea could be minimal.

Malaysian Maritime Enforcement Agency Regional commander First Admiral Ismaili Bujang Pit said they were on high alert for distress calls at sea.

"We advise fishermen not to go

out to sea to avoid unnecessary risks and to observe the warnings issued by the Meteorological Department from time to time."

Meanwhile, the Malaysian embassy in the Philippines is still trying to establish contact with some Malaysians believed to be in the resort town of Boracay.

Its head of Chancery and Counsellor, Zahid Rastam, said communications with the island were disrupted due to heavy storms.

"However, the authorities have informed us that no casualties have been reported on the island."

As for the 12 Malaysians, comprising students and five workers in the hospitality industry in the

Visayan Islands, Zahid said they were safe and the embassy was monitoring their situation.

He said the embassy had informed all Malaysians to be in constant contact with the embassy and also their families at home.

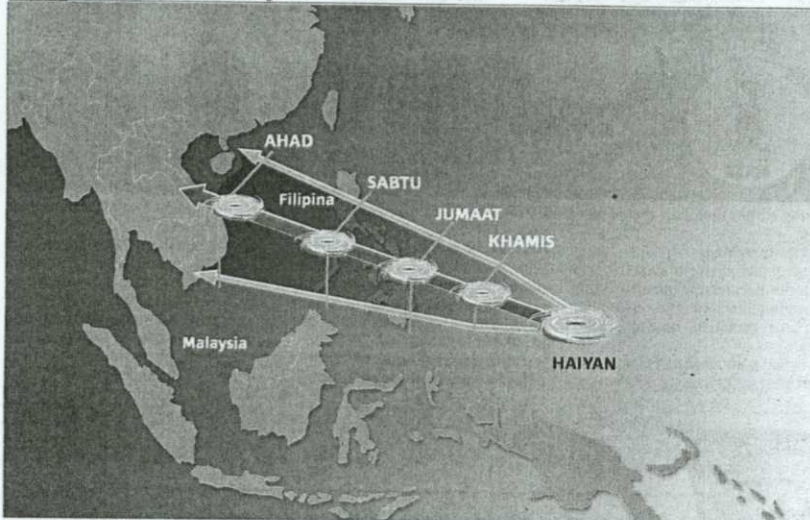
"We are on high alert and prepared for any emergency calls by any of the 700 registered Malaysians here."

The category-5 super typhoon Haiyan, locally known as Yolande with winds nearing 313kph and gusts as strong as 380kph, is the strongest tropical cyclone ever recorded, according to weather agencies. **Additional reporting by Dennis Wong and Ili Liyana Mokhtar**

TAUFAN HAIYAN

Angin kencang, laut gelora berterusan

INFO Laluan Taufan Haiyan



Sumber: AccuWeather.com



Taufan Haiyan mengakibatkan kerosakan teruk di lapangan terbang Tacloban di wilayah Leyte, Filipina semalam. (FOTO AP)

» Jabatan Meteorologi keluar amaran kategori tiga di pantai Sabah

Oleh Khairul Anuar Abdul Samad, Hanneeyzah Bariah Baharin, Suhaila Shahrul Anuar, Syazwan Msar, dan Aslina Abu Bakar
bhnews@bh.com.my

Kuala Lumpur

Jabatan Meteorologi mengeluarkan amaran angin kencang dan laut bergelora kategori ketiga dengan kelajuan angin sehingga 60 kilometer sejam (km/j) dan ombak setinggi 5.5 meter di perairan Sabah, yang dijangka berterusan hingga Selasa ini.

Jurucakap Jabatan Meteorologi berkata, angin kencang dengan kelajuan 50 hingga 60 km/j serta ombak mencapai ketinggian sehingga 4.5 meter pula diramalkan berlaku di perairan Labuan dan Sarawak.

Selain itu, angin kencang berkelajuan 40 hingga 50 km/j dengan ombak setinggi 3.5 meter mungkin berlaku di kawasan perairan Kelantan, Terengganu, Pahang dan Johor Timur.

"Angin kencang dan laut bergelora berbahaya kepada semua aktiviti pantai dan perkapalan termasuk pekerja di pelantar minyak, penangkapan ikan, perkhidmatan feri, bot kecil, rekreasi

laut dan sukan laut," katanya ketika dihubungi BH di sini, semalam.

Taufan jauhi kawasan perairan negara

Bagaimanapun, jurucakap itu berkata, pergerakan taufan Haiyan dikesan semakin menjauhi kawasan perairan negara ini.

Katanya, sehingga jam 6 petang semalam, taufan berkenaan semakin bergerak ke arah barat dengan kelajuan 30 km/j.

"Jaraknya dengan bandar terdekat di Malaysia ketika ini kira-kira 766 km ke barat laut Kudat, Sabah. Keadaan itu boleh menyebabkan angin kencang dan laut bergelora di perairan Laut China Selatan, Sulu dan Sulawesi," ka-

tanya ketika dihubungi, semalam.

Kelmarin, taufan Haiyan melanda kawasan pantai di Pulau Samar, kira-kira 600 km ke tenggara Manila dengan membawa angin sehingga 315 km/j.

Taufan terkuat dunia itu setakat ini sudah mengorbankan 100 nyawa di Filipina dan mengakibatkan 132,879 penduduk negara itu dipindahkan.

Di Kuantan, Jabatan Perikanan Pahang semalam memberi taklimat kepada nelayan di negeri itu supaya tidak mengambil risiko turun ke laut menjelang Selasa ini.

Bot boleh terbalik, karam

Pengarahnya, Adnan Hussin, berkata peringatan itu untuk semua

nelayan kecil serta nelayan laut dalam memandangkan kelajuan tiupan angin serta ancaman ombak besar boleh mengakibatkan bot mereka terbalik atau karam.

"Sebagai langkah berjaga-jaga, kita harap semua nelayan sentiasa mendapatkan maklumat terkini atau merujuk kepada laporan kaji cuaca dikeluarkan Jabatan Meteorologi sebelum turun

menangkap ikan," katanya.

Di Kuala Terengganu, keadaan cuaca baik dan laut bergelora kecil menyaksikan nelayan di negeri ini masih turun ke laut, namun tetap mengambil langkah berjaga-jaga berikutan taufan itu yang melanda Filipina.

Jeti dipenuhi nelayan

Tinjauan BH di Jeti Perikanan Chendering dan Marang mendapati, aktiviti nelayan berjalan seperti biasa dan jeti itu dipenuhi nelayan yang sibuk dengan kegiatan masing-masing.

Di Kota Bharu, nelayan sekitar kawasan Pantai Sabak, Pengkalan Chepa, dekat sini, masih lagi meneruskan kerja harian mencari rezeki di laut, walaupun Taufan Haiyan dengan kelajuan angin sehingga 275 kilometer melanda Filipina, pagi kelmarin.

Keanyakan nelayan sudah tahu mengenai taufan berkenaan, namun disebabkan keadaan laut masih tenang dan tidak nampak tanda-tanda bencana itu akan melanda perairan negara, mereka tetap turun ke laut untuk mencari rezeki.

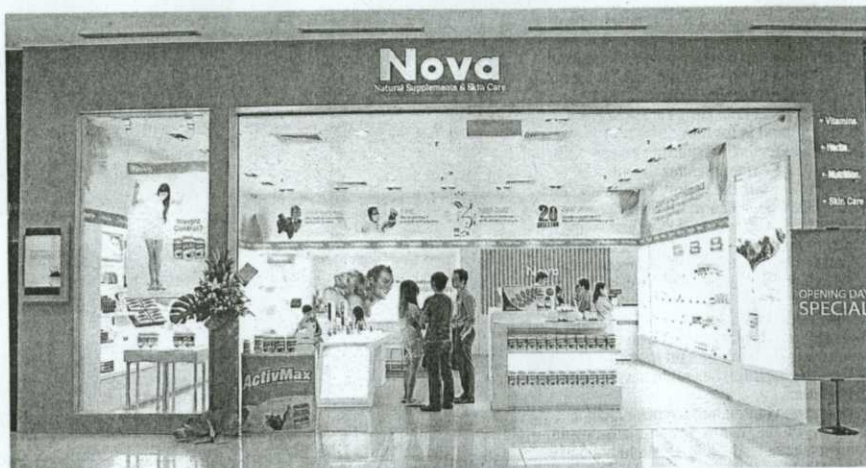


Jusoh Omar, membasuh botnya di jeti pendaratan nelayan berikutan tidak dapat keluar ke laut kerana bimbang keadaan ombak dan angin kuat akibat tempas taufan Haiyan. (FOTO STAMIS SUHAIMI/BH)

◻ Lagi berita dan gambar mengenai Taufan Haiyan - MUKA D1 dan D2

A money-spinner in our backyard

Malaysia has many herbs and plants just waiting to be discovered for an industry that can generate jobs for researchers and the rural folks alike.



Unique niche: Novalab's set up their own retail outlets to market their herbal products.

By HARIATI AZIZAN
sunday@thestar.com.my

PHARMACIST Phang Nyie Lin knew he was on the brink of an exciting innovation in herbal development when his brother-in-law, who was diagnosed with liver hepatitis, was cured of his ailment a month after taking an unknown herb from India.

He was excited to discover that the herb, scientifically known as *Phyllanthus Niruri*, can be found here in Malaysia and is a popular traditional medicine among the Malays. Called *Dukung Anak* locally, the juice of the plant is believed to cure a range of ailments from yellow fever and anaemia to diabetes.

But Phang, who is managing director of herbal pharmaceutical company Nova Laboratories Sdn Bhd (NovaLab), was more interested in its potential as a cure for Hepatitis-B and liver protection, and wasted no time in starting research on the then experimental herbal medicine.

That was in 1997. The phyllanthus herb is now available as Hepar-P capsules in the market.

"We have sold more than 26 million capsules, and the liver health herbal product is now in the second phase of clinical trials," says Novalab spokesperson Nicholas Cheong.

Novalab took more than seven years of intensive research and development (R&D) to develop Hepar-P but Cheong believes it would have taken them longer if they had not acquired the BioNexus Status, which is awarded to qualified companies that undertake value-added biotechnology activities by the government through its agency BiotechCorp.

"With all the incentives and funds under the BioNexus Status award, it has made the process easier. We were able to patent Hepar-P in 2007 and 2009 and get it into the market earlier than planned," says Cheong.

As he explains, herbal medicine is a highly regulated industry where

restriction and control from government is stringent "because we are dealing with people's health and well-being."

"The BioNexus status has facilitated the bureaucratic process with government agencies. This allows us to focus on R&D and marketing instead of spending time and manpower on the red tape," shares Cheong.

With some research funding and the tax incentive under the BioNexus status, Nova Lab was able to invest in R&D.

"R&D investment can go up to millions of ringgit in the herbal medicine industry so the RM1mil research funding we got and tax rebate were helpful as we were able to put the money back into the company and invest in the latest research equipment.

"One research can take up many years and sometimes at the end of it, you don't get the therapeutic compounds that you are looking for. With the right and state-of-the-art equipment, we were able to speed up the research time and cover any losses incurred by waste of time and manpower," says Cheong, adding that it has spurred R&D on new indigenous herb products.

Their top bestsellers after Hepar-P include a complete nutrition and balance, low glycemic drink, slow-release glucosamine, and high absorption double strength fish oil soft gel.

He highlights that there are more than 2,000 forest species in Malaysia with identified medicinal value and many more undiscovered herbs and plants. Sadly, though, 65% of the raw herbs used here are imported. "We need to start sourcing local raw herbs, which can generate jobs for the rural folks, especially in herb planting. And once the herbal products get accredited, it will create other jobs such as researchers and marketers."

Through BiotechCorp, they have been able to connect with local planters says Cheong.

Novalab now has more than 50 herbal products in the market and

plans to expand their herbal beauty products and artery health.

To market their homegrown herbal products, Novalab does not only rely on the local network of retail pharmacies, they have also opened their own retail outlets around the Klang valley.

"Our retail outlets are an integration of Novalab's R&D and marketing endeavours. A lot of the time, you have a good product that is well researched but you cannot get it out there. This is a good way of reaching out to the customers and distributing the products," says Cheong.

"We have three outlets now with the fourth and fifth scheduled to open at the end of this year," he says, adding that they hope to expand nationwide in the near future.

The retail outlets also act as education hubs on herbal medicine and health supplements where Novalab have hired pharmacists and nutritionists to answer consumers' enquiries and concerns.

"Many Malaysians are not aware of the use and benefits of herbal medicine. Many also still think that Malaysian products are inferior," he explains.

Novalab is also working to explore new markets, both domestic and foreign.

"BiotechCorp has assisted us by 'matchmaking' us with prospective overseas partners and publicising our products," says Cheong. He hopes the government could raise public awareness on the benefits of herbal medicine further to boost the industry as it is worth billions with a lot of prospects globally. It is expected to increase by three folds from RM777bil in 2009 to more than RM2tril by 2020.

"There is so much room to grow in the herbal medicine industry but there are still not many players in Malaysia. BiotechCorp is doing a lot to connect the different stakeholders in the industry as well as build an ecosystem to boost the local herbal medicine production, and more can be done," says Cheong.

By LISA GOH
 sunday@thestar.com.my

Budget boost for bioeconomy

Recognising the enormous potential of bioeconomy for Malaysia's future economic prosperity, further strategies have been identified under Budget 2014 to strengthen its core activities.

THE Bioeconomy Transformation Programme (BTP) has swiftly become a game changer for Malaysia to become a high-income developed nation and would be a key contributor to economic growth for a productive, competitive and innovative economy.

Supporting the BTP is the Bioeconomy Malaysia Accelerator Programmes (Bio-Accelerators) which comprises four sub-programmes – Bioeconomy Community Development, Technology Development and Innovation, Bio-Entrepreneurship and BioNexus Go Global.

"The BTP is the main programme to help Malaysia achieve a high-income nation status, sustainable and inclusive by 2020. And supporting it is Bio-Accelerators, which is slated to boost Malaysia's Gross Domestic Product (GDP) to 8-10% by the year 2020," says Zurina Che Dir, senior vice-president of BiotechCorp's Bioeconomy Development Division.

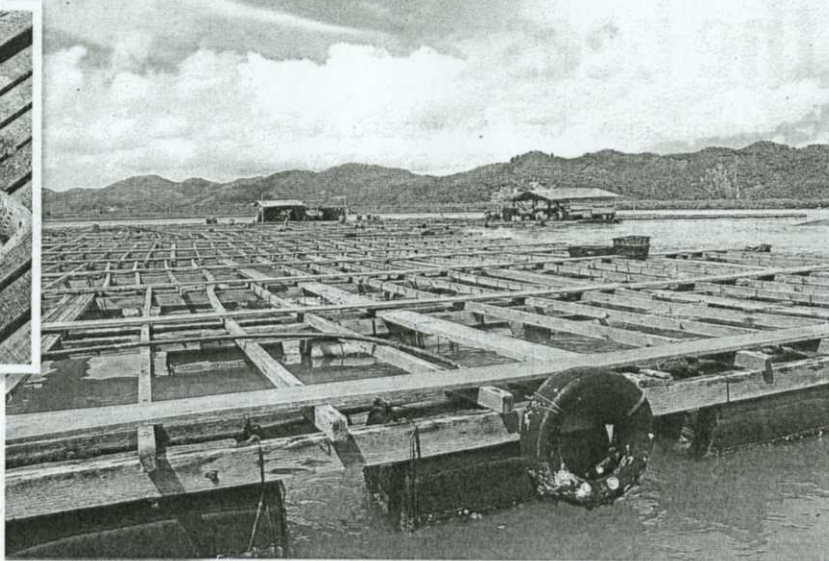
Of the four, the Bioeconomy Community Development Programme, as announced by Prime Minister Datuk Seri Najib Tun Razak when delivering Budget 2014, is the main thrust of the Bio-Accelerators and will be supported by another three accelerator programmes.

Bio-Accelerators is designed with a holistic value chain approach, whereby these programmes are inter-linked and will be implemented simultaneously to ensure the success of the Bioeconomy Community Development Programme. The focus of Bio-Accelerators will be mainly to increase the multiplier effects on the economy and positive impact on the income and welfare of the people.

Through the Bioeconomy Community Development Programme, a total of 100,000 hectares of idle land in Malaysia will have the opportunity to be developed for contract farming.

The success of this programme requires close cooperation with the Agriculture and Agro-based Industry Ministry, Rural and Regional Development Ministry, the states, economic development corridors and research institutions such as Mardi and FRIM.

The Community Development Programme will help farmers to



Success story: An oyster breeding farm run by Seaharvest Aquamarine (M) Sdn Bhd. Seaharvest embarked on the venture through the successful completion of a TECNOFUND project for the breeding of oysters and their cultivation. Inset: Fruit of the company's labour.

develop entrepreneurship skills to undertake contract farming with BioNexus Status companies. The product that will be produced by Bioeconomy Community Development Programme will be processed through new technology and innovation by the BioNexus companies into high value products while at the same time strengthening entrepreneurial skills to commercialise the products for domestic and international markets.

Complete value chain

BiotechCorp is looking at bioeconomy from a complete value chain approach where on the one hand, there are the BioNexus Status companies which require raw materials, and on the other hand, there are the contract farmers who can plant these crops as raw materials.

Once planted and harvested, the BioNexus Status companies will buy back the feedstock (be it mushrooms, stevia, mangosteen or energy crops) and use the extracts for the production of a high-value product.

This will help farmers increase their income. Sub-sectors which will be given priority for

the Bioeconomy Community Development Programme are Nutritional Pharma, Aquaculture, Bio-Aromatic, Food Ingredients, and Energy Crops.

New business models will also be developed aimed to benefit all parties involved in the value chain. Other targeted outcomes are to promote the use of modern farming techniques and advanced biotechnology for contract farming, enhance the technology utilisation for product diversification and encourage young people to venture into agricultural biotechnology.

Launched last October, the BTP is a platform provided by the Government for the private sector to channel and maximise commercial opportunities in bio-based industries.

BiotechCorp continued to identify and evaluate high-potential Trigger Projects for inclusion in the pro-

gramme. The BTP has set a target to increase Malaysia's gross national income (GNI) by RM43bil by 2020, attract investments of about RM15bil, while creating 160,000 jobs opportunities.

With an initial 20 Trigger Projects identified and the possibility of including 13 new Trigger Projects as part of the initiative, the BTP is set to maximise the undiscovered potential of the country's economy and at the same time enhancing the multiplier effect of the economy, thus strategically placing Malaysia within the global biotechnology market that is projected to be worth around US\$321bil (RM1 trillion) by 2015.

As for the Technology Development and Innovation Programme, a bioeconomy technology roadmap will be set in place for the acquisition and development of better and more advanced technology. The main focus is to bridge

global technology and expertise, between bio-based companies and R&D institutions in advanced countries. These include the conversion technology that converts biomass to higher value products.

The Bio-Entrepreneurship Programme instead aims to create an enabling environment to enhance the commercialisation of bio-based products and services by local biotechnology researchers and entrepreneurs. The benefit of this programme is that it will provide Malaysian bio-based companies the necessary exposure to achieve global standards in skills and capabilities.

Finally, BioNexus Go Global programme is aimed at identifying and assisting BioNexus Status companies to penetrate the global market by 2020. Under the National Biotechnology Policy, Malaysia's target is to have 20 global companies by 2020, and BiotechCorp will identify these companies, look at their business model – examine the branding, packaging and registration – to meet the requirements of foreign markets.

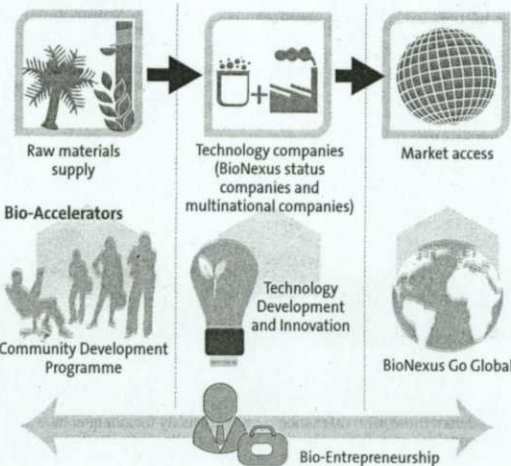
Recognising the importance of research and development (R&D) for the development of Bioeconomy, the Prime Minister also announced the following R&D incentives for viable projects (which will be assessed by BiotechCorp) in his budget speech:

- > Tax deduction for companies that invest to acquire technology platform in bio-based industry;
- > Exemption on import duty on R&D equipment for companies that invest in pilot plants for the purpose of pre-commercialisation in Malaysia;
- > Special incentive to companies to partially cover the operational cost for human capital development for Centre of Excellence for R&D.

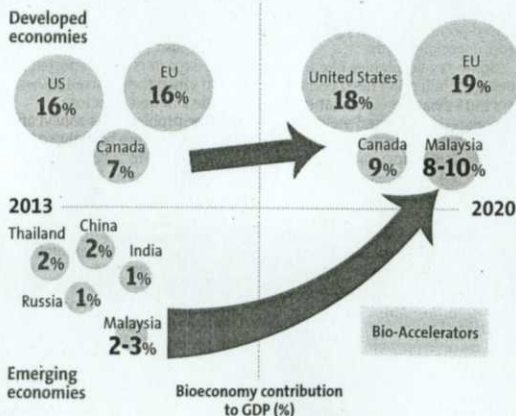
The incentives are for applications received by BiotechCorp from Jan 1, 2014 to Dec 31, 2018.

Bioeconomy Malaysia Accelerator Programmes (Bio-Accelerators)

Bio-based Ecosystem



Bio-Accelerators will Enhance Bioeconomy's GDP Contribution by 2020



KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH:09 NOVEMBER 2013 (SABTU)

Bil	Tajuk	Akhbar
1.	Haiyan membadai	Berita Harian
2.	Malaysians in Philippinesafe	New Straits Times
3.	Typhoon affects fishermen	The Star

Haiyan membadai

» Perairan Pantai Barat Sabah kena tempias taufan kelajuan angin 275 kilometer sejam

Oleh Mohd Izham Unnip
 Abdullah dan
 Norrasyidah Arshad
 bhnews@bh.com.my

► Kuala Lumpur

Taufan Haiyan yang melanda kawasan tengah dan selatan Filipina awal pagi semalam dengan kelajuan angin sehingga 275 kilometer sejam, turut memberi tempias kepada negara ini.

Taufan yang membawa puting beliung terkuat di dunia sepanjang tahun ini, menyebabkan angin kencang Timur Laut dan Barat Laut dengan kelajuan antara 50 hingga 60 kilometer

sejam (km/j) di kawasan perairan Sabah terutama di Pantai Barat, Kudat dan Sandakan serta Labuan.

Angin kencang itu turut menyebabkan laut bergelora hingga ketinggian ombak mencapai 4.5 meter (m) dan dijangka hingga Selasa ini.

Ketua Pengarah Meteorologi Malaysia, Che Gayah Ismail, berkata di kawasan lain, kesan taufan berkenaan menyebabkan ribut dengan kelajuan angin antara 40 hingga 50 km/j yang dijangka sehingga Selasa ini di kawasan perairan Kelantan, Terengganu, Pahang, Johor Timur, Sarawak dan Tawau.

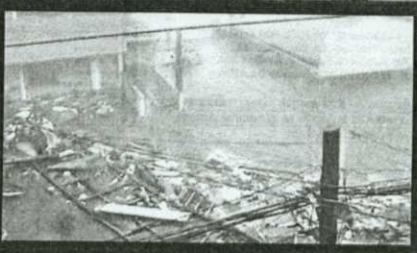
Ia juga menyebabkan ombak setinggi 3.5 meter di kawasan berkenaan.

Berikutan itu, katanya, penduduk yang tinggal berhampiran pantai dan



Pasukan keselamatan membantu usaha menyelamatkan penduduk berhampiran gunung berapi Mayon mencari perlindungan. [FOTO AFP]

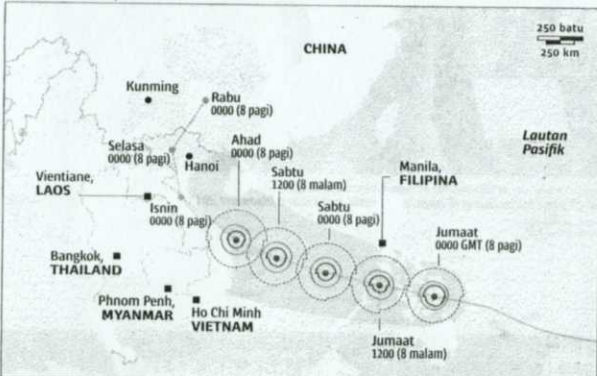
Kerosakan teruk di bandar Tacloban, Wilayah Leyte akibat ribut melanda petang semalam. [FOTO REUTERS]



INFO

Laluan Taufan Haiyan bermula semalam hingga Rabu

Radius kelajuan angin (knots) Kelajuan angin (knots) Kawasan dilanda ribut
 ○ 34 ○ 50 ○ 64 ● Ribut Tropika (34-63) ● Taufan (≥ 64) — Ramalan ● Berpotensi
 1 knot = 1.852km/j



Sumber: Joint Typhoon Warning Centre. Data setakat 0300 GMT (10 pagi) Jumaat.

REUTERS



SAMBUNGAN...
BERITA HARIAN (NASIONAL) : MUKA SURAT 09
TARIKH: 09 NOVEMBER 2013 (SABTU)

nelayan dinasihatkan tidak menjalankan aktiviti di laut, termasuk perkapalan, perkhidmatan feri dan menangkap ikan bagi mengelakkan kejadian buruk.

Malaysia zon selamat

Secara keseluruhan, katanya, Malaysia masih berada di zon selamat kerana Taufan Haiyan tidak melalui negara ini, sebaliknya bergerak ke arah pantai Vietnam.

Jabatan Meteorologi Malaysia turut memberi amaran angin kencang dan laut bergelora di Condore, Reef North, Palawan, Layang-Layang, Sulu, Samui, Bunguran dan Sulawesi.

Katanya, Malaysia hanya mendapat tempas kecil iaitu kejadian ribut di pesisir pantai berikutan pergerakan

Taufan Haiyan dari Filipina ke Vietnam, melalui Laut China Selatan.

"Berdasarkan pergerakan taufan itu, kami yakin ia tidak akan melanda mana-mana kawasan negara ini melainkan angin kencang di pesisir pantai. Bagaimanapun, jabatan akan sentiasa memantau keadaan bagi mengesan petanda awal.

"Pagi ini (semalam), Taufan Haiyan dikesan kira-kira jam 11 pagi pada kedudukan latitud 11.2 utara, longitud 123.7 timur iaitu kira-kira 860 kilometer (km) dari timur laut Sandakan, Sabah dan ia bergerak ke arah barat dengan anggaran kelajuan 35 km/j," katanya kepada BH, di sini, semalam.

Semalam, agensi perkhidmatan kaji cuaca Manila melaporkan Taufan Haiyan bermula di Pulau Samar, kira-

kira 600 km dari barat daya Manila, membadai pesisir pantai Guiuan, kira-kira 4.40 pagi waktu tempatan.

Taufan Haiyan berasal daripada ribut tropika berdiameter beberapa kilometer membawa angin dengan kelajuan maksimum 120 km/j serta berputar.

Ribut tropika itu yang melalui kawasan lautan bersuhu 26 darjah celsius menyebabkan penyejatan permukaan laut sekali gus membentuk tenaga yang mengakibatkan Taufan Haiyan.

Beliau berkata taufan kali ini dianggap luar biasa kerana kelajuan angin lebih tinggi berbanding kejadian sebelum ini yang mana ia berlaku setiap tahun antara Jun hingga Disember.

Cemaskan berjuta-juta penduduk

Manila: Taufan paling ganas mula membadai Filipina semalam menyebabkan sekurang-kurangnya tiga terbunuh dan mencemaskan berjuta-juta penduduk.

Angin kencang menerbangkan bumbung rumah selain menyebabkan ombak besar yang menghanyutkan rumah penduduk.

Taufan Haiyan melanda kawasan pantai di Pulau Samar, kira-kira 600 kilometer ke tenggara Manila awal pagi semalam dengan membawa angin sehingga 315 kilometer sejam.

"Kami menerima laporan pokok tumbang, angin sangat kencang dan rumah yang dibina dari bahan ringan musnah," kata Ketua Palang Merah Filipina, Gwendolyn Pang kepada AFP semalam.

Kerajaan berkata tiga penduduk disahkan terbunuh dan seorang lelaki masih hilang selepas terjatuh dalam kejadian di bandar pelabuhan Cebu.

Tetapi angka kematian dijangka meningkat disebabkan pihak berkuasa gagal untuk menghubungi kawasan yang teruk terjejas dan Haiyan hanya dijangka meninggalkan Filipina pada waktu petang.

Semua hubungan melalui telefon terputus. Purata 20 ribut atau taufan besar kebanyakan menyebabkan maut melanda Filipina setiap tahun.

Filipina adalah negara paling banyak dilanda taufan di dunia pada 2012, di mana Taufan Bopha menyebabkan 2,000 penduduk maut atau hilang di pulau selatan Mindanao.

Bekalan elektrik di tiga pulau utama di Filipina, Samar, Leyte dan Bohol, terputus sama sekali, namun pihak berkuasa berjanji akan memulihkannya dalam tempoh 24 jam.

"Keadaan di Bohol menjadi gelap gelita ketika Haiyan mula membadai wilayah ini, manakala hujan turun dengan lebatnya," kata penyelaras bantuan ke pulau itu, Lionel Dosdosa.

Gabenor Samar, Sharee Tan, berkata seluruh wilayah itu bergelap apabila bekalan elektrik terputus, disebabkan banyak pokok yang tumbang.

Gabenor Leyte, Roger Mercado, menyifatkan Haiyan mempunyai kekuatan luar biasa.

Pegawai di Filipina memberi amaran lebih 12 juta penduduk berdepan risiko akibat Haiyan, termasuk di bandar raya City yang menempatkan 2.5 juta penduduk dan belum pulih daripada gempa bumi bulan lalu.

Di Kota Kinabalu, kebanyakan nelayan di pantai barat tidak turun ke laut selepas menerima amaran laut bergelora ketika Haiyan bergerak ke pantai Vietnam.

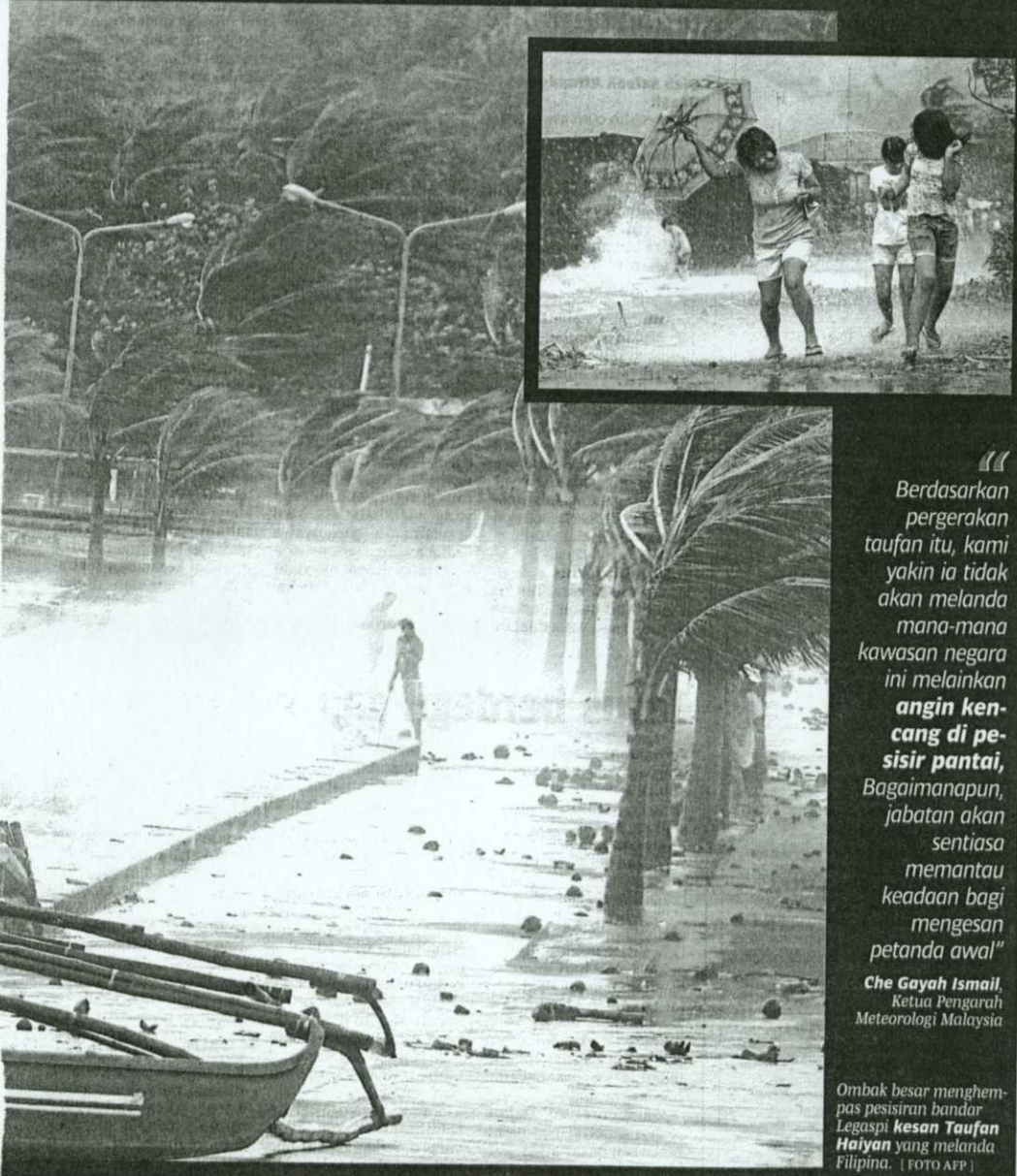
"Kami memang sentiasa berwaspada terhadap keadaan laut. Kalau ombak kuat, tiada yang berani turun, lebih-lebih lagi jika ada berita mengenai ribut atau taufan di Filipina," kata nelayan, Marlih Mausear, 29 dari Kampung Rampayan, Menggatal.

Katanya, daripada 10 nelayan dalam kumpulannya, hanya dia turun ke laut semalam, itupun hanya sekejap di sekitar kuala sungai.

"Tiada yang berani keluar ke laut kerana ombak agak kuat. Hanya yang menggunakan perahu besar turun jauh ke laut tetapi jika ada amaran laut bergelora disebabkan taufan di Filipina, ramai yang tidak berani turun," katanya.

Rakan beliau, Jasni Awang Damit, 31, berkata jika kurang ikan segar dipasarkan di gerai jualan tangkapan nelayan di kampung berkenaan, ia petanda tidak ramai nelayan turun ke laut kerana bergelora.

"Kalau banyak ikan dijual, maknanya ramai nelayan turun. Hari ini (semalam) tidak banyak ikan dijual di sini menunjukkan ramai nelayan tidak ke laut kerana laut bergelora," katanya.



"Berdasarkan pergerakan taufan itu, kami yakin ia tidak akan melanda mana-mana kawasan negara ini melainkan angin kencang di pesisir pantai, Bagaimanapun, jabatan akan sentiasa memantau keadaan bagi mengesan petanda awal"

Che Gayah Ismail,
 Ketua Pengarah
 Meteorologi Malaysia

Ombak besar menghempas pesisiran bandar Legaspi kesan Taufan Haiyan yang melanda Filipina. (FOTO AFP)

Malaysians in Philippines safe

'STAY INDOORS': Embassy keeping in touch with students and workers in Visayan Islands as super typhoon makes landfall

TASNIM LOKMAN
KUJALA LUMPUR
news@nst.com.my

TWELVE Malaysians in the Visayan Islands that was hit by super typhoon Haiyan early yesterday are safe.

First Secretary of the Malaysian embassy in the Philippines Raveendran Nair said the Malaysians had been advised to stay indoors.

The typhoon, locally known as Yolanda, a category-5 super typhoon with winds nearing 313kph and gusts as strong as 380kph, is the strongest tropical cyclone ever recorded, according to weather agencies.

The 12 Malaysians comprise seven students and five workers in the

hospitality industry.

Raveendran said the embassy was in touch with the Malaysians and were keeping tabs on their wellbeing.

"We have informed all Malaysians to be in constant contact with the embassy and also their families back in Malaysia, regardless whether they are in the badly hit areas or safer places."

He said the seven students were on campus and had been advised by university authorities to stay indoors at all times.

The embassy is on high alert and prepared for emergency calls by any of the 700 registered Malaysians in the country.

The storm is expected to continue moving up to the west-north-

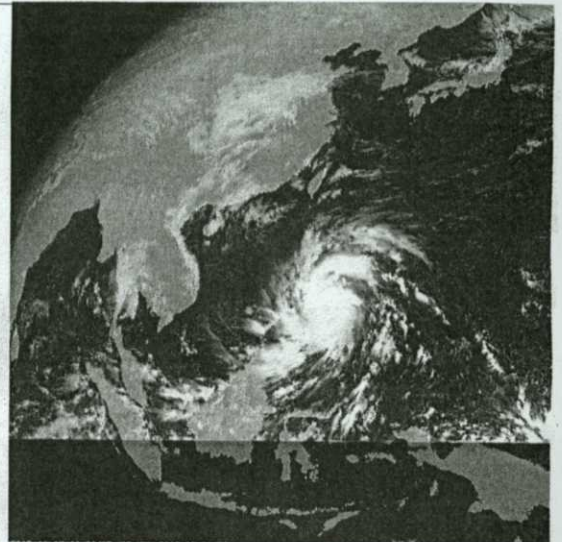
west of the country, which includes Manila, today.

Malaysians residing in Manila have been told by the embassy to stay indoors and take extra precautions.

At least three people have been killed and seven injured according to reports as of yesterday evening, while millions of people in vulnerable areas across 20 provinces have been forced to seek shelter.

Schools and offices have been closed with ferry services and local flights suspended, while hospitals and soldiers have been put on stand-by.

The Malaysian Meteorological Department has issued a warning on its website, stating that the



Satellite image provided by the Japan Meteorological Agency shows super typhoon Haiyan hitting the Philippines yesterday. Reuters pic

strong winds and rough seas were dangerous to all shipping and coastal activities, including fishing and ferry services.

It stated that winds of over 60kph with waves higher than 4.5m occurring in waters off Sabah's west coast, Kudat and Sandakan,

Labuan, Condore, Reef North, Palawan, Layang-Layang and Sulu were expected to continue until Nov 12.

Meanwhile, artist Fairuz Sulaiman, who is in Manila for the Media/Art Kitchen exhibition, said yesterday the skies began to darken at 3.30pm.

He said people were up to their usual business as the capital city was yet to be hit. However, he added, some schools had been closed.

"No one is panicking just yet but I heard from the news that the storm will be arriving by 8pm tonight (yesterday)," said Fairuz, who has been in Manila for a week.

As of 7pm yesterday, all flights to and from the Philippines have not been cancelled or delayed.

Malaysia Airports Holdings Bhd told the *New Straits Times* that flight schedules were to be updated by airlines should there be any disruptions.

The public is advised to contact the airlines for further enquiries.

Meanwhile, Bernama reported that Gerakan Youth chief Tan Keng Liang was safe in Manila.

Tan is attending a conference and the 20th anniversary of the Council of Asian Liberals & Democrats, of which Gerakan is a member.

"I am safe in the hotel in Manila... the situation is okay. Not much traffic jams here because everyone is staying indoors. School and university activities have been cancelled as a precautionary measure.

"I was giving a talk at the University of Santo Tomas Manila when the typhoon hit the Philippines," Tan said.

"However, there was some turbulence during the flight when it was approaching Manila airport. Perhaps the typhoon."

Tan, who arrived in Manila on Thursday night, said he would return to Malaysia on Monday.

→ See also Pages 24 & 25



Debris littering a road in a coastal village in Legazpi city, Albay province, following a storm surge brought about by super typhoon Haiyan yesterday. AP pic

Typhoon affects fishermen

Fish supply in Sabah may drop after Haiyan hits Philippines

By STEPHANIE LEE

stephanielee@thestar.com.my

KOTA KINABALU: Fish supply in Sabah is expected to dwindle in the coming week as fishermen stay close to shore in fear of the super typhoon Haiyan which made landfall in central Philippines yesterday.

Most fishermen from the east and west coast Sabah have stopped going to sea due to the rough sea conditions since Thursday night.

Chairman of the east coast Kota Belud Fishermen Association, Makbul Matdin, said they had stopped going fishing as the wind was too strong for any sea activities there.

"The typhoon is affecting our livelihood as most fishermen dare not go to sea now," he said, adding that this would affect the supply of fish in

the district.

He said the situation was expected to remain dangerous for fishermen in the area for at least a week.

However, in Sandakan, the local fishermen association said the typhoon had only affected small vessels operating in the area and the weather was gloomy.

Association chairman Asnaul Gindong said the sea was rough and the waves were dangerous, so most small vessels could not operate at the moment.

Asnaul said only a small number of fishermen with larger fishing ships dared to operate but they would cut short their time at sea.

"Everyone will stay on shore if the situation gets worse and there will definitely be a shortage of fish supply in this area, and maybe also in

other parts of the state, if that happens," he said.

Kudat Fishing Association chairman Jais Hasan also said that all fishermen in the area were keeping a close tab on the weather and most were staying closer to the shore.

"We hope the typhoon will pass soon as long-term rough seas and strong winds will affect our livelihood," he said.

Meteorological Department central forecasting office director Muhammad Helmi Abdullah said Haiyan, one of the strongest typhoons in recorded history, would result in dangerous conditions for ships and ferries.

He advised ships and ferries to cease activities in north Sabah waters although large or very large ships might be able to withstand the strong winds and rough seas.

The MetMalaysia website, on the other hand, said Haiyan was about 938km away from Sandakan.

It said strong north-easterly and north-westerly winds of 50 to 60kph with waves of up to 4.5m high were occurring in waters off Sabah's west-coast, Kudat, Sandakan and Labuan.

A Reuters report said Haiyan landed on central Philippine islands yesterday morning with winds of up to 315kph and waves up to 5m high.

Ferries, flights and fishing operations there have been suspended, while thousands of people have been evacuated.