## KERATAN AKHBAR-AKHBAR TEMPATAN
## TARIKH: 26 OKTOBER 2014 (AHAD)

| Bil | Tajuk | Akhbar |
|---|---|---|
| 1. | Changing the climate | New Sunday Times |
| 2. | We must adapt to global warming | New Sunday Times |
| 3. | Ancaman puting beliung | Berita Harian |
| 4. | Amaran ribut petir di perairan Kedah, Pulau Pinang dan Selat Melaka Utara | Bernama |
| 5. | Jabatan Meteorologi nafi sebar amaran puting beliung | Bernama |
| 6. | Kenderaan cekap tenaga | Utusan Malaysia |
| 7. | Fadilah tabah lalui saat hitam | Mingguan Malaysia |

KERATAN AKHBAR
NEW SUNDAY TIMES (VIEWPOINT): MUKA SURAT 16
TARIKH: 26 OKTOBER 2014 (AHAD)

**NEW SUNDAY TIMES**: There is a need to atone for our 'sins' against nature

# *Changing the climate*

THE weather patterns that Malaysians may have learned in Geography classes just one or two generations ago no longer hold true. Back then, it was with not a little pride that Malaysian schoolchildren were taught how blessed this land was to have been spared from many natural disasters. Even though we lie on the rim of the Pacific Ring of Fire, we have somehow been extremely lucky to avoid it. The volcanoes, earthquakes and typhoons that plagued our nearest surrounding neighbours somehow skipped us. But, it is no longer unusual to experience mini-earthquakes — aftershocks of earthquakes in neighbouring countries. So, it is little wonder that the violent weather we have been experiencing this month has got people wondering what has happened to change things. "Tornadoes" in Kedah; Klang, Selangor; and off the coast of Kota Kinabalu, Sabah, have brought people to their knees, crying for physical and spiritual salvation, as humans are wont to do when all else fails.

It was not surprising, therefore, that the Selangor chapter of Malay-rights group Perkasa took the opportunity to suggest that these unusual weather phenomena were the result of a rise in vice activities, like gambling, prostitution, and festivals that celebrate alcohol-drinking and dog-touching. Although the suggestion is conveniently selective with the sins, the concept of cause and effect is not necessarily an absurd one. For instance, if tornadoes were a sign of displeasure from a higher power, the occurrences could just as well be the result of the endless bickering, name-calling and inhumane actions that shatter peaceful relations between Malaysians during the many long-drawn-out one-upmanship competitions that the country hosts with increasing regularity.

> Have our **contributions to global warming...** culminated in this **'punishment'?**

The Meteorological Department has unnervingly said such phenomena were "normal", merely the result of the inter-monsoon season. And those scary "tornadoes"? They are too small to be called as such. So, there is, as yet, no need to worry about Malaysia becoming a "tornado alley", even though there is no study to back this up either, as the department has reportedly not kept any records. It is thanks to the prevalence of camera phones and ease of uploading videos on YouTube that make it easier to share these disasters. In the same week that Malaysia was experiencing waterspouts and windspouts, the city of Sydney, Australia, experienced fierce gale-force winds, floods and even snow in the Blue Mountains — a rarity, given that it is well into spring there now. Are these all early "signs" of the end of the world? Or, is it just climate change, brought on by our "sins" against the environment? Have our contributions to global warming, our rampant development without thought to ecological balance, and our ousting of flora and fauna from their natural habitat culminated in this "punishment"? If so, what are we doing to earn salvation?

KERATAN AKHBAR
NEW SUNDAY TIMES (VIEWPOINT): MUKA SURAT 20
TARIKH: 26 OKTOBER 2014 (AHAD)

CLIMATE CHANGE

# *We must adapt to global warming*

*A waterspout in Bintulu on Oct 18. Malaysia must **anticipate changing weather patterns** that will blow our way.*

GIVEN the global pattern of extraordinarily strong typhoons and hurricanes wreaking havoc in several countries, and the violent weather experienced in the country, the assumption is that weather patterns are changing.

It can also be assumed that these changes are attributable to global warming, a phenomenon long warned against. That being the case, we need to live with the changes and anticipate the problems that will blow Malaysia's way.

We will need to equip the Meteorological and the Drainage and Irrigation Departments with the latest technology to enable better weather forecasting, and broadcasting of public information. On the ground, flood mitigation and rescue and relief efforts will need massive infrastructure upgrades. Better drainage systems are also urgently required.

Low-lying homes will probably need massive monsoon drains to cope with increasingly heavy rainfall. Retaining walls must be made invulnerable to water-logged soil, with better construction methods. Roofs must be able to withstand strong gusts during storms.

More needs to be done to understand the impact of climate change on the country. How unpredictable is it and what is to be done under these circumstances?

Now that global warming is a fact, Malaysians must wake up to that reality and act accordingly.

**Alfred Ang,** Petaling Jaya, Selangor

KERATAN AKHBAR
BERITA HARIAN (NASIONAL) : MUKA SURAT 18
TARIKH : 26 OKTOBER 2014 (AHAD)

# ANCAMAN PUTING BELIUNG

» *Tiupan musnahkan kediaman, ragut ribuan nyawa*

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Fenomena puting beliung kebelakangan ini semakin kerap berlaku di negara kita. Perubahan cuaca dan ketidakstabilan ekosistem banyak menyumbang kepada kejadian yang disifatkan sebagai bencana alam ini.

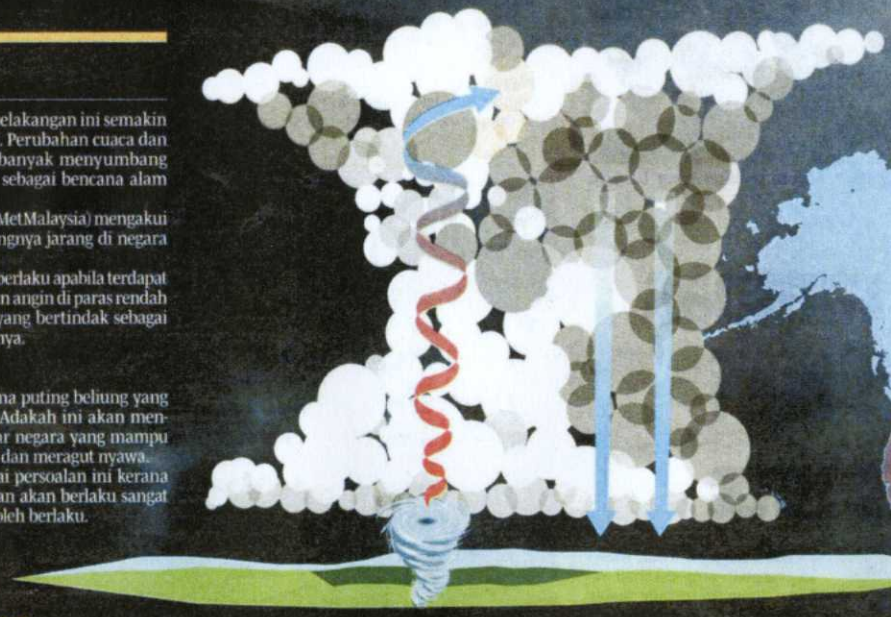
Jabatan Meteorologi Malaysia (MetMalaysia) mengakui kejadian puting beliung sememangnya jarang di negara ini, namun ia bukan mustahil.

Secara asasnya, puting beliung berlaku apabila terdapat kelembapan tinggi dan penumpuan angin di paras rendah serta ketidakstabilan atmosfera yang bertindak sebagai pemangkin untuk pembentukannya.

## Ragut nyawa

Namun persoalannya, sejauh mana puting beliung yang terjadi itu boleh menjadi teruk. Adakah ini akan menjadi puting beliung sebesar di luar negara yang mampu memusnahkan ribuan kediaman dan meragut nyawa.

Masih tiada jawapan mengenai persoalan ini kerana jarang berlaku dan kebarangkalian akan berlaku sangat rendah, namun tidak mustahil boleh berlaku.



## APA ITU PUTING BELIUNG

- Puting beliung atau tornado adalah sebuah **tiub angin berpusing yang menyentuh tanah dan awan kumulus-nimbus.** Angin yang berada di dalam puting beliung berpusing dengan pantas dan menjadikan puting beliung sangat berbahaya.
- Purata puting beliung berkelajuan **175 kilometer sejam** dengan **lebar 250 kaki (75 meter),** dan bergerak beberapa kilometer sebelum lenyap.
- Manakala sesetengah puting beliung mempunyai angin selaju 480 kilometer sejam dengan lebar lebih **dari 1.6 kilometer** dan boleh bergerak **melebihi 100 kilometer.**
- Puting beliung terjadi **ketika hujan ribut petir angin kuat** dan mendatangkan banyak kemusnahan kepada apa-apa saja yang disentuhnya.

## BAGAIMANA BENCANA BERLAKU

- Puting beliung boleh terjadi **hasil aktiviti di dalam awan kumulusnimbus** yang besar ketika ribut petir.
- Puting beliung juga boleh **berlaku bersama taufan.**
- Kebanyakan ribut petir berlaku serentak **puting beliung apabila wap panas dari bumi** yang disebabkan oleh **terik matahari naik ke atmosfera** dan membentuk gumpalan awan tebal yang menyebabkan hujan lebat serta tiupan angin kencang terutama di kawasan lapang.
- Sesetengah ribut petir pula menghasilkan angin kencang di dalam awan akibat turun naik udara panas dan sejuk secara serentak serta turun naik **udara panas dan sejuk yang tidak berlaku pada tempat yang sama,** dikenali sebagai fenomena angin ricih.
- Sekiranya angin ricih kencang itu berubah bentuk daripada melintang di dalam awan kepada menegak, angin kencang berbentuk corong akan **terbentuk dan pusaran angin berbentuk corong** itu dikenali sebagai puting beliung.
- Puting beliung dikategori mengikut **Skala Fujita, dari F0 sehingga F5.**
- F0 mempunyai kelajuan angin paling rendah, manakala F5 **mempunyai kelajuan angin paling tinggi.**
- Puting beliung sukar diramal dan hanya dapat diramalkan apabila **titik tekanan rendah di dalam awan kumulusnimbus dikesan** oleh radar Doppler.
- Kebiasaannya penduduk di kawasan yang diramal akan dilanda **puting beliung hanya mempunyai masa yang sangat terhad** untuk pergi ke tempat perlindungan.

## INFO

- **Angin kencang ribut petir yang berputar secara ganas** dari udara dan mencecah daratan. Ini terbentuk apabila angin panas, lembap bertembung dengan udara sejuk dan kering.
- Musim bermula pada awal musim bunga **di kawasan sepanjang Teluk Mexico.**
- Tempoh puting beliung yang turut diiringi ribut taufan, angin kencang dan hujan batu boleh berlanjutan beberapa saat hingga lebih sejam. **Kebanyakannya tidak sampai 10 minit.**
- **Kira-kira 1,300 puting beliung** menyerang Amerika setiap tahun.
- Kebanyakan puting beliung bergerak dari **barat daya ke timur laut, atau barat** ke timur. Sebahagiannya menukar arah atau berpatah balik.
- Satu atau dua hari sebelum, pakar kaji cuaca melihat suhu dan aliran tiupan angin yang boleh menyebabkan kelembapan mencukupi dan **ketidakstabilan untuk menentukan kehadiran puting beliung.**