

**KEMENTERIAN TENAGA, SAINS, TEKNOLOGI, ALAM SEKITAR DAN PERUBAHAN IKLIM**

Bil	Berita	Media	Capaian Berita Penuh
1.	<p><a href="#"><u>Govt developing SMS alert system on tsunami, says Yeo</u></a></p> <p>The Energy, Green Technology, Science, Climate Change and Environment Minister said this is in view of the climate change and geologists' warning that some areas in the country, specifically Tawau off Sabah, could be hit with tsunami.</p>	The Star	Klik pada tajuk berita
2.	<p><a href="#"><u>No decision on coal power plants in Sabah yet, says Yeo</u></a></p> <p>Energy, Green Technology, Science, Climate Change and Environment Minister Yeo Bee Yin (pic) said the power reserve in Sabah is at 32%, which means there is enough supply for now.</p>	The Star	Klik pada tajuk berita
3.	<p><a href="#"><u>Solar power users to get cheaper electricity bills</u></a></p> <p>TWO new policies will be introduced to help domestic and commercial users of solar power to enjoy cheaper electricity bills from Jan 1, 2019, says Energy, Science, Environment and Climate Change Minister Yeo Bee Yin.</p>	The Star	Klik pada tajuk berita
4.	<p><a href="#"><u>Tenaga's slump hits blue chips</u></a></p> <p>Maybank Investment Bank Research said recent quotes from the Minister of Energy, Science, Technology, Environment, and Climate Change Yeo Bee Yin reaffirm its views that the fuel-cost pass-through mechanism remains relevant.</p>	The Star	Klik pada tajuk berita
5.	<p><a href="#"><u>Battle of the bots</u></a></p> <p>The closing ceremony was officiated by Energy, Science, Technology, Environment and Climate Change Ministry deputy secretary-general (science) Associate Professor Dr Ramzah Dambul.</p>	New Straits Times	Rujuk lampiran 1

6.	<p><a href="#"><u>UPM students win top spots at nanotech competition</u></a></p> <p>The prizes were presented by Deputy Energy, Science, Climate Change and Environment (MESTECC) Minister Isnaraissah Munirah Majilis.</p>	New Straits Times	Rujuk lampiran 2
7.	<p><a href="#"><u>UMP pursue green agenda</u></a></p> <p>She said UMP and GreenTech Malaysia were optimistic about the collaboration. Representing GreenTech Malaysia at the ceremony was its chief executive officer, Dr Mohd Azman Zainul Abidin. Present was Deputy Energy, Technology, Science, Climate Change and Environment Minister Isnaraissah Munirah Majilis.</p>	New Straits Times	Rujuk lampiran 3
8.	<p><a href="#"><u>Tsunami alert, location-specific SMS to be upgraded, says minister</u></a></p> <p>The government is studying how to upgrade its tsunami alert plans, including its SMS alert, to target those in the vicinity of the threat, said Energy, Green Technology, Science, Climate Change and Environment Minister Yeo Bee Yin.</p>	Malay Mail	Klik pada tajuk berita
9.	<p><a href="#"><u>Power generation — coal or otherwise — not priority right now for Sabah, says Minister</u></a></p> <p>After criticism for considering coal as an option to solve Sabah's power woes, Energy, Science, Environment and Climate Change Minister Yeo Bee Yin said the government will prioritise strengthening transmission first before dealing with power generation.</p>	Malay Mail	Klik pada tajuk berita
10.	<p><a href="#"><u>Study needed to stop Cameron Highlands landslides, says minister</u></a></p> <p>The government will make a detailed study of the recurring landslides in Cameron Highlands and determine who is responsible, said Energy, Green Technology, Science, Climate Change and Environment Minister Yeo Bee Yin.</p>	Malay Mail	Klik pada tajuk berita
11.	<p><a href="#"><u>Sistem amaran Tsunami menerusi SMS</u></a></p> <p>Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim akan membangunkan sistem khas yang akan berfungsi memberi maklumat awal berkenaan kejadian Tsunami menerusi khidmat pesanan ringkas (SMS), kata Menteri Yeo Bee Yin.</p>	Sinar Harian	Klik pada tajuk berita

12.	<p><b><u><a href="#">Ministry to develop tsunami warning system via SMS</a></u></b></p> <p>The Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) will develop a special system that will provide early information on tsunami via the short messaging service (SMS), said Minister Yeo Bee Yin.</p>	BERNAMA	Klik pada tajuk berita
13.	<p><b><u><a href="#">MGTC inks MoUs with German Agency, Iskandar Halal Park</a></u></b></p> <p>The signing ceremonies were witnessed by Minister of Energy, Science, Technology, Environment and Climate Change, Yeo Bee Yin, at the International Greentech and Eco Products Exhibition and Conference Malaysia (IGEM) 2018 recently.</p>	BERNAMA	Klik pada tajuk berita
14.	<p><b><u><a href="#">Biar mahkamah putuskan - Shafie Apdal</a></u></b></p> <p>Beliau berkata demikian kepada pemberita ketika ditanya berhubung perkara itu pada sidang media di Pusat Pentadbiran Negeri Sabah (PPNS) selepas mendengar taklimat daripada Menteri Tenaga, Teknologi, Sains Perubahan Iklim dan Alam Sekitar (MESTEC), Yeo Bee Yin.</p>	Astro Awani	Klik pada tajuk berita
15.	<p><b><u><a href="#">Tenaga falls to three-month low, among Bursa's top decliners</a></u></b></p> <p>Yesterday, Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin announced that Tenaga would now have to pay solar energy generators the same consumption tariff under the revised net energy metering (NEM) programme.</p>	The Edge Market	Klik pada tajuk berita
16.	<p><b><u><a href="#">Ministry to develop tsunami warning system via SMS</a></u></b></p> <p>The Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) will develop a special system that will provide early information on tsunami via the short messaging service (SMS), said its Minister Yeo Bee Yin.</p>	The Edge Market	Klik pada tajuk berita
17.	<p><b><u><a href="#">Ministry to develop SMS-alert tsunami warning system</a></u></b></p> <p>The Energy, Science, Technology, Environment and Climate Change Ministry is set to develop a special system that will provide early information on tsunamis via SMS, said its minister Yeo Bee Yin.</p>	Malaysia Kini	Klik pada tajuk berita

18.	<p><a href="#"><u>Ministry studying tsunami SMS alert plan</u></a></p> <p>THE Energy, Science, Technology, Climate Change and Environment Ministry is undertaking a study a tsunami SMS alert plan as part of the country's early disaster warning system.</p>	The Malaysian Insight	Klik pada tajuk berita
19.	<p><a href="#"><u>UK plastic waste found in illegal Malaysian dumps after China ban</u></a></p> <p>Environment minister Yeo Bee Yin told Malaysia's parliament: "Plastic waste are varied, some can be recycled, but there is mixed plastic waste that cannot and is usually used by illegal factories.</p>	MRW	Klik pada tajuk berita
20.	<p><a href="#"><u>Plastics from UK homes found in Malaysia's illegal dumps</u></a></p> <p>The environment ministry did not respond to questions from Uearthed, but minister Yeo Bee Yin said in a press conference last week that imports would be tightened further, and the crackdown on illegal operators would continue. "Enforcement and monitoring operations will be continued to ensure illegal factories do not continue their operations," she said.</p>	The Ecologist	Klik pada tajuk berita
21.	<p><a href="#"><u>Coal-fired power plant not a priority in Sabah right now, says minister</u></a></p> <p>A COAL-FIRED plant and other alternative power generation sources will not be the top priority when it comes to resolving Sabah's power woes yet, said Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin said today.</p>	The Malaysian Insight	Klik pada tajuk berita
22.	<p><a href="#"><u>Sabah can expect more stable power supply within 2 years</u></a></p> <p>Speaking after a briefing with Chief Minister Shafie Apdal here today, Energy, Green Technology, Science, Climate Change and Environment Minister Yeo Bee Yin said Sabah is generating enough power supply and has a 32% reserve margin — the same as in the peninsula.</p>	Free Malaysia Today	Klik pada tajuk berita
23.	<p><a href="#"><u>SMS alerts may be used to warn public on tsunamis</u></a></p> <p>Energy, Green Technology, Science, Climate Change and Environment Minister Yeo Bee Yin says her ministry is looking for ways to employ a more effective SMS alert system to warn the public about tsunamis.</p>	Free Malaysia Today	Klik pada tajuk berita

24.	<b><u>Solar Power Users Will Pay Less For Electricity Starting From January 2019</u></b>  Domestic and commercial users of solar power will enjoy cheaper electricity bills starting from 1 January 2019, according to Energy, Science, Environment, and Climate Change Minister Yeo Bee Yin	SAYS	Klik pada tajuk berita
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## TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
25.	<b><u>'Govt should introduce logging, carbon taxes'</u></b>  The government should introduce logging and carbon taxes in the 2019 Budget to be tabled by Prime Minister Tun Dr Mahathir Mohamad on Nov 2.	New Straits Times	Rujuk lampiran 4
26.	<b><u>Tetrix Prime robot terhebat</u></b>  "Robot kami ini ringkas saja, tetapi memiliki kelebihan daripada segi kepantasan hingga mampu mencatat jumlah skor 15 bola dalam tempoh dua minit 30 saat.	Harian Metro	Rujuk lampiran 5
27.	<b><u>Transformasi had pemanasan, impak global</u></b>  Juga pada pertengahan abad ke-21 (2050), tiada lagi peningkatan kepekatan gas rumah hijau di atmosfera, iaitu kadar jumlah pembebasan perlu setara dengan kadar penyerapan gas rumah hijau.	Berita Harian	Rujuk lampiran 6
28.	<b><u>Unwelcome annual affair</u></b>  "The water outside our house was waist-high and we had to move to the shelter for our safety," said Aishah.	The Star	Rujuk lampiran 7

# ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
29.	<p><b><u>Climate change threatens 'Himalayan Viagra'</u></b></p> <p>A prized caterpillar fungus that is more valuable than gold and is nicknamed "Himalayan Viagra" in Asia, where it is seen as a wonder drug, is becoming harder to find due to climate change, researchers said Monday.</p>	Malay Mail	Rujuk lampiran 8
30.	<p><b><u>Acknowledging the risks of new AI technology</u></b></p> <p>In July, two of the world's top artificial intelligence labs unveiled a system that could read lips.</p>	New Straits Times	Rujuk lampiran 9
31.	<p><b><u>Kepingan seramik logam, jana tenaga solar lebih cekap</u></b></p> <p>Kajian terbaharu itu menjadikan penjanaan elektrik daripada matahari lebih cekap dengan menggunakan kepingan seramik dan logam untuk pemindahan haba dalam keadaan suhu serta tekanan tinggi.</p>	Kosmo	Rujuk lampiran 10
32.	<p><b><u>Magnitude 5.7 earthquake shakes Taiwan</u></b></p> <p>A 5.7 magnitude earthquake jolted Taiwan, the US Geological Survey said, and was felt strongly in the capital Taipei.</p>	The Star	Rujuk lampiran 11
33.	<p><b><u>Even our own bodies now contain plastic waste. It's time to get drastic</u></b></p> <p>We are what we eat, and what we eat reveals something about what we are in return. So it shouldn't be all that surprising that humans are now apparently eating plastic, given what we mostly are is thoughtless enough to have littered the planet with the stuff.</p>	The Guardian	Klik pada tajuk berita
34.	<p><b><u>'No questions, no excuses': the squad enforcing Mumbai's ban on plastic</u></b></p> <p>From Starbucks and McDonalds to tiny street food stall owners, no one is exempt from the ban on single use plastic, introduced on 30 June by</p>	The Guardian	Klik pada tajuk berita

	the authorities in the state of Maharashtra and in Mumbai, its capital.		
35.	<p><a href="#"><u>End of 'sunshine tax' raises hopes for green energy in Spain</u></a></p> <p>Seven years ago, Spain was on the way to becoming a world leader in renewable energy, but after the election in late 2011 of a People's party government seen by critics as hostile to the sector, there was little or no progress.</p>	The Financial Times	Klik pada tajuk berita



# LAMPIRAN 1 NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 59 TARIKH: 24 OKTOBER 2018 (RABU)

## Battle of the bots

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**T**HERE were claps and cheers on the ground floor of the National Science Centre in Kuala Lumpur as fans screamed for their favourite teams at the 2018 National Robot Combat competition.

Themed "Resist or Surrender", the mechanical duel was jointly organised by the science centre and My Robots Enterprise.

The arena was packed as 32 teams, comprising 250 students from various higher-learning institutions, pitted their brainchild against each other in a battle of skill, ingenuity and sturdiness.

After the final round of thuds, clashes and explosions, the entry by team Institut Latihan Perindustrian (ILP) Mersing of Johor was the last robot standing.

The first runner-up went to the team from Bukit Mertajam National Youth Skills Training Institute in Penang, followed by Universiti Putra Malaysia as the second runner-up.

The contest also evaluated the aesthetic value of the robots and their functionality (engineering) aspects.

For these, the robot by Batu Pahat Community College in Johor was deemed the "prettiest" after winning the Best Design Award, while the Bukit Mertajam National Youth Skills Training Institute scored dou-

ble victory when they also won the Best Engineering Award.

The 2018 National Robot Combat competition aimed to test the practical knowledge of tertiary students in basic mechatronics and engineering.

They had to use their creativity and innovativeness in building their battlebots, which could spell victory or defeat when facing a competitor.

The closing ceremony was officiated by Energy, Science, Technology, Environment and Climate Change Ministry deputy secretary-general (science) Associate Professor Dr Ramzah Dambul.

He said the competition was a platform to promote interest in robotics, which was a vital technological convergence in the Fourth Industrial Revolution.

"It is important to ensure a continuous succession of experts in science, engineering and technology. They are key drivers of growth for the nation.

"Students must be encouraged to love science if we want to produce more scientists," he said.

Automotive technology instructor Mohd Fahmin Mohamad, a member of the champion team, said he saw the competition as an opportunity to develop his students' skill in building robots.

His team consisted of four lecturers and five students.

"The most challenging part is time investment and the effort we poured into the



Team members of Institut Latihan Perindustrian (ILP) Mersing of Johor with their robot named Todak after the prize presentation ceremony of the 2018 National Robot Combat competition at the National Science Centre in Kuala Lumpur recently.

project despite our busy schedules. We built the robot at night as our days were packed with other commitments.

"A night before the competition, we had to rebuild our robot after it broke. One of the broken parts was the weapon. We stayed up to 1am to fix it."

Their invention, called Todak, is named after a landmark in their hometown.

Mohd Fahmin said they purposely built their robot with only two wheels in front as a strategy to overcome their competitors.

It took them two months to build and programme it, beginning from the drawing board up to the fabrication and installation

of parts.

Fahmin said 80 per cent of the robot was built by the students as the instructors wanted to encourage them with more hands-on experience.

He credited his colleague, Norazizi Mohd Saleh, for teaching the students about the robot's wiring.

Previously, the team had won first place with an 8kg robot at a match in Kuantan, Pahang. This time, they won top spot with a bigger, meaner 45kg robot.

The team members spent RM3,000 to develop their robot for the recent competition, which was good investment since their prize money was RM5,000.



Dr Ramzah Dambul



Mohd Fahmin Mohamad



## LAMPIRAN 2

### NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 57

### TARIKH: 24 OKTOBER 2018 (RABU)



Izwaharyanie Ibrahim (second from left) receiving the top prize under the PhD category from Deputy Energy, Technology, Science, Climate Change and Environment Minister Isnaraissah Munirah Majilis (second from right).

## UPM students win top spots at nanotech competition

**UNIVERSITI** Putra Malaysia (UPM) post-graduate students dominated the limelight at the National Nanotechnology Innovation Research (PIN) Project Competition 2018 held recently in Technology Park Malaysia, Kuala Lumpur, where they won two of the top three positions in the doctor of philosophy category.

Izwaharyanie Ibrahim won first place for her project titled "Modification of three-dimensional printed electrode with cellulose acetate beads infused with cadmium sulfide nanoparticles and graphene for dual-functional photo electrochemical sensor-adsorbent of copper (II) ions".

She received RM1,500, a trophy and certificate.

Shafarina Azlinda Ahmad Kamal won third place in the same category, receiving RM500, a trophy and certificate.

Her project was titled "Graphene-conductive inks as a disposable carbon dioxide gas sensor".

PhD student Mohd Amirul Syafiq Mohd Yunos received the consolation prize for his project, taking home RM100 and a certificate.

In the Masters category, Farah Najwa Nabila Mohd Hatta received the consolation prize of RM100 and a certificate for her research.

The prizes were presented by Deputy Energy, Technology, Science, Climate Change and Environment (MESTECC) Minister Isnaraissah Munirah Majilis.

PIN 2018 was organised by the National Nanotechnology Centre under the auspices of MESTECC. It aims to provide opportunities for students to highlight their ideas and contribute towards the development of nanotechnology.

**LAMPIRAN 3**  
**NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 57**  
**TARIKH: 24 OKTOBER 2018 (RABU)**

# UMP pursues green agenda

**U**NIVERSITI Malaysia Pahang (UMP) will work with the Malaysian Green Technology Corporation [Greentech Malaysia] to promote research cooperation efforts in green technology policy, management and Industry 4.0.

This comes after the signing of a memorandum of understanding between the two at the International Greentech and Eco Products Exhibition and Conference Malaysia in Kuala Lumpur last week.

GreenTech Malaysia is an agency under the purview of the Energy, Technology, Science, Climate Change and Environment Ministry tasked with spearheading green growth and sustainability in line with the Green Technology Master Plan.

The collaboration between UMP and GreenTech Malaysia will boost research in green technology and eco-products for commercialisation.

"UMP is committed to strengthening its research capacity through constructive and impactful collaborations with strategic partners locally and globally.

"Such collaborations are not only vital to UMP's strategic positioning, but also significant in accomplishing the university's mission to become a constructive partner for socio-economic development through research," said UMP deputy vice-chancellor [Research & Innovation]



*The signatories, Mashitah Mohd Yusoff (left) and Mohd Azman Zainul Abidin (right). With them is Isnaraissah Munirah Majilis.*

Professor Datuk Dr Mashitah Mohd Yusoff.

"That commitment is reflected in UMP's 2016-2020 Strategic Plan, which emphasises the 'Communitising Tech-

nology' agenda."

She said UMP and GreenTech Malaysia were optimistic about the collaboration. Representing GreenTech Malaysia at the ceremony was its chief executive

officer, Dr Mohd Azman Zainul Abidin. Present was Deputy Energy, Technology, Science, Climate Change and Environment Minister Isnaraissah Munirah Majilis.



**LAMPIRAN 4**  
**NEW STRAITS TIMES (NATION/ NEWS): MUKA SURAT 75**  
**TARIKH: 24 OKTOBER 2018 (RABU)**

**SUGGESTIONS**

# 'GOVT SHOULD INTRODUCE LOGGING, CARBON TAXES'

NGO says they can serve as new sources of income for govt, protect environment

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*Puan Sri Shariffa  
Sabrina Syed Akil*

**T**HE government should introduce logging and carbon taxes in the 2019 Budget to be tabled by Prime Minister Tun Dr Mahathir Mohamad on Nov 2.

Association for the Protection of the Natural Heritage of Malaysia (Peka) president Puan Sri Shariffa Sabrina Syed Akil said the two taxes would serve a dual purpose — acting as new sources of income for the government, as well as protection for the environment.

She said a logging tax could serve to control rampant graft, which was said to surround the industry, as logging companies would have to declare the number of logs and the areas in which trees were felled, making it easier for the authorities to monitor their activities.

"At present, state governments don't receive much from logging activities. On the contrary, certain logging companies are making huge profits. This should not be. Rampant and uncontrolled logging has led to environmental problems and disasters, such as floods and landslides, which destroy infrastructure and cause the government to spend money to repair the damage.

"As such, the government needs to introduce a logging tax

based on the tonnage of trees felled so that the activity can be controlled, with the long-term aim of having a 20-year moratorium on logging in areas which have been cleared so that they can be rehabilitated."

Shariffa Sabrina said a carbon tax should be introduced to ensure the industrial sector shared the responsibility in reducing the amount of greenhouse gases released by factories by employing environmental-friendly technologies.

"The government can take a leaf from Singapore and place a tax of between RM10 and RM15 for each tonne of greenhouse gas released by factories."

Another suggestion Peka has for the budget is the provision of incentives to state governments, that re-gazette logging areas to eco-tourism, which could generate profits in the long term.

She proposed the government set aside an allocation to rehabilitate areas, affected by bauxite pollution, as well as a reduction in taxes for electric and hybrid vehicles.





# LAMPIRAN 5 HARIAN METRO (SETEMPAT): MUKA SURAT 63 TARIKH: 24 OKTOBER 2018 (RABU)



PASUKAN Kolej Vokasional Kuantan mengharumkan nama negara apabila meraih emas dalam International Robotics Contest 2018 di Seoul, Korea Selatan.

■ Ciptaan pelajar Kolej Vokasional Kuantan juara antarabangsa

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**K**epantasan robot dinamakan *Tetrix Prime* milik pasukan Malaysia menjanginkan bola tenis dengan skor terbanyak dalam tempoh singkat mencuri tumpuan juri pada *International Robotics Contest (IRC) 2018* di Seoul, Korea Selatan.

Robot dikendalikan pasukan mewakili Kolej Vokasional Kuantan, Pahang itu mengharumkan nama Malaysia apabila meraih emas selepas mengetepikan 24 pesaing lain bagi kategori sekolah menengah atas daripada lima negara.

Selain Malaysia, negara lain yang mengambil bahagian dalam pertandingan

## Tetrix Prime robot terhebat



MUHAMMAD Norikhwan (tengah) dan rakan sepasukan bersama robot ciptaan mereka.

berlangsung dari 11 hingga 13 Oktober lalu adalah Korea Selatan, Jepun, Indonesia dan Filipina.

Ketua Pasukan, Muhammad Norikhwan Mohd Mazlan, 19, berkata, dia bersama dua rakan, Ahmad

Amirun Aiman Ahmad Fauzi dan Ahmad Nasharudin Kamal Zaim masing-masing berusia 19 tahun mengambil masa tiga minggu untuk membina robot berkenaan.

"Kami mendapat pendedahan dan tunjuk ajar awal me-

ngenai teknologi pembuatan robot daripada *World of Robotics Sdn Bhd*, selain menjadikan YouTube sebagai rujukan.

"Kebetulan kami mengambil kursus elektronik, jadi kami apa dipelajari dalam kelas amat membantu dalam

proses membina robot khusus membabitkan aspek *programming* (pengaturcaraan)," katanya.

Menurutnya, mereka menggunakan mikropemproses arduino untuk mengaktifkan dan mengawal pergerakan robot berkenaan.

"Robot kami ini ringkas saja, tetapi memiliki kelebihan daripada segi kepantasan hingga mampu mencatat jumlah skor 15 bola dalam tempoh dua minit 30 saat.

"Tak sangka boleh menang kerana pada pusingan separuh akhir kami berdepan masalah iaitu motor robot kami rosak. Mujur kami dapat motor gantian dipinjam daripada pasukan lain juga dari Malaysia.

"Alhamdulillah mungkin sudah rezeki, akhirnya tuah berpihak kepada kami selepas diumumkan juara dalam kategori disertai," katanya.

Katanya, kejayaan itu adalah kali kedua diraih dan se-

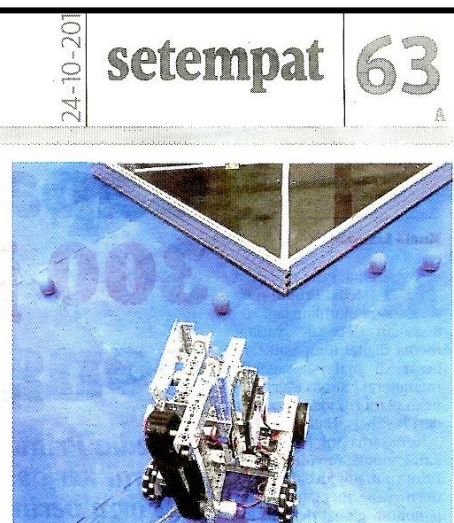
belum ini mereka mengalahkan 60 pasukan lain pada peringkat kebangsaan dalam *World of Robotics Championship (WRC) 2018* berlangsung di ibu negara April lalu.

Sementara itu, Pengarah Urusan *World of Robotics Sdn Bhd* Lee Yew Kein berkata, ketujuh-tujuh pasukan yang mewakili negara itu

mempamerkan prestasi membanggakan biarpun ini adalah tahun pertama penyertaan Malaysia.

"Pasukan terpilih ini, menerima latihan intensif daripada kami selama tiga bulan selepas mereka menunjukkan kecemerlangan dalam pertandingan WRC April lalu," katanya.

Turut mengharumkan nama Malaysia ialah pasukan dari tiga sekolah yang bertanding bagi kategori sekolah menengah apabila meraih emas serta gangsa disumbangkan pasukan Kolej Vokasional Keningau, Sabah (kategori sekolah menengah atas).



ROBOT yang meraih pingat emas pada International Robotics Contest 2018 di Seoul.

**FAKTA**  
Ambil masa tiga minggu untuk membina robot Tetrix Prime



**LAMPIRAN 6**  
**BERITA HARIAN (MUKA SEPULUH): MUKA SURAT 10**  
**TARIKH: 24 OKTOBER 2018 (RABU)**

# Transformasi had pemanasan, impak global



**Dari Kaca Mata**  
**Prof Dr Fredolin Tangang**  
Profesor Klimatologi dan Oseanografi & Pengerusi  
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**A**wal bulan ini, Panel Perubahan Iklim Pertubuhan Bangsa-Bangsa Bersatu (PBB) atau IPCC telah mengeluarkan Laporan Khas 1.5 Darjah Celsius (SR1.5) sempena Mesyuarat IPCC Sesi ke-48 yang berlangsung di Incheon, Korea Selatan.

Atas permintaan Konvensyen Rangka Kerja PBB Mengenai Perubahan Iklim (UNFCCC), laporan khas itu menyediakan penilaian saintifik terhadap penghadapan kenaikan suhu pada aras 1.5 darjah Celsius di bawah suhu sebelum era perindustrian di Eropah, berbanding dengan 2 darjah Celsius seperti yang terkandung dalam Perjanjian Paris yang diwujudkan sempena Persidangan COP21 di Paris pada Disember 2015.

Asas saintifik pemilihan 2 darjah Celsius dalam Perjanjian ini ialah Laporan Penilai Perubahan Iklim ke-5 IPCC (AR5) yang diterbitkan pada 2013-2014. Tiada asas saintifik yang kukuh bagi aras 1.5 darjah Celsius ini pada ketika itu.

Bagaimanapun, atas permintaan Kesatuan Negara-Negara Kepulauan Kecil atau AOSIS, klausa "berusaha ke arah menghad kenaikan suhu di bawah 1.5 darjah Celsius" berjaya dimasukkan dalam perjanjian itu.

Maka Laporan Khas SR1.5 ini menyediakan bukti dan asas saintifik mengapa pemanasan global perlu dihadkan pada aras 1.5 darjah Celsius berbanding 2.0 darjah Celsius dan bagaimana sasaran ini boleh dicapai.

Laporan SR1.5 ini merumuskan rata-rata terdapat peningkatan besar impak perubahan iklim pada pelbagai sektor jika peningkatan suhu dunia dihadkan pada 2.0 darjah Celsius, berbanding 1.5 darjah Celsius.

Antaranya, penurunan hasil perikanan diunjurkan meningkat dua kali ganda, kesan terhadap ekosistem terumbu karang meningkat 30 peratus, hasil tanaman jagung dunia diunjurkan menurun 2.3 kali ganda, impak kepada biodiversiti dua hingga tiga kali ganda, populasi dunia terdedah kepada gelombang haba ekstrem diunjurkan meningkat 2.6 kali lebih tinggi.

## Impak perubahan iklim

Impak terhadap kesihatan, kehidupan manusia, pengeluaran makanan, sumber air dan pertumbuhan ekonomi diunjurkan meningkat pada 2 darjah Celsius, berbanding 1.5 darjah Celsius.

Secara keseluruhannya, laporan ini menyatakan impak perubahan iklim secara signifikan boleh dikurangkan jika peningkatan suhu global dihadkan pada aras 1.5 darjah Celsius, berbanding 2.0 darjah Celsius.

Laporan ini juga mengesahkan suhu dunia sehingga 2016 meningkat 1.0 darjah Celsius, berbanding suhu era pra-perindustrian Eropah dan ini peningkatan ~ 0.14 darjah Celsius, berbanding suhu dunia pada 2012 yang dilaporkan dalam Laporan Penilaian IPCC Ke-5.

Laporan ini menyatakan kadar pembebasan gas rumah hijau pada ketika ini terlalu tinggi dan jika kadar ini berterusan aras peningkatan 1.5 darjah Celsius diunjurkan akan dicapai pada sekitar 2030 - 2052, dan seterusnya meningkat melangkaui aras ini pada penghujung abad ke-21.

Bagaimana sasaran had peningkatan suhu 1.5 darjah Celsius ini boleh dicapai dan adakah secara praktikalnya ia boleh dicapai mengambil kira komitmen dan senario semasa dunia kini?



Secara keseluruhannya, laporan ini menyatakan impak perubahan iklim secara signifikan boleh dikurangkan jika peningkatan suhu global dihadkan pada aras 1.5 darjah Celsius, berbanding 2.0 darjah Celsius"



**LAMPIRAN 6 (SAMBUNGAN)**  
**BERITA HARIAN (MUKA SEPULUH): MUKA SURAT 11**  
**TARIKH: 24 OKTOBER 2018 (RABU)**

## Runding tatacara kurang pembebasan gas rumah hijau

### ← Dari MUKA SEPULUH

Apakah implikasinya kepada Perjanjian Paris yang lebih menekankan sasaran had 2.0 darjah Celsius, berbanding 1.5 darjah Celsius?

Pada 2016, jumlah pembebasan tahunan gas rumah hijau dunia ialah 52 GtCO<sub>2</sub>e. Di bawah Perjanjian Paris, kadar pembebasan tahunan gas rumah hijau dunia pada 2030 dianggarkan antara 52 - 58 GtCO<sub>2</sub>e.

Walhal menurut laporan SR1.5 ini, untuk mencapai sasaran had 1.5 darjah Celsius, kadar pembebasan tahunan dunia pada 2030 perlu pada tahap 25 - 30 GtCO<sub>2</sub>e, iaitu lebih kurang 50 peratus pengurangan perlu dicapai dalam 12 tahun lagi.

Juga pada pertengahan abad ke-

21 (2050), tiada lagi peningkatan kepekatan gas rumah hijau di atmosfera, iaitu kadar jumlah pembebasan perlu setara dengan kadar penyerapan gas rumah hijau.

#### Implikasi utama

Dua implikasi utama dari Laporan SR1.5 ini. Pertama, komitmen yang dipersetujui dalam kerangka Perjanjian Paris sukar atau tidak akan dapat mengehadkan pemanasan global pada aras 1.5 darjah Celsius.

Ini selaras dengan beberapa artikel saintifik yang diterbitkan sebelum ini yang menganggarkan kebarangkalian untuk dunia berjaya mengekang peningkatan suhu dunia pada 1.5 darjah Celsius hanyalah satu peratus.

Kedua, menurut laporan ini, untuk mencapai sasaran penurunan pembebasan gas rumah hijau

tahunan pada tahap 25 - 30 GtCO<sub>2</sub>e pada 2030, perlu transformasi menyeluruh dan pantas dalam semua sektor termasuk tenaga, guna tanah, perbandaran, infrastruktur (pengangkutan dan bangunan) dan industri.

Skala transformasi ini boleh dianggap belum pernah dilakukan dan terjadi sebelum ini. Ini bermakna, negara perlu merundingkan semula tatacara pengurangan secara drastik ini boleh dicapai, di bawah kerangka Perjanjian Paris dan dilaksanakan dalam masa yang singkat.

Secara teori dan atas kertas, sasaran mengehadkan peningkatan suhu pada aras 1.5 darjah Celsius ini boleh dicapai. Tetapi, secara praktiknya amat sukar.

Transformasi menyeluruh dalam semua sektor untuk mengu-

rangkan kadar pembebasan gas rumah hijau kepada 50 peratus, berbanding kadar sekarang dalam tempoh 11 hingga 12 tahun satu cabaran yang besar kepada dunia.

Kesukaran ini ditambah lagi dengan Amerika Syarikat, negara kedua tertinggi membebaskan gas rumah hijau, kini tidak lagi komited dan dilaporkan akan menarik diri dari Perjanjian Paris.

#### Cuaca ekstrem

Semua negara, termasuk Malaysia perlu menilai semula sama ada komitmen 1.5 darjah Celsius boleh dicapai secara praktiknya.

Dalam masa yang sama, memandang sasaran 1.5 darjah Celsius ini sukar dicapai, negara yang terdedah kepada impak perubahan iklim seharusnya juga menekankan langkah penyesua-

ian, terutama kepada bencana cuaca ekstrem seperti banjir dan kemarau yang dijangka meningkat apabila suhu dunia meningkat melangkaui 1.5 darjah Celsius.

Bencana iklim akan bertambah teruk lagi jika kenaikan suhu berterusan melangkaui 2 darjah Celsius.

Kajian unjuran perubahan iklim di rantau Asia Tenggara yang membabitkan 14 negara dan diketuai oleh penulis mendapati, Malaysia dan Indonesia diunjurkan akan mengalami kemarau pada Jun hingga Oktober jika peningkatan suhu dunia tidak dapat dikekang dan melangkaui 2 darjah Celsius.

Keadaan ini, jika berlaku, akan mendatangkan masalah besar, terutama dalam isu kebakaran hutan dan jerebu.



LAMPIRAN 7  
THE STAR (NEWS): MUKA SURAT 1  
TARIKH: 24 OKTOBER 2018 (RABU)



**Wading through their woes:** Hasrina Erman, 40, drying a mattress and carpet in front of her flooded house in Kampung Lorong Mesra in Changkat Jong. — SAIFUL BAHRI / The Star

# Unwelcome annual affair

Dark skies and heavy rain signal chances of flash floods occurring in Kampung Lorong Mesra, Changkat Jong, near Teluk Intan, Perak, which villagers blame on poor drainage. >2



# LAMPIRAN 7 (SAMBUNGAN) THE STAR (NEWS): MUKA SURAT 2 TARIKH: 24 OKTOBER 2018 (RABU)



A child riding his bicycle through floodwaters at Kampung Lorong Mesra in Changkat Jong.  
— Photos: SAIFUL BAHRI/ TheStar

## Downpour heralds despair

Villagers of Kampung Lorong Mesra in Changkat Jong have shelters to escape to whenever they see signs of impending flash floods

By MANJIT KAUR  
manjit@thestar.com.my

A DOWNPOUR strikes fear among villagers in Kampung Lorong Mesra, Changkat Jong near Teluk Intan as their area is prone to flash floods.

Although they are no experts, they blame the repeated occurrence of flash floods to poor drainage. A dumpsite located close to Sungai Bidor, not far from the village, is also said to contribute to the problem.

Residents said rubbish would accumulate in drains near the oil palm plantation located at the back of their village, and the culverts were not wide enough to accommodate the volume of water during heavy rain.

When there is no escape route, flash floods occur, resulting in huge losses to villagers as their furniture and electrical items get damaged.

Jabar Idris, 62, who has lived in the village for the last 20 years,

said almost every year during the monsoon season, villagers would move to shelters.

He said on a recent Saturday afternoon, water rose to waist-high levels due to continuous rain.

"My wife and I had no choice but to move to a primary school that was converted into a shelter.

"I managed to stack up all the important items before leaving for the shelter, and after three days water was still stagnant at the village," he said when met at his home.

Another villager, Mat Anuar Jusoh, 39, who drives a garbage truck, said each time there was a downpour, his heart would beat faster due to anxiety.

"We live in fear. We know that when it rains heavily, the water level will rise, and we have to be prepared to move to shelters.

"During the recent flash flood, I could not save my washing machine," he added.

Mat Anuar's house, which is

located in a low-lying area in the village, was badly affected by the flash flood. Children who are unaware of the dangers are often seen playing in the muddy water.

Housewife Suraini Mat Imran, 33, said when water levels started to rise in the afternoon, she did not take any chances, but left for the shelter.

"I rang my husband who was at work and told him about my plans to take our three children there.

"Usually I will tell him to stack up wood around our house but this time I did not want to risk it with a baby in the house," she said, adding that flash floods was an annual affair at the village.

Seventy-five-year-old Aishah Kasin, who lives with her daughter, said due to her age it was difficult to move out of the house quickly.

"My kitchen got flooded as it is situated on lower ground but we managed to keep the rest of the important items safely on higher ground.



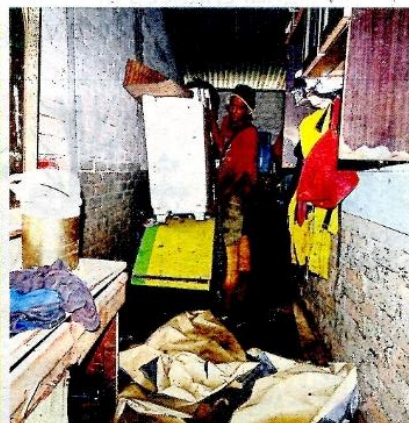
Jabar says villagers seek shelter when their village is hit by flash floods.

"The water outside our house was waist-high and we had to move to the shelter for our safety," said Aishah.

While the flash floods caused much inconvenience, it is dealing with the aftermath that villagers dread most as the clean-up work is a nightmare.



Some houses at Kampung Lorong Mesra in Changkat Jong, Teluk Intan, have to deal with flash floods every year.



Mat Anuar placing his washing machine on a table to prevent floodwaters from destroying it.



**LAMPIRAN 8**  
**MALAY MAIL (WORLD): MUKA SURAT 18**  
**TARIKH: 24 OKTOBER 2018 (RABU)**

## Climate change threatens 'Himalayan Viagra'

**WASHINGTON** — A prized caterpillar fungus that is more valuable than gold and is nicknamed "Himalayan Viagra" in Asia, where it is seen as a wonder drug, is becoming harder to find due to climate change, researchers said.

People in China and Nepal have been killed in clashes over the years over the elusive fungus "yarchagumba", known formally as *Ophiocordyceps sinensis*.

Although it has no scientifically proven benefits, people who boil yarchagumba in water to make tea or add it to soups and stews believe it cures everything from impotence to cancer.

It is "one of the world's most valuable biological commodities, providing a crucial source of income for hundreds of thousands of collectors", said the report in the *Proceedings of the National Academy of Sciences*, a peer-reviewed US journal.

In recent decades, the fungus has skyrocketed in popularity, and prices have soared — it can fetch up to three times the price of gold in Beijing,

researchers say.

While many have suspected over-harvesting was the reason for its scarcity, researchers wanted to find out more.

So they interviewed about four dozen harvesters, collectors and traders of the prized fungus.

They also examined previously published scientific literature, including interviews with more than 800 people in Nepal, Bhutan, India and China, in order to understand its apparent decline.

Weather patterns, geographic factors and environmental conditions were also analysed to create a map of yarchagumba production in the region.

"Using data spanning nearly two decades and four countries, (we) revealed that caterpillar fungus production is declining throughout much of its range," said the report.

The finding "is important because it calls attention to how highly valuable species, like caterpillar fungus, are susceptible not only to over-harvesting, as is often the focus, but also to climate

change", lead study author Kelly Hopping said.

The cone-shaped fungus is only found above an elevation of 3,000m, and forms when the parasitic fungus lodges itself in a caterpillar, slowly killing it.

To grow, it needs a specific climate with winter temperatures below freezing but where the soil is not permanently frozen.

The warming trend has particularly affected Bhutan, with average winter temperatures "increasing by 3.5 to 4°C across most of its predicted habitat (+1.1°C per decade, on average)", said the study.

Researchers have previously found that vegetation on the Tibetan plateau "did not shift upward in response to climate warming from 2000 to 2014", suggesting the caterpillar fungus will be unable to simply move up the mountain to colder habitats as the climate warms.

This spells trouble for harvesters who sell the fungus in order to survive, according to Hopping.— AFP



**LAMPIRAN 9**  
**NEW STRAITS TIMES (OPINION): MUKA SURAT 15**  
**TARIKH: 24 OKTOBER 2018 (RABU)**

ARTIFICIAL INTELLIGENCE

# ACKNOWLEDGING THE RISKS OF NEW AI TECHNOLOGY

The technology has its downsides, and scientists should explain how it could affect society in negative ways as well as positive, writes **CADE METZ**

**I**N July, two of the world's top artificial intelligence labs unveiled a system that could read lips.

Designed by researchers from Google Brain and DeepMind — the two big-name labs owned by Google's parent company, Alphabet — the automated setup could at times outperform professional lip readers. When reading lips in videos gathered by the researchers, it identified the wrong word about 40 per cent of the time, while the professionals missed about 86 per cent.

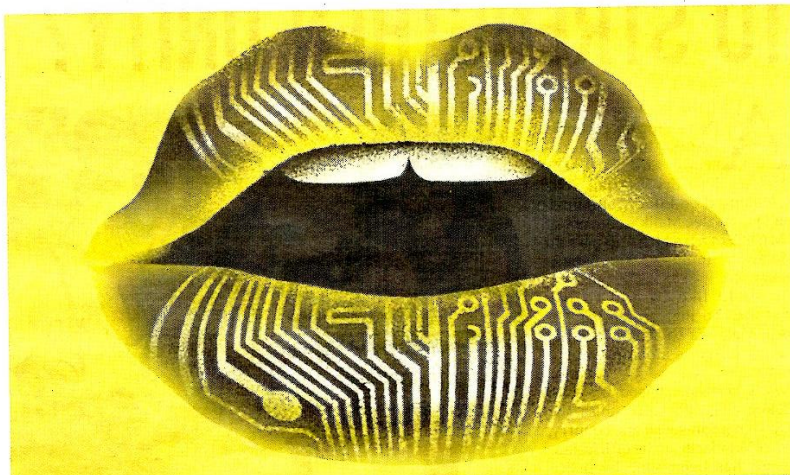
In a paper that explained the technology, the researchers described it as a way of helping people with speech impairments. In theory, they said, it could allow people to communicate just by moving their lips.

But the researchers did not discuss the other possibility: better surveillance.

A lip-reading system is what policymakers call a "dual-use technology", and it reflects many new technologies emerging from top AI labs. Systems that automatically generate video could improve moviemaking — or feed the creation of fake news. A self-flying drone could capture video at a football game — or kill on the battlefield.

Now, a group of 46 academics and other researchers, called the Future of Computing Academy, is urging the research community to rethink the way it shares new technology. When publishing new research, they say, scientists should explain how it could affect society in negative ways as well as positive.

"The computer industry can become like the oil and tobacco industries, where we are just



A group of 46 academics and researchers, called the Future of Computing Academy, is urging the research community to rethink the way it shares new technology. NYT PIC

building the next thing, doing what our bosses tell us to do, not thinking about the implications," said Brent Hecht, a Northwestern University professor who leads the group. "Or we can be the generation that starts to think more broadly."

When publishing new work, researchers rarely discuss the negative effects. This is partly because they want to put their work in a positive light — and partly because they are more concerned with building the technology than with using it.

As many of the leading AI researchers move into corporate labs like Google Brain and DeepMind, lured by large salaries and stock options, they must also obey the demands of their employers. Public companies, particularly consumer giants like Google, rarely discuss the potential downsides of their work.

Hecht and his colleagues are calling on peer-reviewed journals to reject papers that do not explore those downsides. Even during this rare moment of self-reflection in the tech industry, the proposal may be a hard sell. Many researchers, worried that reviewers will reject papers because of the downsides, balk at the idea.

Still, a growing number of researchers are trying to reveal the

potential dangers of AI. In February, a group of prominent researchers and policymakers from the United States and Britain published a paper dedicated to the malicious uses of AI. Others are building technologies as a way of showing how AI can go wrong.

And, with more dangerous technologies, the AI community may have to reconsider its commitment to open research. Some things, the argument goes, are best kept behind closed doors.

Matt Groh, a researcher at the MIT Media Lab, recently built a system called Deep Angel, which can remove people and objects from photos. A computer science experiment that doubles as a philosophical question, it is meant to spark conversation around the role of AI in the age of fake news. "We are well aware of how impactful fake news can be," Groh said. "Now, the question is: How do we deal with that?"

If machines can generate believable photos and videos, we may have to change the way we view what winds up on the Internet.

Can Google's lip-reading system help with surveillance? Maybe not today. While "training" their system, the researchers used videos that cap-

tured faces head-on and close-up. Images from overhead street cameras "are in no way sufficient for lip-reading," said Joon Son Chung, a researcher at the University of Oxford.

In a statement, a Google spokesman said much the same, before pointing out that the company's "AI principles" stated that it would not design or share technology that could be used for surveillance "violating internationally accepted norms".

But cameras are getting better and smaller and cheaper, and researchers are constantly refining the AI techniques that drive these lip-reading systems. Google's paper is just another in a long line of recent advances. Chinese researchers just unveiled a project that aims to use similar techniques to read lips "in the wild", accommodating varying lighting conditions and image quality.

Stavros Petridis, a research fellow at Imperial College London, acknowledged that this kind of technology could eventually be used for surveillance, even with smartphone cameras. "It is inevitable," he said. "Today, no matter what you build, there are good applications and bad applications." **NYT**

... a growing number of researchers are trying to reveal the potential dangers of AI. In February, a group of prominent researchers and policymakers from the United States and Britain published a paper dedicated to the malicious uses of AI.



LAMPIRAN 10  
KOSMO (INFINITI): MUKA SURAT 36  
TARIKH: 24 OKTOBER 2018 (RABU)

# Kepingan seramik logam, jana tenaga solar lebih cekap

**K**UASA solar menyumbang dua peratus daripada tenaga elektrik di Amerika Syarikat (AS). Namun, ia tidak dapat membantu mengurangkan kos penjanaan elektrik dan penyimpanan tenaga bagi kegunaan dalam keadaan cuaca mendung serta waktu malam.

Pasukan penyelidik dari Universiti Purdue, Amerika Syarikat membangunkan bahan baharu dan proses pembuatan ke arah penggunaan tenaga solar sebagai tenaga haba agar lebih efisien dalam menjana elektrik.

Inovasi itu merupakan satu langkah penting untuk meletakkan penjanaan haba solar kepada elektrik dalam persaingan kepada bahan api fosil yang menghasilkan lebih 60 peratus tenaga elektrik di AS.

Kajian terbaharu itu menjadikan penjanaan elektrik daripada matahari lebih cekap dengan menggunakan kepingan seramik dan logam untuk pemindahan haba dalam keadaan suhu serta tekanan tinggi.

“Kos menyimpan tenaga solar lebih murah berbanding tenaga yang diperoleh daripada



**KEPINGAN** seramik logam digunakan untuk pemindahan haba dalam keadaan suhu serta tekanan tinggi.

bateri.

“Oleh itu, kami mencari cara terbaik untuk mengurangkan kos elektrik dengan menjana tenaga daripada pemanasan matahari. Kadar pelepasan rumah hijau juga sifar,” ujar Profesor Kejuruteraan Bahan,

Universiti Purdue, Kenneth Sandhage.

Universiti itu melakukan penyelidikan tersebut dengan kerjasama Institut Teknologi Georgia, Universiti Wisconsin-Madison dan Makmal Kebangsaan Oak Ridge.



LAMPIRAN 11  
THE STAR (WORLD): MUKA SURAT 22  
TARIKH: 24 OKTOBER 2018 (RABU)

# Magnitude 5.7 earthquake shakes Taiwan

**TAIPEI:** A 5.7-magnitude earthquake jolted Taiwan, the US Geological Survey said, and was felt strongly in the capital Taipei.

The quake struck around 104km off the coast of the port city of Hualien, in the east of the island, at a depth of 34km at 12.34pm.

There were no immediate reports of casualties or damage.

Taiwan's weather bureau measured the quake at 6.0-magnitude.

Local media said the quake had been felt all over the island.

Hualien was hit by a 6.4-magnitude earthquake in February this year which killed 17 people.

Taiwan lies near the junction of two tectonic plates and is regularly hit by earthquakes.

The island's worst tremor in recent decades was a 7.6-magnitude quake in September 1999 that killed around 2,400 people. — AFP