

# Surviving climate change in Borneo

ONE thing that grabbed my attention during our recent trip to National Science Centre in early January was a map (see figure) that illustrated the expected sea level rise by 2100 projected by National Hydraulic Research Institute (Nahrin).

It shows that for Malaysia, the east coast of Sabah – from Kudat to Tawau – will be the area that experiences the highest sea level rise, ranging between 0.4 to 1.1 metres with an average of about 0.5 metres. Especially, the south-eastern area bordering North Kalimantan has some of the darkest red dots.

Three weeks later, I was in Tawau. The city is surrounded by the Sulu Sea to the east and the Celebes Sea to the south. Established in the 1890s by the British, it was destroyed during World War 2 but was later rebuilt. According to the Census 2020 report, the urban area is now home to nearly 290,000 inhabitants. However, outside the city, the population is relatively small with only about 84,000 people scattered throughout the district.

Most areas in the district are planted with oil palm, except the city and the Tawau Hills Park. As a border district, Tawau serves as the gateway to Kalimantan, with international ferry services connecting it to Nunukan of North Kalimantan.

The downtown area facing Cowie Bay may be particularly vulnerable to the rise in sea level. Physical infrastructure such as buildings, ports, roads, sewage discharge facilities, power lines, and others could suffer damage from seawater intrusion or even be inundated.

The coastal region is also home to many Tawau residents, with numerous 'water villages' consisting of houses built

on seawater lining up from east to west. These residents are among the most affected if the water level continues to increase. By the end of the century, large swaths of low-lying land could also be engulfed by the sea.

The effects of sea-level rise resulting from climate change are not limited to artificial borders and are expected to impact the Indonesian counterparts as well. From Tawau to Nunukan, large tracts of mangrove forests can be found along the coast. Coastal erosion due to the changes in currents and waves will bring devastating impacts on coastal ecosystems. In addition to physical alterations, salt contamination of freshwater aquifers by seawater intrusions may also greatly damage flora and fauna, destroying habitats for both lives on land and below water. Changes in soil and water properties can be harmful to agriculture, causing cropland degradation and reducing productivity.

However, the threat of climate change to Borneo can be insidious. Unlike its northern neighbour, i.e., the Philippines, Borneo is fortunate to stay outside the general range of cyclones. However, the increasing frequency and severity of flood events across the island have reminded people about the potential impacts of climate change and sea level rise. There were numerous reports of flash floods across Borneo in 2022, with unusually heavy rainfalls cited as a main cause.

To make things worse, land cover changes considerably exacerbate the flood risks. By mapping flood events across Kalimantan, a group of researchers, J. A. Wells and the team in their paper published in

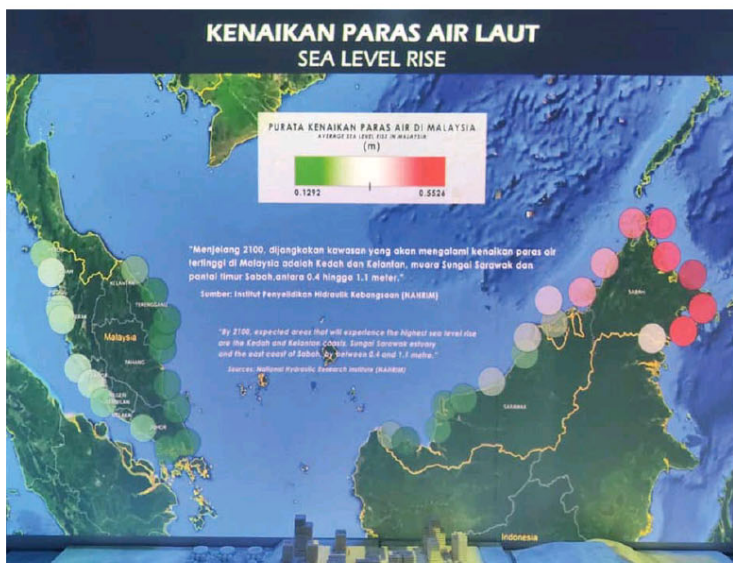


2016 found that flood frequency was associated with land use activities like logging and mining. In contrast, the villages in more forested watersheds were found to have a lesser flood risk.

Things can also go the other way – droughts and fires. Droughts in Borneo have become more intense in the past decades. The uncontrolled fire events were made worse, becoming much larger and longer due to El Niño-Southern Oscillation. The most recent massive fire event occurred in 2015, mainly in Central Kalimantan, causing enormous economic loss up to billions of US dollars.

In the event of a worst-case scenario, the inhabitants of the central area of Borneo may need to brace themselves for a temperature increase of approximately 4 degrees Celsius by the conclusion of the 21st century. This elevated temperature could have severe consequences for public health, including heat waves that may endanger vulnerable populations such as the elderly and young children. Additionally, the risk of fire could be exacerbated by the rise in temperature.

Several solutions have been proposed to combat climate change. Some coastal cities have opted for adaptation measures, such as constructing seawalls, re-planning roads, and



planting mangroves, in order to enhance their resilience to environmental changes.

Meanwhile, countries have implemented a variety of energy and industrial policies to mitigate climate change and reduce emissions. However, many of these approaches face challenges due to their high costs and people's reluctance to alter their lifestyles and behaviors.

One potential area where Borneo can make a significant contribution is by reducing and preventing greenhouse gas emissions through its abundant natural capital.

Borneo plays a major role in global emission dynamics due to its substantial terrestrial carbon stocks. Proper and

sustainable management of land use activities, particularly agricultural expansion and mining, will be an immediate priority for Borneo in tackling climate change.

The urgency of the climate crisis presents an opportunity to bring together various stakeholders to achieve a sustainable transformation of Borneo's economy, which is currently heavily reliant on primary resource extraction. However, attaining this objective requires clear and concise vision from decision-makers.

"We will certainly find solutions to these problems." I was surprised by my 7-year-old's optimism. "How?" My big ask.

"Don't know, but we will when we run the world."

While the early 21st century was marked by great innovation and exciting developments, it was also a time of global chaos and widespread anxiety. As I stared out of my hotel room window, the disturbing scenes from Netflix shows – destruction, pollution, and conflict – flashed through my mind.

I hope that the world we leave behind for the next generation is not too bleak.

Dr Goh Chun Sheng is a researcher at Sunway University and Harvard University. He is interested in exploring sustainable development in both Malaysian and Indonesian Borneo.



Dennis strikes the gong to symbolically officiate at the DKTU triennial general meeting.

## Establish new wing for youths, association told

MIRI: Telang Usan assemblyman Dennis Ngau has suggested Telang Usan Kayan Women Association or Doh Kayan Telang Usan (DKTU) create a new wing for its youths.

He said the new wing is for the association to involve the youths to groom them as future leaders.

"I would like to suggest for you all to look into creating a new wing for those under 18 or 21 years of age."

"I believe DKTU provides a good training ground to groom our youths by providing them with opportunities to work together with the seniors in

Dennis said this in his speech while officiating the DKTU triennial general meeting here Saturday.

At the same time, he urged DKTU members to use the association as a platform to enhance economic growth through the involvement in various activities which includes producing and selling of foods and traditional handicrafts.

"Nowadays, it is very easy – you can promote and sell your products online via your smartphones."

"I hope that you all will use this platform to market your products and from the state government side – we will

(STB) chairman also disclosed that its board is planning to set up either a pavilion or a designated area behind its Visitors Information Centre here for local communities to sell their products.

"I hope DKTU members will seize the opportunity to sell products such as handicrafts or ethnic foods of high value at the pavilion in times to come."

"We want this association to move forward alongside other ethnic communities in the future, and this is possible with the members' hard work and commitment in carrying out their duties," he added.

Also present was the

## Kit Siang: No race or religion under threat in Malaysia

KUALA LUMPUR: DAP veteran Lim Kit Siang yesterday said that no race or religion in Malaysia is under threat.

In a statement, he also said there is no 'green wave' coming as there are signs which point towards this. The 'green wave' is referred to parliamentary gains made by Islamic Party (PAS). It won the most number of seats among all parties during the 15th general election.

"Selangor Menteri Besar Datuk Seri Amirudin Shari is right."

"The state polls in July or August will be a litmus test for the federal government not only in Selangor but in the other five states which will also have their state polls – Penang, Negeri Sembilan, Kedah, Kelantan, and Terengganu."

"They in fact represent six steps to show that there is no 'green wave' in Malaysia," Lim said.

The six steps he referred to are: Prime Minister Datuk Seri Anwar

Ibrahim's unity government performing better in Penang in the state polls compared to the 2018 state general election; retaining its state government in Selangor; retaining its state government in Negeri Sembilan; winning more than three seats in Kedah state polls; winning one or more state assembly seats in the Kelantan state polls; and winning one or more state assembly seats in the Terengganu state polls.

"The Anwar unity government election strategists should bear in mind what the defeated Pakatan Harapan (PH) candidate in Padang Serai by-election after the 15th General Election said as the cause of his defeat."

"The PH candidate, Mohamad Sofee Razak said Perikatan leaders used racial and religious issues to poison the minds of Undi18 voters as they are innocent and believed the lies of PN leaders that there is a threat to the Malays and Islam in the country."

"There must be an effective

counter-strategy to these racial and religious lies and falsehoods in the state polls in the six states, as at stake is not only the survival of the Anwar unity government, but the future of Malaysia as to whether Malaysia can reset and return to the original nation-building principles the nation's founding fathers (which include the first four Umno presidents) to again become a successful world-class nation and avoid the fate of a divided, failed, and kleptocratic state," Lim added.

He said Malaysia must show the world the way to democracy, and good governance in the fight against corruption, as well as the achievement of inter-racial, inter-religious, inter-cultural, and inter-civilisational understanding, harmony, and peace.

"We want Malaysians, regardless of race or religion, to be great on the world stage, and not to be a divided, failed, and kleptocratic state," he said. — Malay Mail

## Anwar's visit to Saudi Arabia fruitful, says pol sec

KUALA LUMPUR: The Saudi Arabian government had asked Prime Minister Datuk Seri Anwar Ibrahim to extend the period of his recent official visit to the kingdom in order to arrange meetings between him and Saudi leaders, Anwar's political secretary Ahmad Farhan Fauzi said yesterday.

He said Anwar, however, had

di-Pertuan Agong Al-Sultan Abdullah Ri'ayatuddin Al-Mustafa Billah Shah and Raja Permaisuri Agong Tunku Azizah Aminah Maimunah Iskandariah. Besides, Ahmad Farhan said the prime minister is also scheduled to make a one-day official visit to Cambodia today and then, beginning Wednesday, to China where he is scheduled

expressed by quarters with vested interests that are deliberately politicising the recent visit of the prime minister to Saudi Arabia.

"I urge those people who are bankrupt of issues to cease this polemic and together support the efforts of the unity government to strengthen Malaysia's image, as well as



leadership roles to better secure the community's future," he said.

continue to provide necessary assistance," said Dennis. The Sarawak Tourism Board

association's chairperson cum Kayan paramount chief Temenggong Elizabeth Deng.

to politely decline the request because of the scheduled breaking of fast with the Yang

to meet President Xi Jinping and Premier Li Qiang. "I am aware of the views

consolidate foreign relations and cooperation," he said in a statement. — Bernama

## Academic: Death penalty still relevant, should be retained for serious crimes

**KUCHING:** An academician believes the government should consider retaining the death penalty for serious and heinous crimes.

Universiti Sains Islam Malaysia Faculty of Syariah and Law associate professor Dr Muzaffar Syah Mallow said the death penalty is still relevant and needed to deter crimes such as terrorism, drug trafficking and

murder.

"The government should consider the implication over the commission of serious and heinous crimes to the victims, their family and the society. There should not be any compromise on subjecting criminals to punishment," he said in a statement yesterday.

He was commenting on the statement last week by Minister in

the Prime Minister's Department (Law and Institutional Reform) Datuk Seri Azalina Othman, that the Cabinet had agreed to several new policies related to efforts to abolish the mandatory death penalty.

The minister said the new policies include replacing life imprisonment as an alternative to the death sentence, with the new alternative of jail of between

30 and 40 years and whipping of not fewer than 12 strokes.

Muzaffar opined that there was concern that without capital punishment like the death penalty, society could witness more serious crimes being committed which would see more innocent people fall prey.

"There are pros and cons over the proposal to abolish the death penalty. It has been argued that

the death penalty is an important tool for upholding law and order within the society as well as to deter crime.

"Those who oppose capital punishment believe such penalty has no deterrent effect on crime, and that it is morally wrong to empower governments to take human lives. This group believes a life sentence is a more severe punishment than the death

penalty," Muzaffar believes before making any final decision on the matter, the government needs to establish a special committee comprising experts like judges and lawyers, academicians, relevant non-governmental organisations (NGOs), and concerned individuals like family members or relatives of those who have fallen victim to heinous crimes.

