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# S'pore researchers studying impact of climate change on Asean's agriculture sector

## They are working with other countries in the region to better manage climate risks

Chin Hui Shan

Researchers from Singapore are working with other Asean countries to study the impact of climate change on the region's agriculture sector, said Minister for Sustainability and the Environment Grace Fu on May 28.

The study by the NUS Tropical Marine Science Institute will help countries better manage climate risks, so that the region can plan its responses to climate change impacts on crop production at national and local levels, she added.

The study, which was started in 2024, is expected to be completed in the second quarter of 2026, and will help to boost the region's food security, she said.

Ms Fu was speaking at the Singapore Dialogue on Sustainable World Resources, organised by the Singapore Institute of International Affairs.

The event at One Farrer Hotel gathered policymakers, industry experts and thought leaders to discuss how Asean's agricultural commodities industries can help to tackle emerging sustainability and economic challenges.

In response to queries from The Straits Times, the Ministry of Sustainability and the Environment said Singapore had proposed conducting the study on climate change impacts on South-east Asia's agriculture sector at the 45th Asean Ministers' Meeting on Agriculture and Forestry held in Malaysia in October 2023.

The objective of the study is for Singapore to partner the region in strengthening the resilience of its food production systems, the ministry added.

The study involves applying climate projections by the Centre for Climate Research Singapore to assess the projected physical impacts of climate change on five agriculture crops: maize, rice, cassava, sugar cane and soya bean.

The findings will provide Asean countries, which have been providing data to the researchers, with an analysis of the future impacts of climate change in the region and their potential impact on agriculture production such as yield, productivity and cultivation area.

The study will also propose mitigating measures that Asean nations can take to address the impact of climate change on the five crops.

In her keynote address, Ms Fu also said that the rules-based multilateral system is under pressure, with protectionism rising and trade barriers and supply chain disruptions becoming more frequent. Asean countries can collaborate more to advance the bloc's interest.

"As climate change intensifies amidst these uncertain times, the need for greater Asean cooperation to address the challenges faced by our region is more salient than ever," she said.

The production of agricultural commodities in Asean, which is a large economic driver for the region, is one such area of cooperation.

Asean countries are among the world's largest producers of agricultural commodities such as palm oil and rubber, said Ms Fu, who is also Minister-in-charge of Trade Relations.

The agriculture, forestry and fishing industries collectively contribute to about 10 per cent of Asean's gross domestic product and remain a primary source of jobs for many people across the region, she added.

Singapore is working closely with regional partners to develop climate-resilient crops and sustainable farming practices, Ms Fu said.

For example, Temasek Life Sciences Laboratory has developed climate-resilient rice varieties that are more resistant to droughts and floods.

Extreme weather events such as floods, storms and heatwaves have damaged crops in the region. El Nino events – which bring drought and warmer temperatures to South-east Asia – have led to drought and increased wildfire risk in countries like Indonesia.

In 2023, rice output in Indonesia was reduced due to severe drought, leading to rising prices, requiring increased imports of rice and threatening food security.

Meanwhile, more than 250,000ha of crops, including rice, vegetables and fruit trees, were destroyed across typhoon-hit northern Vietnam when Typhoon Yagi made landfall along Vietnam's east coast in September 2024.

The agricultural sector is affected by climate change, but it is also a contributor of planet-warming emissions.

Citing a UN study, Ms Fu said the various steps of farming, transportation, consumption and disposal of agriculture emit a third of all human-caused greenhouse gas emissions. Sustainable agribusiness and forestry practices are pivotal in climate action and conserving resources, Ms Fu said.

**Sustainability and the Environment Minister Grace Fu with Malaysia's Plantation and Commodities Minister Johari Abdul Ghani at the Dialogue on Sustainable World Resources on May 28.** ST PHOTO: NG SOR LUAN

For example, the risk of deforestation and transboundary haze can be reduced by avoiding unsustainable farming practices, such as burning stubble and slash-and-burn techniques, she added. Such farming practices also contribute to the release of greenhouse gas emissions driving climate change.

Transboundary haze has been a recurring issue in the region.

Ms Fu said countries in the region have taken steps to curb emissions from this sector.

Thailand, Laos and Myanmar, for example, have a joint Clear Sky Strategy 2024-2030, which was launched in October 2024 to address cross-border haze and air pollution affecting South-east Asia.

She noted that Indonesia has also made efforts to reduce deforestation through legislation and continued monitoring, while Malaysia has the Sustainable Palm Oil Certification Scheme to raise sustainability standards in its palm oil industry.

There are also business advantages when it comes to practising sustainable agriculture, Ms Fu said, citing various compliance measures imposed by countries to ensure that agricultural commodities are grown in a sustainable way.

For example, since 2016, the Singapore Government has been buying paper that carries the Singapore Green Label, which assures that suppliers practise sustainable forestry management.

The EU has also announced its plans to introduce regulations on deforestation-free products, requiring firms that want to export to the EU to comply with them, she said. The regulations help ensure that the products its citizens consume do not contribute to deforestation or forest degradation worldwide.

Ms Fu added that sourcing from suppliers that practise sustainable agriculture reduces the risk of supply disruptions caused by environmental events or regulatory changes. It also helps companies reduce reputational risk by ensuring that operations are environmentally responsible, she added.

"Singapore remains committed to supporting sustainable agribusinesses despite not having a significant traditional agriculture industry," she said, adding that the Republic is a finance hub for many agribusinesses and commodity trades in the region and that it is growing its local agri-tech sector.

"Climate change waits for no one. We need to maintain the momentum of climate action in spite of the global headwinds and keep a steady course in achieving the green transition."

chuishan@sph.com.sg

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