



PRESS RELEASE

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NUS launches scenario-modelling facility to accelerate regional cooperation on nature-based carbon projects at COP28

Singapore, [30 November, 2023] — A new scenario-modelling facility that aims to accelerate regional cooperation on nature-based carbon projects across Southeast Asia was launched today at COP28, the United Nations climate change conference, during a panel at the Singapore Pavilion titled 'Beyond Borders: Harnessing greater mitigation opportunities through international cooperation'.

The S\$1 million NUS Decision Theatre was developed by the National University of Singapore's (NUS) Centre for Nature-based Climate Solutions (CNCS), a research centre under the NUS Faculty of Science, in collaboration with ST Engineering's satellite data and geospatial analytics business, ST Engineering Geo-Insights.

Located within the University's Kent Ridge campus, the NUS Decision Theatre allows users to utilise the interactive platform in-person or remotely, to model outcomes from different scenarios to identify strategic collaborations for the establishment of nature-based carbon projects across the 10 countries in Southeast Asia.

For example, users will be able to adjust various parameters - including type of carbon credit, participating countries, carbon price, project duration and so on - to perform on-the-fly calculations of economic potential and co-benefits of establishing a carbon project at a specific site.

This scenario-modelling ability allows groups of users, for example policymakers, investors and carbon project developers, to play out different scenarios, adjust the parameters according to their understanding or predictions of policy and market changes, to jointly identify the optimal strategy to source nature-based carbon credits or establish new projects. This reduces the need for a "wait and see" approach in response to changing conditions, enabling quicker action to protect Southeast Asia's rich natural landscape.

The new NUS Decision Theatre builds on the Carbon Prospecting Dashboard (<http://carbonprospecting.org>), which was first launched by CNCS and ST Engineering Geo-Insights, at COP27 in 2022. Based on data and analysis published in peer-reviewed scientific papers, the Dashboard highlights areas where carbon emissions can be avoided by protecting threatened tropical forests and mangroves, and the potential revenue that can be raised from the sale of carbon credits from such sites.

However, the Dashboard provides only an overview of the economic potential of carbon credits that can be sold from avoided deforestation projects. In reality, due to changing market or policy conditions, these credits may not be available for other countries to purchase to meet their climate targets under the Paris Agreement. There could also be new types of nature-based carbon credits - such as those from High Forest cover Low Deforestation (HFLD) regions - coming online in the future.

REDUCING AMBIGUITY BY OUTLINING THE TYPE AND SHARE OF CARBON CREDITS

One source of uncertainty in the establishment of nature-based carbon projects lies in national policies that would affect the quantity of carbon credits in each country available for international trading. This is because some countries may want to count their forest protection or restoration efforts toward meeting their own climate change targets.

Another uncertainty is the type of carbon credit that can be used to meet national climate targets under the Paris Agreement. Currently, most credits in the global carbon markets are from projects that protect threatened forests. However, discussions are ongoing as to whether such protection credits should continue to be used for meeting national targets, due to concerns over their environmental integrity.

At the same time, there are also discussions about whether credits from non-threatened forests, or High Forest cover Low Deforestation (HFLD) regions, should be allowed for use in meeting national targets. Currently, HFLD credits are not yet tradable in the market, but they are available on the NUS Decision Theatre for users to model future scenarios in which they are.

The NUS Decision Theatre addresses all these uncertainties by mapping out three different carbon credit types – protection, restoration and HFLD credits – and the share of each type of credit from the 10 Southeast Asian countries. The interactive platform allows users to adjust the proportion of nature-based carbon credits that each of the countries allocates for international trade.

This allows for rapid calculations of the size of the region's pool of carbon credits available for trading. It also helps users narrow down locations to source for compliant carbon credits, identify possible sites for establishing carbon projects and calculate their potential return of investment. A greater understanding of these factors could also pave the way for new partnerships across the region.

Professor Koh Lian Pin, Associate Vice President and Chief Sustainability Scientist at NUS, and Director of CNCS, said: "The NUS Decision Theatre will enable stakeholders – such as countries, businesses, and carbon project developers – to come together to work through the different scenarios and trade-offs on how to protect nature in Southeast Asia to meet various goals, whether it be their Nationally Determined Contributions under the Paris Agreement, voluntary net-zero pledges, or other climate goals. Having a platform to model the different scenarios will help to reduce the ambiguity involved in the decision-making process and enhance the effectiveness and efficiency of cross-border carbon credit trading, while also creating new economic opportunities."

For enquiries about the NUS Decision Theatre or to book a demonstration, please contact Mr Sean Ng at ng.sean@nus.edu.sg or email CNCS at cncs@nus.edu.sg.

For media enquiries, please contact:

Mr Naveen K
Partner
East West Public Relations
E-mail: naveenk@eastwestpr.com

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The National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education, research and entrepreneurship, with a focus on Asian perspectives and expertise. We have 16 colleges, faculties and schools across three campuses in Singapore, with more than 40,000 students from 100 countries enriching our vibrant and diverse campus community. We have also established more than 20 NUS Overseas Colleges entrepreneurial hubs around the world.

Our multidisciplinary and real-world approach to education, research and entrepreneurship enables us to work closely with industry, governments and academia to address crucial and complex issues relevant to Asia and the world. Researchers in our faculties, research centres of excellence, corporate labs and more than 30 university-level research institutes focus on themes that include energy; environmental and urban sustainability; treatment and prevention of diseases; active ageing; advanced materials; risk management and resilience of financial systems; Asian studies; and Smart Nation capabilities such as artificial intelligence, data science, operations research and cybersecurity.

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