

NUS researcher lauded for work in using flood waters to tackle drought

Chin Hui Shan

A National University of Singapore researcher has become the first winner of the inaugural Global Climate Research Prize for his innovative work in using flood waters to reduce water scarcity during droughts.

He Xiaogang, an assistant professor in the university's department of civil and environmental engineering, edged out three other finalists from Stanford University, the University of California, Berkeley, and the University of Toronto

to clinch the award on June 10.

Founded by the University of Cambridge's Clare Hall college and LUT University, the prize is a biennial, philanthropic initiative to recognise research that combats climate-induced effects. Such effects can include flooding, droughts and the spread of infectious disease.

Tapping 67 years of global drought and flood data, He's work shows how droughts and floods increasingly occur in rapid succession, posing risks to food and water security.

He has developed frameworks to improve the prediction and management of water-related hazards.

His research also explored how flood waters can be stored and used during dry periods, helping to strengthen groundwater supplies and improve drought resilience.

"To address hazards threatening global food security, he has developed frameworks that enhance drought resilience and groundwater sustainability, with implementation spanning from California to South-east Asia," said Clare Hall and LUT University in a joint statement on June 11.

The prize of €200,000 (\$297,000) will be given to NUS to support the continuation of the research. The funders of the prize in-

clude the City of Lappeenranta and Marjatta ja Eino Kollin Saatio, a Finnish foundation that supports scientific and applied research, according to the Global Climate Research Prize's website.

"Winning the inaugural Global Climate Research Prize is beyond anything I could have imagined, especially being selected alongside such distinguished researchers... including Nobel laureate professor Omar Yaghi of the University of California, Berkeley, whose pioneering work on materials that harvest water from desert air using solar energy continues to inspire and complement my own research

on climate extremes," He told *The Straits Times*.

He said the prize money will be used to focus on building solutions to strengthen water, food and energy security across the region.

A key priority is training the next generation of local climate scientists and equipping them with the skills to tackle the defining environmental challenges of our time, he added.

He said he also intends to expand research collaborations across borders and scientific disciplines – from climate and hydrology to economics and artificial intelligence – and hopes to establish NUS as a

world-leading centre for tropical climate science.

South-east Asia faces a medley of risks and hazards like rising sea levels, heat and extreme weather events intensified by climate change.

The finalists' projects tackled some of the most urgent challenges linked to climate change and global resilience, such as advancing greenhouse gas monitoring, developing solar-powered water technologies and understanding how climate change is reshaping the spread of infectious diseases.

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