

Typhoons forming closer to coast due to climate change – study

SINGAPORE — Typhoons in Southeast Asia are forming closer to coastlines, intensifying more rapidly and lasting longer over land due to climate change, according to a joint scientific study released on Wednesday.

Coastal communities and cities like Hai Phong in Vietnam and the Thai capital Bangkok are "facing unprecedented threats from longer lasting and more intense storms," a statement about the study said.

Researchers from the Nanyang Technological University (NTU) in Singapore and Rowan

University and the University of Pennsylvania in the United States analyzed "more than 64,000 modeled historic and future storms from the 19th century through the end of the 21st century" to come up with the findings, the statement said.

Published in the peer-reviewed Nature partner journal *Climate and Atmospheric Science*, the study "highlights significant changes in tropical cyclone behaviors in Southeast Asia."

The changes include "increased formation near coastlines and slower movement over land,

which could pose new risks to the region," the statement said.

It added that climate change, which has caused ocean waters to warm, can alter the paths of tropical storms in the region, home to more than 650 million people.

"Our study shows that as the cyclones travel across warmer oceans from climate change, they pull in more water vapor and heat," said Benjamin Horton, director of NTU's Earth Observatory of Singapore and a co-author of the research.

"That means stronger wind, heavier rainfall and more flooding when the typhoons hit land."

Lead author Andra Garner of Rowan University's School of Earth and Environment said people living along the region's densely populated coastlines were the most vulnerable.

"There were two takeaways: First, we should be acting to reduce emissions so we can curb the impacts of future storms," Andra said.

"Second, we should be acting now to protect those coastlines for the future, which will likely

see some worsened tropical cyclone impacts regardless of future emissions."

Just last week, intense rains from Typhoon Carina (Gaemi) caused heavy flooding in the Philippine capital Manila and parts of Kaohsiung City in Taiwan.

It was the strongest typhoon to hit Taiwan in eight years and left at least five people dead and hundreds injured.

In the Philippines, it exacerbated seasonal rains and triggered flooding and landslides that killed at least 30 people.

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