

# PHL, Japan experts partner in mapping of mangroves

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A village and a highway among the mangroves in Siargao, Surigao del Norte.

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Filipino and Japanese researchers proposed a new mangrove vegetation index (MVI) to map mangroves and maximize its benefits.

The MVI is a mangrove-specific index or measure that distinguishes mangrove areas from other vegetation. The MVI value increases with higher probability of an area being classified as mangroves.

University of the Philippines Diliman Senior Researcher Alvin Baloloy said the data to be used in the MVI will be derived from free satellite images.

“A mangrove mapping index derived from free satellite images is crucial for regular monitoring of our mangrove forests, especially when it is integrated in online mapping platforms like Google Earth Engine,” Baloloy said.

“We have recently simplified a mangrove index that will support rapid and accurate mapping of mangroves that will not only be useful in our study sites in the Philippines and Japan but also in other mangrove-rich countries,” he added.

The Japan International Cooperation Agency said in a statement that this is a joint project of Filipino and Japanese researchers from the University of the Philippines Diliman and Tokyo Institute of Technology.

A scientific paper on the MVI was released this June and is published in the *International Society for Photogrammetry and Remote Sensing Journal* via ScienceDirect, a global database of scientific and medical journals.

The MVI analyzed the characteristics of mangrove and nonmangrove sites in the Philippines and in Japan and was incorporated in IDL (a scientific programming language) and Google Earth Engine.

The study developed and implemented two automated platforms: an offline IDL-based MVI Mapper and an online Google Earth Engine-based MVI mapping interface. These platforms can be used to identify and measure areas with mangroves.

The latter was used in generating the latest mangrove extent map of the Philippines—with an estimate of 227,808 hectares for year 2019.

It is estimated that a hectare of mangroves can provide more than \$3,200 worth of direct flood-reduction benefits per year, according to the World Bank.

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Apart from this, mangroves help in the absorption of carbon dioxide or blue or organic carbon. When ecosystems are damaged this leads to adverse effects to the environment.

“We aim to leverage our findings to support a Blue Carbon Strategy to help mitigate the impact of extreme weather and other threats to coastal environments and ensure a future worthy for the next generation,” said Nadaoka Kazuo, Japanese chief technical advisor of the BlueCARES project.

The Blue Carbon Strategy refers to the policy framework on blue carbon conservation that can be implemented at the national and local levels.

The development of the MVI also utilized field data from the IAMBlueCECAM Program, the BlueCARES counterpart program in the Philippines.

IAMBlueCECAM stands for Integrated Assessment and Modelling of Blue Carbon Ecosystems for Conservation and Adaptive Management.

The program is funded by the Philippine Council for Industry, Energy and Emerging Technology Research and Development.

[https://businessmirror.com.ph/2020/07/05/phl-japan-experts-partner-in-mapping-of-mangroves/?fbclid=IwAR3ccz0bta2q7\\_h\\_eLcmbwCluwMrfmv3lY7dtcN6rV20CilpCdCAKflLbRA](https://businessmirror.com.ph/2020/07/05/phl-japan-experts-partner-in-mapping-of-mangroves/?fbclid=IwAR3ccz0bta2q7_h_eLcmbwCluwMrfmv3lY7dtcN6rV20CilpCdCAKflLbRA)