# [***Sun Yat-sen University Researchers Describe Recent Advances in Geography (Estimation of Mangrove Aboveground Biomass in China Using Forest Canopy Height through an Allometric Equation)***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:67NM-VFJ1-DY7R-R41G-00000-00&context=1516831)

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**Body**

2023 MAR 01 (NewsRx) -- By a News Reporter-Staff News Editor at Daily Hong Kong Report -- New research on geography is the subject of a new report. According to news reporting out of Guangzhou, People's Republic of China, by NewsRx editors, research stated, "***Mangroves***, which have extremely high primary productivity, are efficient coastal ***blue carbon*** ecosystems. Aboveground biomass (AGB) is an important component of vegetation carbon pools."

Our news correspondents obtained a quote from the research from Sun Yat-sen University: "Thus, accurate estimation of ***mangrove*** AGB is critical for studying carbon cycle and climate change. While the practical significance and application of information obtained on ***mangrove*** AGB in China is apparent, studies of this nature in China at a national scale have rarely been reported. Remote sensing technology is convenient, efficient, has a wide observational range, and can be used for large-scale ecosystem monitoring. Canopy height is a structural parameter that is positively correlated with the AGB of vegetation. The Global Ecosystem Dynamics Investigation (GEDI) spaceborne Light Detection and Ranging (LiDAR) satellite, launched in recent years, is able to obtain vegetation canopy height. This study employed forest canopy height derived from GEDI satellite-based LiDAR and an allometric equation based on the allometric theory to estimate ***mangrove*** AGB in China in 2019, and the quantitative and spatial distribution of ***mangrove*** biomass and their main influencing factors were analyzed. The results showed that the total and mean AGB of ***mangroves*** in China in 2019 were about 1,974,827 t and 73.0 t/hm2, respectively. Guangdong-Hong Kong-Macao area showed the largest total ***mangrove*** AGB, reaching 843,836 t. The mean values of AGB in each province (region) with ***mangrove*** ecosystems nationwide ranged from 53.3 to 92.1 t/hm2, of which the largest was found in Hainan Province, reaching 92.1 t/hm2. In Hainan, Taiwan, and Fujian provinces, mean ***mangrove*** AGB was higher than the national mean. Considering nature reserves, the mean AGBs of ***mangroves*** in Neilingdingdao-Futian and Mai Po ***mangrove*** nature reserves in Shenzhen Bay in the Guangdong-Hong Kong-Macao area and Dongzhaigang ***mangrove*** nature reserve in Hainan province were relatively high, with values greater than 110 t/hm2. The accumulation and distribution of ***mangrove*** AGB in China are affected by latitude and anthropogenic factors."

According to the news reporters, the research concluded: "This study provides a comprehensive analysis of ***mangrove*** AGB in China based on remote sensing and an allometric equation and can provide a database and technical reference for estimating carbon storage in ***mangrove*** ecosystems. It will also contribute to the implementation of ecological restoration and protection measures for coastal ***mangroves***, as well as carbon emission control in China."

For more information on this research see: Estimation of ***Mangrove*** Aboveground Biomass in China Using Forest Canopy Height through an Allometric Equation. Redai dili, 2023,43(1):1-11. The publisher for Redai dili is Editorial Committee of Tropical Geography.

A free version of this journal article is available at https://doi.org/10.13284/j.cnki.rddl.003616.

Our news editors report that more information may be obtained by contacting Wen Xin, School of Geography and Planning, Sun Yat-sen University, Provincial Engineering Research Center for Public Security and Disaster, Guangdong Key Laboratory for Urbanization and GeoSimulation, Guangzhou 510006, People's Republic of China. Additional authors for this research include Liu Kai, Cao Jingjing, Zhu Yuanhui, Wang Ziyu. Our reports deliver fact-based news of research and discoveries from around the world. Copyright 2023, NewsRx LLC

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