# [***Study Findings from Chinese Academy of Sciences Provide New Insights into Climate Change (Soil Carbon Stock and Potential Carbon Storage in the Mangrove Forests of Guangdong)***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:67NM-VFJ1-DY7R-R3RN-00000-00&context=1516831)

Climate Change Daily News

March 1, 2023 Wednesday

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**Section:** CLIMATE CHANGE

**Length:** 615 words

**Body**

2023 MAR 01 (NewsRx) -- By a News Reporter-Staff News Editor at Climate Change Daily News -- Research findings on climate change are discussed in a new report. According to news reporting originating from the Chinese Academy of Sciences by NewsRx correspondents, research stated, "***Mangroves*** occur in coastal intertidal zones and play an important role in terrestrial and marine carbon cycles. Accurate estimations of ***mangrove*** carbon stocks and sequestration potential can help quantify the contribution of ***mangroves*** to addressing climate change and achieving carbon neutrality goals."

Our news correspondents obtained a quote from the research from Chinese Academy of Sciences: "The carbon stocks and burial rates of different ***mangrove*** communities and regions in Guangdong Province were studied through literature collection and data integration. The soil carbon densities of the Rhizophora stylosa and Bruguiera gymnorhiza communities were 0.27 and 0.23 Gg C/hm2, respectively, while the soil carbon density of the Kandelia obovata community was the lowest at only 0.13 Gg C/hm2. The area of ***mangroves*** in Guangdong Province is 9,106.2 hm2, the total carbon stock is 1,542.02 Gg C, and the soil carbon density is 0.23 Gg C/hm2. The total carbon reserves of ***mangroves*** in thirteen regions are in the following order: Zhanjiang (894.5 Gg C) > Yangjiang (195.4 Gg C) > Jiangmen (97.7 Gg C) > Zhuhai (91.0 Gg C) > Maoming (59.6 Gg C) > Shantou (51.4 Gg C) > Zhongshan (49.2 Gg C) > Huizhou (36.1 Gg C) > Guangzhou (35.1 Gg C) > Shenzhen (18.3 Gg C) > Shanwei (10.8 Gg C) > Dongguan (2.83 Gg C) > Chaozhou (0.11 Gg C). Using the 210Pb method, the sediment accretion rate was found to be 13.47 mm/a. Qi'ao Island had the highest sediment compaction rate of 31.5 mm/a, followed by Zhenhai Bay, with 16.5 mm/a, Shenzhen Futian, with 15.9 mm/a, and Leizhou Bay, with the lowest sediment compaction rate of 7.3 mm/a. The carbon sequestration capacity of Guangdong province is approximately 2.96 Gg C/a, with the Leizhou Peninsula having the highest (6.05 Gg C/a) and Futian, Shenzhen having the lowest (0.66 Gg C/a) capacities. The carbon storage of ***mangroves*** in Guangdong Province was 1,542.02 Gg C, which was higher than that in other regions. The carbon sequestration capacity of the ***mangroves*** was relatively strong."

According to the news reporters, the research concluded: "Therefore, the protection and restoration of local ***mangroves*** may substantially contribute to the mitigation of climate change while providing additional benefits. This assessment, on a provincial scale, provides insights into ***blue carbon*** sequestration capacity, thus contributing to the synchronous progression of ***blue carbon*** management."

For more information on this research see: Soil Carbon Stock and Potential Carbon Storage in the ***Mangrove*** Forests of Guangdong. Redai dili, 2023,43(1):23-30. 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.003606.

Our news editors report that more information may be obtained by contacting Qin Guoming, Xiaoliang Research Station for Tropical Coastal Ecosystems and the CAS engineering Laboratory for Ecological Restoration of Island and Coastal Ecosystems, South China Botanical Garden, Chinese Academy of Sciences, Guangzhou 510650, People's Repub Additional authors for this research include Zhang Jingfan, Zhou Jinge, Lu Zhe, Wang Faming.

Keywords for this news article include: Chinese Academy of Sciences, Climate Change, Global Warming.

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**Classification**

**Language:** ENGLISH

**Document-Type:** Expanded Reporting

**Publication-Type:** Newsletter

**Subject:** CARBON CAPTURE & STORAGE (90%); EXPERIMENTATION & RESEARCH (90%); RESEARCH REPORTS (90%); JOURNALISM (89%); NEWS REPORTING (78%); COASTAL AREAS (71%); Climate Change;Global Warming (%)

**Industry:** NEWS REPORTING (78%)

**Geographic:** SHENZHEN, GUANGDONG, CHINA (88%); GUANGZHOU, GUANGDONG, CHINA (79%); SHANTOU, GUANGDONG, CHINA (79%); GUANGDONG, CHINA (94%); SOUTH CHINA (94%); CHINA (94%)

**Load-Date:** March 1, 2023

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