# [***Research from University Gadjah Mada Yields New Study Findings on Geography [Mapping Mangrove Surface Carbon Stocks Using Multisensor Imagery in Clungup Mangrove Conservation (Cmc) Malang Regency]***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:66KB-VBJ1-JBSP-13GT-00000-00&context=1516831)

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**Body**

2022 OCT 10 (NewsRx) -- By a News Reporter-Staff News Editor at NewsRx Science Daily -- Researchers detail new data in geography. According to news reporting originating from the University Gadjah Mada by NewsRx correspondents, research stated, "***Mangroves*** can store carbon effectively with a value of about 1,023 Mg C/Ha and become one of the richest forests that store 4-20 billion tons of ***blue carbon*** globally. Remote sensing imagery can be used to map ***mangrove*** surface carbon stocks using radar and optical image sensors."

Our news correspondents obtained a quote from the research from University Gadjah Mada: "Generally, forest carbon on earth is stored in two places, namely above the surface (Above Ground Carbon, AGC) and below the surface (Below Ground Carbon, BGC). This study aims to estimate the surface carbon stock of ***mangroves*** using multisensory imagery using the Random Forest method in the Clungup ***Mangrove*** Conservation (CMC) area, Malang Regency, East Java. Four vegetation indices (IRECI, NDI45, NDVI, SAVI), single band, and VV VH polarization were used as predictive variables. Estimating the carbon stock ***mangrove*** value using Sentinel-1 imagery produced 2,126 tons of C with R² 0.11. Meanwhile, Sentinel-2 produces an estimated carbon value of 2,025 tons C with an R² of 0.22. The estimation model using Sentinel-2 shows a better evaluation value with a Root Mean Squared Error (RMSE) of 0.89 and a Mean Absolute Error (MAE) of 0.75."

According to the news reporters, the research concluded: "The IRECI vegetation index is the most important variable in estimating carbon stocks. The results of the mapping accuracy of the Sentinel-1 model show a value of 34.73% and Sentinel-2 35.03%."

For more information on this research see: Mapping ***Mangrove*** Surface Carbon Stocks Using Multisensor Imagery in Clungup ***Mangrove*** Conservation (Cmc) Malang Regency. Jurnal Geografi, 2022,14(2):192-201. (Jurnal Geografi - http://jurnal.unimed.ac.id/2012/index.php/geo). The publisher for Jurnal Geografi is Universitas Negeri Medan.

A free version of this journal article is available at https://doi.org/10.24114/jg.v14i2.33575.

Our news editors report that more information may be obtained by contacting Maulana Abdul Hakim, Universitas Gadjah Mada.

Keywords for this news article include: University Gadjah Mada, Geography, Science.

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