# [***Changes In Mangrove Blue Carbon Under Elevated Atmospheric CO2***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:67TF-55F1-F11P-X4JJ-00000-00&context=1516831)

Eurasia Review

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**Body**

As one of the major ***blue carbon*** ecosystems, ***mangroves*** provide critical ecosystem services in mitigating global climate change. However, the future complex and variable climate conditions may lead to the uncertainty in trajectories of ***blue carbon*** capacity. Elevated atmospheric CO2 concentrations (eCO2) is projected to become a prominent driver to ***mangrove*** ***blue carbon*** in the future.

A group of scientists working on ***blue carbon*** reviewed studies on "changes in ***mangrove*** ***blue carbon*** under elevated atmospheric CO2" to identify the pathways for how eCO2 might influence ***mangrove*** ecosystem carbon cycling. The research is published as a review article in Ecosystem health and sustainability, a Science Partner Journal.

This review highlights that ***mangrove*** has a negative feedback to climate change existed whereby eCO2 added to ***mangrove***'s ability to sequester additional carbon, which in turn reduces the rate by which CO2 builds. Furthermore, eCO2 affects warming and sea-level rise through alternate pathways, which might co-influences the ***mangrove*** response in both antagonistic and synergistic ways.

The scientists suggest to establish more experiments to understand the influence of eCO2 on biological processes that might lead to greenhouse gas emissions, and invest in mesocosm-scale simulation experiments that could provide datasets for prediction in future scenarios. Given the complexity of the interactions of biological and environmental factors with eCO2, long-term field observations and in situ simulation experiments can help to better understand the mechanisms for proper model initialization to predict future changes in ***mangrove*** carbon sequestration.

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