

The potential of Korean vegetated coastal ecosystems for greenhouse gas abatement through blue carbon management

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Coastal Blue Carbon refers to the climate change mitigation benefits offered by improved management through conservation and restoration of biogeochemical processes performed by coastal wetlands, including salt marsh, mangroves, seagrasses, and other tidal wetlands. Coastal blue carbon is the newly recognized ecosystem service value of climate mitigation, and as such can provide a new incentive to prioritize the restoration and conservation of these coastal ecosystems. Korean blue carbon focuses on the current status of salt marsh and seagrass vegetation in addition to the carbon deposition that occurs in the wide tidal flats spreading on the southwestern coast where it is having high blue carbon potential sequestration. Korean blue carbon studies have started from 2017 funded by government through KOEM, mainly interested in Korean blue carbon calculate to the current amount as well as annual accumulation of domestic blue carbon on tidal flat and seagrass bed. Establishment of a blue carbon production and its management system through field survey of at least 25 sites around the Korean peninsula. Salt marsh vegetation so far emphasized fundamental structure such as distribution and density; less research on species-based biomass or on shore seagrasses to estimate the amounts of blue carbon. Spatiotemporal estimates of blue carbon amounts by habitat with measuring total biomass and carbon content of dominant salt marsh vegetation were done as well.

