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## Carbon burial capacity limited by accelerated sea-level rise in coastal wetlands

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Coastal wetland are known to be among the most efficient carbon burial environments around the worlds and given this high efficiency for carbon sequestration, wetland restoration and conservation efforts have been proposed as a way to potentially mitigate greenhouse emissions. The processes that lead to carbon sequestration can be quite complex and often depend on feedbacks between the type of vegetation in the wetlands, tidal flow regime, geomorphology and sediment availability. Coastal wetland vulnerability to submergence due to sea-level rise has been widely discussed in the current literature, and while wetlands could survive under some sea-level rise scenarios, accelerated rates of sea-level rise would most likely result in significant wetland losses. These can be less accentuated when accommodation space is available and the wetland is able to migrate inland, however, topography, physical barriers, and some anthropogenic factors can limit wetland migration thus decreasing the ability of wetlands to cope with sea-level rise. Potential losses of wetland vegetation under accelerated sea-level rise and limited capacity for wetlands to migrate inland are expected to affect the overall efficiency for carbon sequestration. We apply an eco-geomorphic model to simulate vegetation dynamics, carbon accumulation and overall change in carbon stocks for a restored mangrove-saltmarsh wetland experiencing accelerated sea-level rise under different management scenarios. Our results suggest that under accelerated sea-level rise and limited space for inland migration, vegetation might not be able to fully mature, reducing the capacity for sequestering carbon over time.