UNIVERSIDAD DE GRANADA

Departamento de Ecología

Assessing the Climate Mitigation Potential of Tidal Wetlands at the Ecosystem Scale

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Conferencia



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Tidal wetlands naturally sequester and store carbon (C) at millennial time scales. However, the C storage potential of tidal wetlands may be underestimated as previous work has focused on C stored in sediments and does not include the lateral export of C into the coastal ocean. Additionally, emissions of methane (CH4), a powerful greenhouse gas (GHG), from these ecosystems are poorly constrained. To fully understand the role of tidal wetlands in global C cycling we need better understanding of the Net Ecosystem Carbon Balance (NECB) of tidal wetlands which is the net rate of C accumulation including atmospheric exchange, lateral exchange and soil C burial. I will present recent findings from high-frequency lateral carbon flux data in addition to hydrologic and atmospheric data at a network of tidal marshes in the US to improve predictions of NECB. These data are being used to inform biogeochemical models and improve our ability to estimate the climate mitigation potential of coastal wetlands.

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