

Carbon Storage in Natural Mangrove Biomass: Its Destruction and Potential Impact on Climate Change in the UAE

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Abstract : Measuring the level of carbon storage in mangroves' biomass has a potential impact in the climate change of UAE. Carbon dioxide is one of greenhouse gases. It is considered to be a main reason for global warming. Deforestation is a key source of the increase in carbon dioxide whereas forests such as mangroves assist in removing carbon dioxide from atmosphere by storing them in its biomass and soil. By using Kauffman and Donato methodology, above- and below-ground biomass and carbon stored in UAE's natural mangroves were quantified. Carbon dioxide equivalent (CO₂eq) released to the atmosphere was then estimated in case of mangroves deforestation in the UAE. The results show that the mean total biomass of mangroves in the UAE ranged from 15.75 Mg/ha to 3098.69 Mg/ha. The estimated CO₂eq released upon deforestation in the UAE was found to have a minimal effect on the temperature increase and thus global warming.

Keywords : carbon stored in biomass, mangrove deforestation, temperature change, United Arab Emirate

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