

Investigating the origin of carbon buried underneath seagrass meadows in a tropical mangrove-seagrass ecosystem



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December 6th 2018



Oceans Are Losing a Football Field of Seagrass Every 30 Minutes

And with it, a vital tool for cleaning up heat-trapping carbon pollution



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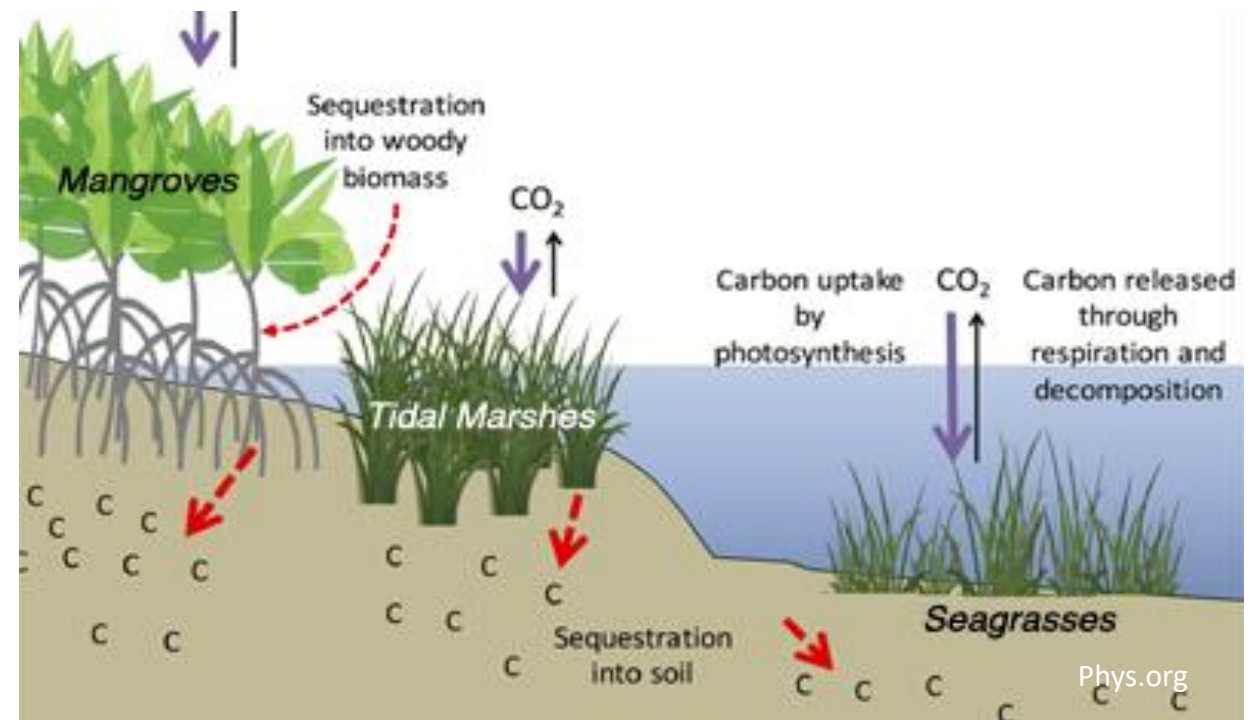
Nov 14 · 5 min read



Why should we care?

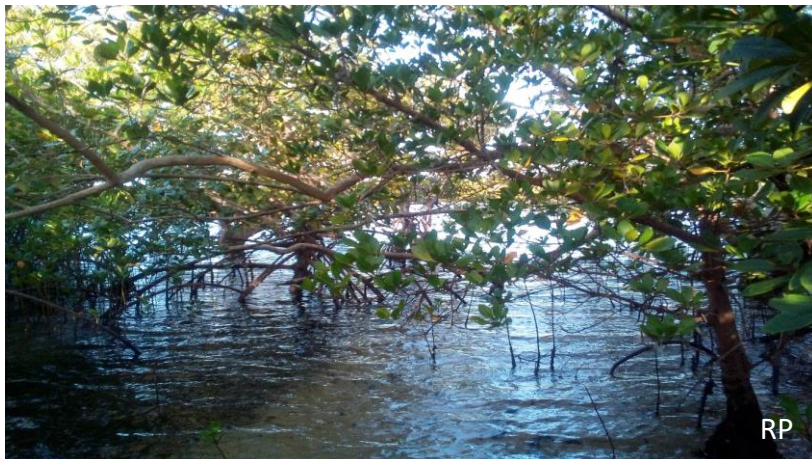
Why should we care?

- Cover only the 0.2% of the ocean's surface
- Amongst the most productive ecosystem
- Store up to 10% of C in the oceans
- Together with mangroves form Blue Carbon Ecosystem



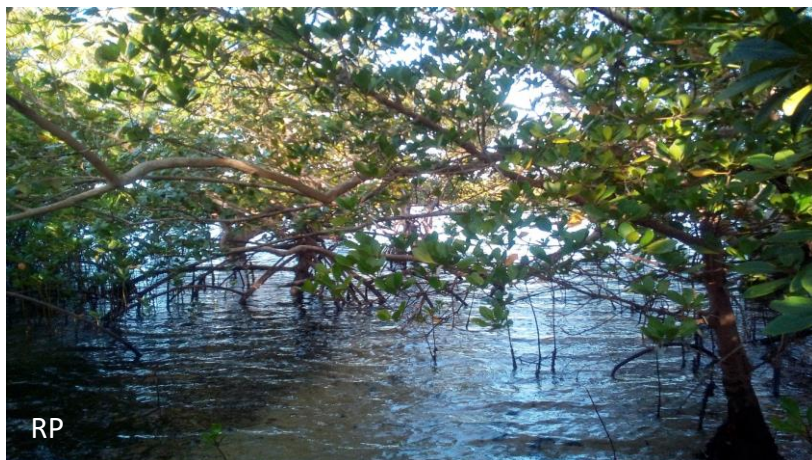
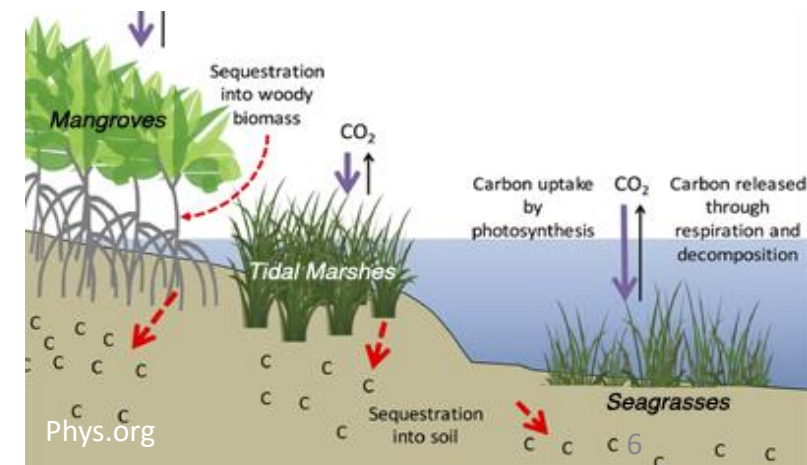
What is a BCE?

- Vegetated coastal habitats
- High carbon sequestration rate



What is a BCE?

- High flux of exchange: organisms, nutrients and sediments
- Provide important ecosystem services: fishing grounds, wave protection and oxygen production



What we actually did?

- Importance of seagrass meadows on **storing allochthonous carbon**



What we actually did?

- Importance of seagrass meadows on **storing allochthonous carbon**



Where?

- Gazi bay, Kwale county, Kenya
- 615 ha of mangrove forest



What did we find?



youtube.com -> #ellieandjared

- Allochthonous mangrove carbon, major source (25 – 40%)
- Seagrass plant parts, contribute importantly (20 – 70%)
- Mangrove-derived carbon enhance the burial rate

So, what does this mean?

- Seagrass meadows are important sites for carbon storage and limit the exportation of mangrove-derived carbon
- Contiguous mangrove-seagrass ecosystem increase the rate of carbon storing
- Conservation measures are fundamental for mitigation of climate change



Community-led projects



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- Carbon offsetting schemes
- Woman's boardwalk
- Mikoko Pamoja project
- Puunguza project



Community-led projects





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