

TEAL CARBON

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Context:

India's first study on 'teal carbon', undertaken at Keoladeo National Park (KNP) in Rajasthan's Bharatpur district, has highlighted the significance of wetland conservation to address the challenges of climate adaptation and resilience.

Background:

The concept of teal carbon is a recent addition to the environmental science

About Teal Carbon:

1. Teal carbon refers to carbon stored in non-tidal freshwater wetlands, encompassing carbon sequestered in vegetation, microbial biomass, and dissolved and particulate organic matter.
2. Teal carbon being a colour-based terminology reflects the classification of the organic carbon based on its functions and location rather than its physical properties.
3. As opposed to teal carbon, black and brown carbon are primarily produced by incomplete combustion of organic matter from sources such as wild fires, fossil fuel combustion, and industrial activities. They contribute to global warming.
4. At the global level, the storage of teal carbon across the ecosystems is estimated to be 500.21 petagrams of carbon (PgC), which is a unit to measure carbon. Peatlands, freshwater swamps, and natural freshwater marshes account for significant amount of this storage.

Additional information:

1. The study in news has depicted the potential of teal carbon as a tool to mitigate climate change if the anthropogenic pollution in the wetlands can be controlled.
2. Though wetlands play a crucial role in regulating greenhouse gases, they are vulnerable to degradation from pollution, land use changes, water extraction, and landscape modifications.
3. Wetlands, when degraded, could release methane and carbon dioxide into the atmosphere.