

Examrace

Climate Change Environment, Point You Should Know, Wetlands, Point You Should Know

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Point You Should Know

Carbon Storage & Sequestration Potential of India's Forests & Tree Cover:-

- India's Forest Cover accounts for 20.6 % of total geographical area of country as of 2005. Tree Cover accounts for 2.8 % of India's geographical area².
- Progressive national forestry legislations & policies have transformed India's forests into significant net sink of CO₂, from 1995 to 2005, carbon stocks stored in forests & trees have increased from 6,245 mt to 6,662 mt, registering annual increment of 38 mt of carbon or 138 mt of CO₂ equivalent.

Mitigation Service by India's Forest and Tree Cover:-

- Estimates show that annual CO₂ removals by India's forest & tree cover is enough to neutralize 11.25 % of India's total GHG emissions (CO₂ equivalent) at 1994 levels.
- This is equivalent to offsetting 100 % emissions from all energy in residential & transport sectors; or 40 % of total emissions from agriculture sector. India's forest & tree cover is serving as major mode of carbon mitigation for India & world.

Carbon Stocks in the Future:-

- India is one of few developing countries in world that is making net addition to its forest & tree cover over last 2 decades. Based on actual and projected trends of investments in the forestry sector, we present three scenarios of the future carbon stocks in the forest and tree cover of India.
- In 1st scenario, carbon stocks in India's forest and tree cover decrease at the rate of the world average and the total carbon stored in India's forests in 2015 will decrease to 6,504 mt.
- In 2nd scenario, the carbon stocks continue to increase at the historical rate of the last decade (0.6 % p. a.) . Total carbon stored in India's forests in 2015 will increase to 6,998 mt.
- In 3rd scenario, the carbon stocks increase at a rate higher than the historical rate of increase and total carbon stored in 2015 will increase to 7,283 mt. This is the path that

we intend to tread in India.

- Computations for 3rd scenario are based on a series policy initiatives on Sustainable Management of Forests (SMF) and Afforestation and Reforestation (A&R) , additional resources like Forest Restitution Fund 5 with US \$ 2.5b, a policy to include forestry related activities in the flagship employment scheme of the country and introducing new forestry related schemes on components such as capacity building in the forestry sector.

Value of Mitigation

- Putting a conservative value of US \$ 5 per tonne of CO₂ locked in our forests; this huge sink of about 24,000 mt of CO₂ is worth US \$ 120b, or ₹ 6,00, 000 crores.
- Incremental carbon under scenario three will add a value of around US \$ 1.2b, or ₹ 6,000 cores every year to India's treasury of forest sink, assuming a value of US \$ 7 per tonne.

Environment



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Wetlands

- Government has notified rules for conservation and management of wetlands
 - Wetlands (Conservation and Management) Rules, 2010
 - The rules specify activities that are harmful to wetlands and prohibit them.
 - Other activities such as harvesting and dredging could be carried out with prior permission from the authorities concerned.

- Despite their immense importance, wetlands are one of the most degraded ecosystems globally. Over-exploitation of fish resources, discharge of industrial effluents, fertilizers and pesticides and uncontrolled siltation and weed infestation have taken the toll on these important water bodies

Coastal Regulation Zone



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- 1991
 - To regulate development activity on India's coastline
 - The approach adopted by the first notification was to define the 'High Tide Line' and 'Coastal Regulation Zone' and thereafter specify the activities permitted and restricted in the vicinity of the CRZ
 - This regulated zone was further divided into four categories (CRZ 1 - 4) as per permitted land use
- There have been about 25 amendments in this notification between 1991 and 2009
- Rules re-issued in 2011
 - The difference between 1991 and 2011 rule is that the 'no development zone' has been reduced from 200 m from the high-tide line (HTL) to 100 m only to meet the increased demands of housing of fishing and other traditional coastal communities.
 - CRZ has been expanded to include territorial waters as protected zone
 - The concept of 'hazard line' has been introduced
 - Concept of classification of CRZ into four zones has been continued

- CRZ I- ecologically sensitive areas such as mangroves, coral reefs, salt marshes, turtle nesting ground and the inter-tidal zone.
- CRZ II- areas close to the shoreline and which are developed.
- CRZ III- Coastal areas that are not substantially built up, including rural coastal areas.
- CRZ IV- water area from LTL to the limit of territorial waters of India
 - A new category called areas requiring special consideration has been created which includes
 - CRZ areas of Greater Mumbai, Kerala and Goa
 - Critically vulnerable coastal areas such as Sunderban
 - The list of exceptions to the rule prohibiting setting up of new industries and expansion of existing industries has been expanded

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