

The unresolved issues of Indian carbon sink

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Dedicating forests for sequestration role can negatively affect other forest-related benefits and life of forest dwellers

India has committed, as the Nationally Determined Contribution declared under Paris Agreement (2015), to create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030. Preparation of a roadmap towards achievement of this target warrants, as a prerequisite, a simultaneous consideration of status of forests and tree resources, their socio-economic linkages, and accrual of carbon as well as non-carbon benefits from them.

The status of forests indicated in the ISFR needs to be examined with reference to parameters that are relevant from the point of view of the services they provide. While the plantations outside recorded forests have gone up in the country, hill districts have lost 902 sq. kms of forest cover indicating damage to watersheds and an impending risk to water security and agriculture. Tribals and forest dwellers depend on forests for various services, minor forest produce, and livelihood creation. The tribal districts have lost 655 sq. kms of forest cover inside the recorded forest area putting the rest under higher pressure. Parallely, an aggregated area of 18,486 sq. kms vested as individual forest rights under Forest Rights Act 2006 exists as pock marks in the recorded forests of the country today. People, vested with community forest rights under the Forest Rights Act 2006, freely collect and sell minor forest produce including bamboo. With this coupled with removal of bamboo from the

category of timber through amendment to the Indian Forest Act 1927, however, more than 12,500 sq. kms of bamboo bearing areas of India have been lost between 2019 and 2021. Needless to mention, bamboo species are one of the best for carbon stock creation as well as sustenance of the green economy. Strangely enough, the provisions in the Forest Conservation Bill 2023 under consideration today do not serve the objective related to carbon stock creation contained in its own preamble. Carbon stock creation is rarely an objective while selecting an area or species mix for compensatory afforestation. Different forest types existing in different areas have different capabilities of carbon sequestration. For India, the carbon stock aggregating different carbon pools is indicated as 100.92 thousand tonnes/ha. For Andamans & Nicobar it is 162.86 thousand tonnes/ha. while for plantations outside forests it is 64.22 thousand tonnes/ha. Thus, notwithstanding the physical distance and variance in ecological and biodiversity potentials, a compensatory plantation taken in Haryana in lieu of deforestation done in Andamans is, prima facie, a negative proposition from the perspective of carbon sequestration potential.

The climate change debate increasingly highlights forests as repositories of carbon. Dedicating forests for sequestration role shall involve trade-offs between diverse stakeholders and can negatively affect other forest-related benefits. This could necessitate restriction of rights of forest dwellers and provision of suitable alternatives to them. In the wake of democratization and devolution of authority to the Gram Sabhas, accelerated loss of forests coupled with the recently recognized large number of forest rights, and forest protection and governance issues emerging due to the apparent disempowerment of the forestry sector on the ground, some critical questions crop up. Who will decide and how will the carbon and non-carbon benefits be prioritized? What are the biophysical and social and socio-economic trade-offs involved in prioritizing carbon sequestration over other forest benefits to various stakeholders? The policy makers have to seek early and definitive answers to these while embarking on the path to meet the target of carbon stock India has set for itself. Conservation of forests, though, cannot but remain a non-negotiable issue.

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