

XIII.A.6. Carbon Stock and its Value for India

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The United Nations Framework Convention on Climate Change (UNFCCC) in Rio in June 1992, has made it mandatory for all the countries signing the convention to give an estimate of all the sources and sinks of carbon and adopt measures to stabilise the concentration of CO₂ in the atmosphere. Forest ecosystems merit consideration in this context because they can act as sources as well as sinks of CO₂, the most abundant greenhouse gas. In view of this, the estimate of C stock for different forest types by country will be important components for these assessments.

In this paper, we estimated the value of carbon stock in Indian forests for the year 1993 using species-wise forest inventory data on volumes for all the states. However, the inventory data consider trees only greater than 10 cm diameter. For estimating the carbon stock all the trees are important irrespective of their size and hence we adjusted the estimates with the carbon stock present in trees less than 10 cm diameter also. The results of the analysis show that the total carbon stock in Indian forests is 2,050 Mt C for the year 1993. Converting this into the monetary terms assuming \$15/ tC, the value of the carbon stock is Rs. 1,292 billions. The value of forest on account of potential benefits it can generate from various forest products like timber, fuelwood and nontimber forest products is estimated at Rs, 14,030 billion. Thus, if forests are valued not only for timber but for storing carbon as well the asset value of forests will be still larger. The paper asserts the need for proper policies that balance the satisfaction of human needs with the long-term maintenance of environmental functions of forests to meet the goals of sustainable development.