

## Chapter 15

# Sustainable Forest Use and India's Economic Growth: A Structural Decomposition Analysis of Direct Forest Intensity

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### ABSTRACT

*This paper assesses the prospect of sustainable forest management (SFM) for an emerging economy like India, where forest coverage has gone up over the last three decades in spite of population growth, rapid urbanization and fast economic growth. To assess the possibility of sustainable future growth in a globally congenial environment, the extent of ecological stress on Indian economy has been assessed by using Input-Output transaction tables and pattern of expenditure by the Government and the Private sector along with Import and Export of forestry and related products over 1993-94 to 2007-08. The change in direct forest intensity (DFI) in gross domestic product has been calculated and decomposed into effects due to material intensity, structural change and economic growth. The results reveal increasing dominance of economic growth over other effects indicating necessity of designing intervention to decouple potential future economic growth from forest resources to ensure long run sustainability.*

### INTRODUCTION

India is developing and by consistently maintaining a no less than 5 per cent growth of national income ([www.rbi.org.in](http://www.rbi.org.in)) over a reasonably long time horizon, she has been included in the club of emerging economies as a member of the BRIC<sup>1</sup>

nations. For this growth to be socially sustainable, attention needs to be paid on the distributive policies and to be ecologically sustainable, the designing and implementation of natural resource and pollution management policies are of utmost importance. To assess the possibility of sustainable future growth in a globally congenial

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environment, one should enquire into the nature of ecological stress imparted by the present state of production and consumption at the aggregate level of the macro economy. Natural forest reserve, being a precious national stock, and having great existence value to the global society for maintaining the climatic balance is chosen as the specific sector for this assessment (Amritkar-Wani, 2009).

Destruction of natural resources began with the history of civilization, though early Man had recognized the importance of nature in their lives and was concerned for its conservation and protection. Increasing population and developing civilization have utilized more and more of natural resources, forests being one of the most affected. With the rise in population, forests are destroyed for growing food, making houses, creating roads and building cities. Forests in peripheral areas are also used up for timber by cutting down trees. Deforestation had its adverse impact on soil, water table, climate and also forest-based livelihoods. With such irresponsible use of natural resources human population has crossed over six billion and has reached the verge where exploitation surely causes irreversible damage to the ecosystem (Mukherji, 2004). Thus maintaining a balance between urban land, agricultural land and forest land to facilitate better adaptation to the impact of climate change and mitigation of its adverse influences are almost universally recognized as a fundamental issue related to *our common future*. However, environmental management demands an impeccable and accurate knowledge base of the physical interactions in nature and a constant effort to reach acceptable and tenable trade-offs between what is essential now (short-term benefits) and what is needed to secure the future (long-term benefits). In developing countries like India, where hunger and poverty are still the order of the day, the purpose of environmental management is more to secure the present. The challenge is therefore how to use the environment at increasing levels of productivity and in a sustainable manner (Aggarwal, 1992). However, this issue of sustainable

development is a highly imprecise concept and is broadly defined by the Brundtland Commission in its 1987 report as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*”. This requires balancing the demand for natural resources with the protection of ecosystems that also contribute goods and services necessary for economic growth. The underline basis depends upon the effective and systematic integration of economic development with social equity and environmental protection (figure 1) (Condrea & Boston, 2008).

The major concern of this paper is to find out whether India's high rate of growth is coming along with a suitable forest conservation policy to make it sustainable in the long run. From the official sites it is found that the forest coverage has gone up over the last three decades in spite of population growth and rapid urbanization. However, for sustainable forest management (SFM), the direct initiative of the Forest Department needs to be complemented by rigorous demand management policy where the demand for forestry-based products from the producers should be curtailed by designing appropriate technology policy and that from the consumer should be controlled by discouraging final consumption intensive in forest materials. To be economically sustainable, the growth process needs to be decoupled from the forestry sector and the direct forest intensity

*Figure 1. Three goals of sustainable forest management*

Source: Condrea & Boston, 2008.



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