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Development of Spatial database on Intact Forest Landscapes of India**C. Sudhakar Reddy^{1*}, Jyoti Singh¹, C.S. Jha¹, P.G. Diwakar^{1,2}, V.K. Dadhwal^{1,3}**¹Forestry and Ecology Group, National Remote Sensing Centre, Indian Space Research Organisation, Balanagar, Hyderabad- 500 037, India^{1,2}Indian Space Research Organisation, Antariksh Bhavan, New BEL Road, Bengaluru, Karnataka - 560 231, India^{1,3}Indian Institute of Space Science and Technology, Valiamala, Thiruvananthapuram, Kerala – 695 547, India

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Abstract

There is an increased interest in identifying the status of biodiversity in different spatial and temporal scales. The objective of the current research is to prepare a consistent spatial database of intact forest landscapes of India. The intact forest landscapes are located in the Andaman & Nicobar Islands, Himalayas, Western Ghats and Sunderbans. At national level 237 forest landscapes and 5.4 percent of the total natural forest remained as intact in India. Current intact forest landscapes of India consists of blocks larger than 10 km² covering an area of 34,061 km². Of the total area under intact forest landscapes, Eastern Himalayas represent 76.7% of the area, followed by Western Himalayas (8.8%), Andaman & Nicobar Islands (6.2%) and Western Ghats (5.7%). The largest intact forest landscape block occupies an area of 3342.9 km² (9.8%) is found in western Arunachal Pradesh. Temperate forest zone represents highest intactness (56.6%), followed by subtropical zone (19.2%), tropical zone (18.6%) and alpine zone (5.6%). Himalayan moist temperate forests represent highest area (39.1%) of intact forest landscapes followed by subtropical broad-leaved hill forests, wet evergreen forests, and montane wet temperate forests. It is estimated that 4.4% of the area of intact forest landscapes fall inside the existing 47 protected areas. The results of the analysis best suited as input for the process of identification of new protected areas. The study recommends fine-scale mapping of biodiversity within the intact forest landscapes and to prepare efficient conservation plans.

Keywords: Biodiversity, Protected Areas, Remote sensing, Conservation, India

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