



**Forest Cover Assessment in Asia. Proceeding of the International Workshop: Asian Forest Cover Assessment and Conservation Issues.** P. S. Roy, Hans-Jurgen Stibig and Shefali Agrawal (eds). Published by Indian Institute of Remote Sensing (NRSA), Department of Space, Government of India in collaboration with Joint Research Centre (European Commission), Institute for Environment and Sustainability, Ispra, Italy. 2002. 369 pp. Price: not given.

Documentation of research findings on sustainable management of forest habitats using various types and sources of data-sets has steadily increased over the past decade or so. And so has the application of remote sensing and GIS rapidly grown in recent times. It is a happening science in Southeast Asia, and India is no exception. Be it forest cover mapping, assessment of change or characterization of biodiversity at landscape level<sup>1,2</sup>, remote sensing, as a cost-effective technology, is becoming popular with the advent of high resolution data generating capabilities. It is now widely used by various institutions in our country. Undoubtedly these contemporary techniques have opened innumerable avenues for capturing various aspects of forest health, biodiversity, forest biomass and forest stand dynamics.

In this context, this proceeding is yet another effort to highlight the strengths of using remote sensing tools in conjunction with ground truthing for accurate assessment of forest cover dynamics in Asia. And any initiative to assemble and integrate national, continental and global data-sets to interpret the state of health of the earth's tropical forests must be welcome. This volume, emanated as a result of collaboration of Department of Space, Government of India with an international centre of repute based in Italy and is an effort in this direction.

Important contributions on forest cover assessment and conservation issues from eminent experts, drawn from various parts of the world, have covered a huge diversity of areas in Southeast Asia. The contributions (twenty-four in all, including a keynote paper) are largely based on case studies, undertaken under different projects, in northwest Himalaya, northeast India, China, Mongolia, Bangladesh, Myanmar, Thailand, Vietnam, Malaysia, Sumatra and Indonesia.

Most of the papers include analysis and interpretation of data using almost all types of available sources, which range from coarse resolution satellite data as of NOAA-AVHRR, WiFS for better spatial, spectral and temporal resolution to high resolution data derived from Landsat TM, LISS III, SPOT, etc.

Using such imageries and integrating data from various sources has yielded a wealth of information on forest cover change, phenological variation in forest type, fire spread risk, forest canopy density, etc. It is not only the volume of information but, more importantly, the diversity of issues, which have been addressed in most of the contributions. For example, the development of (i) methodology showing seasonal change pattern of each pixel from multi-temporal satellite data neglecting the influences of cloud, haze and system noises and (ii) indices on bare soil, shadow and thermal fluctuations are important achievements.

The image analysis and interpretation has tremendous predictive value for sustainable management of forest habitats on a broad spatial scale. These developments in the applications of remote sensing and GIS need to be further strengthened and extended to areas where such tools are not available. In our country the subject matter is rather new and therefore capacity-building mechanisms should be further strengthened.

The application of any contemporary scientific tool such as remote sensing has its limitations. This is aptly indicated by the author of the keynote paper, which reads '*Accessibility to and affordability of existing data and information are the major constraints for all users, with distribution being the weakest part of the chain.*' He further highlights the concept of an end-to-end information system, which includes the requirement of information infrastructure such as, data cap-

ture, data acquisition and distribution, data processing, data integration and capacity building as essential components. Availability of a vital decision support system, as indicated above, can ensure development of approaches for sustainable forest management in our country.

Every good work and every good effort is almost always accompanied by weak links. One such weakness in this volume has been the rather casual attitude of the editors in maintaining the continuum of the subject matter. For example, the editors should have categorized the volume in appropriate themes and each theme should have been provided with a summary. Uniformity in format has also not been looked into seriously. Some of the contributions start with an abstract, whereas in others, the abstracts are not given. This is an anomaly which could have been avoided. Further, there are few typos, which should not have been there.

Overall, it is a very important contribution and will help to promote the use of remote sensing and GIS in forest cover assessments. I am sure this volume will be of tremendous help to research scholars, scientists, ecologists, foresters, policy planners and remote sensing specialists.

1. Indian Institute of Remote Sensing. Biodiversity characterization at landscape level in Western Ghats India, using satellite remote sensing and Geographical Information System, A joint project of the Department of Biotechnology and Department of Space, Government of India, Project Report, 2002, p. 244.
2. Indian Institute of Remote Sensing. Biodiversity characterization at landscape level in north-east India using satellite remote sensing and geographical information system, A joint project of the Department of Biotechnology and Department of Space, Government of India, Project Report, 2002, p. 296.

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