

Gholz, H.L., Nakane, K., Shimoda, H. (ed.): **The Use of Remote Sensing in the Modeling of Forest Productivity**. (Forestry Science. Volume 50). - Kluwer Academic Publishers, Dordrecht - Boston - London 1997. 323 pp. NLG 250.00. ISBN 0-7923-4278-X.

Primary productivity of forests is rather difficult to assess using direct destructive sampling of biomass increments. Indirect methods as remote sensing and mathematical modelling represent alternative and more adequate approaches, particularly suitable for large-scale and long-time estimations. The advantages and difficulties of integrated use of the both indirect methods are discussed in the reviewed book.

The book consists of eleven chapters, which are in fact self-standing contributions written by well-known specialists in the pertinent branch of science. Special scale was used to divide the contributions into three sections. The first section (with three chapters) is focused on problems of radiation transfer, photosynthesis and carbon gain on stand level. Changes in productivity of forest ecosystems at regional scales are discussed in six chapters of the section two. To the most interesting belongs description of the three-dimensional forest succession model, and presentation of basic principles of geometric-optical modelling of structural changes in forests. Several examples of successful use of remote sensing combined with ecosystem modelling are presented as case studies realized within the frame of complex regional projects in the USA and Japan. The last section of the book with only two chapters is devoted to problems at the global scale.

As follows from the contribution presented, different approaches may be chosen in integrated application of remote sensing and forest ecosystem modelling, and their selection is not always dependent on the special scale. In this context it is very instructive to compare contributions describing remote sensing as a tool for model construction and parametrization, with contributions based on another philosophy: remote sensing as a tool for verification of models constructed "bottom up", using good knowledge of structure and physiology of forest trees.

The approaches discussed in the book are not limited to forests only, they can be easily utilized in evaluation of other types of ecosystems. This is why the book will certainly be highly valuable for a wide range of scientists and land managers.

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