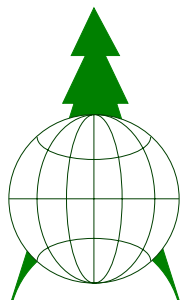

Proceedings of the IUFRO / FAO Seminar on

*Forest Operations in
Himalayan Forests with
Special Consideration of
Ergonomic and Socio-
Economic Problems*

held October 20 - 23, 1997
in Thimphu, Bhutan

edited by
Hans R. Heinimann
John Sessions



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Hans R. Heinimann/John Sessions (eds.)

Forest Operations in Himalayan Forests with Special Consideration of Ergonomic and Socio-Economic Problems

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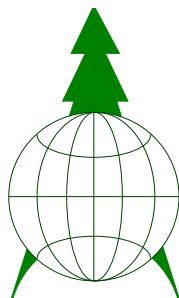
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IUFRO 3.06.00 / 3.07.00

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Preface

The seminar held in Bhutan between October 20 and 23, 1997, was the 3rd seminar of IUFRO 3.06.00 held in Asia - following the seminars of 1987 in Peshawar/Pakistan, and of 1994 in Harbin/China. In keeping with the aims of IUFRO, the Bhutan seminar aimed:

- to bring together an international group of researchers to discuss how to improve the efficiency of forest operations in the mountain forests of the Himalayan subregion;
- to exchange experience among scientists, professionals, and government representatives;
- to create better understanding between scientists from various countries and cultures.

Why did we choose Bhutan as a place for a scientific meeting? IUFRO research group 3.06.00 focuses on problems of mountain forestry what means - from an operational point of view - non-trafficable terrain conditions. It tries to organize its meetings in the most significant mountainous areas of the world. The Himalayan subregion was on the wish list for quite a while, and it was good luck that one of the officers, Dr. Guglhoer, who has worked in different places of Asia was in Bhutan at the time making it possible to organize this meeting.

The significance of mountainous areas is becoming more and more important. Estimates of the United Nations tell us that in 2010 about 40% of the world population will live in mountainous areas and in areas influenced by mountains, respectively. The management of the fragile forest ecosystems in those regions is a key issue for a sustainable development, as proclaimed at the RIO World summit in 1992. Bhutan is an excellent case study of a very fragile region due to its geologically very young history and its richness of natural heritage, why it was nominated as one of the world's hotspots of biodiversity. Furthermore it is well known for its environmentally sound forest practices that probably could represent a model case for many developing countries.

In a modern understanding sustainable development is based on three principles: economic development to fulfill human needs, social development following the principles of equity and human integrity, and conservation of our natural resources such as lithosphere, atmosphere and biosphere whereas maintaining biodiversity is a key issue. These three principles cannot be treated separately, they have to be considered in an integrated way. That is why IUFRO research groups „forest operations under mountainous conditions“, „ergonomics“, and „environmental effects of harvesting operations“ have begun organizing joint meetings.

IUFRO promotes the dissemination and application of research findings in developing countries. Scientific knowledge is not a value to be conserved by a single person, a single institution, or a single country. It's a heritage of the international community. I hope that the Bhutan event is a starting point for the exchange of experience among scientists, professionals and government representatives that will evolve to a common path in the future.

The process of globalization has been changing economic, scientific, and social life dramatically. The change will continue in the near future. Economic and social activities will be integrated in an interrelated international network binding together different nations. We therefore need to create a better understanding between different cultures. I am sure that visiting Bhutan could help the participants of the seminar to improve the understanding of cultural and social life in the Himalayan subregion.

I would like to thank the Royal Government of Bhutan warmly for making it possible to organize a scientific meeting in Thimphu including an excursion giving us an idea of the real conditions of forestry out in the field. I know how much additional work had to be done to handle all the preparatory activities and to make all the necessary arrangements. I would like to address a special thank to the following persons:

- Mr. Phuntsho Namgyel, Program Coordinator for Forestry Research, who is the responsible person from the Ministry of Agriculture of the Royal Government of Bhutan;
- Dr. Wolf Gughlhoer, Co-Manager of the Integrated Forest Management Project and Coordinator of IUFRO Working Party 3.06.01 "accessibility of mountain forests";
- Prof. Frits Staudt, coordinator of the IUFRO Research Group 3.07.00 „Ergonomics“ for supporting this joint seminar.

Without their assistance it would not have been possible to organize this conference.

Hans R. Heinimann

Coordinator, IUFRO Research Group 3.06.00 "Forest Operations Under Mountainous Conditions"