

## Preface

In various forms, uneven-aged forest management is practiced in throughout the world. The variation in species composition and stand structures related to local ecological, social, and economic constraints results in a very broad definition and practice of uneven-aged forest management. In addition to classical single tree selection practices that rely on shade-tolerant tree species, uneven-aged management also includes methods that create multifunctional, semi-natural forests with a high degree of structural complexity or irregularity.

The International Union of Forest Research Organizations (IUFRO) has recognized the importance and challenges in management of irregular forest structures. The Working group 'Uneven-aged Silviculture' was founded in 1992, and constitutes Unit 1.14.100 in IUFRO's current organisation. The research group seeks to bring together people from a wide spectrum of disciplines and to disseminate scientifically based information about structurally complex forests and uneven-aged silviculture. It does not promote or advocate the use of any particular kind of silviculture.

The meeting 'Uneven-aged Forest Management: Alternative Forms, Practices, and Constraints' held in Finland and Sweden on June 8–17, 2003, was the fourth in a series of meetings arranged by the Working Group in the last six years.

One starting point for the meeting in Finland was to change the focus from uneven-aged forestry alternatives in the temperate forests to those in the boreal zone. The second starting point for the meeting was the conclusion made by Professor Jean-Philippe Schütz at the Unit's third meeting in 2001, Zurich: "Our aim is not to create one, but several co-existing forms of heterogeneity, in a sense of creating varied habitats, modern silviculture should make use of all silvicultural tools. This is a significant challenge for silvicultural expertise."

Management of Fennoscandian boreal forests differs from many other regions of the world in two major respects. First, forests have not been transformed into uniform plantation structures on a large scale, and second, uneven-aged forestry has not been a legal practice, apart from specific types of non-commercial forests. Thus, the discussion about diversifying stand structure and possibilities for the application of uneven-aged management in commercial forests, which has been going on elsewhere, is relatively recent in Fennoscandia. In forests, irregularity in structure can be created in many ways at different spatial and temporal scales, and irregularity in structure may be a transient phase in the stand development or be a genuine management system.

Demands for alternative forest management regimes arise not only from ecological considerations but also from social, political, cultural, and even spiritual values and concerns. One purpose of silviculture has always been to provide forests with alternatives for future generations, i.e. silviculture has a strong social context. As such, the purpose of silviculture aligns well with the present concept of sustainable development.

The meeting, 'Uneven-aged Forest Management: Alternative Forms, Practices, and Constraints', covered a wide range of issues in research and management of irregular forests, from ecology, regeneration, growth and yield and harvesting, to economics and modelling. The principal purpose was to pinpoint the constraints and areas lacking information for scientists to work on in the future. The scale and complexity of these issues will challenge scientists and those specific to uneven-aged management in boreal forests were emphasized in the selection of invited speakers and during the In-Conference and Post-Conference Tour.

The meeting was arranged by the Finnish Forest Research Institute (METLA) and the University of Helsinki, Department of Forest Ecology. The

post-congress tour was organized in collaboration with the Swedish University of Agricultural Sciences. The meeting was co-sponsored by the IUFRO units Uneven-aged Silviculture (IUFRO 1.14.00), Design, Performance and Evaluation of Experiments (IUFRO 4.01.03) and Silviculture for Sustainable Multifunctional Forests (IUFRO 1.05.00).

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