

## CHRONICLE

# Forest landscape mosaics: disturbance, restoration and management at times of global change

Global environmental change poses complex challenges to our continued demand for ecosystem services. Where forestry in the past focused on the production of a few commodities, the threat of global environmental change demands that we adopt a new paradigm of forest management that combines past knowledge with innovative management planning strategies that consider a full range of projected ecosystem responses, and resilience to unanticipated factors. The challenge of restoring ecosystems processes while safeguarding ecosystem services in a balanced mosaic landscape demands a global dialogue on innovative methodologies.

On August 11–14, 2014, the Estonian University of Life Sciences hosted an international scientific conference „Forest landscape mosaics: disturbance, restoration and management at times of global change“ in Tartu, Estonia. The conference was organized by the Department of Forest Biology at the Institute of Forestry and Rural Engineering of the Estonian University of Life Sciences in collaboration with EFINORD-SNS networks.

The initiative for the conference came from two working groups of EFINORD-SNS: the Nordic Working Group on the Ecology of Primeval Boreal Forests (PRIFOR) <http://www.miun.se/sv/Avdelningar/nat/Forskning/PRIFOR/> and the network Natural Disturbance Dynamics Analysis for Forest Ecosystem Management (FORDISMAN) <http://ecosyst.emu.ee/>.

EFINORD is the North European Regional Office of the European Forest Research Institute <http://www.efinord.efi.int/portal/> and SNS is the Nordic Forest Research Co-operation Committee of Nordic Council of Ministers <http://www.nordicforestresearch.org/>.

The conference also served as a meeting platform for IAVS (International Association for Vegetation Science), FURN (Forest Ungulate Research Network) and IUFRO networks. Together with the mentioned EFINORD-SNS networks, which are dealing with different aspects of forest disturbances and restoration, a substantial set of research institutes was represented.

The conference brought together scientists, practitioners and experts to share experiences about forest disturbances, restoration and management at times of global change, and to evaluate past, present and future application and implementation of research find-

ings from the scientific community. Major themes of the conference related to the conservation and sustainable use of forests as natural resources in the face of global environmental change: Forest disturbance and resource management; Forest nature conservation and biodiversity; Forest management and conservation in the light of climate change; Natural forest and land use change; Primeval forest and natural dynamics; Natural forest dynamic: modelling perspective and methodological considerations; Forest restoration: complexity challenges; Landscape mosaic dynamics. The conference also addressed how global environmental change and political decisions alter natural and human disturbances.

Altogether about 150 people from 22 countries participated in the conference, most of whom visited Estonia and the Baltic States for the first time. During three days of presentations, keynote speeches were given by Prof. Kalev Jõgiste (Estonian University of Life Sciences, Estonia) – „Management of disturbance legacies in forest ecosystems of the hemiboreal zone“, Dr. Sylvie Gauthier (Canadian Forest Service, Canada) – „Forest disturbances and ecosystem management strategies in a climate change context: examples from the Canadian boreal forest“, Dr. Kaisa Junninen (Metsähallitus Natural Heritage Services, Finland) – „Restoration of forests from practitioner’s perspective“, Prof. Shinya Sugita (Tallinn University, Estonia) – „Forest vegetation change during Holocene: climate and human“, Dr. Ekaterina Shorohova (Saint Petersburg State Forest Technical University, Russia, Finnish Forest Research Institute (METLA), Finland) – „A dynamic view on primeval forest landscapes“ and Dr. W. Keith Moser (USDA Forest Service, USA) – „Projecting future forest composition and the importance of disturbance assumptions in temperate and boreal forests“. In addition, distributed over 8 sessions covering the major topics, 81 oral presentations, were delivered complemented by a poster session.

During the conference the book „Primeval Forests of Finland – Cultural History, Ecology and Conservation“ was introduced by the authors Dr. Petri Keto-Tokoi (Tampere University of Life Sciences) and Dr. Timo Kuuluvainen (University of Helsinki). The book, in its original language entitled „Suomalainen aarni-

ometsä“ (published by Maahenki), has received several nature awards in Finland.

On the second day three different Mid-Conference Excursions were organized, where participants visited either Järvelja, Endla Kassinurme, or Kiidjärve Taevaskoja, led by Dr. Ahto Kangur, Dr. Marek Metslaid and Prof. Kalev Jõgiste, respectively. During the excursions guides, researchers and practitioners gave an overview of the history and natural conditions of the visited sites. There were lively discussions on topics of forestry, disturbance management and closely related fields of science. Excursion programs also included visits to forest-related cultural sites.

After the conference those who were interested had an opportunity to join the post-conference excursion,

which took the participants to West-Estonia, and the islands Hiiumaa and Saaremaa.

We are grateful for all the support from our event partners and sponsors: Frens Conference Services, Environmental Investment Centre, Estonian University of Life Sciences, City of Tartu, State Forest Management Centre, Järvelja Training and Experimental Forest Center, FestForest, Artiston, A. Le Coq.

More information can be found on conference webpage: <http://www.forestdisturbances.com/>.

On behalf of the Organizing Team,  
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**Photo 1.** Participants of the FORDISMAN Conference. Photo: Ahto Kangur



**Photo 2.** Participants of the Mid-Excursion to Endla and Kassinurme. Photo: Jaanus Paal



**Photo 3.** Book „Primeval Forests of Finland – Cultural History, Ecology and Conservation“ presentation: Dr. Timo Kuuluvainen. Photo: Ahto Kangur