

CHRONICLE



3rd Restoring Forests: Regeneration and Ecosystem Function for the Future

Forest regeneration is a key for successful and adaptive forestry in future climate, and the prerequisite for the continued and increasing supply of forest biomass and ecosystem services for the future societies. Thus, it is of great importance to maintain and improve our competence and collaborations, and knowledge exchange in this subject field, both regionally and globally. To support this process, an international scientific conference „3rd Restoring Forests: Regeneration and Ecosystem Function for the Future“, was organized on September 12-14, 2017 in Lund, Sweden. The conference communicated the state-of-the-art in the forest regeneration research and relatively new research field of restoration ecology.



Photo Author – Johanna Witzell

The conference focused on the following main topics: learning from the past for the future, stress tolerant plant materials, and designing and establishing resistant/resilient forest landscapes. Thus, the scope of the conference covered a wide array of relevant topics, promoting cross- and inter-disciplinary research. All main topics had clear focus on the practical forest regeneration and restoration, which contributed to science-society interactions. For instance, past experiences from different regions and conditions can reveal what genetic material and species might adapt to future climate and point out the specific success factors in previous restoration efforts. The conference addressed different aspects of forest regeneration phase, seeking solutions to major challenges, such as selection of cost-efficient regeneration methods, proper planting materials and management systems. Another timely issue was non-native tree species that may serve an important role under some circumstances, e.g., to facilitate reintroduction of native tree

species or as substitutes for native tree species attacked by various diseases.

The conference was organized by several networks and IUFRO units: EFINORD–SNS Nordic Network of Forest Regeneration, SLU Faculty of Forest Sciences research school – Bioeconomy – Adapted Forest Management, IUFRO Task force – Forest Adaptation and Restoration under Global Change, IUFRO unit 1.01.00 – Temperate and Boreal Silviculture, IUFRO unit 1.06.00 – Restoration of Degraded Sites, IUFRO unit 1.01.06 – Ecology and Silviculture of Oak, IUFRO unit 2.01.15 – Whole Plant Physiology. Organizing institutions were: Swedish University of Agricultural Sciences (SLU), Estonian University of Life Sciences (EMU), Forest and Landscape College, IGN, University of Copenhagen (KU) in Denmark, Purdue University in USA.

The organizer's earlier experience in similar activities ensured broad participation and maximized the scientific exchange. The conference provided a global update of and identified knowledge-gaps of the wide array of topics. The collaborative approach successfully met the expectations to strengthen the research on forest regeneration and restoration by bringing together participants from several countries throughout the world, including the Nordic and Baltic region. In addition, participants from forest regeneration and restoration practice attended the conference to enrich the discussions and knowledge exchange on the application of science based knowledge.

Altogether 109 experts from 31 countries and 6 continents participated in the conference. During three days of presentations, inaugural talks were given by Luis Neves Silva (WWF International, Switzerland) – „New Generation Plantations: Restoring forests and ecosystem functions at the landscape scale“, John Stanturf (USDA Forest Service, USA) – „Saving the Bonn Challenge from Irrelevance“, David Lindenmayer (The Australian National University, Australia) (video-link) – „When too much disturbances is too much – principles and practices for restoration forestry in heavily disturbed native forests“.

Keynote speeches were given by Richard Bradshaw (University of Liverpool) – „Using the past as guide to forest restoration“, Annika Felton (SLU, Sweden) – „Ungulate browsing from a nutritional ecology point of view and implications for forest restoration“, Lorena Gomez-Aparicio (CSIC, Spain) – „Understanding species interactions to support



Photo Author – Johanna Witzell

forest restoration in a changing world“, Catherine Collet (INRA, France) – „Role of mechanical methods for the establishment and silviculture of young plantations, in relation to forest restoration“, Timo Saksa (LUKE, Finland) – „Advances in planting techniques and materials in boreal region“, Anne Tolvanen (LUKE, Finland) – „The role of disturbances in forest restoration – do we promote or counteract them?“, Juan A. Martın (Technical University of Madrid, Spain) – „Scientific and breeding advances in the fight against Dutch elm disease – will they allow the use of elms in forest restoration?“, Lena Gustafsson (SLU, Sweden) – „Mitigating negative effects on biodiversity from clearcutting – an overview from north Europe“, Pablo J Donoso (Universidad Austral de Chile) – „Restoration expectations in South America: a case study in the Andes“.

In memoriam

Māris Daugavietis

(December 11 1939 –August 2 2017)

Māris Daugavietis has graduated from Forest Faculty of Latvia Academy of Agriculture in 1964 as forestry engineer. After studies, he has started working at the Forestry Problems' Institute (later LSFRI Silava) as junior research fellow; then as senior engineer, senior research fellow and finally as senior research scientist.

His research interests included complex processing of forest raw material: gathering, transport and processing of logging residues, use of logging residues (needles, leaves, bark, non-lignified twigs) to obtain biologically active compounds and assess the possibilities of their use in pharmacy, animal fodder (biologically active additives), agriculture (plant protection and growth stimulation) and house-



hold chemistry. He has led a large number of projects related to these topics.

Māris Daugavietis was a member of Latvian Academy of Agricultural and Forestry Sciences. As Coordinator of IUFRO Working party *Harvesting and utilization of non-wood tree biomass* (1986-2000; 2000-2006 – Deputy Coordinator), he has received IUFRO certificate of appreciation.

In 2001, Māris Daugavietis received Latvian Academy of Sciences A.Kalnins award, in 2008 –IV class Cross of Recognition. He was a citizen of honour in Salaspils.

Māris Daugavietis has authored and co-authored more than 170 scientific publications and more than 60 inventor's certificates and patents. He has supervised student practices and theses and actively taken part in reviewing scientific works and dissertations.

12 products from non-wood biomass have been developed, registered and introduced in production under supervision of Māris Daugavietis.

Māris Daugavietis has been Editor, Member of the Editorial Board of "Baltic Forestry" since its beginning

In addition, distributed over 5 sessions covering the major topics, 38 oral presentations were delivered complemented by a poster session.

On the second day, half-day field excursion to Söderåsen National Park and Herrevads Monastery area was organized, led by Jesper Witzell and Tove Hultberg (Skania County Administrative Board). During the excursion, it was shown and discussed various methods for restoring temperate broadleaved forests. During the field trip guides, researchers and practitioners gave an overview of the history and natural conditions of the visited sites. There were lively discussions on topics of forest regeneration, forest restoration and closely related fields of science. Field trip program also included visits to forest-related cultural sites.

After the conference those who were interested had an opportunity to join an optional one-day post-conference excursion to southern Sweden and Denmark. During the excursion, it was shown and discussed examples of forest landscape restoration of which some are more than 200 years old. Various aspects of restoration such as afforestation, continuous cover systems, rehabilitation of native broadleaved forests and the use of non-native and fast growing tree species were shown.

More information can be found on conference webpage: <https://reg.akademikonferens.se/restoringforest2017>

On behalf of the Organizing Committee,

Marek Metslaid

Institute of Forestry and Rural Engineering
Estonian University of Life Sciences