Natural Disturbance Dynamics Analysis for Ecosystem Based Management (FORDISMAN)

The main aim has been the study on the natural disturbances and forest ecosystem response to those. The practical value of this approach can be seen in new methods to manage the forest.

Photo: Workshop participants / Kalev Jõgiste

Disturbance dynamics of forest

The questions on natural dynamics of forest ecosystems is a topic high on the agendas of research community. The definition of natural in the case of forest ecosystems stays highly debatable

Carbon sequestration

The carbon sequestration is a task for resource management modelling at different scales.

New management strategy

The land-use changes that create carbon sources alter both the climate and forest regeneration and therefore potentially threaten future wood harvests. The resulting unpredictable conditions will limit forest productivity even with increased productivity due to the rise of CO_2 in the atmosphere. With new climatic conditions, the un-adapted species and ecosystems will cause increased carbon emission to the atmosphere from natural disturbances.

Main activity is organized in the form of thematic seminars and workshops.

History and cooperation

The network Natural Disturbance Dynamics Analysis for Ecosystem Based Management (FORDISMAN) started its activity in 2002. The network has been active during 11 years bringing together researchers from different countries from Northern Europe, Baltics and other countries worldwide. The acronym FORDISMAN is used since 2013. The joint activity with PRIFOR group was started in 2012. The activity has been focused in the meetings to discuss the disturbance dynamics of boreal and temperate forest. Another topic for the FORDISMAN network is the carbon balance analysis of natural forests. The forest carbon cycle is highly influenced by climatic variability and disturbance regimes. The effects differ according to disturbance types, character of the individual events and local conditions. The discussions for the network are the questions how to emulate natural disturbance regimes, and mitigate negative disturbance effects. Also the carbon sequestration is analyzed in the context of forest disturbance theory.

FORDISMAN-PRIFOR conference

The preparation for the international conference in Tartu has proceeded according to a plan. In 2013 March 18 the meeting of PRIFOR and FORDISMAN representatives took place in Helsinki to plan an international conference for August 2014. The audio/video conference was held on May 8 to plan the meeting of 2014. After that the series of

meetings of local organizers were held to discuss the organizational questions of the conference.

Carbon workshop

As the carbon sequestration has become a crucial question of research in the field of forest ecology. The FORDISMAN network planned a meeting to discuss the topic. The workshop «Carbon sequestration of disturbed and managed forest ecosystems» took place on 21. – 24. October 2013 in Lithuania. Totally 18 participants from 7 different countries (Estonia, Finland, Latvia, The Netherlands, Lithuania, USA, Russia) attended the meeting. 11 oral presentations were hold during the meeting.

It is worthy to note that great number of postgraduates was involved from different countries. Thesis defenses have planned by members of the network in different countries. The discussion on further activities was focused on the next conference and publication procedure. In the frame of the workshop also the organizational questions of 2014 Tartu conference were discussed.

The excursion was organized to Aukstaitia National Park and Forest Monitoring Station. The visit was paid also to Aukstaitia Nature Reserve. The detailed measurements of water and nutrient balance are remarkable. The database created would deserve keen attention in the frame of collaboration project to compare the environmental indications of different regions.

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