IUFRO Meeting Report Form for Session 68a “Forest Adaptation and Restoration under Global Change” within the IUFRO 125th Anniversary Congress

1) IUFRO focal person/meeting organizer:

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2) Meeting report

Key issues discussed/latest findings in the field:

a) Status of the IUFRO TF “Forest Adaptation and Restoration under Global Change”
b) Governance challenges for forest landscape restoration
c) Different tree species and management strategies to adapt forests to climate change
d) Biodiversity issues of adaptive forest management
e) Plantation forestry as a possible solution for forest adaptation

Conclusions

There are a large variety of approaches and techniques that are promising for forest adaptation and restoration in different parts of the world. Whereas in developed countries uncertainties of future site and climate conditions on regional and local scale are major challenges for forest adaptation to climate change; in other regions often tenure and governance issues are a major obstruction for forest restoration and adaptation. The development of local and regional biodiversity and restoration of naturalness of forest vegetation may conflict with plantation forestry as one option for large-scale restoration and adaptation of forest land.

Global information of successes and failures of forest restoration and adaptation under global change is currently gathered and compiled by an online survey of the TF (website: http://gdi.thuenen.de/wo/limesurvey/index.php/883655?lang=en)

Outlook to future activities

There will be a special issue in Annals of Forest Science (AFSC) with the title “Forest Adaptation and Restoration” that will compile scientific work and progress of the session and TF activities. An analyses and publication of the results of the online survey is planned for the time period 2018 to 2019. A joint TF meeting with the IUFRO TF on Forests, Soil and Water Interactions is planned for 13 and 14 September 2018 in Corvallis, OR (USA).

Background information

Forests provide a wealth of direct and indirect benefits by way of a range of important ecosystem services. These societal demands on forest goods and services are on a sharp upswing on account of rising populations, improved incomes and changing preferences. Increased demands for meat and dairy products are leading to forest degradation and deforestation in several parts of the world. Global demand for bioenergy to limit fossil fuel use requires increased production of wood and biomass. At the same time forest ecosystems are facing foundational disruptions on e.g. increased temperatures and altering precipitation patterns. Extreme weather events are leading to more frequent and intense droughts and fires challenging forest stability and resilience similar to effects of insects and plant diseases.

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diseases. In this session we focused on the following topics as pertaining to forest ecosystems worldwide:

- State of the knowledge of both forests adaptation (FA) and landscape restoration (FLR);
- Key challenges for FA/FLR in different regions of the world;
- Political, economic, and societal aspects related to FA and FLR;
- Local and regional best practice examples of FLR and its supporting role in adaptation.

3) Other information:

Meeting data:

*Full title of the meeting:* Session 68a “Forest Adaptation and Restoration under Global Change” within the IUFRO 125th Anniversary Congress

*Date and venue:* 21 September 2017, University of Freiburg, Germany

*Meeting website:* http://iufro2017.com (session 68a: Forest Adaptation and Restoration under Global Change)

*Number of participants:* 50 persons

*Countries represented:* (with contributions): Germany, Switzerland, Austria, France, Sweden, Slovenia, Latvia, Poland, Chile, China, India, Mongolia, Nepal, Malawi,

Organization of the meeting:

*All IUFRO Units involved:* IUFRO Task force – Forest Adaptation and Restoration under Global Change

And the following networks: IUFRO-SPDC

*Host organization(s):* University of Freiburg, Thünen Institute of Forest Ecosystems, Germany

*Sponsors:* National Institute of Forest Science (NIFoS), travel and participation costs of selected participants via IUFRO-SPDC

Communication activities (dissemination of information about the meeting; promotion of IUFRO):

Selected papers will be published in a special issue in Annals of Forest Science (AFSC) with the title “Forest Adaptation and Restoration” within the year 2018.

*Related publications/websites:*


Hoehl, M., Bolte, A. 2017. Online survey on forest adaptation and restoration under global change - an approach to gathering expert knowledge and local experiences worldwide. Flora Mediterranea 27, p. 60. doi: 10.7320/FIMedit27.005.


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