Forest Landscape Restoration as a Strategy for Mitigating and Adapting to Climate Change

Report on Side Event, XXIV IUFRO World Congress
10 October 2014
by
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This side event jointly organized by the World Resources Institute (WRI) and the International Union of Forest Research Organizations (IUFRO) aimed at discussing forest landscape restoration (FLR) as a strategy for mitigating and adapting to climate change. To this end, a group of IUFRO scientists, led by IUFRO RG 1.06.00 “Restoration of degraded sites”, has developed a framework to demonstrate how FLR contributes to climate change mitigation and adaptation and how this contribution can be enhanced through more efficient methods and systems. This communication tool should help decision-makers to build resilient landscapes and learn how climate objectives can be addressed through FLR.

Professor Björn Hanell, Swedish University of Agricultural Sciences and Coordinator of IUFRO Division 1 (Silviculture), in his welcome remarks informed participants that IUFRO is an active member of the Global Partnership on Forest Landscape Restoration (GPFLR) and as such supports the call to restore 150 million hectares of deforested and degraded lands by 2020 as an important component of the “Bonn Challenge Initiative on forests, climate change and biodiversity”. Research activities on FLR within IUFRO have been carried out for many years - long before FLR restoration has been placed high on the political agenda at global and national levels. IUFRO is pleased to partner with the World Resources Institute in implementing a joint project, financed by the German Ministry of Environment on “Inspire, Support and Mobilize Forest and Landscape Restoration” in support of the Bonn Challenge Global Forest Landscape Restoration Policy Initiative. Thus far, IUFRO’s input to this process includes:

- Feasibility Study on Peer Review for the Bonn Challenge Initiative, providing options for evaluating FLR pledges by countries or other proprietors; and
- Forest Landscape Restoration as a Strategy for Mitigating and Adapting to Climate Change; an analysis and communication tool based on a wide array of case studies.

The preliminary results of this ongoing project were presented and discussed in this side event.

The welcome remarks were followed by a presentation on the Global Initiative on “Inspire, Support, and Mobilize Forest and Landscape Restoration”, Objectives and Role of IUFRO, presented by Dr. Michael Kleine, IUFRO-Deputy Executive Director, on behalf of Dr. Lars Laestadius, Senior Associate, World Resources Institute. Almost half of global forest landscapes that have been deforested and/or severely degraded over the past centuries are considered as relevant target areas for FLR-activities. They account for about 2 billion hectares of degraded land and once restored potentially support the multiple
environmental benefits provided by forests and trees. Numerous examples from around the world (e.g. Republic of Korea, China, Brazil etc.) show that successful restoration of forest ecosystems is not only technically and economically feasible, but also socially acceptable if prepared and designed with adequate participation of relevant stakeholders. Forest landscape restoration needs now to be upscaled to cover much larger areas, in order to significantly contribute to climate change mitigation and improve environmental conditions globally.

To this end the project aims at front running the global FLR efforts by restoration of at least 10 million hectares of degraded and deforested landscapes committed and/or initiated in 5 countries (including Brazil and Indonesia) involving a range of various stakeholders (e.g., civil society, governments, private companies) by 2017, in support of the Bonn Challenge Initiative. The project will

- Inspire awareness of and commitments to restoration via sustained communications efforts, a Global Restoration Council, and annual Restoration Awards (global);
- Support methods and measures that close gaps in enabling conditions and capacity in order to advance FLR (global methods, applied in Brazil & Indonesia); and
- Mobilize on-the-ground efforts by convening FLR champions (in Brazil and Indonesia) and contributing to global capacity building.

IUFRO’s role in this context is to provide state-of-the-art scientific knowledge on FLR through analysis of restoration case studies, review of scientific literature and development of capacity building material.

Dr. John Stanturf, US Forest Service and IUFRO Research Group Coordinator leading the project provided insights into the work, thus far accomplished through a presentation titled “Application of the Adaptation & Mitigation and FLR stop light(s)”. In total 10 case studies of forest restoration from around the world were assembled including South and Southeast Asia, East Africa, Europe, Latin and North America. These case studies were evaluated in detail for their context, activities and impact, in order to know they represent forest landscape restoration.

The description of each case covered the three major components of the project i.e. “motivate”, “enable” and “implement” by checking whether or not various features under each component are (a) in place, (b) partly in place; (c) not in place; or (d) not relevant. The resulting tabulated summaries provide a good global view of the type and nature of each restoration case.

In a next step, restoration cases have been evaluated for their contribution to climate change mitigation and adaptation by listing the specific project objectives, mechanisms used and restoration activities applied. This allows direct comparison between the restoration cases and highlights their level of contribution to mitigating and adapting to climate change.

Following the presentation on preliminary project results, a panel discussion and audience question and answer session titled “Contributing to climate change objectives at local levels through FLR” took place. Three members IUFRO’s FLR expert group leading the project formed a panel consisting of Promode Kant (India), Palle Madsen (Denmark), and John Stanturf (USA). Topics touched upon during the panel discussions included:

- Scale is an important aspect to be considered in evaluating FLR projects;
- In most cases a complex mix of mitigation/adaptation measures occur in a single project;
- Projects evaluated were not designed with climate change mitigation and adaptation in mind;
Conservation of existing native forests is critical and it was pointed out that FLR can be applied to reduce pressure on native forests and provide a buffer zone around protected areas, as well as deliver biodiversity benefits;

In developing countries landscape restoration projects that are community centred are more likely to succeed. Projects aiming at reducing demand for fuelwood, like the India cook-stove project, also have high transformational potential; and

Multiple indicators complicate FLR implementation.

In conclusion, the analysis of the case studies and discussions on the results revealed a number of important lessons learnt:

- The results of this assessment of FLR case studies as presented in the side event mainly serves as communication tool;
- The case studies help decision makers to realise what types of concrete action on the ground contribute to climate change mitigation and adaptation;
- They also help to connect high-level discussions on climate change (UNFCCC-COP etc.) to reality on the ground, thus enable the formulation of appropriate policies, support schemes and financing mechanisms;
- FLR and mitigation and adaptation projects are not always resulting in win-win situations; sometimes compromise or sub-optimal designs from the perspective of one or the other is necessary to meet project objectives; and
- The stoplight presented in the side event is not a prescription, but is meant to suggest where no- or low-cost design alterations to FLR would have additional mitigation and adaptation benefits.

Overall one can conclude that the stoplight approach for FLR cases and projects can be used both as an evaluation tool and a design guide for actual FRL implementation on the ground. The final report of FLR mitigation and adaptation stoplight will be published in March 2015.
IUFRO-WRI Forest Landscape Restoration Side Event (Salt Lake City, 10 October 2014)

The FLR Panel (Photo by R. Khorchidi)

Landscape Restoration Udaipur, Rajasthan, India (Photo by Foundation for Ecological Security)

Restoring natural beech forests on farmland in Denmark (Photo by P. Madsen)

Dry tropical forest restoration in Ghana (Photo by J. Stanturf)

Restoration Estonia is a sequence of oil shale mining, over burden pile, and planted Scots pine (Photo by J. Stanturf)