



**IMPLEMENTING FOREST
LANDSCAPE RESTORATION**

A Practitioner's Guide

Editors: John Stanturf, Stephanie Mansourian, Michael Kleine



"Implementing Forest Landscape Restoration: a practitioner's guide" by IUFRO

a modular training resource for
facilitators with a broad approach
towards sustainable land
management

IUFRO FLR Guidebook introduction

- Emerged of WRI-led project “Inspire, support & mobilize FLR”
- Holistic treatment of FLR, focus on Sustainable Land Management
- Modular approach, modules can be applied in isolation
- Underlying concept: project cycle management
- Target audience:
 - FLR practitioners working in a local context
 - Policy makers, who need to gain understanding of the entire range of complexity of FLR
- Published in 2017 – no feedback on impact

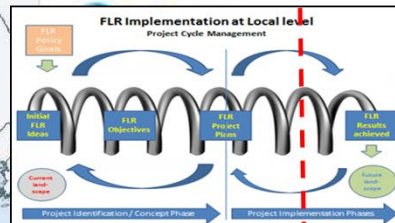
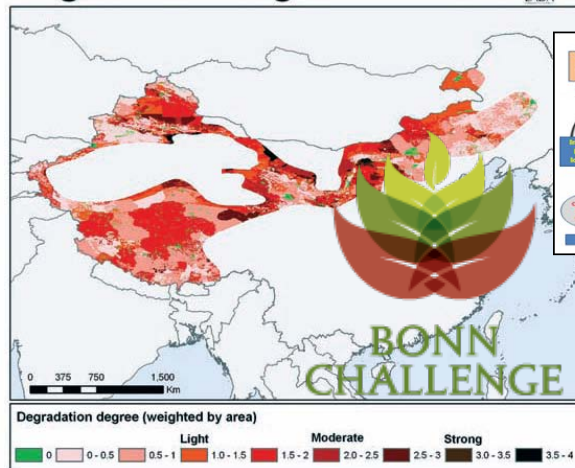
IUFRO FLR Guide contents

- Module I. Getting Started
- Module II. Governance and Forest Landscape Restoration
- Module III. Designing a Forest Landscape Restoration Project
- Module IV. Technical Aspects of Forest Landscape Restoration
Project Implementation
- Module V. Monitoring Forest Landscape Restoration Projects
- Module VI. Climate Change Mitigation and Adaptation in Forest
Landscape Restoration
- Module VII. Communicating Forest Landscape Restoration Results
- Outlook

Module 1: Getting (an FLR project) started

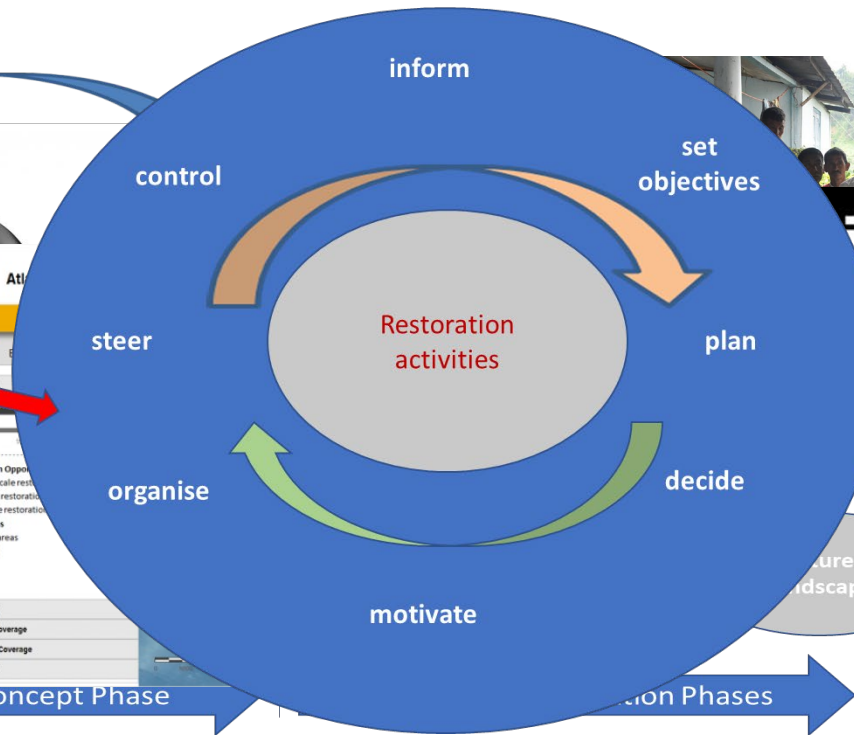
FLR Phase	Contents
1. Visioning	What is FLR in a given country context
2. Conceptualizing	Prioritize landscapes, identify ecological & social goals
3. Designing	Turn goals into objectives, baselines & targets
4. Implementing	Implementation & monitoring plans: what, where, when, by whom, how much

Degradation degree



Assessing forest landscape restoration opportunities at the national or sub-national level

Project Identification / Concept Phase



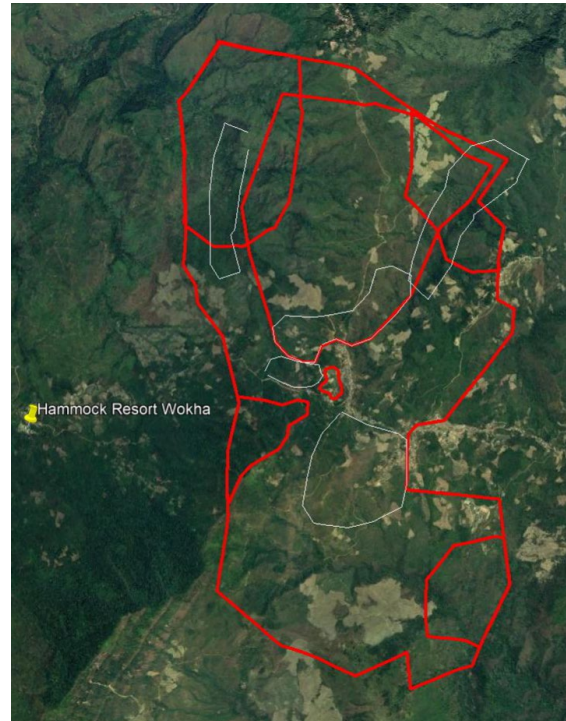
Future landscape

Implementation Phases

Module 2: Governance of FLR

Land ownership & tenure rights

- 1) Clarify land ownership & tenure rights
- 2) Apply principles of Free Prior and Informed Consent



Stakeholder Engagement

- 1) Identify & engage stakeholders
- 2) Understand stakeholders' objectives & power relations
- 3) Discussion of trade-offs & negotiation of FLR and compensation
- 4) Capacity building



Module 3: Designing a FLR Project

Identify clear goals & turn them into measurable objectives

	Goal	Objective	Plan
Meaning	Purpose of FLR project	Accomplishment	Activities that result in accomplishment
Measure	Not measurable/tangible	Measurable	Sequenced list of what, where, when, by whom, at what cost
Timeframe	Long-term	Short to mid-term	Short to mid-term
FLR Example	Restore degraded land along river basin	20 m buffer along rivers	Plant 100 ha of native species along rivers in Kigali province by end of 2016 by local farmers

Agreement among stakeholders on objectives; prioritize objectives in case of disagreements

Module 4: Technical aspects of FLR implementation

- Implementation specific for landscape units
 - Restoration methods for forest functions (hydrological, protection, biodiversity, carbon, production)
 - Restoration strategies (active/passive)
 - Species choice/planting design
- Landscape unit plan – overarching FLR plan
- Capacity building



Module 5: Monitoring of FLR

- Capture outcomes at different spatial and temporal scales

Monitoring type	Contents
Surveillance	Change of ecological or socio-economic conditions (permanent sample)
Implementation	Process monitoring
Effectiveness	Achievement of social, economic & ecological goals & objectives
Socio-ecological effects	S-E benefits, trade-offs, unintended results



- Develop criteria & indicators - SMART
- Establish baselines – e.g. through surveillance monitoring

Module 6: Climate mitigation and adaptation methods in FLR

Identification of synergies between climate change and restoration objectives

Mitigation

- Carbon sequestration
- Emission reduction
 - Biomass burning – forest fire
 - Land use change

Adaptation

- Strategies:
 - Incremental – use of native species
 - Anticipatory – use of exotics
 - Transformational – manage or create new ecosystems
- Activities:
 - Practice & behaviour – thinning to reduce respiration
 - Green infrastructure – mangrove planting

Module 7: Communicating FLR results

- Communicating FLR vision, goals, objectives, implementation & outcomes to stakeholders at various stages during the FLR process – tailor made communication
- Wide range of stakeholders: industry, science, farmers, extension, government, NGOs, youth, civil society
- Stoplight tool: status & prioritization

	Objective	Mechanism	Restoration Activity	Priority Level
Mitigation	Sequester carbon	Increase forest area	Afforestation	●
		Increase biomass/unit area	Increase productivity	●
			Longer – lived species	●
	Reduce emissions	Increase soil carbon	Increase rooting depth	●
		Bioenergy	Bioenergy plantations	●
Adaptation	Maintain forest area	Reduce deforestation drivers	Policy reform – wetlands drainage regulations	●
			Conservation easements	●
			Improve silviculture	●
	Maintain carbon stocks	Reduce degradation	Sustainable forest management (improve regeneration)	●
	Maintain other forest functions	Improve biodiversity	Afforest with mixed species	●
			Recover endangered species (Louisiana black bear, pondberry)	●
			Manage for species of concern (Neotropical migratory songbirds)	●
		Improve hydrology	Restore microsites	●
			Plant stream buffers	●
				●
	Manage for resistance	Reduce vulnerability to stressors	Integrated pest management of <i>Populus deltoides</i> only	●
		Overcome regeneration barriers	Secure advance <i>Quercus</i> regeneration	●
Manage for resilience		Reduce vulnerability by breeding, introduce new provenances, genetic modification		●
		Expand population (within range)	Emphasize <i>Quercus</i> spp. in afforestation	●
		Expand range		●
		Create refugia		●

Stanturf, John; Mansourian, Stephanie; Kleine, Michael; eds. 2017. *Implementing Forest Landscape Restoration, A Practitioner's Guide*. International Union of Forest Research Organizations, Special Programme for Development of Capacities (IUFRO-SPDC). Vienna, Austria. 128 p.

ISBN - 978-3-902762-78-8

<https://www.iufro.org/science/special/spdc/netw/flr/flr/pract-guide/>



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