TRAINING REPORT

AFoCO-ITTO Capacity Building Workshop on Forest Landscape Restoration in the Asia-Pacific Region: Developing capacities needed for successful FLR interventions in the Tropics

Full Report

30 September – 3 October 2021

AFoCO

ITTO
ORGANIZACIÓN INTERNACIONAL DE LAS MADERAS TROPICALES

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Note to Readers

The workshop report was prepared by the AFoCO Regional and Education and Training Center to the AFoCO Capacity Building Workshop on " AFoCO – ITTO Capacity Development Workshop on Forest Landscape Restoration in the Asia-Pacific Region "virtually organized on 30 August – 3 September 2021.

The AFoCO and ITTO are grateful for the support and resources provided by participants of the Member Countries: Bhutan, Cambodia, Fiji, India, Indonesia, Kazakhstan, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste, and Viet Nam. We further extend our great appreciation for two countries in Central Asia, Tajikistan and Turkmenistan, for their countless efforts and contributions to the workshop. Last but not least, we would like to deeply thank lecturers and speakers from the Asian Institute of Technology, CIFOR-ICRAF, GCF, IUCN, IUFRO, RECOFTC, and the University of Bern.

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CONTENTS

ABBREVIATIONS & ACRONYMS

ANR	Assisted natural regeneration
ASDP	Agriculture Strategic Development Plan
BECCS	Bioenergy, carbon capture and storage
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CDR	Carbon Dioxide Removal
CPF	Collaborative Partnership on Forests
DALMS	Department of Agricultural Land Management and Statistics
DF	Department of Fishery
FD	Forest Department
FLR	Forest landscape restoration
FMP	Forest Management Plan
FP	Funding proposals
FPIC	Free, Prior and Informed Consent
GAD	General Administration Department
GHG	Greenhouse Gas
NbS	Nature-based Solutions
NDCs	Nationally Determined Contributions
NSDP	National Strategic Development Plan
NTFP	Non-timber forest products
PPF	Project preparation facility
RFP	Request for Proposals
ROAM	Restoration Opportunities Assessment Methodology
RS	Rectangular Strategy
SAP	Simplified Approval Process
SDGs	Sustainable Development Goals
ToFs	Trees outside Forests
WBI	Wood-Based Industry

1. BACKGROUND

Embarking the first year of the UN Decade on Ecosystem Restoration 2021-2030 in the Asia-Pacific region and across the world offers an excellent opportunity to scale up restoration partnerships. In an effort to enhance restoration initiatives at the national and sub-national levels to help catalyze fast implementation of the UN Decade, the Asian Forest Cooperation Organization (AFoCO) and the International Tropical Timber Organization (ITTO) jointly organized a virtual workshop on forest landscape restoration on 30 August-3 September 2021 in partnership with many partners in the region.

Forest landscape restoration (FLR) is an inclusive and integrated landscape approach that can help reverse land degradation, increase carbon storage, conserve biodiversity, and create sustainable livelihoods for local communities, allowing them to play a critical role in shaping the landscape and gain significant benefits from restored forest resources. It is to pursue ecological integrity and human well-being in restoring deforested or degraded landscapes for multiple benefits.

The Workshop was intended to contribute to capacity building in AFoCO and ITTO member countries in the Asian-Pacific region to undertake successful FLR interventions through adopting and implementing a new Guidelines for Forest Landscape Restoration in the Tropics that lay out six key principles for successful FLR, first identified by the Global Partnership and Landscape Restoration, as well as 32 guiding elements with recommended actions for putting FLR into effect in the field. The FLR guidelines provide a basis for policy decisions and a technical reference that practitioners can adopt. These new FLR guidelines are a joint effort of ITTO, members of the Collaborative Partnership on Forests (CPF), AFoCO, and other collaborating institutions.

The workshop also provided an excellent opportunity to share national and local restoration cases and lessons, which explored how FLR could be achieved – and the challenges and opportunities it could present for local people and other stakeholders along the way.

2. OBJECTIVES

The workshop aimed to provide participants with a comprehensive understanding of six FLR principles and associated guiding elements in view of sustainable knowledge sharing on the basis of ITTO's recent Guidelines on Forest Landscape Restoration in the Tropics.

To achieve the main objective, a total number of ten sessions were provided, consisting of four (4) keynote presentations on the global discourses on forest restoration and rehabilitation, six (6) lectures about the main pillars of FLR, wherein cases studied in Asia and the Pacific region were introduced as focusing on the analytical views in project proposal development.

Another objective of this workshop was to provide an interactive opportunity to brainstorm, discuss, share and develop future FLR project concepts amongst the participating countries. Four (4) country presentation sessions would encourage the participants to raise and analyze their challenges and issues in implementing FLR schemes and develop project concept notes based on their problem tree, stakeholder analysis, and logical framework analysis.

3. ANALYSIS OF PARTICIPATING COUNTRIES

3.1 PARTICIPANT INFORMATION

This course welcomed 72 government officials and forestry experts (Male: 39 and= Female: 33) involved in forest landscape restoration and related work of the Member Countries. Those involved for a minimum of one year of serving the government were invited from the respective member countries.

Table 1. Number of participants from member countries

No.	Country	No. of Participants
1.	Bhutan	2
2.	Cambodia	13
3.	Fiji	2
4.	India	2
5.	Indonesia	13
6.	Kazakhstan	2
7.	Lao PDR	2
8.	Malaysia	4
9.	Myanmar	4
10.	Philippines	9
11.	Thailand	6
12.	Timor Leste	5
13.	Vietnam	4
14.	Tajikistan	2
15..	Turkmenistan	2
	Total	**72**

Table 2. Position of participants

No.	Position	No. of Participants
1.	Director-General/Head of Department	6
2.	Deputy Director-General	13
3.	Director/ Chief	12
4.	Deputy Director / Deputy Chief/Vice-Chief	11
5.	Senior Expert/ Forest Management Specialist/ Management	7
6.	Forestry Officer/ Project Officer	13
7.	Researcher	13
8.	Technical Officer	8
9.	Statistical Data Reviewer	1
	Total	**72**

3.2 PURPOSE OF PARTICIPATION

Country	Purpose of Participation
Bhutan	• Learn ways and means how large areas are restored. To know more about the principles of FLR • How has the Policy intervention made FLR successful? To know more about the cost-effective strategies for implementing FLR
Cambodia	• What kinds of investment portfolio have you used your personal savings/capital so far? • What kinds of modalities or innovative finance (financial technologies-fintech) for FLR? • Why does the private sector not invest in FLR?
Fiji	• How to find or open the market for the non-high valued product? • How to identify a niche market for forest farmer products?
India	• What are the causative factors of land degradation in other ITTO and Asia-Pacific Countries? • What are the commonalities in Land Degradation between India and other participating countries? • Are there any common remedial measures that can be developed and applied across the different landscapes? • Can FLR be dovetailed into sustainable production of forest products and economic activity for local people in India? India is 3rd largest importer of timber. • What needs to be done to achieve that through FLR while mitigating adverse impacts of wildlife conflicts.
Indonesia	• How to develop a landscape restoration program to provide solutions to land degradation issues such as carbon storage, biodiversity loss, and poverty? • How to gain significant benefits from restored forest and land resources but still consider sustainability
Kazakhstan	• Obtaining international expertise/experience from colleagues/participants of the seminar
Lao PDR	• How to illustrate a balanced and integrated rural-urban system with restored and resilient landscapes. • Key challenges net-zero emissions assessment
Malaysia	• How can FLR contribute to human-wildlife conflict? • How can FLR be further inclusive yet provide a balance between ecosystem health and socio-economic benefits in areas fragmented by ownership?
Myanmar	• How can we do the forest landscape restoration with the participation of multi-stakeholder? • How do we develop or plan future FLR projects by learning FLR practices implemented in the other countries?
Philippines	• How does FLR differ from other reforestation initiatives in the country? • What is/are other countries' best practices or strategies in terms of FLR that can be applied to the?
Thailand	• How to create effective monitoring for successful FLR implementation • How to manage the complexity of needs from multi-stakeholders
Timor Leste	• What is the best method or practice from FLR that can be applied in my country regarding the project 026/2021 from AFoCO • Can the GIS support the success of Forest Landscape Restoration activities?
Vietnam	• How to apply Free, Prior, and Inform Consent (FPIC) in the context of REDD+? • How to apply six principles and associated guiding elements to design FLR interventions? • Learn and share international experiences on FLR practices and approaches applicable for the national and international contexts
Tajikistan	• In the future, the organization of joint seminars and training on the adaptation of forestry in connection with global climate change, on the main problems of forestry, and the establishment of scientific and practical cooperation in the Central Asia region. • In the future, the development and implementation of joint programs and projects for: - combating desertification - improving the state of biodiversity - monitoring forest ecosystems - restoration and creation of plantation forests - fight against forest pests and diseases - increasing human resources in forestry
Turkmenistan	• N/A

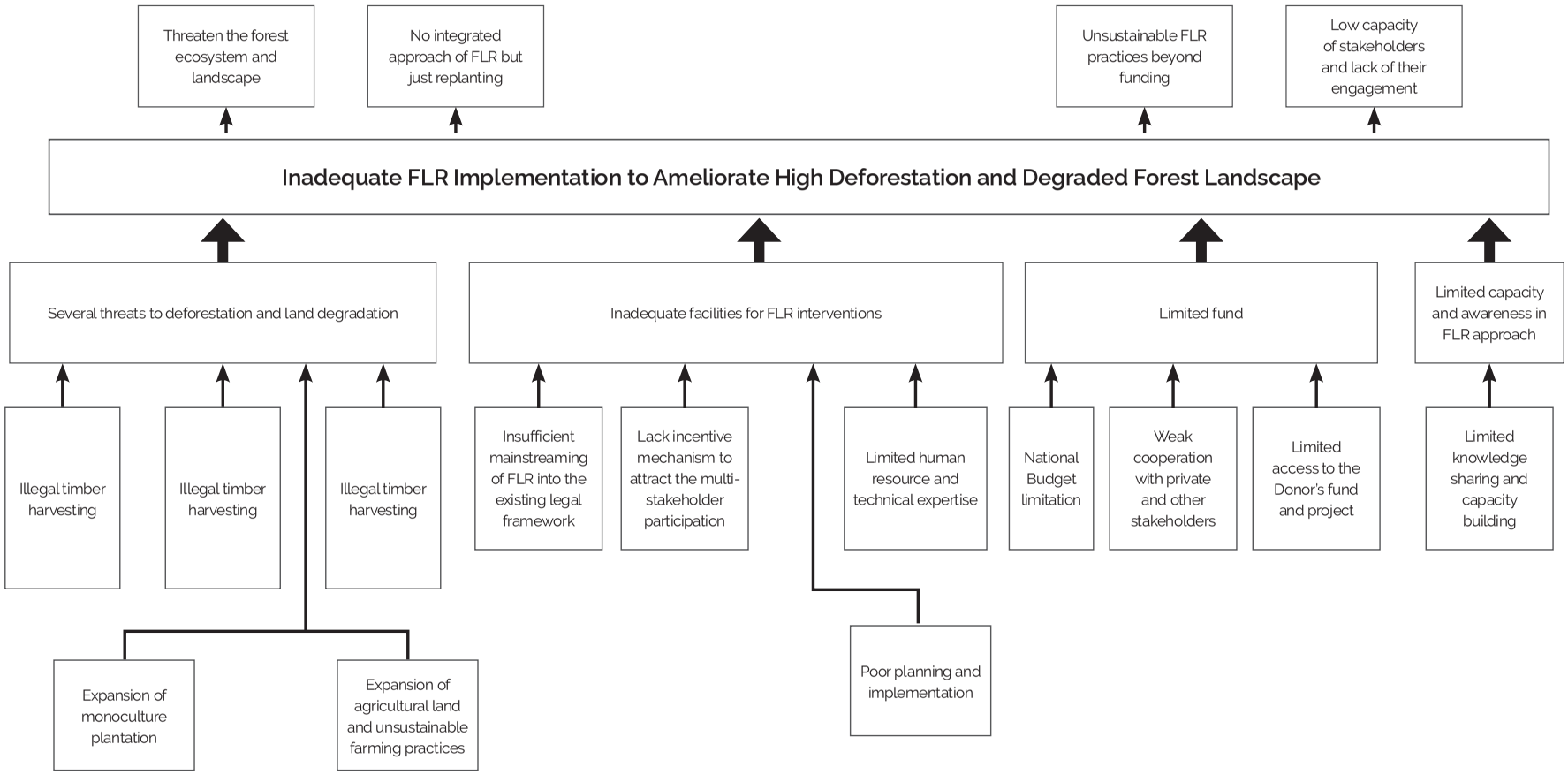
(Note: Information excerpted from Country Reports submitted by participants)

3.3 CORE PROBLEMS

Country	Core Problems
Bhutan	• Need to re-stock and enrich degraded forests
Cambodia	• Low productive and resilient landscape: Forest landscape restoration were public domain (perception) or responsibility
Fiji	• Low survival of Native Forest Restoration
India	• Inadequate timber production in forest and non-forest land
Indonesia	• Implementation of forest and land rehabilitation is slow
Kazakhstan	• N/A
Lao PDR	• Deforestation and forest degradation
Malaysia	• Forest degradation
Myanmar	• Ongoing deforestation and forest degradation
Philippines	• Inadequate integration of FLR in existing reforestation initiatives
Thailand	• Unsustaining FLR implementation
Timor Leste	• High rate of deforestation in Timor Leste
Vietnam	• High rate of degraded forest landscapes in the Northern region
Tajikistan	• N/A
Turkmenistan	• N/A

(Note: Information excerpted from Country Reports submitted by Participants)

PROBLEM TREE on FLR at Regional Level



3.4 CURRENT ISSUES REPORTED BY PARTICIPANTS

3.4.1 BHUTAN

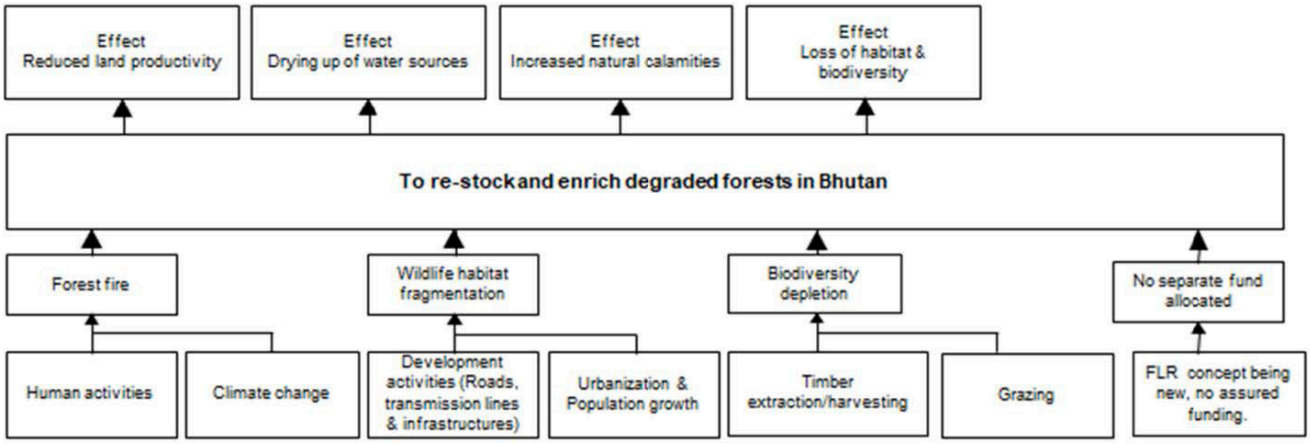


Figure 1. PROBLEM TREE ON FLR IN BHUTAN

Table 3. SWOT OF FLR IN BHUTAN

Strength	Weakness
• The constitutional mandate of 60% forest covers all times to come. • FLR focuses on landscapes Participatory approaches involving all the relevant stakeholders • Enhance capacities of local communities and engagement for restoration activities • Restoration of degraded forest land will help in increasing forest cover and carbon sequestration capacity • Policy enabling Environment	• Geographical and fragile topographical constraints • Loss of forest area to other developmental activities • Inadequate capacity to take up FLR approaches
Opportunity	**Threat**
• Establish restoration partnership at the regional level with the member countries • Exchange of experiences of successes/failures in local and national restoration project implementation. • Institutional strengthening and capacity development	• Forest fire incidence • The outbreak of pests & diseases • Natural calamities such as flashfloods, floods, landslides • Change in Policy decision

Table 4. COUNTRY STATUS AND ISSUES ON FLR IN BHUTAN

Valuation Study related to the FLR	No valuation study conducted
Policy Advocacy and Awareness for FLR intervention	Advocacy and awareness during training, consultative workshop, media
Enabling Legal Framework for FLR intervention	• Constitution of Bhutan • Bhutan Forest Act 1969 • Forest and Nature Conservation Act 1995 • Land Act of Bhutan 2007 • Constitution of the Kingdom of Bhutan 2008 • National Forest Policy 2011 • Forest and Nature Conservation Rules and Regulations 2016 • Forest and Nature Conservation bill 2019
Experiences on FLR	• Community • Geog - Block • Dzongkhag – Provincial
Social and environmental safeguards in the context of REDD+	• Environment and Social Management Framework (ESMF) • Strategic Environmental and Social Assessment (SESA) • Safe guide Information System (SIS) • Forest Grievance Redressal Mechanism (FGRM)
Free, Prior and Informed Consent (FPIC) in the context of REDD+	Guidelines for FPIC for REDD+ developed

3.4.2 CAMBODIA

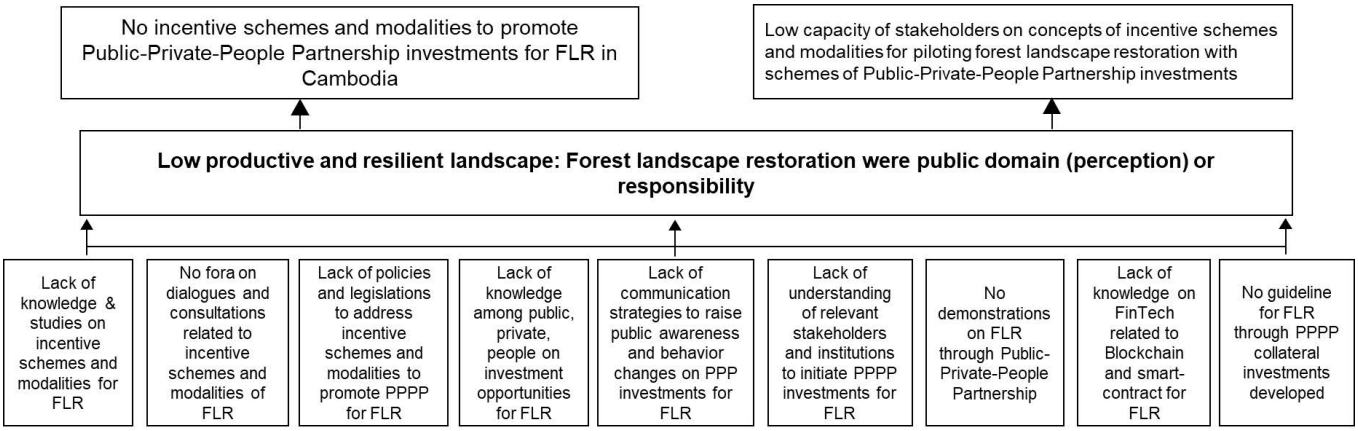


Figure 2. PROBLEM TREE ON FLR IN CAMBODIA

Table 5. SWOT OF FLR IN CAMBODIA

Strength	Weakness
• Land for forest landscape restoration • Suitable conditions of weather & soil • Expertise and Vocational Training (forest management and development), Processing operations, Business practices, Labor supply • Forest related investment policies • Available financial resources from private • sectors & individuals	• Lack of enabling policies associated with FLR • Lack of knowledge on Bioeconomy, circular economy, and green development • Lack of knowledge on accounting practices & natural resource asset valuation • Poor infrastructure & unskilled labor lack of public-private-people partnership investment and foreign investment in FLR • Lack of incentive schemes and modalities for FLR
Opportunity	**Threat**
• Timber demand, Regional and international markets, Markets for forest products: (Timber products from natural forests and plantations and non-timber forest products) • Forest ecosystem services • Raw materials supply from Natural Forest decreasing • Blockchain, Digital Tree-Note, Trees- Banking, Innovative Financing. • Bioeconomy, circular economy, and green development • Forestry climate change and innovative financing	• Demand for expanding agro-industrial land and demand for timber forest products domestically and regionally • Land security and incompatible land use allocation and planning • Natural disasters, pests and diseases, and forest fires • Population growth and urbanization • Perceptions on FLR were public responsibility • Climate change and global warming

Table 6. COUNTRY STATUS AND ISSUES ON FLR IN CAMBODIA

Valuation Study related to the FLR	• Technical Report (2018): Contribution to Watershed Management Planning for Prek Thnot Watershed 2019 -2029. Areas focused: land use planning, forest cover changes, land degradation, water and hydrologic issues, and solutions to forest landscape restoration. (APFNet) • Practical Guide to Development for Forest Plantation Investment in Cambodia (2013). Funded by The Korean Green Promotion Agency.
Policy Advocacy and Awareness for FLR intervention	• National Forest Program (Cambodia's SDGs: planting trees 25,000 ha annually) • Global objectives on forests (GOF) and other key activities to implement the UN Forest Instrument (formerly Non-Legally Binding Instrument-NLBI) and advance SFM • Convention on Biological Diversity –Aichi Targets: SFM (7), PAs (11), degradation (5), and carbon (15) • Promotion of SFM - ITTO and FAO; ITTO-CBD Program on Biodiversity Conservation; Forest Ecosystem Restoration Initiative – Korea through the CBD & Global Landscape Restoration Initiative (e.g., Bonn Challenge); Intact Forest Landscapes Program; FAO-UNEP: 1 trillion trees Initiative; UNFCCC – REDD+ with safeguards
Enabling Legal Framework for FLR intervention	• Forestry Law (2002): (Community-based Restoration, Agroforestry Modalities, Performance-based Incentives for Environmental Services of Community Forests and Benefit Sharing,) • National Forest Programme 2010-2029 • The Cambodia Rectangular Strategy (RS) • Framework for Cambodian Sustainable Development Goals (CSDGs) 2016-2030 • National Strategic Development Plan (NSDP) 2019-2023 • Agriculture Strategic Development Plan (ASDP) 2020-2030
Experiences on FLR	• APFNet, FAO workshop entitled "Mainstreaming Degraded Forests Restoration into Forestry Strategic Plans". The event took place in Phnom Penh, Cambodia, from 17 to 19 December 2014 as one of the activities under the Platform for Regional Dialogue on Forestry Strategic Planning which APFNet proposed in 2013.
Social and environmental safeguards in the context of REDD+	• The right to access information stems mostly from a right to participation across different pieces of legislation. • The rights of original ethnic minorities, indigenous peoples and local communities • the right for public participation in forest-related decision-making processes • promote the conservation of natural forests and biodiversity, the enhancement of social and environmental benefits, • Risks of reversals and displacement of emissions of the REDD+
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• FPIC is an important tool to ensure that participants are free to give their informed consent before implementing project activities. • Information is fully not selectively provided to communities before implementation of project activities • Potential benefits and risk of REDD+

3.4.3 FIJI

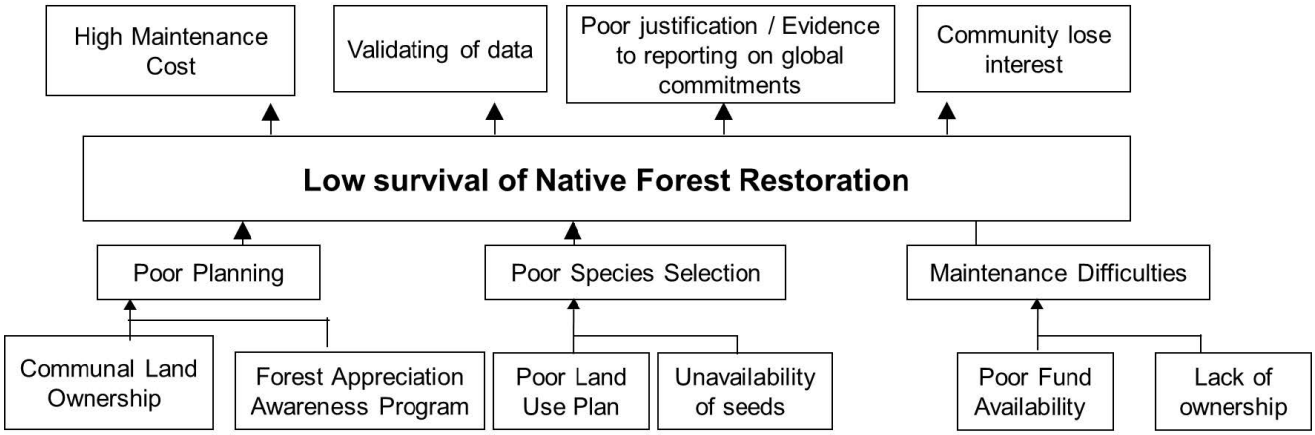


Figure 3. PROBLEM TREE ON FLR IN FIJI

Table 7. SWOT OF FLR IN FIJI

Strength	Weakness
• Ministry of Forestry has a nation-wide network • Fiji has a national tree-planting program (30M15Y) • Fiji still has ~60% forest cover	• Down 50% Budget due to current Pandemic • Insufficient capacity to develop good project proposals • Very weak enforcement of forest restoration following harvesting activities
Opportunity	**Threat**
• 90% of Fiji's land is traditionally indigenously owned & registered in the Native Land Registry • Fiji's forest cover is ~50% degraded • Fiji has some high-value native species trees which do best in mixed-species arrangements, e.g., native sandalwood	• Careless-Fire attitude • National Government Database corrupted • Competing land uses

Table 8. COUNTRY STATUS AND ISSUES ON FLR IN FIJI

Valuation Study related to the FLR	N/A
Policy Advocacy and Awareness for FLR intervention	N/A
Enabling Legal Framework for FLR intervention	N/A
Experiences on FLR	N/A
Social and environmental safeguards in the context of REDD+	N/A
Free, Prior and Informed Consent (FPIC) in the context of REDD+	N/A

3.4.4 INDIA

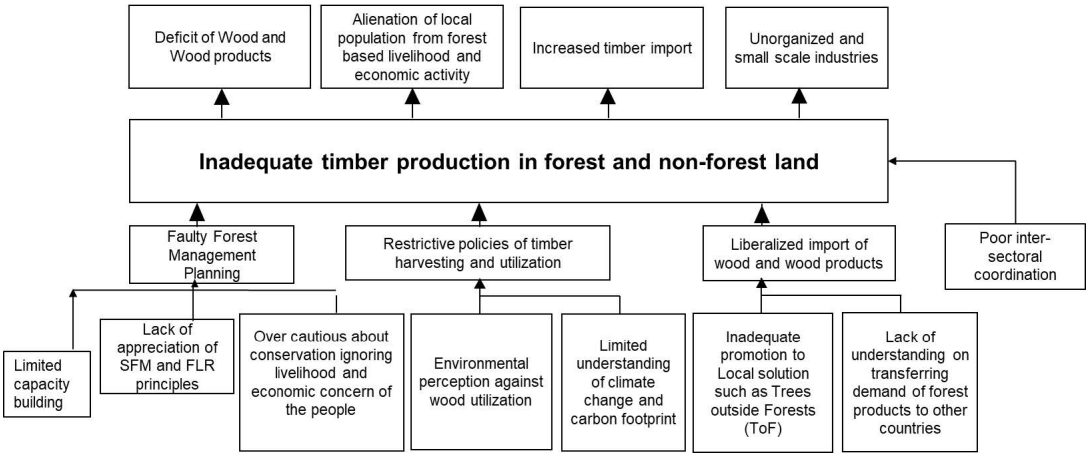


Figure 4. PROBLEM TREE ON FLR IN INDIA

Table 9. SWOT OF FLR IN INDIA

Strength	Weakness
• Willingness to modify policies at the national level • Government thrust on increasing green cover and farmer's income • Strong forest department infrastructure • Availability of FMPs/ working plans • Availability of land and areas for production forestry • Strong research support	• Lack of appreciation of FLR and SLM principles among stakeholders. • Conservation oriented forest management • Poor intersectoral coordination • Limited public-private-people partnership in tree growing activities • Easy import of wood and wood products • Lack of incentive schemes and modalities for FLR • Poor linkages between tree grower and WBI
Opportunity	**Threat**
• National forest certification mechanism based on FLR principles • Availability of certified wood material for different sectors. • Reducing the dependency on timber import • Mapping of tree resources and WBI for improved coordination • Development of circular bioeconomy providing livelihood opportunity for locals. • Boosting growth of Wood-based industries in the country • Export of certified wood-based products	• Slow Policy changes and adoption at federal and state levels • Ineffective implementation of the productive function in forest areas due to at • Uncertain economic returns from ToF and changing farming priorities

Table 10. COUNTRY STATUS AND ISSUES ON FLR IN INDIA

Valuation Study related to FLR	• The government of India, in partnership with USAID, is implementing a project, namely Partnership for land use Science (Forest-Plus) Program • A project on "Enhanced Capacity Building of Stakeholders and State Governments on Forest Landscape Restoration and Reporting Mechanism on Bonn Challenge" was awarded IUCN by MoEFCC. • India has published the first-ever country progress report among the Bonn Challenge countries in 2018 • As per this report, an area of 9.8 M ha is under restoration from 2011-12 to 2016-17
Policy Advocacy and Awareness for FLR intervention	The country already has a slew of policies and laws in keeping with the principles of restoration. Notable among them are the National Forest Policy, 1988, and the recent National Agroforestry Policy, 2014. In addition, the Wildlife Protection Act, 1972 is one of the oldest and most comprehensive wildlife laws globally. • The National Conservation Strategy and the Policy Statement on Environment and Development -1992. • National Environment Policy -2006 • The National Biodiversity Action Plan-2008, 2014 • National Agriculture Policy 2000 • National Agroforestry Policy 2014 • The Biodiversity Act 2002 • Forest Right Act 2006 • CAMPA Act 2016 • National Working Plan Code 2014 for sustainable management of forests and biodiversity in India
Enabling Legal Framework for FLR intervention	• ICFRE has prepared a draft report on the Developed Road map for Institutional and policy mainstreaming of SLEM in India. • India has initiated various programs to achieve SLEM • National Afforestation Programme, Green India Mission, Compensatory Afforestation Management and Planning Authority, NAP, and Joint Forest Management Committee adopted best practices existing with local communities for the current afforestation programme.
Experiences on FLR	• Conducted Stakeholders Consultation about REDD+ activities • Forest –Plus 1.0 Partnership for Sustainable Forest in India –USAID 2012-2017 - The program aims to reduce deforestation and forest degradation emissions and enhance sequestration through afforestation, conservation, and sustainable management of forests. • In 2017, the Government of India and IUCN organized a South Asia regional consultation on forest landscape restoration (FLR) in New Delhi • Conducted Stakeholders Consultation for DPR for major Indian Rivers 2019-2020 • (watershed development approach – conservation, regeneration, judicious use of natural resource-land, water, flora, fauna within watershed area).
Social and environmental safeguards in the context of REDD+	• Forest restoration in India involves different agencies. Prominent among them are the State Forest departments. Additionally, many private companies in India also engage in restoration programmes. The environmental, social, and economic benefits of the restoration of degraded lands have prompted several stakeholders to become part of the restoration process. • UNFCCC Cancun Safeguards (representing an authoritative international baseline for REDD+ social and environmental safeguards)- based on this Action plan for implementing REDD+ Action Plan across the different Indian States prepared.
Free, Prior and Informed Consent	• Importance to FPIC was given in REDD+ implementation to bring coherence and harmonization, improve information sharing, ensure accountability, and
(FPIC) in the context of REDD+	• Ensure sustainability in safeguards implementation, including undertaking a thorough cost analysis.

3.4.5 INDONESIA

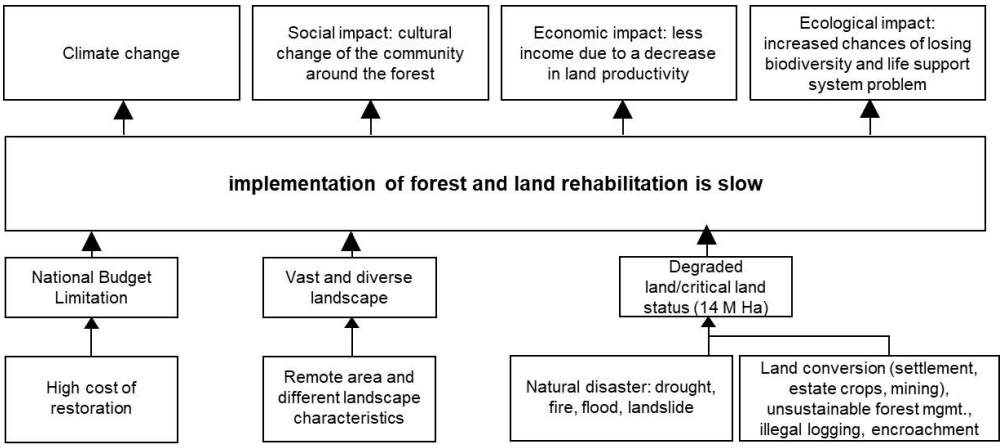


Figure 5. PROBLEM TREE ON FLR IN INDONESIA

Table 11. SWOT OF FLR IN INDONESIA

Strength	Weakness
• Indonesia long term plan • Regulation (national constitution, presidential decree, minister decree) • Participatory of community • Institutional arrangement	• Local government regulation not in line with central government • A limited number of skilled and trained personnel in FLR • Coordination in implementation
Opportunity	**Threat**
• The need healthy environment • Create jobs for the local community • Cooperation with the financial institution	• The demand for forest product • Conflict interest from different stakeholders • A forest fire and other disturbance • Forest encroachment

Table 12. COUNTRY STATUS AND ISSUES ON FLR IN INDONESIA

Valuation Study related to FLR	• Bassi, A., Varma, K., & Toppo, W. (2015). Forest ecosystem valuation study: Indonesia. • Suprapto, D., Kirana, M., Susilowati, I., & Fauzi, A. (2015). Economic valuation of mangrove restoration in Indonesia. Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi dan Pembangunan, 16(2), 121-130. • Widianingsih, N. N., Theilade, I., & Pouliot, M. (2016). Contribution of forest restoration to rural livelihoods and household income in Indonesia. Sustainability, 8(9), 835. • Njurumana, G. N., Ginoga, K., & Octavia, D. (2020). Sustaining farmers' livelihoods through community forestry in Sikka, East Nusa Tenggara, • Indonesia. Biodiversitas Journal of Biological Diversity, 21(8).
Policy Advocacy and Awareness for FLR intervention	• Law No. 41 of 1999 on Forestry • Government Regulation No. 26 of 2020 on Forest Rehabilitation and Reclamation • several implementing regulations such as Ministerial Regulation No. 105 of 2018 and No. 2 of 2020, etc
Enabling Legal Framework for FLR Intervention	• Implementation of regulations abovementioned in the field.

Experiences on FLR	• Consultation is conducted on the formulation of FLR policy and implementation of FLR in Indonesia through engaging other ministries, local governments, universities, communities, and other stakeholders.
Social and environmental safeguards in the context of REDD+	• Indonesia has been developing SIS REDD+, a web-based system providing information of safeguards implementation towards REDD+ full implementation in Indonesia, which is accessible online through http://ditjenppi.menlhk.go.id/sisredd/
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• FPIC, or we have adopted in Bahasa as the PADIATAPA, is a must in every program related to REDD+ to ensure the programs will have enough support and acknowledgment from stakeholders, mainly the community. • For example, last year, we conducted FPIC/PADIATAPA for Forest Carbon Partnership Facility/FCPF-Carbon Fund of World Bank (2020-2024) in East Kalimantan.

3.4.6 KAZAKHSTAN

Table 13. SWOT OF FLR IN KAZAKHSTAN

Strength	Weakness
• N/A	• N/A
Opportunity	**Threat**
• N/A	• N/A

Table 14. COUNTRY STATUS AND ISSUES ON FLR IN KAZAKHSTAN

Valuation Study related to FLR	• N/A
Policy Advocacy and Awareness for FLR intervention	• N/A
Enabling Legal Framework for FLR intervention	• N/A
Experiences on FLR	• 2 billion tree planting project (2021-2025 years) • The country's forest cover is 4.8% at this moment. The implementation of the above project will make it possible to bring this figure up to 5%.
Social and environmental safeguards in the context of REDD+	• N/A
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• N/A

3.4.7 LAO PDR

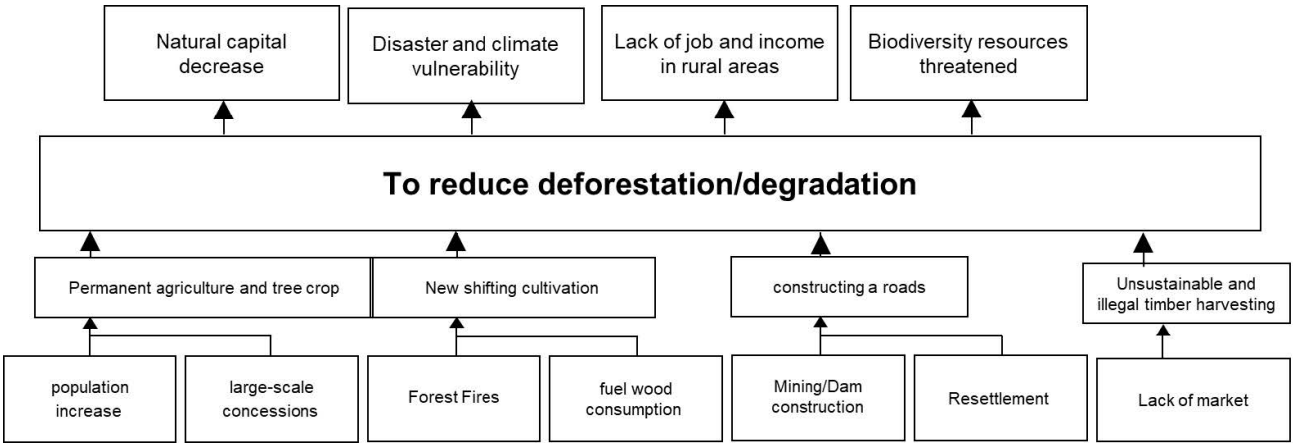


Figure 6. PROBLEM TREE ON FLR IN LAO PDR

Table 15. SWOT OF FLR IN LAO PDR

Strength	Weakness
• The villager regularly utilizes forest products • Good condition of accessibility (has road)	• Limited on communication (ethnic group) • Villagers are living under the poverty line • Not strong law and regulation enforcement enough • Enabling environment for doing business
Opportunity	**Threat**
• Local line agency of government (MAF, MoNRE, Local authorities) • There are laws and regulations for forest and NTFPs management (Forest law, wildlife law, bamboo management regulation, etc.) • Social Organization Structure (Youth union, women union, etc.)	• Limited Financial support • Multi-cooperation (DoF and DoFI, provincial level)

Table 16. COUNTRY STATUS AND ISSUES ON FLR IN LAO PDR

Valuation Study related to FLR	• 67% of the population are rural, relying on NR for livelihoods and income generation • Lao PDR's strategic development frameworks recognize that jobs, livelihoods, and greener growth depend on well-functioning landscapes and climate resilience • Lao PDR is a globally important biodiversity hotspot, a tourism asset
Policy Advocacy and Awareness for FLR intervention	• National Socio-Economic Development Plan • Sustainable Development Goals • Forestry Law • Water and Water Resources Law • Land Law • Forestry Strategy to 2020 • National Tourism Strategy 2020 • Emerging National Green Growth Strategy • Emerging National REDD+ Strategy

Enabling Legal Framework for FLR intervention	N/A
Experiences on FLR	N/A
Social and environmental safeguards in the context of REDD+	N/A
Free, Prior and Informed Consent (FPIC) in the context of REDD+	N/A

3.4.8 MALAYSIA

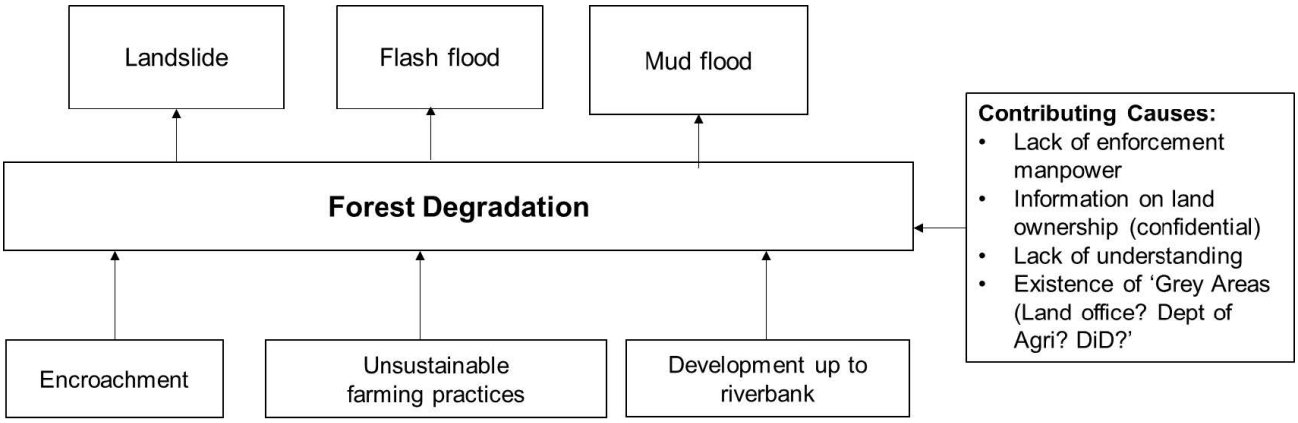


Figure 7. PROBLEM TREE ON FLR IN MALAYSIA

Table 17. SWOT OF FLR IN MALAYSIA

Strength	Weakness
• Subject matter experts in various fields, from soil to plant to pests, are available • Support from ministry and state forestry departments • Supporting policies/ legal frameworks	• Lack of enforcement workforce • Lack of understanding & training among enforcement officers • Accessibility to information on land ownership • Grey areas in rules and regulations
Opportunity	**Threat**
• Partnership with various stakeholders (more inclusive) • Identification of more areas that need restoration • • FLR is a rather new concept to be further explored	• Disturbance by wildlife • Covid-19 pandemic limits implementation activities • Stakeholder conflict

Table 18. COUNTRY STATUS AND ISSUES ON FLR IN MALAYSIA

Valuation Study related to FLR	• Value Management in accordance to Value Management Circular 2015 by the Economic Planning Unit (EPU) of the Prime Minister's Department for projects above RM50 million to ensure the achievement of objectives and functions. • Value Assessment – to verify the needs of a project • Value Engineering – to determine best alternatives/ methods, to enhance effectiveness and reachability, and to optimize costs of the project • Value Review – to learn and continuously improve weaknesses and effectiveness for projects in the future
Policy Advocacy and Awareness for FLR intervention	• Malaysian Forestry Policy 2021 • National Policy on Biological Diversity 2016 • Access to Biological Resources and Benefit Sharing Act 2017 • National Land Code 1965 • Water Act 1920 • Wildlife Conservation Act 2010 • Commitment to 17 goals of SDGs

Enabling Legal Framework for FLR intervention	• 2021 – Greening Malaysia Campaign – Planting 100 million trees by 2025 • Greening Sarawak Programme – Planting 35 million trees • 11th and 12th Malaysia Plan – Restoration, Reclamation and Rehabilitation of Degraded Forests in Peninsular Malaysia (3RSM) • Central Forest Spine: Master Plan for Ecological Linkages
Experiences on FLR	• Consultation with relevant ministries, subject matter experts from universities/ • research institutions, NGOs, and local communities (if applicable)
Social and environmental safeguards in the context of REDD+	• Consistent with national policies, including Forestry Policy, Biological Diversity, etc. • Following national as well as state legislations and sovereignty • Fair and equitable sharing of benefits • Participation and active involvement of various stakeholders including NGOs and local communities in programmes
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• FPIC is mandatory when indigenous people and local communities are affected. • Parallel to the pledge to "leave no one behind" in SDGs.

3.4.9 MYANMAR

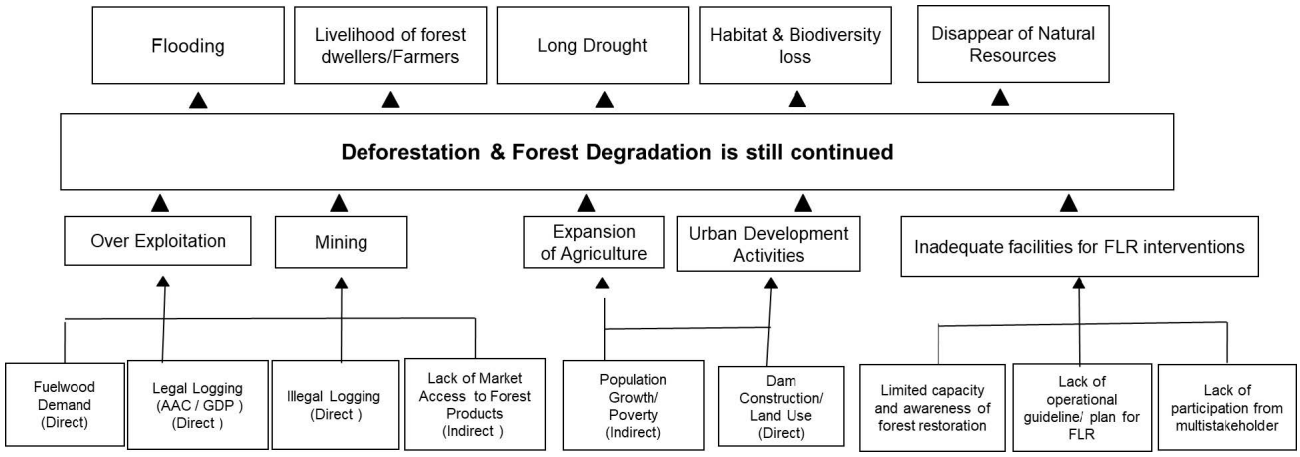


Figure 8. PROBLEM TREE ON FLR IN MYANMAR

Table 19. SWOT OF FLR IN MYANMAR

Strength	Weakness
• High-level political support to restore degraded forest • Long history and experiences of reforestation in degraded forest • Favorable climatic and edaphic conditions for reforestation • Enabling conditions for the local community and private investors	• Lack of enforcement workforce • Lack of understanding & training among enforcement officers • Accessibility to information on land ownership • Grey areas in rules and regulations
Opportunity	**Threat**
• Large/many areas of degraded forest areas to be restored. • Government's initiative restoration programs (MRRP, RNH, Watershed Restoration Program, etc.) • Lesson learned from experiences of previous reforestation/ restoration programs	• High labor cost and limited availability of skilled laborers. • Increasing demand on land for infrastructure development, expansion of agricultural areas, and urbanization • Conflict of interest

Table 20. COUNTRY STATUS AND ISSUES ON FLR IN MYANMAR

Valuation Study related to FLR	• Myanmar Reforestation and Rehabilitation Program (MRRP): To restore and rehabilitate the forests with the various appropriate methods and to support the community forestry and agro-forestry practices • The Restoration Initiative (TRI) project in Myanmar: To demonstrate FLR models and strategies to restore and rehabilitate degraded forests and deforested areas • Targets of the National REDD+ Strategy in Myanmar: (1) Reduction of deforestation and carbon emissions by 30% by 2030 (2) Enhancement of forest carbon stocks by 90 million tons of C02 by 2030 (3) Reducing degradation on existing overexploited forests and preventing future forest degradation (4) Conserving forest carbon stocks, particularly in Protected Areas

Policy Advocacy and Awareness for FLR intervention	• The Forest Law (1992), (2018) • National Land Use Policy (2016) • Climate Change Policy (2017) • National Environmental Policy (2017) • Conservation of Biodiversity and Protected Areas Law (2018) • Community Forestry Instruction (2018) • The Restoration Initiative (TRI) project in Myanmar demonstrates FLR models and promotes policy, law, and regulations. • Establish a national cross-sectoral policy advisory group • Provide policy-relevant advice for national and sub-national policies, strategies, and plans • Conduct District ROAM, in particular reflecting on policy issues • Action against illegal harvesting and hunting
Enabling Legal Framework for FLR intervention	• 30 years National Forestry Master Plan (2001-02 to 2030-31) • Ten years District Forest Management Plan (2016-17 to 2026-27) for 68 Districts • The 10-year (2017 to 2026) Myanmar Reforestation and Rehabilitation Program (MRRP) • Myanmar's Intended Nationally Determined Contribution(INDC)[Paris Climate Change Agreement 2016] • Participation in European Union's Forest Law Enforcement Governance Trade (EU-FLEGT) • National REDD+ Strategy • Implementation of Myanmar REDD+ Readiness Roadmap
Experiences on FLR	• The key success factor for restoration projects • Improved knowledge of best practices on forest landscape restoration among key stakeholders • Enhanced the FLR framework nationally and share lessons with other countries in the region and globally • The lack of tenure security • Identifying motivated individuals and avoiding local elites
Social and environmental safeguards in the context of REDD+	• Myanmar became an UN-REDD partner country in November 2011. • REDD+ Roadmap was completed in June 2013. • During 2014, Social and Environmental Standards, which consist of principles, criteria, and indicators for REDD+ Safeguards, were discussed for the pilot project area. • 7 Principles, 27 Criteria, and 49 indicators were developed.
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• The Government of Myanmar is working toward an equitable REDD+ implementation by establishing an SIS and standards for free, prior, and informed consent (FPIC) and a grievance-handling system for ethnic peoples. • FPIC awareness-raising materials in local languages (Myanmar and Ethnic Minorities). • Conducting training on FPIC • Promoting the role of women in REDD+ Expertise in Ethnic Minority rights, gender participation forest resource use, and land tenure rights.

3.4.10 PHILIPPINES

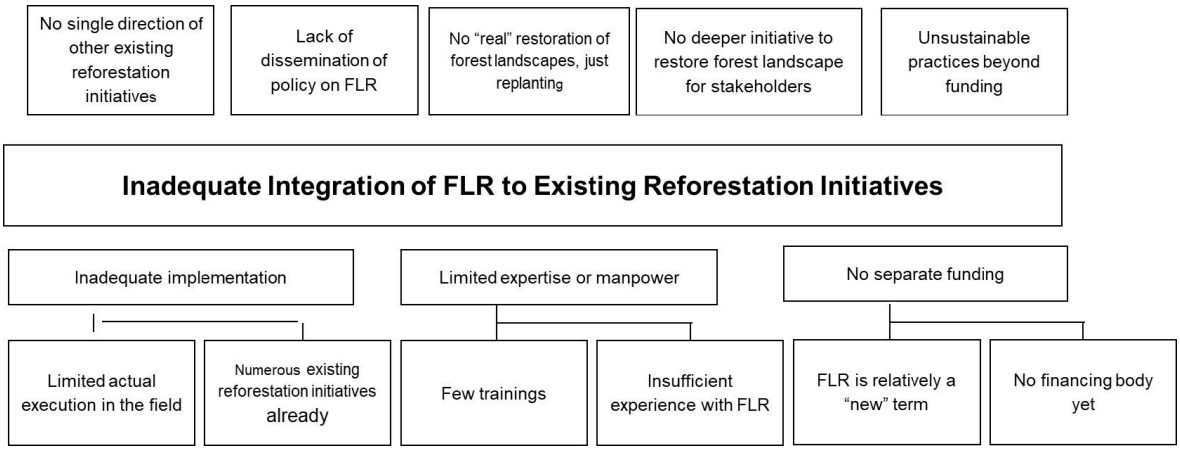


Figure 9. PROBLEM TREE ON FLR IN PHILIPPINES

Table 21. SWOT OF FLR IN THE PHILIPPINES

Strength	Weakness
• There is a masterplan on FLR and policies in support of FLR plans, programs, and activities • Existing reforestation initiatives with baseline data and best practices identified • Project can learn from best practices of past or current reforestation initiatives • ERDB can provide a study on site-species matching and other studies related to landscape restoration • MMFNs can provide planting materials	• FLR concept is known only to DENR and not mainstreamed to other concerned government agencies • A very limited number of FLR experts/ practitioners in DENR • FLR (and the environment in general) is not economically attractive • Economic returns might take time to be realized
Opportunity	**Threat**
• There are many potential areas for restoration • Environment and climate oriented LGUs and NGOs are growing in number • Increasing awareness of people on the importance of forests in relation to the impact of climate change • Many funding agencies/organizations are into nature conservation and climate-related projects	• Overlap in tenurial instruments and/or jurisdiction of stakeholders, e.g., organized groups, government offices, etc. • Prioritization setting, political will, and support from local government units (LGUs)

Table 22. COUNTRY STATUS AND ISSUES ON FLR IN THE PHILIPPINES

Valuation Study related to FLR	• Philippines-Wealth Accounting and the Valuation of Ecosystems Services (Phil-WAVES) (ERDB) • Compilation & Synthesis of Valuation Studies on Philippines Biodiversity (BMB) • National Forest Assessment Project (DENR-FMB) • Forest Ecosystems Services and Resources Valuation (ERDB) • Rehabilitation and Restoration of Degraded Areas (ERDB)

Policy Advocacy and Awareness for FLR intervention	• Conduct of National Workshops on Promoting Forest Landscape Restoration (FLR) • Regional Training Workshop on FLR (participated by Cambodia, Lao PDR, Indonesia, and the Philippines) • IEC Campaigns in the Field Offices
Enabling Legal Framework for FLR intervention	• PD 705. Revised Forestry Code of the Philippines • EO 26, s. 2011. National Greening Program • EO 193 s. 2015. Expanding the Coverage of the National Greening Program • FMB Technical Bulletin No. 24. Guidance in the Implementation of Activities Through the Forest and Landscape Restoration (FLR) Process
Experiences on FLR	• Regular IEC and consultation activities include discussions on projects' goals and objectives, applicable policy and guidelines, and legal, financial, and technical requirements, among others. • Issues and concerns were discussed, e.g., how can they benefit and participate, trust of the community in government projects, etc. • FLR-AFoCO demo site in Zambales: Revealed that LGU of Candelaria is very supportive of the implementation of the project, especially on the FLR Activities. The SB also provided a resolution endorsing the project.
Social and environmental safeguards in the context of REDD+	• This year, the country aims to review the Safeguards Framework and Guidelines (SFG), update the draft Safeguards Information System (SIS), and institutionalize and adopt SIS/SFG.
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• Philippine National REDD-Plus Strategy (PNRPS) - A ten-year frame from 2010-2020 - Recognizes the importance of safeguards in ensuring that REDD+ • policies and projects protect the rights of indigenous peoples and local communities and guarantee their meaningful involvement and participation

3.4.11 THAILAND

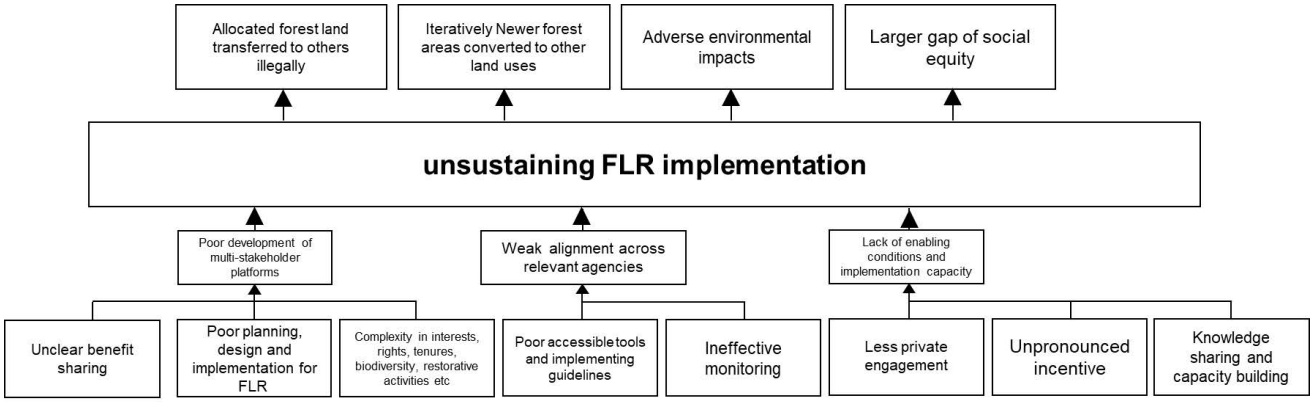


Figure 10. PROBLEM TREE ON FLR IN THAILAND

Table 23. SWOT OF FLR IN THAILAND

Strength	Weakness
• Availability of supportive legal frameworks • Certain responsible agencies • Expertise in forest restoration	• Illegal forest land encroachment • Inadequate and effective monitoring • Inconsistent policy • Conflicts of tenure rights • Disunity and inefficiency of law enforcement • Improper land uses • Weak alignment of relevant agencies
Opportunity	**Threat**
• Public awareness in forest conservation • Available financial supports from the private sector through CSRs • Availability of technical supports from national and international organizations • Growth of green and environmentally friendly development • Lessons learned from previous FLR implementation	• Natural disasters; forest fire • Economic pressure • COVID-19 pandemic • Poor sites • Stakeholder conflicts

Table 24. COUNTRY STATUS AND ISSUES ON FLR IN THAILAND

Valuation Study related to FLR	• Effects of land-use changes on Forest Dynamics and Plant Diversity at Maesa-Huai Kogma and Sakaerat biosphere reserve • Forest landscape restoration for Asia-Pacific • Forest Landscape Restoration (FLR): Case studies of forest landscape management from the mountains to the sea • Forest landscape restoration initiatives in Thailand: Case studies of Doi Mae Salong (Chiang Rai) and Dong Phayayen-Khao Yai Forest Complex

Policy Advocacy and Awareness for FLR intervention	• The 20-year National Strategy (2018-2037) • National Forest Policy
Enabling Legal Framework for FLR intervention	• National Land Policy Council Act B.E.2562 (A.D.2019) • Forest Act (version 8) B.E. 2562 (A.D.2019) • Community Forestry Act B.E. 2562 (A.D.2019) • RFD and DMCR regulation on benefit-sharing for carbon credit in forest areas B.E. 2564 (A.D.2021)
Experiences on FLR	• Development of one map scale implementation • Collective land allocation in line with the implementation of National Land Policy • Local consultation for developing community forest management planning
Social and environmental safeguards in the context of REDD+	• Wider concerns on participatory development • Efforts of harmonious actions for balancing environmental impacts and social issues
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• Local consultation is legally required before proceeding with any implementation

3.4.12 TIMOR-LESTE

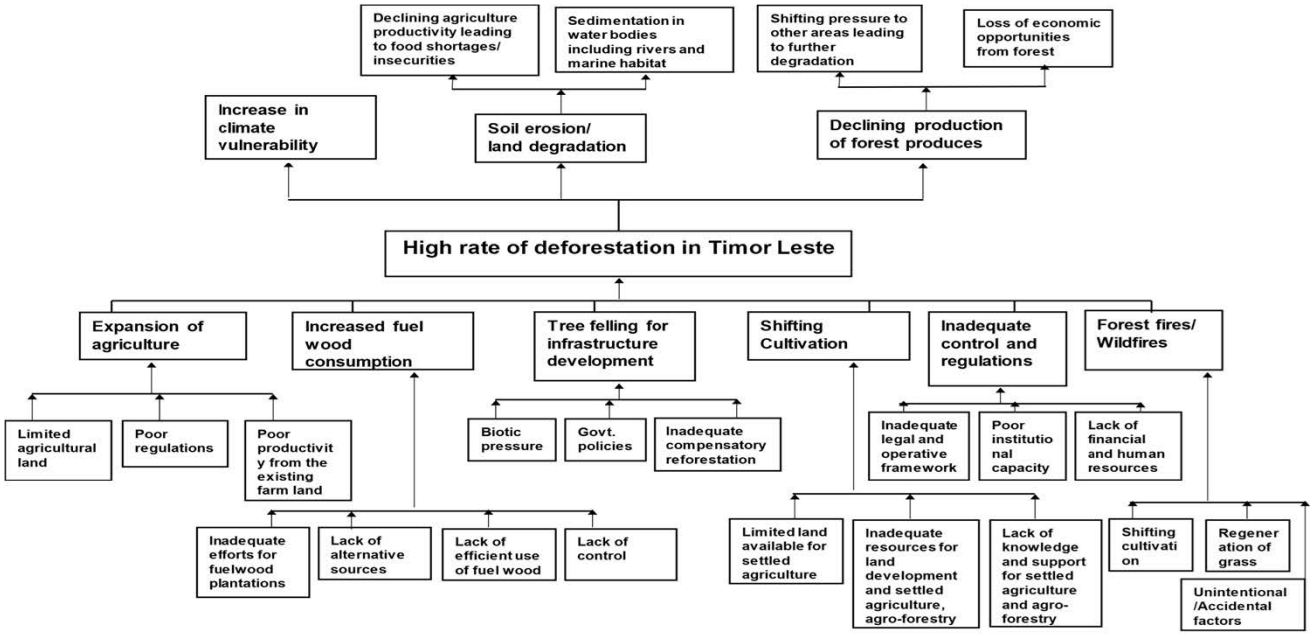


Figure 11. PROBLEM TREE ON FLR IN TIMOR LESTE

Table 25. SWOT OF FLR IN TIMOR-LESTE

Strength	Weakness
• Have good technical capacity according to experience • Improved air and water quality • Climate change resilience	• Deforestation and forest degradation changed forest cover to grasslands and denuded hill slopes.
Opportunity	**Threat**
• Benefit better local Climate regulation • Improved flood and • Erosion control	• Forest degraded lands in watershed areas, increasing water absorptions, reducing soil erosion, and positively impacting climate change, locally and globally.

Table 26. COUNTRY STATUS AND ISSUES ON FLR IN TIMOR LESTE

Valuation Study related to FLR	• Implemented the FLR Project Funding by AFoCO this year
Policy Advocacy and Awareness for FLR intervention	• Sustainable forest management policy
Enabling Legal Framework for FLR intervention	• Nacional Strategy Development Plan 2011-2030 • Law No. 14/2017 General Forest Regime • Forest Conservation Plan 2013 • CBNRM Road Map (Draft)

Experiences on FLR	• Internal discussion within Directorate in General Directorate of Forestry, Coffee, and Industrials Plants
Social and environmental safeguards in the context of REDD+	• That actions complement or are consistent with the objectives of national forest programs
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• Identify locations and target communities that will work on the project • Conduct consultation through local leaders (Chief of Village, Chief of Aldeia, and others) • Make participatory plans for land Use (PLUP) • Implementation of activity • Monitoring and evaluation

3.4.13 VIETNAM

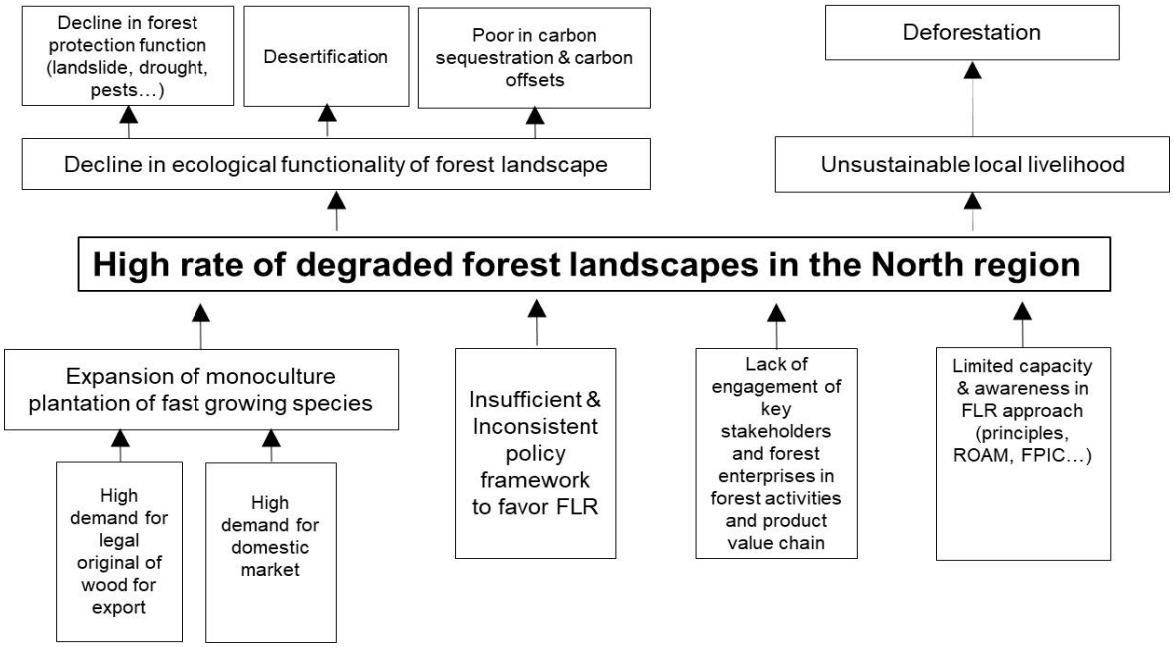


Figure 12. PROBLEM TREE ON FLR IN VIETNAM

Table 27. SWOT OF FLR IN VIETNAM

Strength	Weakness
• Approach FLR principles to address problems in degraded forest land for multiple benefits • The engagement of the local community and relevant stakeholders (local authority, technical staff, policy makers, farmer…) throughout the project activities to help create a sense of strong ownership • Policy consultations with relevant stakeholder groups, including disadvantaged and indigenous peoples and gender representatives, are advocated by the Government	• The main beneficiaries of the project are ethnic minorities who are forest-dependents. Even some people cannot speak Vietnamese. This is a barrier to the meeting, exchange, and training the technical knowledge.
Opportunity	**Threat**
• Project demonstration models are enabled to replicate and scale up in other areas by the local and communities since they could learn to apply through capacity and awareness improvement activities in the project. • Project outcomes help improve local livelihoods that encourage the locals to maintain the project's results • Need of policies and policy tools to facilitate natural rehabilitation and enrichment of degraded forests in response to the ban of natural forest logging started from 2016 to 2030.	• When planting on upstream and steep areas, consider the landslide prevention in the first planting years and application of fertilizer to underground water

Table 28. COUNTRY STATUS AND ISSUES ON FLR IN VIETNAM

Valuation Study related to FLR	• MCELWEE, P. 2009. Reforesting "Bare Hills" in Vietnam: Social and Environmental Consequences of the 5 Million Hectare Reforestation Program. AMBIO: A Journal of the Human Environment, 38, 325-333, 9. • BAYRAK, M. M., TU, T. N. & BURGERS, P. 2013. Restructuring space in the name of development: The sociocultural impact of the forest land allocation program on the indigenous Co Tu people in central Vietnam. Journal of Political Ecology, 20, 37-52. • HOANG, L. S. & LE, T. T. A. 2016. Assessment of forest tenure rights of legal recognition, respect, allocation, and transfer in Vietnam. Journal of Vietnamese Environment, 8, 229-234. • DANG, T. K. P., VISSEREN-HAMAKERS, I. J. & ARTS, B. 2018. Forest devolution in Vietnam: From rhetoric to performance. Land Use Policy, 77, 760-774. • CUONG, T., CHINH, T. & XIE, Y. 2019. The Impacts of Forest Plantation on Household's Income.OALib, 06, 1-17.
Policy Advocacy and Awareness for FLR intervention	• Vietnam's Forestry Development Strategy for the period of 2021 - 2030, with the Vision toward 2050 (Decision No: 523/QĐ-TTg, dated 01 April 2021) • National Project on "Planting one billion trees from 2021 to 2025" (Decision No 524/QĐ-TTg dated 1 April 2021) • Mechanisms and policies for forest protection and development, associated with the policy of rapid poverty reduction, sustainability, and support for ethnic minorities in the period 2015 - 2020 (Decree No. 75 dated 09.09.2015) • Policies on management, protection, and sustainable development of coastal forests in response to climate change (Decree No.119/2016/NĐ-CP dated 23/8/2016) • Policy on payment for forest environmental services (Decree No. 99/ND-CP dated 24.09.2010; Decree No. 147/2016/ND-CP dated 2.11.2016; Decree No. 156/2018/ND-CP dated 16.11.2018: Chapter V (Article 57-86) • 1995; 1998: Program 327; The Program of 5 Million Hectare Reforestation (Decision No.661/QĐ-TTg dated 29/7/1998) • 2007: Vietnam's forestry development strategy for the period 2006 – 2020 (Decision No.18/2007/QĐ-TTg dated 05/02/2007) • 2011: Forest protection and development plan for the period 2011 - 2020 (Decision No.57/QĐ-TTg dated 09/01/2011 • 2012: REDD+ Program for the period 2011-2020 • 2013: Forestry sector restructuring project (Decision No. 1565/QĐ-BNN-TCLN dated 08/7/2013) • 2017: Law on forestry, sustainable forestry development for the period 2016-2020 (Decision No. 886/QĐ-TTg dated 16/6/2017); REDD+ Program to 2030 (Decision No.419/QĐ-TTg dated 05/4/2017)
Enabling Legal Framework for FLR intervention	• Implement Law on Forestry 2017 • Decree on investment policy on forest protection and development, processing and trade of forest products in forestry • Policy to support rice for forest protection and development • Decision on pilot transfer of emission reduction results in North Central region and financial management Agreement on payment of emission reduction in North Central region • Other legal documents
Experiences on FLR	• Consulting with key stakeholders: - At the national level, including VNFOREST - Sub-national level: Department of Agriculture and Rural Development, Forest Protection Department - UNs organizations: World Bank, UNDP, FAO - INGOs and local NGOs: CARE, PanNature, SRD, ... - Vulnerable groups (ethnic minorities, women, religious and ethnic communities, etc.) - Fatherland Front, Farmers' Union, Women's Union, ... - Committee for Ethnic Minority Affairs

Social and environmental safeguards in the context of REDD+	• Policies and measures to ensure environmental and social safeguards in the context of REDD+ of Vietnam: - Law on Environmental Protection No. 55/2014/QH13 dated 23.06.2014. - Forestry Law No. 16/2017/QH14 dated 15.11.2017 (effective from 01.01.2019). - Decree No. 18/2015/ND-CP on environmental protection planning, strategic environmental assessment, environmental impact assessment, environmental protection plan. • Policies and measures to ensure environmental and social safeguards in the context of REDD+ of Vietnam: - Decision 419/QD-TTg dated 05.04.2017 of the Prime Minister Replacing Decision 799/QD-TTg dated 27.06.2012 on the National Action Program "Reducing greenhouse gas emissions through efforts to limit deforestation and forest degradation, sustainably manage forest resources, and conserve and enhance forest carbon stocks" 2011-2020. - Decision 18/2007/QD-TTg dated 02.05.2007 of the Prime Minister on Vietnam's Forestry Development Strategy for 2006-2020.
Free, Prior and Informed Consent (FPIC) in the context of REDD+	• Consultation on a voluntary, prior, and fully informed basis from all • stakeholders, affected local communities, focusing on ethnic minorities. • FPIC as a Rights-Based Approach Embedded in the National Legal Framework • FPIC as a Learning Process and Empowerment Tool

3.4.14 TAJIKISTAN

Table 29. SWOT OF FLR IN TAJIKISTAN

Strength	Weakness
• N/A	• N/A
Opportunity	**Threat**
• N/A	• N/A

Table 30. COUNTRY STATUS AND ISSUES ON FLR IN TAJIKISTAN

Valuation Study relatedto FLR	N/A
Policy Advocacy and Awareness for FLR intervention	N/A
Enabling Legal Framework for FLR intervention	• The main program document for the period 2006 - 2015 determining the development of forestry was the State Program for the Development of Forestry, approved by the Decree of the Government of the Republic of Tajikistan dated October 31, 2005, No. protection of forests. • A similar State Program for the Development of Specially Protected Natural Areas for 2005 - 2015 was also adopted. (Resolution of the Government of the Republic of Tajikistan, 2005 No. 79). • In addition to the above, which directly affect the development of forestry and specially protected natural areas, there are the following long-term program documents: National Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity. • Program to Combat Desertification in the Republic of Tajikistan. State program on environmental education in the Republic of Tajikistan. • The concept of environmental protection of the Republic of Tajikistan. • Concept of the system of specially protected natural areas of the Republic of Tajikistan • Following the instructions of the Government of the Republic of Tajikistan No. 27317 (28-6) dated June 25, 2014, a draft "Strategy for the development of the forest sector of the • The Republic of Tajikistan for the period up to 2030" was developed.
Experiences on FLR	N/A
Social and environmental safeguards in the context of REDD+	N/A
Free, Prior and Informed Consent (FPIC) in the context of REDD+	N/A

3.4.15 TURKMENISTAN

Table 31. SWOT OF FLR IN TURKMENISTAN

Strength	Weakness
• Large-scale Afforestation activities within the country • National Forestry Program	• Lack of experience in forest management • Scarcity of water resources
Opportunity	**Threat**
• Improvement ecological conditions • Conservation and enrichment of biodiversity • Prevention of further land degradation • Better microclimate conditions • Ecotourism development	• Extreme climate conditions (prolonged drought, cold, dust storms) • High risks of forest fires • Uncontrolled grazing damage the ecosystem

Table 32. COUNTRY STATUS AND ISSUES ON FLR IN TURKMENISTAN

Valuation Study related to FLR	• Durikov M., Atamyradov N. State of Forests of the Caucasus and Central Asia.2019. p.105-110. • Atamyradov N. 2020. Microclimate conditions foothill areas in the afforested area of the Central Kopetdag. Problems of Desert Development. journal, p. 67-70
Policy Advocacy and Awareness for FLR intervention	• Prevention of land degradation and desertification, • Adaptation and mitigation forestry and agriculture to climate change.
Enabling Legal Framework for FLR intervention	• Land code (2004) • Water code (2004) • On the establishment of Forest Park zone on foothills of Kopetdag mountain (1998) • Law on specially protected areas (2012) • Forest Code (2011) • Law on vegetation (2012) • Law on animals (2013) • National Strategy on Climate Change of Turkmenistan (2019) • National Forestry Program (2021)
Experiences on FLR	• NATIONAL FORESTRY PROGRAM (Planting 3 million trees a year (conifers, deciduous, fruit, grapes) • Several international joint projects on SFM.
Social and environmental safeguards in the context of REDD+	N/A
Free, Prior and Informed Consent (FPIC) in the context of REDD+	N/A

4. TRAINING SCHEDULE (Korea Standard Time, GMT +9)

Day	Time	Activity	Remark
27 Aug. (Fri)	15:00-17:00	Check and confirm Zoom Application connection	AFoCO
30 Aug. (Mon)	12:30-13:00	Opening Ceremony	RETC-ITTO
	13:00-15:00 (120')	Country Presentation 1: Introduction to FLR policy and program & Open discussion (5 min/country)	Trainees
	15:00-16:00	Break	
	16:00-17:00	Keynote presentation 1:Forests in carbon-neutral/ net-zero commitments: challenges and opportunities in EU	Prof. Jürgen Blaser
	17:00-18:00	Keynote presentation 2: Six principles for successful FLR: ITTO Guidelines for FLR in the Tropics	
	18:00-18:05	Daily feedback and housekeeping announcement	RETC-ITTO
31 Aug. (Tues)	12:30-13:00	Recap on the previous day	RETC-ITTO
	13:00-14:00	Keynote presentation 3: UN Decade for Ecosystem Restoration 2021- 2030: Best Practice Approaches in Forest related Ecosystem Restoration	Dr. Michael Kleine
	14:00-15:00	Lecture 1: Overview of FLR and Restoration Opportunities Assessment Methodology (ROAM): a case study on the use of ROAM in Viet Nam	Dr. Scott Perkin & Mr. Jake Brunner
	15:00-16:00	Break	
	16:00-18:00 (120')	Country Presentation 2: Problem analysis with a problem tree for FLR intervention (5min/country) &Open discussion	Trainees/ITTO
	18:00-18:05	Daily feedback and housekeeping announcement	RETC-ITTO
1 Sep. (Wed)	12:30-13:00	Recap on the previous day	RETC-ITTO
	13:00-14:00	Keynote presentation 4: Securing FLR financing	Mr. Jerry Velasquez
	14:00-15:00	Lecture 2: Social environment safeguard for FLR and application of FPIC in the context of REDD+	Dr. Nguyen Quang Tan
	15:00-16:00	Break	
	16:00-17:00	Lecture 3: Stakeholder analysis for FLR intervention with a case study: Empowering local communities for the restoration of a coastal landscape in the Ayeyarwady Delta, Myanmar	Mr. Ronnakorn Triraganon & Dr. Maung Maung Than & Mr. Aung Kyaw Kaing
	17:00-17:30	Lecture 4: Logical framework (SMART Indicators) for FLR intervention	Mr. Orlando A. Panganiban
	17:30-18:00	Country Presentation 3: : Logical framework for FLR intervention (5min/country) & Open discussion	Trainees/AFoCO
	18:00-18:05	Daily feedback and housekeeping announcement	RETC-ITTO
2 Sep. (Thu)	12:30-13:00	Recap on the previous day	RETC-ITTO
	13:00-14:30	Country Presentation 3: : Logical framework for FLR intervention (5min/country) & Open discussion	Trainees/RETC-ITTO
	14:30-15:30	Lecture 5: Carbon benefit analysis for FLR intervention	Prof. Nophea Sasaki
	15:30-16:30	Break	
	16:30-17:30	Lecture 6: Monitoring of FLR Identification of the Potential Degraded Forests for Restoration in the Tropics – Implications for Carbon Sequestration and Revenues	Dr. Manjunatha Venkatappa
	17:30-18:00	Interactive Discussion for Monitoring on FLR	RETC-ITTO
	18:00-18:05	Daily feedback and housekeeping announcement	RETC
3 Sep. (Fri)	12:30-13:00	Recap on the previous day	RETC-ITTO
	13:00-16:00 (180')	Country Presentation 3:: Draft concept note (title, problem analysis, stakeholder analysis, logical framework) for FLR intervention (7min/country)	RETC-ITTO
	16:00-17:00	Break	
	17:00-17:30	Recap & highlights of the training (inc. evaluation of training)	RETC
	17:30-17:45	Closing Ceremony	RETC-ITTO

5. LECTURE SUMMARY & MAIN OUTPUTS

5.1 KEYNOTE 1. FORESTS AND CLIMATE CHANGE: FORESTS AS AN ELEMENT IN A CARBON NEUTRAL COMMITMENT

I. LECTURE SUMMARY

Global Forest Area: about 4'000 million ha (FAO 2020)

- One-Third of the world's land area is forest (93% natural and semi-natural, 7% planted)
- Forests (trees) can: increase resilience of people and ecosystems (= adaptation), fix and store carbon (=mitigation) = REDD+.
- Mitigation and adaptation options in the forest sector need to be fully understood and used in an integrated way in the context of promoting sustainable development

Forests in Climate Change: Forests can increase resilience, fix and maintain carbon

- If the average C02 concentration in the atmosphere continues to increase to 500 ppm or higher, forests will become highly vulnerable (August 2021: 415 ppm)
- High risk that GHG sinks become sources of GHG emissions (which has been already reported for the southern Amazon in 2021, see Art. In Nature)
- Particular risks: including many governance issues prevailing in forestry, such as unplanned deforestation, continuous degradation, lack of social inclusion (rights, tenure, access, land use planning, benefit-sharing, insufficient law enforcement…

SFM/FLR: Proactively increase CO2 storage in forests

- Reduce source: Reducing deforestation, Sustained yield mgtm/ "Avoid degradation," Keep carbon storage intact ("adaptation")
- Increase sinks: Managed forests, enrichment, Afforestation/Reforestation, FLR, Increased biomass growth

But: Forests cannot grow into the sky

- Boreal forests: 65 tC/ha
- Temperate forests: 136 tC/ha (~= 500m3/ha)
- Tropical forests:186 tC/ha

What role of forests in the net-zero commitment? A first conclusion

- Combine mitigation and adaptation so that forests can play a role in a Carbon Neutral Economy; REDD, REDD+, A/R, FLR, Address vulnerabilities of ecosystems and social system, Increase Forest ecosystem resilience (with the view of the long-term)
- Next 50+ years or so: forests remain an important part of the solution: Carbon storage is key, but forest carbon cannot "grow into the sky."
- To reach the 1.5°C goals, there is a need to look beyond current boundaries first and utmost: to address fossil fuel emissions. Explore the role of forest biomass in a package to come to negative emissions (Bioenergy, carbon capture, and storage: BECCS) but consider that the supply of the biofuels BECCS requires a lot of lands and might jeopardize food production and biodiversity

Take away messages: The role of forests in carbon-neutral commitments

- From a global perspective, keeping existing forest areas intact and protected and restoring/reforesting degraded landscapes is a priority REDD+ and other means
- C-storage in the forest is limited (and not permanent). Loss due to climate change and extreme events is increasingly expected (from a sink to a source of CO2) in all biomes. Managing forest health thus is a priority
- Afforestation/Reforestation/FLR, Bioenergy and Carbon Capture and Storage (BECCS) are the dominant Carbon Dioxide Removal (CDR) methods available now and in the immediate future
- In those parts of the world where forests with high C storage are managed sustainability according to proven SFM standards, forest management assures the highest level of climate protection. The wood used as a long-lasting material stores carbon beyond forests in the long term and can be further developed

What is the role of forests in carbon-neutral commitment?

- Forest sector mitigation strategies need to be assessed regarding their impact on carbon storage in forest ecosystem, on sustainable harvest rates, and on net GHG emissions across all sectors

II. HIGHLIGHTS & INTERVENTIONS

Q1) Challenges to balance between land use for agriculture- food demand and reducing carbon emission complex. Acknowledge that food security and agriculture are the priority, but a potential solution is required to balance the needs and manage the emission. To consider reducing fossil fuel emissions and discover any potential solution in agriculture.

Q2) Potential of carbon locking and substituting energy-intensive materials by biomass, particularly wood. Sustainable management of wood resources as a sustainable material

Q3) Pressure encounter by developing countries to maintain forest cover. Global responsibilities to maintain for global benefit.

Q4) Cheapest and fastest way of reducing carbon emission. Planting tree- yes and no. Integrating source of emission and overall climate strategy with people

Q5) Future of carbon market Compulsory / Voluntary - Must Be Combined & Needed

Q6) Forest dependent: benefit of the carbon market and participation in net-zero CO_2 emission initiatives towards
Forest landscape restoration programme and providing incentive

5.2 KEYNOTE 2. GUIDELINES FOR FOREST LANDSCAPE RESTORATION IN THE TROPICS

I. LECTURE SUMMARY

Process of preparation of the guidelines

- The decision of ITTO Council in 2017 to review "ITTO guidelines for the restoration, management, and rehabilitation of degraded and secondary tropical forests" (ITTO 2002).
- Preparation of a background report setting for new ITTO/CPF restoration guidelines through a CPF Joint Initiative on Forest Landscape Restoration
- Preparation of the Draft Guidelines by two consultants (Blaser/Sabogal), supported by two Expert Group Meetings and exchanges at GLF:
- Final editing and publication in 2020

FLR as defined in the Guidelines

- An ongoing process of regaining ecological functionality and enhancing human wellbeing across degraded and deforested forest landscapes.
- The process has three key components: Participation, Adaptive management; and Consistent monitoring and learning framework

Goal and Purpose of the Guidelines

- Goal: Building sustainable tropical forest landscapes
- Purpose:
- knowledge base for tropical forest landscape restoration focusing on forest-/tree-based land-use systems
- A guidance tool for planning and implementing restoration and management practices at the site (local) and landscape level
- A contribution to a policy framework for tropical forest landscape restoration

Overall focus: "Building sustainable forest landscapes in the tropics."

- FLR to achieve – in the long-term - a more sustainable land use with enhanced social, economic, and ecological benefits
- The ultimate objective is SFM, sustainable agriculture, and all other forms of conserving and managing landscapes
- The future landscape is in mind, which is different from the past: restoration is not necessarily "restoring" what was before

Six internationally agreed principles of FLR adopted in 2018 by the Global Partnership on forests landscape restoration (Besseau et al. 2018)

- Focus on landscapes
- Engage stakeholders and support participatory governance
- Restore multiple functions for multiple benefits
- Maintain and enhance natural forest ecosystems within landscapes
- Tailor to the local context using a variety of approaches
- Manage adaptively for long-term resilience

Implementation arrangements

- Principles are implemented as a package
- For each principle: several Guiding elements that further describe the respective principle
- For each Guiding element: FLR interventions identified and structured according to project phases (visioning, conceptualizing, acting, sustaining)

The way forward: Immediate actions can be taken to encourage the use of the guidelines at the national and local levels, inter alia:

- Apply the guidelines as a reference and guiding document in developing FLR interventions at the national and subnational levels.
- Use the guidelines as a vehicle for increasing capacity in tropical countries to undertake FLR in combination with other specific guidelines, tools, and approaches.
- Identify landscapes where FLR is necessary, feasible, and a local priority and make a long-term commitment to its implementation, including by putting in place mechanisms for learning and exchanging information among stakeholders in such landscapes and at sites within them.
- Promote the guidelines among international organizations and interested stakeholders as an important contribution to the existing community of practice and support strategies for influencing the development of FLR conducive strategies at the national and subnational levels.
- Promote the dissemination and application of the guidelines by local actors and other stakeholders. This may involve the production of simplified versions adapted to local contexts and in local languages.
- Use the guidelines to advocate FLR in broader international conventions and processes.
- Monitor the impacts of these guidelines on changing practices in forest and landscape use throughout the tropics.

FLR in a theory of change on a nature-based solution

- Restoring forest landscapes, planting trees, and sustainably managing and protecting existing forests against degradation constitutes a cost-effective strategy for reaching the goals of the Paris Agreement (including carbon-neutral commitments of countries)
- The Sustainable Development Goals and several other globally agreed policy instruments, including the United Nations Decade on Ecosystem Restoration (2021– 2030), recognize FLR as an important tool for achieving the aspirations such instruments embody
- CPF: Re-imaging the future of forests in a post-COVID 19 recovery stands with the way how we restore and manage our forest landscapes

II. HIGHLIGHTS & INTERVENTIONS

	The conflict between economic development and environmental conservation
Indonesia	• What do you think about FLR in the oil palm landscape? • From the economic aspect, it is very important for a community's livelihood and a source of GDP. Still, from the ecological aspect, it is always the factor blamed for causing forest degradation. Is there a way to balance the two factors and solve the problem, or do we have to choose one of them?
	Monitoring and Evaluation plan
Indonesia	• Agreed that FLR is to regain ecological function. In tropical peatlands, the process to get back ecological function may take hundreds, even thousands of years. Is it possible to do it for peatland, and how to monitor it?
Vietnam	• Can the FLR principles and guiding elements help measure/evaluate the success of FLR projects, and how?
Cambodia	• Can you clarify the level of encouragement/incentivization for Forest Landscape Restoration with and without the FLR Guidelines?
	Social Factors
Myanmar	• What will be affected if the social factor doesn't involve in functional restoration?
	Experience sharing
Vietnam	• These principles are voluntary but very sufficient to achieve SFM. Could you share your experience in integrating these principles into national FLR policies? Any challenges?

5.3 KEYNOTE 3. BEST PRACTICES APPROACHES IN FOREST-RELATED ECOSYSTEM RESTORATION

I. LECTURE SUMMARY

Debate over Concepts

- Ecosystem Approach: CBD describes this as a strategy for the integrated management of land, water, and living resources that promotes conservation and sustainable use in an equitable way
- it also recognizes that humans, with their cultural diversity, are an integral part of many ecosystems
- Nature-based Solutions (NbS): IUCN defines NbS actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human wellbeing and biodiversity benefits

FLR: A planned process that aims to regain ecological integrity and enhance human well-being in deforested or degraded landscapes.

- Principles of a landscape approach: Continual Learning and Adaptive Management, Common Concern Entry-Point, Multiple Scale, Multi-Functionality, Multi-Stakeholder, Negotiated and Transparent Change Logic, Clarification of Rights and Responsibility, Participatory and User-Friendly Monitoring, Resilience, Strengthened Stakeholder Capability
- FLR is more than just planting trees – it is restoring a whole landscape to meet present and future needs and to offer multiple benefits and land uses over time

Phases of designing and implementing FLR

- Visioning national or landscape-level goals
- Conceptualizing local objectives
- Acting plans & activities
- Sustaining monitoring & managing

Key points to consider for an FLR vision

- Scale national or landscape
- National commitments Bonn Challenge, LDN Targets, etc.
- Context, e.g., tenure
- Baseline conditions landscape "suitability."
- Social & Ecological Goals national or landscape

Key points to consider for conceptualizing FLR

- Prioritize landscapes & units within landscapes
- Turn goals into local objectives
- Connect starting point with the ending point
- Define the causal connection "how to get from point A to B" ("Theory of Change", "change logic", etc.)

Acting: Develop a detailed plan for FLR

- What will be done?
- Where will it be done?
- When will it be done?
- By whom will it be done?
- At what cost and from whose resources will it be done?

Key aspects of sustaining FLR

- Monitoring
- Adaptive management
- Evaluation
- Knowledge management
- Capacity development

Conclusions

- Restoration is an intervention into a social-ecological system
- Debates over concepts should not prevent swift and decisive action on the ground
- Restoration is not an end, but a means to achieve resilient landscapes that are beneficial to people and nature
- Restoration actions at all levels must contribute to building a socially just, climate-neutral, and nature-positive world

II. HIGHLIGHTS & INTERVENTIONS

Defining forest-based solutions (ITTO)

Q. Is there an IUFRO effort to define "forest solutions (or forest-based solutions)" to address climate change, biodiversity, and poverty in terms of public awareness?

IUCN is concerned with all landscapes, including forest landscapes. In FLR, the societal aspect is incorporated along with the ecological aspect. A landscape approach is an inclusive approach involving
all segments of stakeholders

Landscape boundaries in cultural context (Indonesia)

Q. How to bridge the landscape boundaries in cultural contexts of indigenous communities and biophysical contexts?

Stakeholders' group involvement is key in bridging the landscape boundaries. It has to be variable depending on the landscapes considering the cultural environment.

Incentivization of FLR (Cambodia)

Can you clarify the level of encouragement/incentivization for Forest Landscape Restoration, especially the One Trillion Tree initiative platform for governments, businesses, and civil society to support the UN Decade on Ecosystem Restoration (within the timeframe 2020–2030). Or FLR is such of "No Action-Talk Only."

Financial and time constraints in FLR implementation (Indonesia)

We understand that achieving sustainable land use takes time, involves many activities, many parties, etc. Often these activities cannot always be carried out due to limited time and funds. Any suggestion on how to approach this issue?

Conflict of interest within the landscape (Vietnam)

Coping with land-use conflicts caused by different stakeholder interests, biodiversity conservation, forest restoration often has to take a step back concerning other interests (food production). From a landscape approach, how to compromise many conflicting interests within the landscape? Are local interests always the most priority within the landscape?

Capacity building schemes (India)

Capacity building of the government or policy makers is important. Does IUFRO have any such scheme?

5.4 KEYNOTE 4. FINANCING FOREST LANDSCAPE RESTORATION

I. LECTURE SUMMARY

- Almost ¼ of the world's land area degraded in 50 years. Total cost: US$ 6.3 trillion a year (8.3% of global GDP in 2016)
- Restoring degraded forests generates US$ 7–30 for every dollar invested
- A funding gap of US$ 300 billion/year
- Achieving the Bonn Challenge of restoring 350 Million ha by 2030 could sequester up to 1.7 GtCO2eq/year
- Land set aside for natural forests to return would hold 40 times more carbon than plantations and six times more than agroforestry

Public Domestic Financing

- Derived from revenue (taxes)
- Redistribution of tax revenues for FLR
- BUT the squeeze on fiscal space due to COVID-19 has restricted the availability of domestic public finance

Private Financing

- Operational level (e.g., timber companies): motivations
- Institutional investors: financial intermediaries
- BUT aversion to low returns, risk, unclear policies/laws/tenure
- SFM investments in non-OECD countries are growing, but many issues remain, e.g.
- Initiatives to help increase private sector involvement in SFM include:
  - Private Sector Set-Asides (PSSAs) as part of the Climate Investment Funds
  - Coalition for Private Investment in Conservation (CPIC)

GCF Fund

- Funding Windows: Readiness funding, Project preparation facility (PPF), Funding proposals (FP), Request for Proposals (RFP), Simplified Approval Process (SAP)
- Key Features: Country Driven Approach, Climate Impact Focus, Paradigm Shift Potential, dedicated Private Sector Facility
- Investment Impact Areas: GCF makes investments within eight strategic result areas

GCF'S Transformative Approach

- Transformational planning & programming: Promoting integrated strategies to maximize the co-benefits
- Catalyzing climate innovation: Investing in new technologies, business models & practices
- De-risk investment to mobilizing finance at scale: Using public resources to crowd-in private finance
- Mainstreaming climate risks & opportunities into investment decision-making: Aligning finance with sustainable development

Key Innovative Initiatives

- Great Green Wall: An umbrella programme proposal with IFAD to build climate-resilient growth in one of the youngest regions of the world. The continent-spanning initiative will combat the effects of desertification by restoring 100m hectares of degraded and non-productive land and enhancing biodiversity
- Caribbean Blue Economic: With IDB, develop a proposal to build resilient infrastructure and provide disaster risk financing and nature-based solutions for SIDS in the Caribbean.
- Clean cooling: The World Bank proposes a multi-country programme to target some of the 1.3 billion people who lack access to sustainable cooling systems.
- Amazon rainforest: Promoting the protection of the Amazon rainforest and other critical ecosystems that serve as global carbon sinks, including market-based mechanisms.
- Desert2Power: Together with AfDB to create the world's largest network of renewable energy installations in the Sahel Region of Africa that will increase energy security and enable climate-resilient development
- Regional adaptation programmes

A Few Pointers

- Where to start: Participate in updating your country's NDC, participate in origination (GCF country programming) through the NDA, reach out to a GCF accredited entity to help you develop a project idea (FAO, UNDP, UNEP, ADB, JICA, GIZ, KfW, etc.)
- Ask yourself: What would be the purpose of restoring? (Flood control, timber harvest, etc.), Wouldn't it be cheaper to conserve than to restore? Is the landscape large enough? (Issue of scale), How to maintain landscapes once they are restored?

II. HIGHLIGHTS & INTERVENTIONS

Indonesia	• What kind of projects is being funded for India by the Green Climate Fund? • Four projects amount to USD 314M with five entities/partners in India.
Vietnam	• Vietnam has 3 GCF projects operated by a co-financing mechanism between GCF, UNDP, and Vietnam Gov. Do you find any challenges when GCF implements co-finance projects in Vietnam? • Three projects amounting to US$346M with four disbursements already; Regarding the implementation of co-financing, it can be informed that 2 out of 3 projects are performing well. There are a lot of projects under review in Vietnam.
Fiji	• Are countries allowed to have more than one GCF fund in implementation simultaneously? E.g., Urban forestry (including urban/peri-urban food forestry) is NOT included in the current GCF proposal, so could we have another fund to create Urban Forestry to develop Green-Blue Towns & Cities. Creating green urban spaces would also involve infrastructure, etc., so it is a different sort of proposal with the density of urban dwellers. the current GCF proposal is on forests in rural areas
Philippines	• How about the direct inclusion of the FLR budget requirements in the budget plan at the local level to ensure project sustainability • It is possible but looks into blended financing sources or different approaches. There are a lot of local budgets that are returned or unused. So, it is potential to be dedicated from this for the sustainability of FLR, for example, in Bhutan, which has a budget plan so that at the end of the project, it's sustained. At the prior, GCF is already asking about the sustainability plans. However, the best sustainability plans are from the government budget.
Vietnam	• What are the most prioritized areas for getting finance from GCF? Does GCF support research projects in FLR, climate change mitigation? What is the acceptable way to approach the funds for GCF? • GCF can support any program related to Livelihoods, FLR, ecosystem services, but it must balance both contribution on climate mitigation and adaptation. • GCF is trying to balance their support both in climate mitigation and adaptation actions and between regions such as developing and African countries. • Funding research is possible, but it needs to have an actual impact on the society and the environment/actual intervention to the ground. So, the research must include tangible emission reduction and tangible benefits for the community and environment. • If it's a little research, it is suggested it included on GCF Readiness Program with US$1M per year per country.
Cambodia	• Do you have information on how many trees have been planted in respective countries or regions through those multi-billion Dollars that have funded GCF, GEF, and other related financial institutions? • How we can make a better narrative for FLR, as so far, those multi-billion Dollars projects that have funded GCF, GEF, and other related financial institutions, probably less than 1% of each project fund go for planting a tree. • GCF does not calculate trees but potential carbon sequestration. • The efficiency and effectiveness of the program/project must be reviewed. • It must be remembered that the cost of conservation is cheaper than the cost of restoration. • The narrative for FLR must deal with climate problems, both adaptation, and mitigation. • We should identify problems first and find alternative solutions after, and not the other way around. • It also suggests providing analysis on its proposals such as cost and benefit analysis

II. HIGHLIGHT AND INTERVENTION

ITTO	• GCF projects are very comprehensive and require data on climate impact. I would appreciate more information on the GCF Readiness Program ($ 1 million per country) to support the GCF country-driven approach. Is it run annually? What are the key elements for a GCF contact point's request? Accredited ITTO so the member countries can access the GCF. Can a GCF readiness program focus on a project in "forests and land use" if a GCF point of contact supports this approach? • With GCF Readiness Program, countries can have annual support but may request the amount for three consecutive years on the 1st year (and no funding for the two consecutive years after), which depends on the design of the program/projects. • It is also possible to request the GCF readiness program in the region platform.
Philippines	• Is it possible that the GCF could adopt the graduated sites of the National Greening Program (Reforestation) to finance its maintenance activities? • Yes. GCF is flexible but asks if it is efficient for GCF to fund this. However, GCF usually funds huge programs/projects that need funding but have no other financing source, and the government already funds NGP. So that, the proponent must be considered to the main problem that needs support from GCF to consider additionally and replicability and scalability as the GCF will review these to find the transformative projects • Perhaps GCF can fund the carbon sequestration studies of the established plantations under the National Greening Program in the Philippines

5.5 LECTURE 1. OVERVIEW OF FLR AND RESTORATION OPPORTUNITIES ASSESSMENT METHODOLOGY (ROAM): A CASE STUDY ON THE USE OF ROAM IN VIET NAM

I. LECTURE STRUCTURE	
Lecture Overview	As the first lecture on the FLR, this lecture will introduce the concept of the FLR how to draw its vision and goal when project development. The IUCN's assessment tool, Restoration Opportunities Assessment Methodology (ROAM), will be introduced with a case study in Viet Nam.
Learning Outcomes	At the end of this lecture, trainees will be able to: • Goal setting and vision for FLR project development • IUCN's Restoration Opportunities Assessment Methodology (ROAM).
Content	(1) FLR's vision and ROAM (2) ROAM's case study in Viet Nam (3) Suggestions/recommendations to the participants

II. LECTURE SUMMARY

Lecture 1-1 > An Introduction to Forest Landscape Restoration (FLR) Dr. Scott Perkin

Globally, two billion hectares of degraded & deforested land could benefit from restoration.

Traditional reforestation practices
- Taken the form of large-scale plantations, with timber production as the primary objective.
- Used only a handful of commercial/exotic species.
- Delivered only limited biodiversity, ecosystem services, and livelihood benefits.

The Evolution of Forest Landscape Restoration (FLR)
- Increasing recognition of the complex nature of the relationship between society, forests, and the environment, and the need for integrated approaches.
- Greater emphasis on the contribution of forest resources to sustainable development and poverty reduction.
- Growing recognition of the limitations of site-based projects and the need for a broader approach focused on multi-functional landscapes.

Forest Landscape Restoration: The concept
- It is not: just "forestry," just "trees," just planting "sites"
- It requires integrating with other land uses, delivery of a broader range of societal benefits a vision for a better managed landscape

Broad FLR categories
- There is no single FLR intervention. Rather, FLR strategies use a suite of complementary land-use interventions that come together under a common framework
- Natural regeneration, planted forests and woodlots, Mangrove and coastal restoration, Silviculture,
- Improved fallow, Watershed protection and erosion control, Agroforestry,

The FLR approach
- The goal of FLR is to enhance native ecosystem functions and bring back ecological and economic productivity, without causing any loss of natural forests, grasslands, or other ecosystems. It is about:
- Restoring "forward" to meet current and future uses.
- Restoring functionality and productivity, not "original" forest.
- Balancing local needs with national & global priorities.
- Using a package of diverse restoration strategies.

FLR is the key approach for achieving the Bonn Challenge through a transition to sustainable land use

How to turn Bonn Challenge pledges into reality?
- The Restoration Opportunities Assessment Methodology (ROAM) offers one way forward.
- ROAM is a flexible, affordable, and participatory framework developed by IUCN and WRI to identify restoration priorities.

ROAM can help governments and institutions to:
- Identify priority landscapes for restoration.
- Estimate the costs and benefits of different restoration strategies and opportunities.
- Lay the foundation for restoration strategies.
- Provide often-missing landscape-level data.
- Build high-level support for restoration.
- In short, ROAM can help identify appropriate interventions and the right places to restore

ROAM can help governments and institutions to:
- Identify priority landscapes for restoration.
- Estimate the costs and benefits of different restoration strategies and opportunities Identify priority landscapes for restoration.
- Estimate the costs and benefits of different restoration strategies and opportunities.
- Lay the foundation for restoration strategies.
- Provide often-missing landscape-level data.
- Build high-level support for restoration.
- In short, ROAM can help identify appropriate interventions and the right places to restore

Some challenges for the growing FLR movement
- Financing: How can we finance a rapidly expanding FLR programme?
- Incentives: What is the role of incentives and subsidy reforms in difficult economic times?
- Roles: What are the respective roles of government, the private sector, and NGOs?
- Scaling: How do we move beyond project approaches and scale-up successful FLR approaches?
- Monitoring: How can we monitor progress in a transparent, credible, and cost-effective way?

Lecture 1-2 > Forest Landscape Restoration Assessing opportunities in Quang Tri, Vietnam

Introduction and set-up of the study - Quang Tri :
- Selected by IUCN for its overall ambition and demonstrated commitment to forest restoration

Restoration Opportunities Assessment Methodology (ROAM) :
- Joint process led by IUCN to identify FLR opportunities

FLR goals
- Increase forest biodiversity and quality
- Conserve and enhance ecosystem services
- Improve livelihoods to reduce incentives to encroach on the forest

Quang Tri Province
- Characteristics
  - North-central Vietnam (4,739 km ^{2})
  - Population size: 620,000 (71% rural); majority Kinh ethnicity, small minority other groups
  - Avg. annual household income: US$575
- Forests
  - Devastated during American War
  - Fast recovery after economic reform in the late 1980s (98,000 in 1989 to 235,000 in 2016)
  - Poor quality (acacia-ized)

FLR options	
Enrichment Plant. & ANR (EP-ANR)	**Extended Rotation (ER)**
• Improve forest quality and biodiversity • Reduce erosion degraded forest • Improve water quality • An alternative source of income for farmers/landholders (PES)	• Erosion control by reducing time land is bare after harvesting • Improve water quality of river basins • Increase incomes through high-quality timber (including FSC)
Native Species Introduction (NSI)	**Soil & Water Conservation (SWC)**
• Erosion control by reducing time land is bare after harvesting • Improve water quality river basins • Increase incomes through high-quality timber (including FSC) Increase biodiversity	• Prevent erosion by conserving high-quality soil on-farm plots • Prevent water run-off and improve water retention for crops • Increase yields
Enabling (and constraining) factors	
Motivation/incentives	**Implementation capacity**
• Forest tenure allows farmers to invest in FLR • Difficulties getting loans, government plays a key role • Logging ban as a disincentive • PES payment low and fixed regardless of performance	• Proven FLR models exist • Basic skills but technical assistance required (especially on NSI) • Enrichment planting and ANR often fail due to a lack of follow-up Costly/low availability of key inputs and seedlings
Markets and value chains	**Policy support and enforcement**
• International demand for legal timber and dependence on imports • Smallholder FSC implemented in several provinces • No market incentive to promote sustainable cassava practices	• PRAP (2016-2020) with measures to curb deforestation and degradation • Laws/institutions well developed, but often not enforced • Growing emphasis on sustainability and forest conservation, but national policies remain focused on quantity

III. HIGHLIGHTS & INTERVENTIONS

	Terminology/Concept
Philippines	• Whether FLR as part of Nbs (Natural-based Solutions)? • What is the connection of FLR with SLEM (Sustainable Land and Ecosystem Management)?
Fiji	• What is FSC? • What have the benefits been from FSC? • Is FSC much preferred over PEFC (Programme for the Endorsement of Forest Certification)?
Indonesia	• The difference between FLR and integrated watershed management concepts/perspectives?

Responses:

- FLR is supposed to take a broader approach than Nbs (for more detail about Nbs, you can look back the Key-note Presentation 3 or: https://portals.iucn.org/library/sites/library/files/documents/2016-036.pdf)
- FLR and SLEM are not quite similar concepts.
- Application of FSC or PEFC depends on the countries situation.
- FLR is supposed to take a broader approach than the integrated watershed management concept.

Experiences in the application of FLR &ROAM (challenges, solutions…)	
Laos	• Which technique would be better for forest restoration in Vietnam?
Bhutan	• Which FLR options would you recommend for a mountainous country like Bhutan, given its fragile mountain ecosystem and, of course, with the high forest?
Indonesia	• What are the challenges often faced when carrying out FLR in various countries, and how do you overcome them?
Viet Nam	• Are there any solutions to extend the rotation of plantations in Vietnam? • Any recommendations from your side? • Can you share more about how you apply to ROAM to identify priority areas for FLR in Quang Tri, Vietnam? What are the opportunities and challenges to apply ROAM in different social-ecological conditions?
India	• What sort of approach is required to ensure the economic benefits to stakeholders?
Philippines	• Is river basin restoration, which constitutes more than one watershed can be considered as the package of FLR?

Responses:

- Keep in mind that FLR is not a single intervention; it includes multiple integrated interventions.
- Application of FLR and the ROAM method is flexible and might vary amongst countries since they face different challenges and issues. It also depends on landscapes or study sites that might have different stakeholders,different demands for economic development.
- For the application of FLR, we have to identify what's key ask.

A guide to the Restoration Opportunities Assessment Methodology (ROAM Handbook)
: https://www.iucn.org/downloads/roam_handbook_lowres_web.pdf

Gender-responsive restoration guideline: https://portals.iucn.org/library/node/46693

Biodiversity guidelines for forest landscape restoration opportunities assessments:
https://portals.iucn.org/library/node/47713

Use the clickable version of ROAM to navigate the phases online: http://www.forestlandscaperestoration.org/

A case study on the use of ROAM in Viet Nam
https://www.iucn.org/sites/dev/files/content/documents/2018/final_-_qt_roam_assessment_oct30.pdf

5.6 Lecture 2. SOCIAL ENVIRONMENTAL SAFEGUARD FOR FLR AND APPLICATION OF FPIC IN THE CONTEXT OF REDD+

I. LECTURE STRUCTURE	
Lecture Overview	In the context of the REDD+, this lecture will introduce a social environment safeguard for FLR. In addition, the lecture will provide an in-depth study on Free Prior Informed Consent (FPIC) with a case study in Viet Nam.
Learning Outcomes	At the end of this lecture, trainees will be able to: • Goal setting and vision for FLR project development • IUCN's Restoration Opportunities Assessment Methodology (ROAM).
Content	(1) Social environment safeguard of FLR (2) Free, Prior, and Informed Consent (FPIC) with a case study in Viet Nam (3) Suggestions/recommendations to the participants

II. LECTURE SUMMARY

Safeguards in REDD+

- consistent with the objectives of national forest programs and relevant international conventions and agreements.
- Transparent and effective national forest governance structures.
- Respect for the knowledge and rights of indigenous peoples and members of local communities.
- Full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities.
- Consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ actions are not used for the conversion of natural forests, but to incentivize the protection and conservation of natural forests and their ecosystem services and enhance other social and environmental benefits.
- Actions to address the risks of reversals.
- Actions to reduce displacement of emissions..

What is Free, Prior, and Informed Consent (FPIC)

- FPIC is the recognition of the right to self-determination of the local people.
- FPIC provides a locally and culturally specific process to guarantee the rights of local people
- FPIC process is based on the fact that local people have the right to negotiate the conditions for any proposed project that will directly impact their lifestyle or livelihood, including their right to use the land and its resources.
- Local people can accept or reject a proposed project, and they can define the conditions and negotiate the terms to accept or reject the proposed project.
- Yet, as local people often lack the political power to voice their opinions and make themselves heard, FPIC provides opportunities and mechanisms to respect their fundamental rights to voice their opinion about a proposed project.

FPIC Components

- **FREE**: 'Free' in FPIC means that the decisions made in the FPIC process should be free from coercion, i.e., free from any pressure, force, manipulation, or intimidation by any party (from any individual, company, organization, or government).
- **PRIOR**: 'Prior' in FPIC refers to a situation in which consent has been sought sufficiently before any project authorization and before any resources, such as finances, equipment, or labor, are allocated to the project.
- **INFORMED**: 'Informed' means that local people are given complete, correct, and clear information in their preferred language(s). Relevant information can include the scope, objectives, duration, human and financial resources involved in the proposed project, the affected land area, and the FPIC process to be followed.
- **CONSENT**:: Local people have the right to accept or reject a proposed project – that is, they can give or withhold their consent. According to their chosen decision-making process, local people have the right to enter into agreements for a proposed project or reject it at any stage of a project.

Why FPIC?

- FPIC is required for implementing projects without negatively affecting any group of local people.
- Many local communities and indigenous peoples depend on forest resources for collecting firewood, food, fodder, cattle grazing, collecting medicinal plants, or for religious purposes.
- In addition to the general development projects covering many different types of land, there is increasing interest in forest land for the development of new plantations, logging of timber, or protecting and maintaining long-term, high-quality forests.
- Any project that may impact the traditional uses of local people needs to be approved by the local people. The right to FPIC is crucial when the statutory law and regulatory use of forests are weak or lacking. Therefore, FPIC needs to be applied to ensure a fair development process for all stakeholders.

Key findings from FPIC verification and evaluation process

- FPIC Facilitation Team:
    - Good ethnic and gender balance, high representation of local ethnic groups
    - Generally youthful and well-qualified, but limited experience and local knowledge
    - Interview skills could be improved – more feedback could be encouraged
- Initiation of the process:
    - Efficient scheduling and planning, but mainly led by UN-REDD Programme
    - Timing of meetings determined by villages leaders according to availability of local people
    - Language needs of main ethnic groups were met, but there were potential problems for minority ethnic groups.
- Decision-making processes:
    - Local people unfamiliar with 'providing consent.'
    - Hard to know the influence of authorities and village leaders on the outcome, but more time for internal discussions would have reduced this potential influence
    - Local people did not determine how much time they needed to give their consent
    - Three-phase processes to allow for review, learning, and improvements in later phases

- Information and Communication Strategy:
    - Effective and locally appropriate: Two languages and a variety of tools and approaches
    - From Phase 2 onwards, facilitation teams went directly to households
    - Good visual awareness-raising tools were used but would benefit from further explanation
- Transparency and 'good faith' indicators
    - No indication of withholding or misleading information
    - Good info on opportunities, less on risks as there was concern that villagers would have difficulty understanding risks
    - Limited availability of secondary sources of information and advice
- Verification of the outcome
    - Independently verified in all sample villages
    - About 38 percent of households did not participate or were not aware of the process. This would not have changed the outcome
    - Three individuals withheld consent – but reasons not recorded and therefore unknown
- Interpretation of the outcome
    - Consent was given to a forest protection strategy, not specifically to UN-REDD Programme
    - Very few 'voters' under 30 years of age, so positions may change as younger people gain influence
    - Poorer households are less likely to participate in meetings, so the outcome reflects the opinion of better-off
    - Impossible to know the importance of these issues without time allowed for internal discussions

III. HIGHLIGHTS & INTERVENTIONS	
India	• How much time and money does Vietnam need to implement FPIC?
	- the FPIC process in Vietnam was too short - there was only one. Two hours or two hours and a half meeting in the village - the cost, doesn't know exactly
	• Can consent be replaced by consultation?
	- consent means more rights from the local communities. - prefer the use of the word consent because it does more connotation in terms of the rights of the local community
	• What are the challenges faced in implementing FPIC?
	Doing FPIC is a costly and time-consuming process, but less image in the cost will be much higher for the project.
Timor Leste	• How can we convince the local community to cooperate with our project?
	- let the villagers discuss - provide additional information for the villages to make the decision
Indonesia	• Can you suggest being able to run FPIC at a lower cost and in a short time?
	- it is possible to do to reduce costs to get the consent - if the villages agree to give consent via the representatives - the low-cost option of doing the FPIC, then spending a lot of money led to remedy the project
	• How do you do FPIC where you can't directly meet the community?
	- you need to wait to talk with them face to face - communicating via that they are not familiar with, it's not commendable for the FPIC process
Fiji	• Would it be better to establish the feedback grievance redress mechanism before FPIC?
	- it should default - it should be informed the local communities of that process before the meeting
Laos	• How to solve the gender equality gaps in the local community?
	- prepare local facilitators - small group discussion facilitated by women facilitator
Myanmar	• The application of digital technology social media on the FPIC approach and its effectiveness?
	- depending on the context - if local people are familiar with that, why not use this? It would save a lot of time it would be very efficient
Others	• It would be wonderful to continue to analyze and share the cost implications of FPIC practices in REDD+ projects in Vietnam

5.6 LECTURE 3. STAKEHOLDER ANALYSIS FOR FLR INTERVENTION: WITH A CASE STUDY #3: EMPOWERING LOCAL COMMUNITIES FOR THE RESTORATION OF A COASTAL LANDSCAPE IN THE AYEYARWADY DELTA, MYANMAR

I. LECTURE STRUCTURE	
Lecture Overview	This lecture will introduce the stakeholder analysis in the development of the FLR project. The project expert will provide practical actions taken to develop and implement a project in Myanmar.
Learning Outcomes	At the end of this lecture, trainees will be able to: • Identify stakeholders and their analysis in perspective of FLR, • Develop the stakeholder analysis for FLR projects in the country context
Content	(1) Stakeholder analysis in Myanmar (2) Suggestions/recommendations to the participants

II. LECTURE SUMMARY

Brief of Case Study (SUComFor Project)

- SUComFor project was successfully implemented in 7 States/ Regions across Myanmar (2015-2018)
- In Ayeyarwady, 22 communities (1,083 HHs) were empowered to manage a total of 4,160 ha
- Issues: Highly vulnerable area, unproductive paddy fields, pressures on the forests more, illegal logging, unsustainable shrimp farming, and salt production
- Process/ approach: Analysis and assessments, Design and deliver training, CF formalization, and management, Networking

Introduction of stakeholder analysis

- Who are the stakeholders?
  - Stakeholders include any people or organizations/ departments or groups that can directly or indirectly be affected or be affected by the project or an FLR initiative (LC, Gov, PS, and CSOs)
- Why do a stakeholder analysis?
  - To draw out the interests and influence of stakeholders
  - To identify conflicts of interests
  - To identify relations between stakeholders
  - To assess the appropriate type of participation by different stakeholders
- What expects from stakeholder analysis?
  - Objectives are more likely to be achieved
  - Activities are likely to be more sustainable

Stakeholder analysis applied in the project

- Landscape-level analysis
  - Identify the different stakeholder groups at the landscape level
  - Explore their roles, influences, and interests in the project
  - Consider the findings in the overall project management
- Village level analysis
  - Identify the different groups and individuals who are doing different livelihoods and taking specific roles in the community
  - Explore their roles, influences, and interests on the CF
  - Consider the findings in the CF management plan
- Landscape-level stakeholder analysis
  - Key stakeholders were Local communities in Pyapon Township, Government sectors
  - Private sectors (Fish/ crab/ shrimp industries), CSOs (FREDA and METTA Development Foundation)

- Most stakeholders were interested in CF and forest restoration but noted there were tenure/ management conflicts among FD, DALMS, and DF, which are rooted in the unharmonization of legal instruments
- Observed that PSs had low interest and less influence as well
- Local communities had high interest, but their capacities are relatively low, and power unbalanced with government sectors
- CSOs showed their high interests in forest restoration and taking coordination between local communities and government sectors

Village level stakeholder analysis

- Key stakeholders were CFUG members, Non-CFUG members, Different groups, Individuals (religious leader, village leader, and the person who has influential power), Women, Youth group, Minority group
- Different stakeholder groups had different interests, so multiple interests need to be accommodated in the CF management plans to avoid resource use conflicts
- Their different livelihoods were directly or indirectly related to mangrove forests, so most community members are interested in the mangrove forest restoration
- Most community members had limited capacity to be able to address the conflicts properly

Approaches for stakeholder engagement

Landscape collaboration workshop

- Bring representatives of key stakeholders from; Local communities, Government sectors (FD, DALMS, DF, and GAD), Private sectors, CSOs

Capacity building training (Township and village level)

- Concept of CF, communication and facilitation skills, and participation
- Conflict management in forestry
- Gender mainstreaming in forest management
- Good governance and institutional strengthening

Networking among CFUGs

- 2 representatives from each CF (2*22 = 44 members)
- Participate in the township level network

Negotiation and dialogue

Key results

- 22 CFUGs developed the CF management plans and effectively managed their CFs (4,160 ha)
- Sustainable actions.
    - In 2017 – planted 585,000 seedlings across 1,500 ha
    - In 2018 – planted 225,000 seedlings across 600 ha
    - In 2019 – planted 156,000 seedlings across 400 ha
    - In 2020 – planted 187,000 seedlings across 500 ha
- Quarterly networking meetings are regularly organized
- About 90% of CFMC members reported better forest health and reduced degradation
- With the collective actions, the illegal harvestings are remarkably decreased
- In 3 years after the project, CFMCs are actively functioning and implementing their CFMPs

Main challenges and lessons learned

- Challenges
    - Forest restoration has to provide an attractive incentive for the local community to engage. Forest restoration in degraded land takes a too long time. The local community expects to get short returns.
    - Local people feel unsecured about their rights for livelihood development from forest restoration intervention
- Lessons learned
    - Effective forest restoration requires contributions from stakeholders, including marginal people in the decision making
    - Capacity-building support on various aspects is one of the key success factors
    - The formalization of rights and tenure, the development of livelihoods, and enhancement of key capacities are important
    - If these are not secure, FLR will not be successful

III. HIGHLIGHTS & INTERVENTIONS

Viet Nam	• **Could you please share more about how to measure the level of influence of stakeholders in your case?**
	- Identifying influence/interest and well representing key stakeholders is important, e.g., from Case – Forest Department is the authorized Department for granting land lease of 30 Years for CF. So FD staff has influential power than others. - Focus Group Discussion (FGD) has been carried out with FD staff to decide the influence and interest level.
	• **How can your project encourage/involve vulnerable stakeholders (women, poor people) in your project?**
	Village level stakeholder's analysis, Village consultation workshops were conducted, and vulnerable people were encouraged to participate and asked their concerns and perspectives - Focus Group Discussion (FGD) has been carried out with FD staff to decide the influence and interest level - Seasonal migrant people case – discuss with Management Committee (MC) for resource use conflict with non-CF members
Cambodia	• **Please let us know the trend or qualities during the last ten years (i.e., functional and productivities, forest cover) of the Landscape unit of targets communities forestry that RECOFTC were implemented projects or programs intervention.**
	- There has been much progress on community-based landscape restoration. Without local stakeholders, engagement FLR cannot make successful. Please check our website at www.recoftc.org - Local leaders play a critical role in development if they see benefits for their society (teacher, religious leader, livelihood group leader), they understand their context better than outsiders like us

1) Important role of community leader:
- Village leader, religious leader, and teacher, etc. are important resource person
- In Delta's case in Myanmar, Chief Monk in the village is important and one of the influential persons in the village. Conduct a meeting with Chief Monk and explain the project and share the information about reforestation and its benefits. Chief Monk can share the information with villagers.
- Demonstrate planting in the monastery, and after that, the villagers see and believe.
- Small group leaders who can organize their members (e.g., Fishery group leader, Farmer group leader) also play an important role

2) Importance of capacity building/development: Trust building is a proper approach to enjoy and contribute to our intervention. Without local stakeholders, engagement FLR cannot make successful.

3) Experience from India and Fiji:
- Wildlife and community co-exist in the coastal area in India. Community participation is a challenge.
- Fiji Mangroves are even more complex than "regular forests," and conflict of interest is a challenge.

4) FLR – a holistic approach for restoration:
- FLR approach needs to consider a holistic approach (Livelihood, Forest cover, other related aspects) not only from one corner.
- For those who want to learn about the progress of social forestry in ASEAN, please see this report https://www.recoftc.org/publications/0000379
- More cases to learn from www.recoftc.org and Social Forestry Knowledge Tree https://www.recoftc.org/social-forestry-knowledge-tree

5.7 LECTURE 4. LOGICAL FRAMEWORK (SMART INDICATORS) FOR FLR INTERVENTION

I. LECTURE STRUCTURE	
Lecture Overview	This lecture will introduce the logical framework development, which is the backbone of project development. Following the problem tree analysis, the participants will learn how the framework and indicators are formulated with SMART (specific, measurable, achievable, realistic, and timely) criteria.
Learning Outcomes	At the end of this lecture, trainees will be able to: • Identify SMART indicators for FLR project development, • Develop the logical framework for FLR project development in the country context
Content	(1) Logical framework development for FLR project development (2) Suggestions/recommendations to the participants

II. LECTURE SUMMARY

Problem Analysis

- A precise definition of a problem is important in designing and implementing a project
- Conduct Situation Analysis/Baselining:
    - Consultation
    - Whom or What does the problem concern?
    - What is the scope of the problem? How big is the problem, and how can it be solved?
    - How do we know what the problem is?

The Problem Identification

- Utilizing experience and knowledge of the situation
- Start with Problems that are within your organization's program, mandates/policies
- Current most important for your organization, sector, country.
- The problem that can be addressed by the Project (duration, funding, and institutional capabilities, mandates, and policies)

Cause and Effect in the Problem Tree

- Once you define all problems associated with the focal problem, you should carefully analyze each of them and determine the cause-effect relationship between them. You should then present them in a way where the problem-cause is shown a level below its problem-effect. Problems not being in direct cause-effect relation are shown on the same level.
- Please note the focal problem must not contain its solution
- Problem Tree is not a hierarchical structure (their position at the Problem Tree does not show their importance)
- Remember to involve the project stakeholders in the Project Tree preparation. As it should be a group process, try to involve as many experts/stakeholders as possible.

Checking the Focal Problem

- If Core Problem is at the highest level, you need to check whether your problem could be fully solved. If not, if you are only somehow partially contributing to the solution of the problem, you should redefine it.
- If your Problem Tree was defined correctly, you should only go one step down on your problem tree and put the main problem on the level of the Overall objective - the problems you can solve during the project realization will become your Specific project objectives.
- When your Problem Tree is finalized, you can check your stakeholder's list again and clarify whether any new stakeholder was noticed. All new stakeholders identified should be included in your stakeholders' list.
- Remember that the Problem Tree is an open logical structure linked to the stakeholder analysis matrix. Both problem tree and stakeholder analysis matrix allow further development, transformations, and adjustments. They must be checked and revised at every different phase of the project development process. Therefore, it can be used as the basis for the development of several projects.

Checking Your Problem Tree

- Each card or box in the problem tree shall include only one problem, not more than this.
- The problems must be real, not hypothetical.
- Avoid, as much as possible, defining the problem in the form of negation of the solution (example: lack of firefighting equipment and training);
- Make sure of the sequence of causes and effects, i.e., problems-effects stems from problems-causes.
- Get back to the experts, co-applicants and/or affiliated entities, and key stakeholders to obtain the information that will help you complete the tree.

The Objective Tree

- Problems to Means and Ends relationship and then chooses one or a few specific objectives (s).
- To create an Objective Tree
  - Establish your 'positive' statement based on your Problem Tree, using the levels you had created for the Problem Tree
  - This way, an 'Objective Tree' will be created on the basis of 'Problem Tree'
  - The focal problem level will turn into the specific objective
  - Problems above it – into overall objectives
  - Problems below it – into results.
  -

Developing Your Strategy /Activities (how/what)

- A complete Objective Tree consists of a number of 'branches,' which means separate, consistent units, each representing an alternative strategy (group of objectives connected by a cause-effect relationship). Each 'branch' may be a basis for a separate project. Each represents an alternative strategy.
- Once the Objective Tree has been created and verified, you can begin to define your project strategy.
- Project Strategy (defining project activities—costs involved)
- The project strategy is a direction in a project that contributes to the success and survival of the project in its environment
- To ensure the success of your project realization, you must thoroughly analyze all different alternative strategies (all separate 'branches' of the Objective Tree) and choose the strategy key to your project. This is one of the most difficult steps in the project development process because the strategy determines your project (and will be assessed as the main part of your Concept Note).

The SMART Indicator

- Specific (what and who of the intervention)
- Measurable (measurement of progress)
- Achievable (what of the intervention)
- Relevant
- Time-bound (ensures project progress)

Project Sustainability

- Sustainability is the likelihood of a continuation in the stream of benefits produced by the project after external support has ended.
  - It will continue to benefit the project's target groups and final beneficiaries also after its completion,
  - Replication or multiplier effect
  - Sustainability leads to the identification/complementation of areas of interest in the future (project development)

Points to consider:

- Financial (showing how will the activities be financed after the funding ends);
- Institutional (presenting how the structures allowing the activities will continue to exist at the end of the action and whether the results of the action will be considered local, owned by the beneficiaries);
- Lead to policy and political and program support (policy/program implementation and improved legislation)
- Perceived beneficial environmental impact
- Capacity building and cooperation among AFoCO member countries (sub-grouping)

5.8 LECTURE 5. CARBON BENEFIT ANALYSIS FOR FLR INTERVENTION

I. LECTURE STRUCTURE	
Lecture Overview	This lecture will explore carbon-related practices under FLR schemes. The participants will explore carbon benefit analysis to be considered as part of components of FLR projects.
Learning Outcomes	At the end of this lecture, trainees will be able to: • Identify carbon benefit analysis in perspective of FLR, • Develop the carbon benefit analysis for FLR projects in the country context
Content	(1) Carbon benefit analysis for FLR intervention (2) Suggestions/recommendations to the participants

II. LECTURE SUMMARY

Background

- Since 1990, we have lost 420 million ha (FAO, 2020). With 500 tCO2/ha, this loss emitted 211 billion tCO2 (about 23% of all carbon stocks in tropical forests (Saatchi et al. 2011)
- The total area of degraded forests: 930 million ha (ITTO)
- Carbon emissions from degradation 25%+ of total carbon emissions from deforestation (Pearson et al. 2017)
- Deforestation and forest degradation impacted 1.6 billion people and biodiversity
- New Hope: The New York Declaration on Forests: restore 350 million ha by 2030 and Paris Agreement's REDD+ Scheme (2020 2030)
- If all 930 million ha are restored, how much carbon can we remove from the atmosphere, and how much $?

Study Methods

- Timeframe: 2021-2060 (350 Mha by 2030, remaining by 2060)
- Tree species for restoration
  - Native species for biodiversity conservation, watershed protection, and timber production: Casuarina spp, Dalbergia sissoo, Gmelina arborea, Swietenia macrophylla, Terminalia spp, Tectona grandis, and other hardwoods
  - Fast-growing species for pulpwood production: Eucalyptus (26%), Pinus (22%), Acacia (6%), and others (46%)

- Assumptions:
  - 10% of native species are harvested in the 30th year for timber production
  - 100% of fast-growing species are harvested and replanted in the 7th year

Total carbon stocks at any given time can be obtained by:

- $TCSt=RF(0)\times CS(t)+RF(1)\times CS(t-1)+\ldots+RF(t)\times CS(0)$
  - RF(1), RF(2), RF(t): Area of restored forests in 2021, 2022, …, 2060 (million ha) by native or fast-growing species, respectively.
  - CS(t): Carbon stocks in the restored forests by native or fast-growing species (MgC /ha). CS(t) was obtained using the logistic model

Results and Discussions

- Carbon storage (2021 ~)
  - If native species are planted in 2021 and grown without logging, they will show a rapid growth rate until about 2050, store about MgC/ha, and then grow slowly and have carbon storage capacity around 2070 will reach the peak of about 150 MgC/ha
  - If fast-growing species are planted in 2021 and raised without logging, about 170 MgC/ha will be stored around 2030, and this state will be maintained after that.
- Production
  - Pulpwood: 1.5 B ton in 2027 4.8 B ton in 2060
  - Stanwood: 0.7 B m^3 in 2050 & 1.3 B m^3 in 2060
- Revenues
  - Pulpwood: $246 billion (2027 2060) at $45 per ton
  - Sawnwood: $1.4 trillion (2050 2060) at 500 per m^3
- Total Costs for Restoration and Management: 930 million ha
  - About $93.4 billion annually between 2021 and 2060 ($4000/ha)

III. HIGHLIGHTS & INTERVENTIONS

india	• What is the global trading volume for carbon?
	- What about wood-based composites like plywood? Do you consider that under sawn wood? - Will carbon stock in eucalyptus and pine trees be the same at a given age since there is a significant difference in their wood densities? - Sawnwood (native species) is a different treatment from pulpwood (fast-growing). Wood density alone cannot determine the carbon stocks at a given age. Pine might grow slower or faster, and so, carbon stocks are not the same.
Vietnam	• Calculating carbon stocks depends on the types of forest, tree, growing conditions. What are different methods to calculate carbon stocks from natural forests and plantation forests? Any challenges to applying these methods in tropical countries?
	- I'd like to hear your mindset about the impacts of forest fire in the context of a wildfire that has been occurred seriously in many parts of the world, out of controlled circumstances. E.g., a wildfire in Amazon Forest & Australia last year, in Greek and USA this year. It causes a huge amount of GHG in the atmosphere. It might raise a controversial opinion that it is worthy of planting forest for carbon offset benefits. - Restoration is done to absorb the lost carbon. Fires are different events, which need different management regimes. Fire management is part of the restoration strategies to ensure long-term success. We need to establish the forest fire road with sensor technologies.
Cambodia	• What do you think the FLR is an urgent matter to take action? • What kind of narrative that can we make FLR achievable? • If that Carbon Credit is good for investment, and how it contributes to food security and poverty alleviation?
Fiji	I would appreciate contacts who may assist with Carbon assessments of agroforestry systems
Philippines	• How about a blue carbon assessment? Was there also an initiative conducted • The Philippines started the study on carbon sequestration of above-ground biomass and below-ground biomass of *Albizzia falcataria* and Rubber (*Hevea brasiliensis*) plantations established under the National Greening Program
Thailand	• Carbon credit needs certification, but getting a certificate of carbon credit is costly; how to cope with it at the local level?
	- With new technologies, we can reduce the third party's validation and verification. When we can monitor and detect any change in automation, we do not need validation and verification. Buyers/sponsors are alerted every time there is change on the ground. We understand it was costly, but new technologies can do most parts of that.

5.9 LECTURE 6. MONITORING OF FLR: IDENTIFICATION OF THE POTENTIAL DEGRADED FORESTS FOR RESTORATION IN THE TROPICS –IMPLICATIONS FOR CARBON SEQUESTRATION AND REVENUES

I. LECTURE STRUCTURE

Lecture Overview	This lecture will learn the principles of spatial-based FLR monitoring and explore how carbon sequestration and revenues calculations are embedded in the FLR project site identification and monitoring.
Learning Outcomes	At the end of this lecture, trainees will be able to: - Understand the principles of spatial-based FLR monitoring, - Identify potentially degraded lands for FLR projects based on the implications for carbon sequestration and revenues, - Develop the FLR monitoring and evaluation plan for FLR projects in the country context
Content	(1) Principles in the FLR monitoring (2) A case study on FLR monitoring in the implications for carbon sequestration and revenues (3) Suggestions/recommendations to the participants

II. LECTURE SUMMARY

Motivation

- Effective restoration of the degraded forests is essential for the ongoing global climate and biodiversity crisis and to restore degraded forests.
- The New York Declaration on Forests and the UN Decade on Ecosystem Restoration (2021-2030) set the target to achieve restoration on the 350-500 million hectares of the degraded ecosystems (700,000,000,000 trees!)
- Although passive restoration is possible, there are questions that remain to be addressed:
  - Where are those degraded forests? How can we identify them?
  - What methods are to be used for such identifications in addition to the cost-effective methods for restoration?
  - Moreover, as the REDD+ scheme also covers many target areas for restoration, assessments on how much carbon can be sequestered in the restored forests also need to be undertaken.
- To monitor the performance, a tracking system is critically needed.
- Transparent methods for monitoring, reporting, and verification are needed, but previous methods rely on remote sensing methods that are required high technical skills.
- Various methods were developed using Remote sensing and spatial data. Still, the challenges are – accessing VHR imagery, their low spatial extent, relatively low temporal resolution and lack of global coverage, the influence of acquisition conditions, computing time.
- With Big Earth-Data and Cloud computing platform, tracking and monitoring the Forest Land Restoration (FLR) areas and planted trees become possible at scale and speed
- Digital technologies equipped with Machine Learning (ML) and Deep Learning (DL) for tracking and monitoring are useful for transparency and quick policy interventions.

What we did

- **Data**: 2199 Landsat collections using GEE
- **Enhanced Vegetation Index** (EVI) along with harmonic regression methods to identify phenological behaviors for 12 land cover categories as per IPCC Guidelines in GEE
- **Phenological Behaviors** were analyzed
- Dry Season (November – April): Leaf-shedding phenology
- Rainy Season (May – October): Leaf-flushing phenology
- 722 mean EVIs were generated, and respective thresholds were determined for 12 land cover categories
- **Reference Data:** 300 sampling points in forest permanent sample plots, field observations, and drone-based locations
- Developed **Phenology-based Threshold classification method**
- Developed **Potential Degraded Forests for Restoration (PDFR)**
- Assessed forest cover change, degraded forest lands and **Carbon stocks, and sequestration in degraded forest lands**

Land Cover Categories:

- ①Evergreen forest, ②Semievergreen forest, ③Deciduous forest, ④Mix wood and shrub, ⑤Flooded forest, ⑥Mangrove forest,
- ⑦Bamboo, ⑧Rubber plantation, ⑨Croplands, ⑩Built-up area, ⑪Sand, ⑫Water

Identification of the Potential Degraded Forest Lands for Restoration

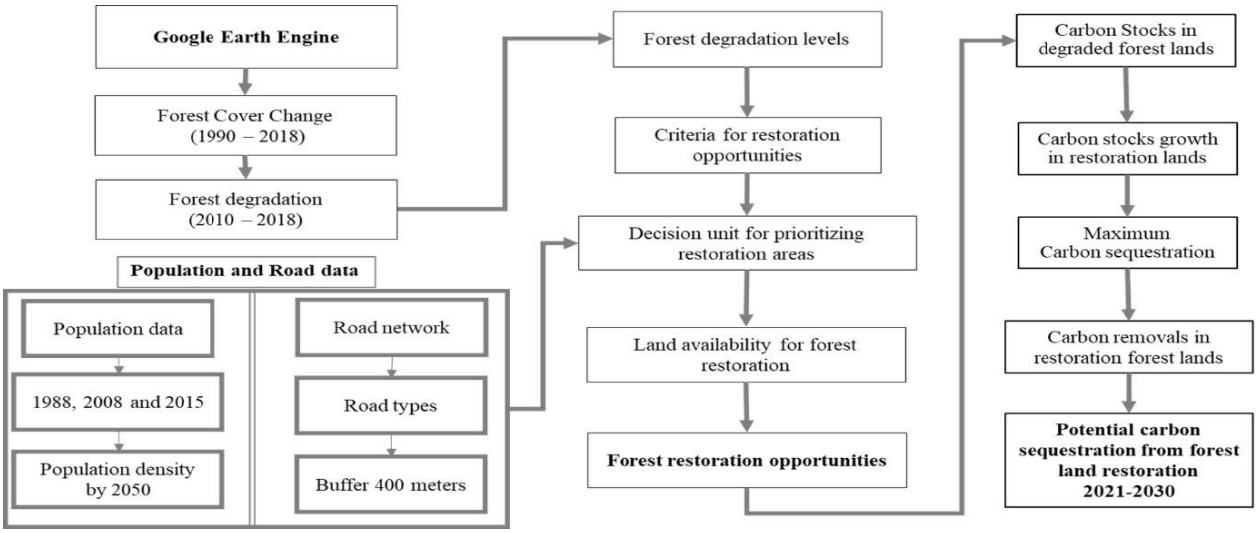
- An inclusive, potential degraded forest land restoration approach that can help reverse forest land degradation, increase carbon storage, conserve biodiversity, and create sustainable livelihoods for local communities

General Definition of Forest Degradation

- Tropical forests are degraded in a way that reduces tree cover and carbon stocks through the removal of trees or woody (e.g., logging or infrastructure construction, shifting cultivation, and harvesting tree for charcoal production) or through the collection of non-timber forest products.

Land Cover Categories:

Potential Degraded Forests for Restoration (PDFR)



- Available forest land for restoration and conservative estimated cost

Degraded Levels	Restoration Strategies	PDFR	
		ha	Costs (US$ Millions) US$ 2000/ha
CD	Assisted natural regeneration	96,693	193.39
HD	Enrichment planting	48,878	97.76
MD	Preventing logging reentries	46,487	92.97
SD	Reduced impact logging	75,567	151.13
	Total	**267,625**	**535.25**

  - Degraded Levels: CD Critically degraded Forest, HD Highly degraded forest, MD Moderately degraded forest, SD Slightly degraded forest

- Total Potential Carbon Sequestration = 193.73MtCO_2 by 2030
- **Benefits**: China Emissions Trading Systems (ETS) **US$ 837** , Voluntary market **US$ 1,937 M**, UK carbon price support **US$ 4,804 M** , Netherlands Carbon Tax **US$ 6,827 M**, EU EST **US$ 9,644M**, Sweden Carbon Tax about US$ **26,587 M**

Bring Home Message

- Google Earth Engine (GEE) is an open-source platform capable of assessing land cover changes at scale but requires minimum skills at no cost.
- Depending on the degradation levels, we could also propose restoration strategies to ensure the high success of the restoration. Accordingly, we estimated the costs for forest restoration and the related carbon sequestration and revenues.
- Our novel PDFR approach makes it possible to identify the degraded forests in the tropics at scale.
- With the increasing data availability such as population distribution, road networks, and earth data, and cloud-computing technologies, our PDFR approach could become a useful tool to assist the large-scale forest restoration planning on automation.
- The PDFR approach could also contribute to the achievement of the NYDF goals 1 and 5 by 2030.
- The PDFR approach may also facilitate the monitoring, reporting, and verifying activities as required under the REDD+ scheme of the UNFCCC.
- Nevertheless, the applications of PDFR to different locations, regions, or countries would need to customize the forest categories as such categories would be different from one location to another.
- Study on costs would also provide better-informed information for effective prioritization of the restoration locations, especially when the budget is limited.

III. HIGHLIGHTS & INTERVENTIONS

Timor Leste	• We would like to have special training for this presentation because we need to learn through practice.
Fiji	• We also request the same Training Opportunity for Fiji, please
AIT	• What are your suggestions to address this? So, can we still assess the historical change of forests in specific areas and eventually strategize ecosystem restoration? • What are the main factors in categorizing the land cover classes in your study about Cambodia's land cover?
ITTO	• What are the main factors in categorizing the land cover classes in your study about Cambodia's land cover?

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6. ACTION PLANS

6.1. BHUTAN

Item	Details
Implementing Organization	• Name: Department of Forests & Park Services • Nature or type: Government Agency • Major functions/duties: Facilitator
Project Duration	Five years
Est. Budget	USD 1,000,000
Main Objectives	To restore 3675 ha of barren and degraded areas and establish innovative income-generating opportunities for the rural communities.
Goal and Outputs	Goal - To increase the overall forest cover and enhance the ecological functions of forests. - Plantation created within state reserve forest land - Restoration of degraded forests, wildlife habitats, and flood plains - Regional & community-based nurseries established - Agro-forestry program initiated
Benefactors	• Local community • Green Bhutan Corporation Limited (GBCL), a state-owned enterprise, will generate youth employment • Private sectors, CSO's
Expected Results	• Economic Effects - IIncorporate contribution from ecosystem services into the country's national accounts (GDP) - Increased benefits from forests to other sectors in the economy – hydropower, tourism, and health - Access international carbon markets in the future • Technical Effects - Enhancement of ecosystem services - Improved soil/land stability through sustainable land management. - Improved watershed /catchment areas. - • Social and Environmental Impacts - Importance to the local community in terms of energy, food, fodder, NWFPs, water quality & quantity - Nature-based tourism provides jobs, benefits from the provision of services, and access to recreation - Protecting forests helps improve water quality. - Reduced incidences of human-wildlife conflicts
Challenges and Solutions	• Policy provisions in favor of FLR - Bhutan Forest Act 1969 - Forest and Nature Conservation Act 1995 - Land Act of Bhutan 2007 - Constitution of the Kingdom of Bhutan 2008 - National Forest Policy 2011 - Forest and Nature Conservation Rules and Regulations 2016 - Forest and Nature Conservation bill 2019 • Gaps and challenges of implementing in FLR - FLR as Government priority, defining country's policy in FLR - Integrating FLR with other land uses - Organizational and individual capacity to understand FLR approaches - Incentives to communities for implementing FLR - Benefit-sharing • Solutions - Integrating FLP approaches in the existing afforestation/reforestation program - The Restoration Opportunities Assessment Methodology (ROAM) as a way forward - Increase income through innovative nature-based solutions (PES, Eco-tourism, etc.) - Capacity development at all levels

6.2. CAMBODIA

Item	Details
Implementing Organization	• Name: Forestry Administration • Nature or type: Public Institution • Major functions/duties: Forest and Wildlife Management
Project Duration	3 years (2023-2025)
Est. Budget	USD 3,000,000
Main Objectives	• To develop Forest Restoration Schemes and Incentive Modalities to promote Public-Private-People Partnership investments for forest landscape restoration in Cambodia • To build the capacity of stakeholders on concepts of incentive schemes and modalities for piloting forest landscape restoration with schemes of Public-Private-People Partnership investments
Goal and Outputs	• To develop forest restoration schemes and incentive modalities to promote Public-Private-People Partnership investments for forest landscape restoration in Cambodia • To build the capacity of stakeholders on concepts of incentive schemes and modalities for piloting forest landscape restoration with schemes of Public-Private-People Partnership investments - Feasibility Studies on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration is conducted - Dialogues and consultations related to incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration are organized - Policy Briefs on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration are developed - Guideline for forest landscape restoration through Public-Private-People Partnership collateral investments developed - Capacity building needs assessment on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration is conducted - Communication campaigns developed to raise public awareness and incite and behavior changes on Public-Private-People Partnership investments for forest landscape restoration - 2.3 Capacities of relevant stakeholders and institutions built, so to operationalize improved Public-Private-People Partnership investments for forest landscape restoration - 2.4 Piloting Forest landscape restoration through Public-Private-People Partnership collateral investments. - 2.5 Blockchain and smart contract for forest landscape restoration developed
Benefactors	Profitable investment for Private sector, local communities, people, farmers, national economy (bioeconomy, circular economy), forestry administration and local authorities, academy.
Expected Results	• Economic Effects - FLR contributes to equitable macroeconomic growth and poverty alleviation - FLR enables through public-private-people partnership investment - FLR provides a new investment portfolio and is profitable for people and the planet - Timber 150 million m3; NTFP 60 million tons; Carbon sink: 100 million tons; Land cover/FLR: 200,000ha - Revenue to national, local, and private sectors. • Technical Effects - FLR constitutes a rational and effective means to provide fact-based information and research results to balance disparities between development and preservation to ensure the continuance of sustainable economic growth through public-private-people partnership investment programs and the maintenance of the integrity of forest landscape ecosystems. - The project will provide an understanding of new economic development agenda such as Bioeconomy, circular economy, and green development, Blockchain, Digital Tree-Note, Trees- Banking, Innovative Financing • Social and Environmental Impacts - FLR through public-private-people partnership investment contributes to sustainable bioeconomy, circular economy, and green development - Public-private-people, who would increase their understanding of alternative investment and income-generating opportunities - FLR enhances climate change mitigation and adaptation capabilities, and sustainable development - FLR contributes to enhancing sustainable livelihood development through agro-forestry - Carbon sink: 100 million tons; Land cover/FLR: 200,000ha, 300Million tree plated

Challenges and Solutions	• Policy provisions in favor of FLR - Forestry Law (2002): (Community-based Restoration, Agroforestry Modalities, Performance-based Incentives for Environmental Services of Community Forests and Benefit Sharing,) - National Forest Programme 2010-2029 - The Cambodia Rectangular Strategy (RS) - Framework for Cambodian Sustainable Development Goals (CSDGs) 2016-2030 - National Strategic Development Plan (NSDP) 2019-2023 - Agriculture Strategic Development Plan (ASDP) 2020-203 • Gaps and challenges of implementing in FLR - Lack of knowledge and comprehensive studies on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration - No fora on dialogues and consultations related to incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration - Lack of policies and legislation to address incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration - Lack of knowledge among public and private sector entities on investment opportunities for forest landscape restoration - Lack of comprehensive communication strategies to raise public awareness and incite and behavior changes on Public-Private-People Partnership investments for forest landscape restoration - Lack of understanding of relevant stakeholders and institutions to initiate Public-Private-People Partnership investments for forest landscape restoration - No demonstrations on forest landscape restoration through Public-Private-People Partnership - Lack of knowledge on FinTech related to Blockchain and smart-contract for forest landscape restoration - No guideline for forest landscape restoration through Public-Private-People Partnership collateral investments • Solutions - Feasibility Studies on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration is conducted - Dialogues and consultations related to incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration are organized - Policy Briefs on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration are developed - Capacity building needs assessment on incentive schemes and modalities to promote Public-Private-People Partnership investments for forest landscape restoration is conducted - Communication campaigns developed to raise public awareness and incite and behavior changes on Public-Private-People Partnership investments for forest landscape restoration - Capacities of relevant stakeholders and institutions built, so to operationalize improved Public-Private-People Partnership investments for forest landscape restoration - Piloting forest landscape restoration through Public-Private-People Partnership collateral investments. - Blockchain and smart contract for forest landscape restoration developed - Guideline for forest landscape restoration through Public-Private-People Partnership collateral investments developed.

6.3. FIJI

Item	Details
Implementing Organization	• Name: Fiji Ministry of Forestry • Nature or type: Government • Major functions/duties: Regulatory Agency also establishes and facilitates effective accountable, transparent, and efficient community forest management
Project Duration	N/A
Est. Budget	N/A
Main Objectives	• Achieve effective project planning • Organize establishment of suitable species • Establish effective community maintenance of baby trees
Goal and Outputs	Goal: Successful Native Forest Restoration - Successful Community Forestry Programs (Happily Engaged Communities receiving significant forest benefits) - High Tree Survival recorded on maps showing expanded Permanent Forest Estate - Positive Forest Restoration reporting on global commitments
Benefactors	• Immediate beneficiaries would be the Forest / Landowners / Communities • Wider / further / downstream communities benefit from clean air, water, carbon sequestration, etc. • Restored forest ecosystem also creates habitats for the other naturally occurring native flora & fauna
Expected Results	• Economic Effects - Payments for Ecosystems developed for carbon trade, plus water management incentives - Communities have greater purchasing power • Technical Effects - Boosting community forest management capacity skills - Effective & efficient use of Drones in forest management • Social and Environmental Impacts - Community Forestry Governance developed - Community forest-based employment - Community livelihoods are enhanced by NTFP commercialization - A full complement of native forest flora & fauna was restored in areas surrounding community homes
Challenges and Solutions	• Policy provisions in favor of FLR - Needs to put communities first - Forest Resource Owners need to be major beneficiaries - Sustainable forest financing schemes need to be developed & promoted - Native forests need to provide maximum benefits – monetary, tangible, and intangible benefits • Gaps and challenges of implementing in FLR - The above-listed governance structures not yet developed - Mindsets/attitudes in the forestry sector (including community members haven't evolved for the above to function effectively - Insufficient capacity to submit successful funding applications • Solutions - Short Capacity Building Training (1 week like this one) - Longer Period Capacity Building Training (scholarships to study) - Careful selection of training participants – project champions needed - Follow up support on the Training Topics - Development of governance required to establish Community Forest Management - Assumes that funds are available

6.4. INDIA

Item	Details
Implementing Organization	• Name: Institute of Wood Science and Technology and Indian Plywood Industries Research and Training Institute • Nature or type: Public Institution • Major functions/duties: Planning and Implementation
Project Duration	Five years
Est. Budget	USD$ 1 million
Main Objectives	• To create a policy and legal framework to promote and facilitate growing trees (including bamboos) outside forests with a suitable certification mechanism. • Improvement of 30 working plans for increased timber production (1-3 /select state) plans as per the principles of SFM an FLR • Capacity building of forest managers, tree growers/farmers, wood/bamboo processing industries, and other stakeholders for the legality of timber and timber products in the country • Policy and legislative framework for facilitating and promoting growing trees outside forests and WBI • Working plans adapted to the principles of SFM and FLR • Mapping of tree resources for industrial utilization in the targeted landscapes in states • Capacity building of the stakeholders
Goal and Outputs	• Goal: Augmenting timber production potential of forest landscapes • Outcome: Improved Policy and legal framework for ToF and WBI • Improved understanding and livelihood opportunity among stakeholders with enhanced timber production from forest landscape
Benefactors	Appropriate policy framework and forest management plans will help augment timber production from both forest and non-forest areas (ToF). Incentivization of tree growing to contribute to achieving nationally committed targets of increasing carbon sink. Effective certification mechanism of trees would benefit both tree grower and wood-based industries, which should provide an incentive to farmers and export opportunities to industries. Overall capacity building on FLR, tree farming, and industrial utilization would be key in integrating diverse stakeholders involved in the process
Expected Results	• Economic Effects - Economic gains to farmers/tree growers with certification mechanism. - Reduction in wood import resulting in saving of foreign exchange. - The clustering of industries with tree farming to reduce operational costs ultimately influences the product cost. - Increased forest revenue with long rotation premium timber species • Technical Effects - Improved policy framework for forest management contributing to timber production. - Improved understanding among stakeholders about FLR and forest management principles. - Forest certification mechanism suitable for ToF and for trees from forest areas. - Introduction of IoT in wood resource assessment and utilization potential of WBI • Social and Environmental Impacts - Opportunities for creating of bio-based circular economy and green development. - A paradigm shift on wood utilization - New livelihood and employment opportunities at the local level.

Challenges and Solutions	• Policy provisions in favor of FLR - National Forest Policy (1988), - National Agroforestry Policy (2014), - National Working Plan Code 2014 for sustainable management of forests and biodiversity in India - Guidelines for Wood-Based Industries (2016), - Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Act (2016) • Gaps and challenges of implementing in FLR - Lack of appreciation of SFM and FLR principles among different stakeholders - Limited Public-Private-People Partnership in timber production and forest landscape restoration - Restrictive policies on harvesting, transportation, and utilization of timber resources. - Non-uniform policies in different states. - Poor intersectoral coordination. - Lack of effective and easy certification mechanisms - Estimated and unverified data on timber production and consumption - Liberalized wood import policies • Solutions - Capacity building of all stakeholders to understand the principles of FLR. - Creation of FLR implementation guidelines for Forest management plans. - Incorporation of FLR principles and guiding elements in working plans. - Ensuring certificate of origin and ownership for ToF. - Mapping of wood resource availability and utilization potential of the industry. - Promotion and incentivization of tree farming for specific industries. - Promotion of production forestry of long-rotation commercially important trees on forest lands for timber production. - IT based solutions for resource mapping. - Innovations and technology upgradation in effective utilization of tree/bamboo resources. - Promotion of wood/bamboo-based industries and exploring export potential.

6.5. INDONESIA

Item	Details
Implementing Organization	• Name: Directorate General of Watershed Management and Forest Rehabilitation • Nature or type: Technical Institution • Major functions/duties: Forest and Land Rehabilitation
Project Duration	Five years
Est. Budget	N/A
Main Objectives	To Strengthen Local Capacity in forest and land rehabilitation and to improve the community welfare/incomes from forest and land
Goal and Outputs	The implementation of forest and land rehabilitation in Indonesia accelerated Local community capacity strengthened in forest and land rehabilitation and sustainable forest and land management
Benefactors	• Improve Forest community's capacity and welfare • Improve condition in Degraded Forest and land • Biodiversity and life support systems are maintained or enriched
Expected Results	• Economic Effects - The welfare of communities around the forest improved • Technical Effects - Local community capacity strengthened • Social and Environmental Impacts - Degraded Forest and land recovered
Challenges and Solutions	• Policy provisions in favor of FLR - Law No. 41 of 1999 on Forestry - Government Regulation No. 26 of 2020 on Forest Rehabilitation and Reclamation - several implementing regulations such as Ministerial Regulation No. 105 of 2018 and No. 2 of 2020 • Gaps and challenges of implementing in FLR - Conflict of interest from different stakeholders - Forest Fire - Forest encroachment • Solutions - Strengthen coordination in the implementation of the National Plan for FLR - Invite the local communities to involve in FLR activities

6.6. LAO PDR

Item	Details
Implementing Organization	• Name: Department of forestry, Ministry of Agriculture and Forestry • Nature or type: government • Major functions/duties: DoF is the responsibility to all work related to production forest management
Project Duration	Three years
Est. Budget	USD 284,000
Main Objectives	N/A
Goal and Outputs	N/A
Benefactors	Communities, including vulnerable and ethnic groups in the project area and government staff on various levels.
Expected Results	• Economic Effects - villagers living will be improved from NTFP management • Technical Effects - Local government officers and authorities gain more experience in Sustainable Forest Management. - The number of trainers is increasing • Social and Environmental Impacts - Forest cover is increased - The demonstration site of Forest can be spread to other provinces - well, the participation of villagers in the project
Challenges and Solutions	• Policy provisions in favor of FLR - logging ban still has prevented the implementation of several PSFM activities, such as sustainable harvesting, timber auctions, forest certification for timber-based forest management units, and chain-of-custody certification for forest industries - Scaling up of forest certification to attain the 300,000-ha target • Gaps and challenges of implementing in FLR - Capacity building (all levels of government and community) - Villager participatory (incentive) - Financial support (depend on only outsource) • Solutions - Training of trainers - Find more options to be an incentive for villager participation - Find financial support by joint government and donor funds

6.7. MALAYSIA

Item	Details
Implementing Organization	• Name: Forest Department Peninsular Malaysia • Nature or type: Planning, management & enforcement • Major functions/duties: Management, planning, protection, and development of the Permanent Reserved Forests
Project Duration	Ten years
Est. Budget	USD 25,000,000
Main Objectives	• To restore approx. 1,640 ha of permanent reserve forests affected by natural disasters and encroachments with over 1 million trees. • To provide silvicultural treatments • To upgrade seed centers and nurseries of state forestry departments • To produce high-quality planting materials for the program
Goal and Outputs	• Goal: To reduce the impacts of natural disasters • Outcome: Reduced number of displaced people & losses due to natural disasters 1,640 ha of PRFs restored • Increased awareness on the importance of restoring PRFs
Benefactors	• Departments engaged in enforcement • Landowners/tenants
Expected Results	• Economic Effects - Reduced financial losses due to natural disasters - Reduced costs of mitigation and repair - Increasing positive perspective in the green economy • Technical Effects - Improved governance of affected areas - Enhanced enforcement of regulations - Improvement of forest silviculture regime • Social and Environmental Impacts - Reduced impact and frequency of natural disasters - The restored function of forests - Land use following rules and regulations
Challenges and Solutions	• Policy provisions in favor of FLR - Malaysia National Forestry Policy 2021 - National Land Code 1965 - Water Act 1920 - Wildlife Conservation Act 2010 - Access to Biological Resources and Benefit Sharing Act 2017 • Gaps and challenges of implementing in FLR - Enhancing enforcement - Improving solutions to 'grey areas' - Holistic planning and achievable long-term outcomes - Finding best practices in restoring degraded forest areas • Solutions - Short Term - One-Stop Centre - Ensuring funds for implementation - Medium-long term - Empowering enforcement officers - Redefining 'grey areas' - Enhancing sustainable farming practices

6.8. MYANMAR

Item	Details
Implementing Organization	• Name: Forest Department • Nature or type: Government Organization • Major functions/duties: Conservation and Sustainable management of forest and ecosystem
Project Duration	3 years
Est. Budget	USD 2,500,000
Main Objectives	• To support the formulation of regional guidelines relevant to FLR practices • To enhance stakeholder participation for the intervention of FLR • To restore and rehabilitate the degraded forest areas
Goal and Outputs	• To improve forest landscapes, not only forest and trees but also biodiversity and ecosystem services by the implementation of forest landscape restoration (FLR) practices with the participation of multiple stakeholders - Regional guidelines relevant to FLR practices - Rehabilitation on degraded forest area with people participation in line with the developed regional guidelines
Benefactors	• Community in the project area will get the benefits (Tangible and intangible) • Target in Forest Management Plan developed by Forest Department will be fulfilled. • Support to NDC and SDG of country
Expected Results	• Economic Effects - Fulfilling the local timber demand and contributing to the national economy - Private sector investment in FLR - The livelihood of the local community will be promoted and supported to poverty reduction • Technical Effects - Promotion of advanced technologies related to FLR - Applied research related to FLR - Strengthening institutional capacity in forest landscape restoration • Social and Environmental Impacts - Job opportunities for local people in the project area - Livelihood support from Forest products and NTFPs, cash crops from Agroforestry - Climate Change mitigation and adaptation - Fulfilling international commitments such as SDGs, NDCs, etc.)
Challenges and Solutions	• Policy provisions in favor of FLR - Forest Law (2019) - Conservation of Biodiversity and Protected Areas Law (2018) - Community Forestry Instructions (2019) - National Land Use Policy (2016) - Myanmar Climate Change Strategy & Action Plan (2016-2030) • Gaps and challenges of implementing in FLR - Inconsistent and conflicts among sectoral policies - Weak coordination between government agencies leading to land conflicts - Conflicts of interest among stakeholders - Insufficient staff and funds for continuous monitoring and evaluating the success of FLR - Full participation of stakeholders is insecure. • Solutions - Develop an integrated land use policy by doing consultation between FD and relevant ministries like agriculture, mining, etc. at National Level - Close interactions with other private partners - Stakeholders analysis, Capacity Building, and livelihood improvement training - Cost-benefit analysis on FLR for private investment

6.9. PHILIPPINES

Item	Details
Implementing Organization	• Name: DENR • Nature or type: Government Agency • Major functions/duties: Conservation, management, development, proper use of the country's environment and natural resources, and licensing and regulation of all-natural resources.
Project Duration	3 years
Est. Budget	USD 1,000,000
Main Objectives	Effectively restore and manage landscapes by identifying appropriate land uses and implementing appropriate management systems, with the full participation of stakeholders to these resources, including actual implementation of projects on the ground to determine best practices of selected pilot region/areas.
Goal and Outputs	• Goal: Reforestation initiatives "transformed" into functional restoration with consideration of integrated stakeholders' goals and objectives within three years • Outcomes: FLR integrated with selected existing reforestation initiatives within three years for regions 3, 8, and 13. Increased number of technically capable personnel on the implementation of FLR - FLR policies and programs, e.g., DAO - Training and workshop designs and actual events - Organized communities - Identified priority areas - Specifically identified FLR approaches - FLR implementation in the field assessed
Benefactors	All stakeholders, specifically the local upland communities, depend on ecosystem services and on forest products such as the wood industry and other livelihoods dependent on the landscapes.
Expected Results	• Economic Effects - Contribution to the economic development of stakeholders - Ability to meet the wood demand of the country - Provision of alternative livelihood opportunities for millions of forest-dependent communities in the Philippines • Technical Effects - Conduct of more scientific and inclusive Survey, Mapping and Planning - Provision of baseline for future studies, plans, programs, and/or activities - Improvement of data pool on ecosystem services for policy and planning purposes • Social and Environmental Impacts - Increase in quality of ecosystems services derived from the landscapes - Improvement of biodiversity conditions - Empowerment of local communities to voice out their interests and opinions - Protection of threatened forests and watersheds - Prioritization of the use of native species endemic or indigenous to specific landscapes
Challenges and Solutions	• Policy provisions in favor of FLR - Philippine Master Plan for Climate-Resilient Forestry Development (2015-2028) - PD 705. Revised Forestry Code of the Philippines - EO 26, s. 2011. National Greening Program - EO 193 s. 2015. Expanding the Coverage of the National Greening Program - FMB Technical Bulletin No. 24. Guidance in the Implementation of Activities Through the Forest and Landscape Restoration (FLR) Process • Gaps and challenges of implementing in FLR - Overlap in tenurial instrument and/or jurisdiction of stakeholders, e.g., organized groups, government offices, etc. - FLR concept is known only to DENR and not mainstreamed to other concerned government agencies - Prioritization setting, political will, and support from local government units (LGUs) • Solutions - Identification of boundaries, resolution of conflicts, and separation of mandate, programs, and projects of concerned agencies - Convergence with other government agencies in the implementation of FLR programs, plans, and activities - Agreements with LGUs and capacitation on FLR implementation in the field

6.10. THAILAND

Item	Details
Implementing Organization	• Name: Royal Forest Department • Nature or type: State agency • Major functions/duties: Facilitator
Project Duration	5 years
Est. Budget	USD 1,000,000
Main Objectives	• To support the formulation of regional guidelines relevant to FLR practices • To enhance stakeholder participation for the intervention of FLR • To restore and rehabilitate the degraded forest areas
Goal and Outputs	• FLR is considered a national and conventional approach to be implemented nationwide to reduce forestland encroachment • The degraded forest is restored, and its functionality can provide well-being livelihood - a 1,000 ha of the degraded forest restoration model - a business model for local livelihood
Benefactors	Local community and individual households, local administrative office, and RFD.
Expected Results	• Economic Effects - sources of decent income generation for locals - more investment in the forestry sector from the private sector - reduce the economic cost of damage from natural disasters • Technical Effects - adaptive management development - practical tools and guidelines - development of enabling regulatory environment for FLR • Social and Environmental Impacts - forest functions are restored - increased engagement of locals for forest management - increased climate change resilience
Challenges and Solutions	• Policy provisions in favor of FLR - National Land Policy Council Act B.E.2562 (A.D.2019) - Forest Act (version 8) B.E. 2562 (A.D.2019) - Community Forestry Act B.E. 2562 (A.D.2019) - Regulations on benefit-sharing for carbon credit in forest areas and mangrove • Gaps and challenges of implementing in FLR - practical guidelines and effective monitoring - strong stakeholder participation - harmonizing stakeholders' needs - pronounced incentives • Solutions - FPIC mechanism - Stakeholder analysis - sustainable livelihood assessment to find out a baseline of local assets; physical, finance, natural, human, and environment - development of participatory stakeholder platform and fair benefit-sharing mechanism - Value chain analysis for further relevant income generation activities - Risk management

6.11. TIMOR-LESTE

Item	Details
Implementing Organization	• Name: General Directorate of Forestry, Coffee and Industrials Plants • Nature or type: Government • Major functions/duties: Initiating customized restoration & reforestation models Secondary . Local livelihood improvement & community-based small enterprise development
Project Duration	5 years
Est. Budget	USD 5,000,000
Main Objectives	To develop a service through a network of community group network
Goal and Outputs	• To implement appropriate forest landscape Restoration (FLR) Practices that can provide environmental benefit for communities, private sectors, and government authorities - Restore 5,000 ha of degraded areas at pilot scale in the project sites by using locally appropriate FLR initiatives
Benefactors	FLR can ensure the continued provision of Ecosystem goods and services by providing wide-ranging benefits at a local and global scale.
Expected Results	• Economic Effects - Economically Attractive - Benefit - private sector • Technical Effects - Can provide benefit - Rebuilding and maintaining - Integral component • Social and Environmental Impacts - Ecological system - Over concepts - A benefit to people and nature - Contribute to building socially
Challenges and Solutions	• Policy provisions in favor of FLR - Context Governance Stakeholders Identification Negotiation - Adaptive management - Laws and regulation - Decision making • Gaps and challenges of implementing in FLR - Lacking successful long-term implementation that fully satisfies all FLR principles. - Achieving meaningful success at restoring degraded landscape by social terms. - FLR is prominent in efforts to reserve past socio-ecological damage - FLR need to consider context; political, economic, social in balancing competing interest. • Solutions - Planting trees - Improving soils - Protecting wildlife corridors - Managing Land Sustainably - Store Carbon

6.12. VIETNAM

Item	Details
Implementing Organization	• Name: Vietnam National University of Forestry, Vietnam Timber and Forest Product Association, and Vietnamese Academy of Forest Sciences
Project Duration	3 years
Est. Budget	USD 500,000 (Funded budget: USD 450,000 and Counterpart contribution: USD 50,000)
Main Objectives	• To raise awareness and enhance capacity in FLR at national and sub-national levels • To promote national and sub-national forestry policies to favor FLR • To improve local forest-based livelihoods through FLR models and vertical linkages setting along the value chain in the project sites
Goal and Outputs	• Goal: To improve the restoration of degraded forest landscape contributing to ecological resilience and sustainable local livelihoods in the North of Vietnam • Outcome: • Increased awareness and capacity of FLR among relevant stakeholders • Promoted policy framework to favor FLR • Increased households' income from FLR - Training, sharing knowledge, experiences, and skills on FLR provided to national and sub-national stakeholders - Policy forestry framework reviewed and restructured to support FLR - 30 ha of forest successfully restored in the project sites. - 03 models of linkages between planting - processing – the business of timber products from FLR established
Benefactors	The staff of VNFOREST, project staff, local staff, timber processing and trading companies, and local communities
Expected Results	• Economic Effects - Improved local forest-based livelihoods through FLR - Benefits from models of linkages between planting - processing – the business of timber products from FLR increased • Technical Effects - Enhanced knowledge and capacity on forest landscape restoration to VNFOREST staff, project staff, timber enterprises, local staff, and villagers • Social and Environmental Impacts - Ensured inclusive local community participation in the activities of forest landscape restoration, contributing to social stability and securities. - Improved environment conditions by establishing forest restoration models on degraded forest land, contributing to soil improvement and water retention.
Challenges and Solutions	• Policy provisions in favor of FLR: N/A • Gaps and challenges of implementing in FLR - The income of people in and near the forest is still low and causing pressure on the forest. - Population increases, demand for forest products continues to increase - Change the purpose of using natural forests for socio-economic development is very large - The management capacity of the authorities at all levels are still weak - Limited human and financial resources for FLR implementation. • Solutions - New financial initiatives are of great significance, which will contribute to mobilizing resources for FLR - The mobilization, management, and use of financial resources need to ensure the principles of openness, transparency, efficiency, and accountability. - Increased income from forests for forest owners and people living in and near the forest get benefits/ economic incentives, so the forest restoration and development are successful. - Engaging private sectors into FLR projects through linkages between planting - processing – the business of timber products from FLR.

7. SURVEY RESULT

After completing all training sessions, the participants filled out the questionnaire composed of the organization and preparation of the training course, subjects, training design, comparisons with other training courses, and opinions for the training course.

7.1 Organization and Preparation

Based on the questionnaire results (Table 1), 39.1% of the participants strongly agreed that the organization of the course was appropriate, and 54.3% of them agreed to the same survey item. 58.7% of the participants strongly agreed that they were well-informed and kept updated before the training course, while 28.3% agreed to the same statement. With regard to satisfaction with the pre-arrangement of the organization, 51.1% of the participants strongly agreed, and 40.0% of them agreed to the same statement.

Table 1. Organization and Preparation

Variable	Percentage (%)	
	Strongly Agree	Agree
• The organization of the course was appropriate	39.1	54.3
• I was well informed and kept updated before the training course	58.7	28.3
• I was satisfied with the pre-arrangement of the organization	51.1	40.0

7.2 Educational Environment

Based on the questionnaire results (Table 2), 39.1% of the participants were very satisfied with the Zoom setting, and 54.3% of them were satisfied with the same statement. Likewise, 63.0% of the participants are very satisfied with the hospitality of the RETC staff, and 37.0% of them are satisfied with the same statement.

Table 2. Educational Environment

Variable	Percentage (%)	
	Very Satisfied	Satisfied
• Zoom Setting	39.1	54.3
• The hospitality of the RETC staff	63.0	37.0

7.3 Comparison of this training course to other training courses taken by the participants

Relative to other training courses taken by the participants (Table 3), 89.1% of the participant answered the overall quality of this training course was “high or much higher,” followed by 10.9% who said it was “similar.” 80.4% of the participants said that the level of intellectual challenge presented, and the participants who said “similar” was 19.6%. 76.4% of the participant answered the level of involvement/participation in this course was “high or much higher,” followed by 17.4% who said it was “similar.” 84.8% of the participants said that the number of effort participants put into this course was “high or much higher”, followed by 15.2% who said it was “similar”. Finally, 87% of the participant answered the amount of knowledge/information gained through this course was “high or much higher”, followed by 13% who said it was “similar”.

Table 3. Relative to other training courses taken by the participants

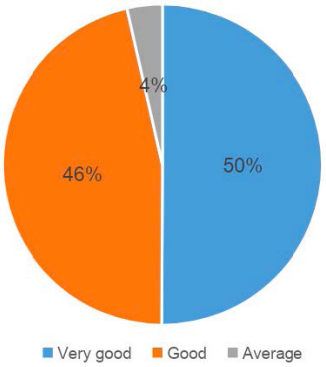
Variable	Frequency (%)		
	Much higher	High	Similar
• The overall quality of this training course	23.9	65.2	10.9
• The level of intellectual challenge presented	26.1	54.3	19.6
• The amount of effort participants put into this course	34.8	50	15.2
• The level of involvement/participation in this course	23.9	52.5	17.4
• The amount of knowledge/information gained through this course	26.1	60.9	13

7.4 Lecturer Evaluation

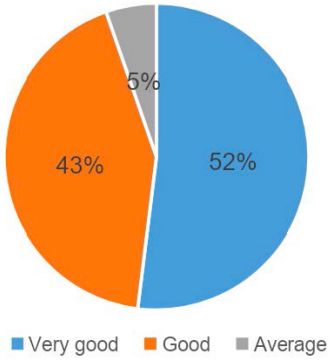
I. LECTURE Evaluation Elements
A. Helpful for work and self-improvement
B. The level of intellectual challenge presented
C. The amount of effort participants put into this course

II. LECTURERS LIST		
No.	**Lecturer Name**	**Lecture**
1	Prof. Jüergen Blaser	Keynote presentation 1: Forests in carbon-neutral/ net-zero commitments: challenges and opportunities in EU
2	Prof. Jüergen Blaser	Keynote presentation 2: Six principles for successful FLR: ITTO Guidelines for FLR in the Tropics
3	Dr. Michael Kleine	Keynote presentation 3: UN Decade for Ecosystem Restoration 2021 - 2030: Best Practice Approaches in Forest-related Ecosystem Restoration
4	Mr. Jerry Velasquez	Keynote presentation 4: Securing FLR financing
5	Dr. Scott Perkin & Mr. Jake Brunner	Lecture 1: Overview of FLR and Restoration Opportunities Assessment Methodology (ROAM): a case study on the use of ROAM in Viet Nam
6	Dr. Nguyen Quang Tan	Lecture 2: Social, an environmental safeguard for FLR and application of FPIC in the context of REDD+
7	Mr. Aung Kyaw Naing	Lecture 3: Stakeholder analysis for FLR intervention with a case study #3: Empowering local communities for the restoration of a coastal landscape in the Ayeyarwady Delta, Myanmar
8	Mr. Orlando A. Panganiban	Lecture 4: Logical framework (SMART Indicators) for FLR intervention
9	Prof. Nophea Sasaki	Lecture 5: Carbon benefit analysis for FLR intervention
10	Dr. Manjunatha Venkatappa	Lecture 6: Monitoring of FLR: Identification of the Potential Degraded Forests for Restoration in the Tropics – Implications for Carbon Sequestration and Revenues

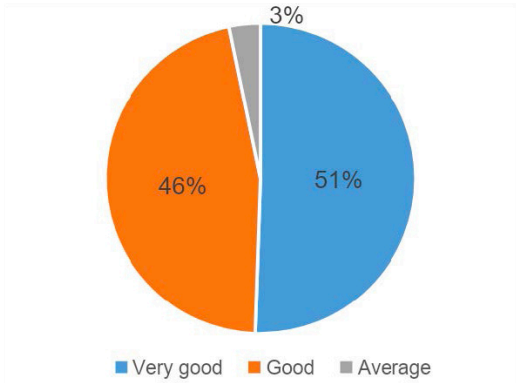
III. TOTAL RESULT



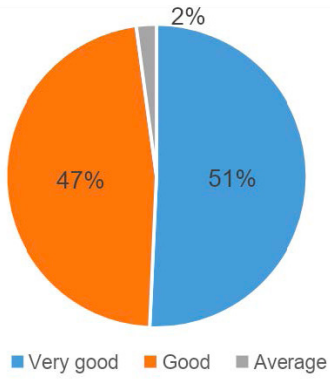
KEYNOTE PRESENTATION 1:
FORESTS IN CARBON-NEUTRAL/ NET-ZERO COMMITMENTS: CHALLENGES AND OPPORTUNITIES IN EU



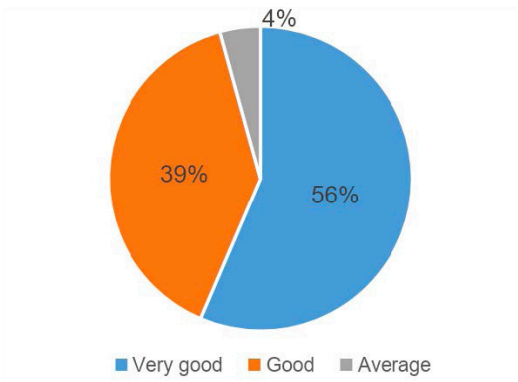
KEYNOTE PRESENTATION 2:
SIX PRINCIPLES FOR SUCCESSFUL FLR: ITTO GUIDELINES FOR FLR IN THE TROPICS



KEYNOTE PRESENTATION 3:
UN DECADE FOR ECOSYSTEM RESTORATION 2021 - 2030:
BEST PRACTICE APPROACHES IN FOREST-RELATED ECOSYSTEM RESTORATION

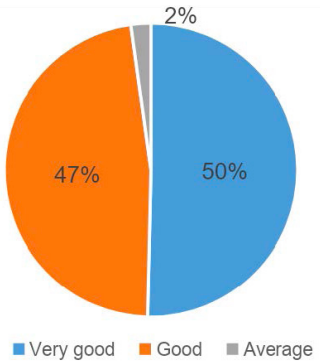


KEYNOTE PRESENTATION 4: SECURING FLR FINANCING

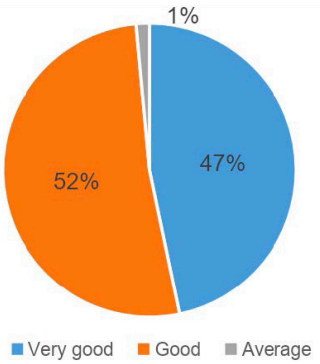


III. TOTAL RESULT

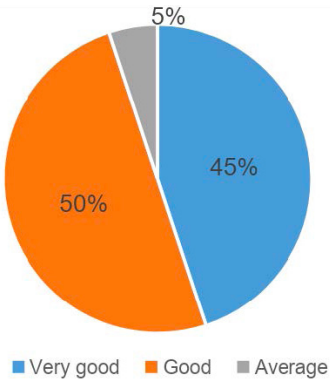
LECTURE 1:
OVERVIEW OF FLR AND RESTORATION OPPORTUNITIES ASSESSMENT METHODOLOGY (ROAM): A CASE STUDY ON THE USE OF ROAM IN VIET NAM



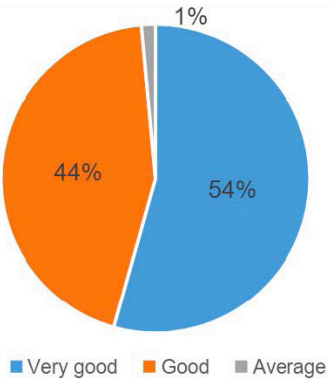
LECTURE 2:
SOCIAL ENVIRONMENTAL SAFEGUARD FOR FLR AND APPLICATION OF FPIC IN THE CONTEXT OF REDD+



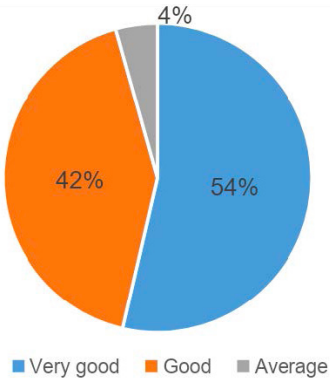
LECTURE 3:
STAKEHOLDER ANALYSIS FOR FLR INTERVENTION WITH A CASE STUDY #3: EMPOWERING LOCAL COMMUNITIES FOR THE RESTORATION OF A COASTAL LANDSCAPE IN THE AYEYARWADY DELTA, MYANMAR



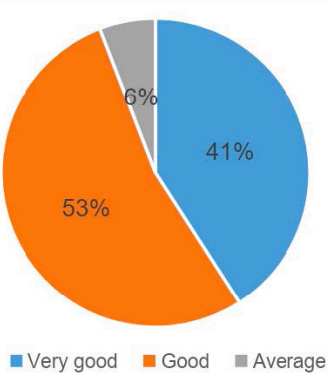
LECTURE 4:
LOGICAL FRAMEWORK (SMART INDICATORS) FOR FLR INTERVENTION



LECTURE 5:
CARBON BENEFIT ANALYSIS FOR FLR INTERVENTION



LECTURE 6:
MONITORING OF FLR : IDENTIFICATION OF THE POTENTIAL DEGRADED FORESTS FOR RESTORATION IN THE TROPICS IMPLICATIONS FOR CARBON SEQUESTRATION AND REVENUES



8. RECOMMENDATIONS FROM PARTICIPANTS

Words of appreciation:

- Excellent organization of the workshop by the RETC and a good selection of lecturers
- My utmost appreciation and thanks to the AFOCO and ITTO. The capability workshop clarifies concerns, specifically principles, and components for FLR and learned experiences on FLR interventions.
- The zoom meeting was well prepared and kindly supported by AFoCO RECT & ITTO staff. Respectfully thanks! Providing an opportunity for participants to practice as rapporteurs is wonderful, and also love almost lectures and keynote presentations.
- Congrats! The training achieved the expected success! It is my pleasure to have the opportunity to join many other pieces of training or workshops organized by AFoCO and ITTO. Again, thank you for inviting me.
- It is a wonderful workshop I have.
- The workshop is relevant for the successful implementation of the FLR, created an in-depth understanding of the FLR Concept, provided additional knowledge, especially of financing mechanisms for sustainability
- Excellent training as phase I. Please continue Phase II for project development and funding
- Thank you VERY Much for organizing this workshop for us! The training opportunity is very much appreciated. All Keynote Speakers & Lecturers were very good

Next training may be operated considering:

- Provide more time for the discussions, and allot time for the crafting of presentations
- Hold discussions on the lectures before the crafting of presentations to provide techniques and appropriate knowledge on crafting tools, e.g., problem tree, logical framework, etc.
- Time management in presentations, as well as comments and questions and answers.
- Provide clearer guidance on the country presentations
- Invite more interaction with the moderators
- Give sufficient break time
- Reduce the length of lectures to help participants focus and understand the presentation material better
- Consider participation by stakeholders from the industry and/or civil society in related fields
- Improve on the accuracy of interpreted content

The next training topic on FLR may include:

- A lecture on logical framework during the initial sessions to assist in developing projects during the workshop
- Group activities involving participants from different countries to provide more opporunities for interaction with fellow participants

9. LIST OF PARTICIPANTS

NO.	COUNTRY	NAME	POSITION	AFFILIATION
1	Bhutan	Mr. Lobzang Dorji	Director-General	Department of Forest and Park Services
2		Ms Sonam Peldon	Principal Forestry Officer	
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4		Mr. Hort Sothea	Deputy Director, Department of Wildlife and Biodiversity	
5		Mr. Chheang Dany	Deputy Director-General, Cambodia Alternate Focal Point for ITTO	
6		Mr. Say Sinly	Deputy Chief of Forest Partnership Office, Department of Private Forest and Forest Plantation Development	
7		Mr. Lim Bunna	Deputy Director	
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11		Ms. Koh Sotheavy	Deputy Chief of Forest Demarcation, Registration, and Forest Land Use Office	
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38		Dr Ho Wai Mun	Research Officer	Forest Research Institute Malaysia
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42		Ms. Nway Mon Mon Aung		

NO.	COUNTRY	NAME	POSITION	AFFILIATION
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49		Minerva J. Martinez	Development Managaement Officer V	DENR Region 3
51		Rogelio Lico, Jr.	Project Evaluation Officer	
52		Ma Teresa Patindol	Chief, Planning and Management Division	DENR Region 8
53		Dailinda Villamor	Forest Management Specialist II, Conservation and Development Division	
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56		Prattana Meesincharoen	Foreign Relations Officer	
57		Niwat Phupasuk	Forestry Officer	
58		Ms.Supanee Niyonsin		
59		Mrs.Ornsrisa Phauwongsa		
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62		Madalena Godinho	Technical officer forest guards	
63		Ivania Sousa Magno Ximenes	Technical media officer	
64		Felisberta Belac	Technical officer GIS	
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67		Cao Xuan Thanh	Chief of Office	Viet Nam Timber and Forest Product Association – VIFORES
68		Nguyen Thuy My Linh	Executive manager of Environment and Climate Change Faculty	Research Institute for Forest Ecology and Environment (RIFEE) (under Vietnamese Academy of Forest Sciences - VAFS)
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70		Nazarov Azizbek	Head of the Sector for International Relations and Information	
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73		Prof Jürgen Blaser		Bern University, Switzerland
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76		Mr Jake Brunner		IUCN Indo-Burma Programme
77		Mr Jerry Velasquez	Director	Division of Mitigation and Adaptation, GCF Secretariat
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80		Dr Maung Maung Than	Country Director	
81		Mr Ronnakorn Triraganon	Senior Strategic Advisor	RECOFTC Main Office, Bangkok
82		Prof Nophea Sasaki		AIT, Thailand
83		Dr Manjunatha Venkatappa		
84		Dr Promode Kant	Director	Institute of Green Economy (IGREC) Gurugram, India
85		Dr Ma Hwan-Ok		ITTO
86		Mr Ham Taesik		
87		Ms Elsie Yang		
88		Mr Orlando A. Panganiban	Director of CPD	AFoCO
89		Dr Lee Yeongjoo		
90		Ms. Zhaniyat		
91		Ms. Su Yi Hnin		
92		Ms. Soozin Ryang		
93		Ms. Kay Khine		
94		Ms. Youngeun Rho	Internship student	

Asian Forest Cooperation Organization (AFoCO)

AFoCO is a treaty-based intergovernmental organization that is committed to strengthening forest cooperation and taking concrete actions to promote sustainable forest management and address the impacts of climate change.

AFoCO Regional Education and Training Center (RETC)

AFoCO RETC was established as a subsidiary organ of AFoCO to develop the capacities of member countries in dealing with forestry and related environmental issues. The RETC provides practical and problem-solving oriented training programs, training courses, and workshops to enhance the knowledge and skills of diverse participants including government officials from member countries, researchers, university students, and members of local communities, among others.

www.afocosec.org

International Tropical Timber Organization (ITTO)

ITTO is an intergovernmental organization promoting the sustainable management and conservation of tropical forests and the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests.

www.itto.int

AFoCO's Training Reports aim to highlight the findings of training activities and provide up-to-date knowledge and information on the topics discussed by participating Member Countries. The views expressed in this report do not necessarily reflect the views of the decision-making bodies of AFoCO, ITTO, or Member Countries.
