Forest and Landscape Restoration

Main challenges on the ground for practitioners

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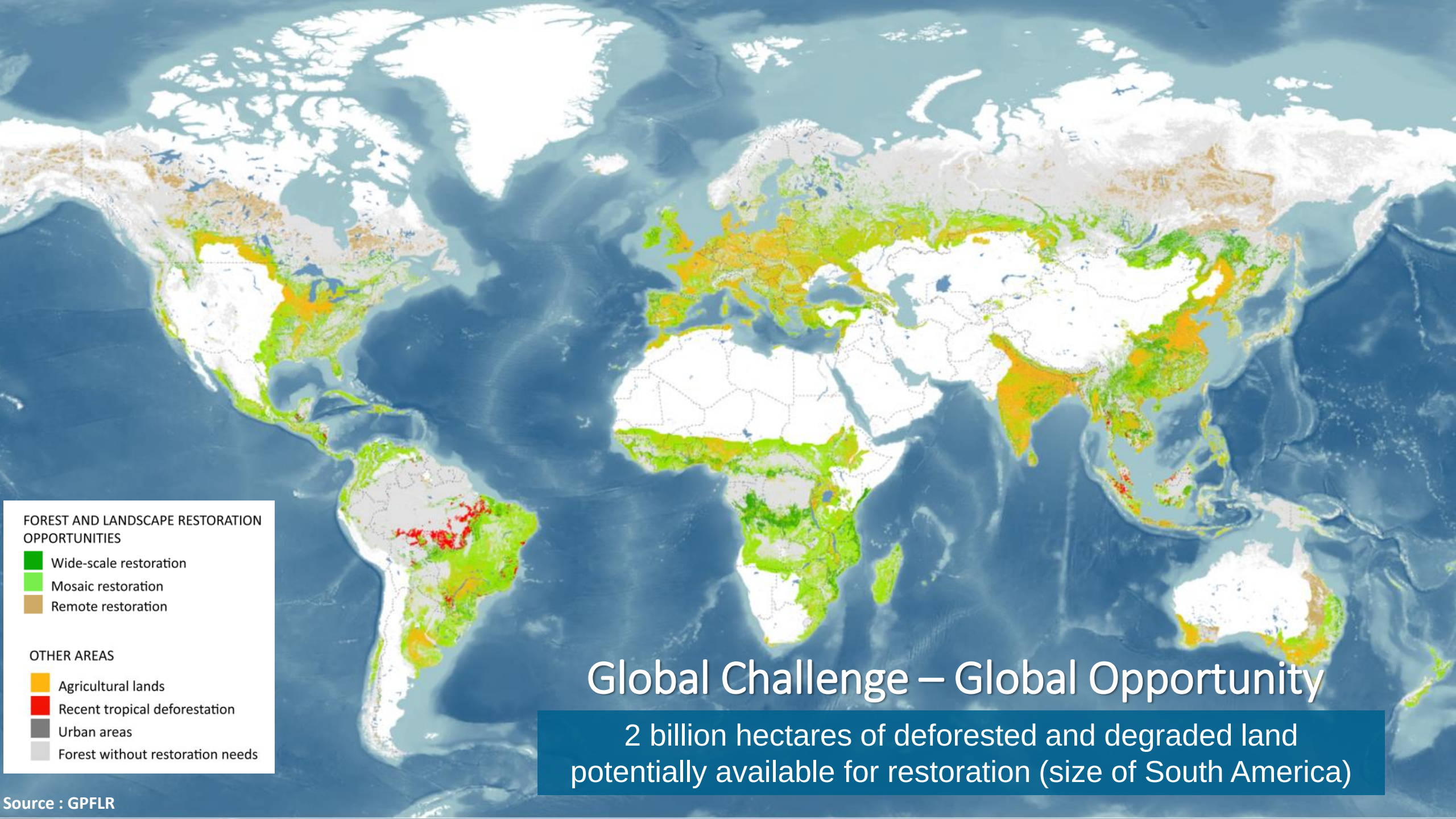
Degradation: familiar sights… familiar stories…



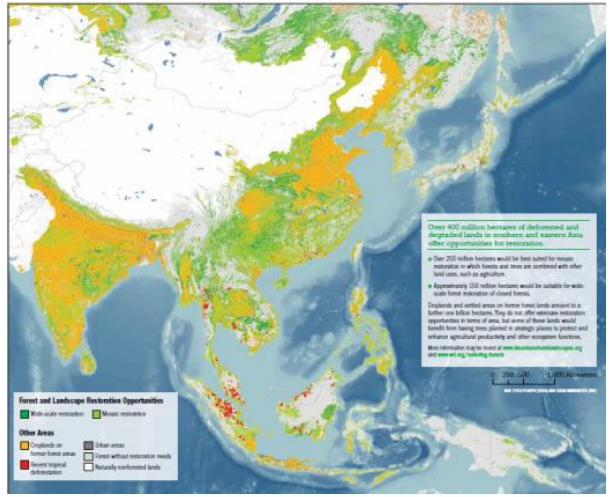
Global Challenge – Global Opportunity

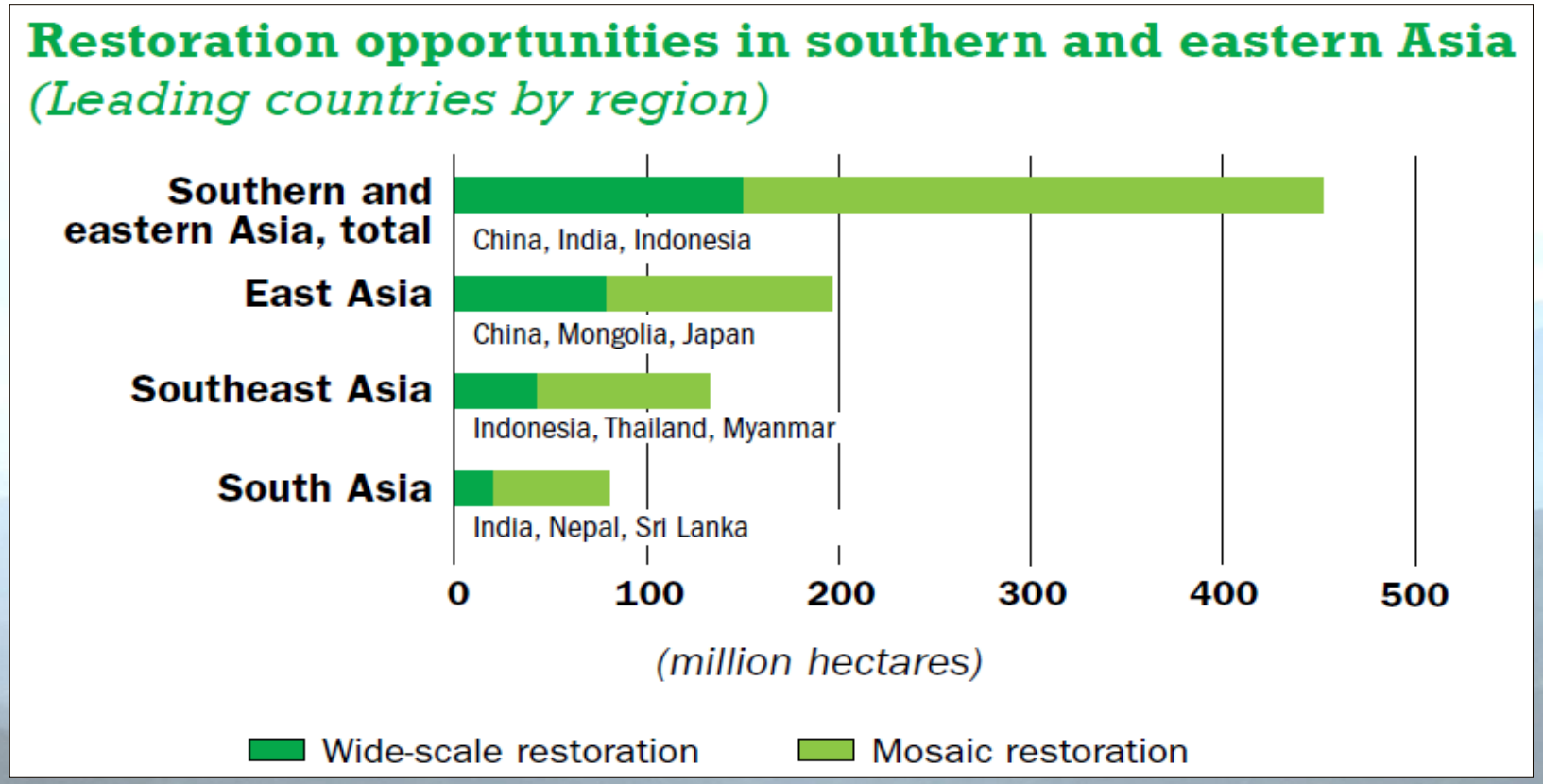
2 billion hectares of deforested and degraded land potentially available for restoration (size of South America)

Source : GPFLR

Restoration opportunities in Asia

- Vast areas of degraded forestlands in the region
- GPFLR estimates **400 mil ha of degraded lands** potentially available for restoration in Asia





The restoration opportunity

Area of *Imperata* grassland in Asia

Country	Area (m. ha)	Country	Area (m. ha)
Indonesia	13.5	Cambodia	0.3
Philippines	6.0	Thailand	4.0
Malaysia	0.5	Myanmar	3.0
Vietnam	5.0	India	12.0
South China	5.0	Sri Lanka	2.0
Laos	2.0	**TOTAL**	**57.2**

International Commitments to restoration

BONN CHALLENGE

Restore **150 million hectares** of degraded and deforested lands by 2020 and **350 million hectares** by 2030

SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

United Nations
Framework Convention on
Climate Change

Convention on
Biological Diversity

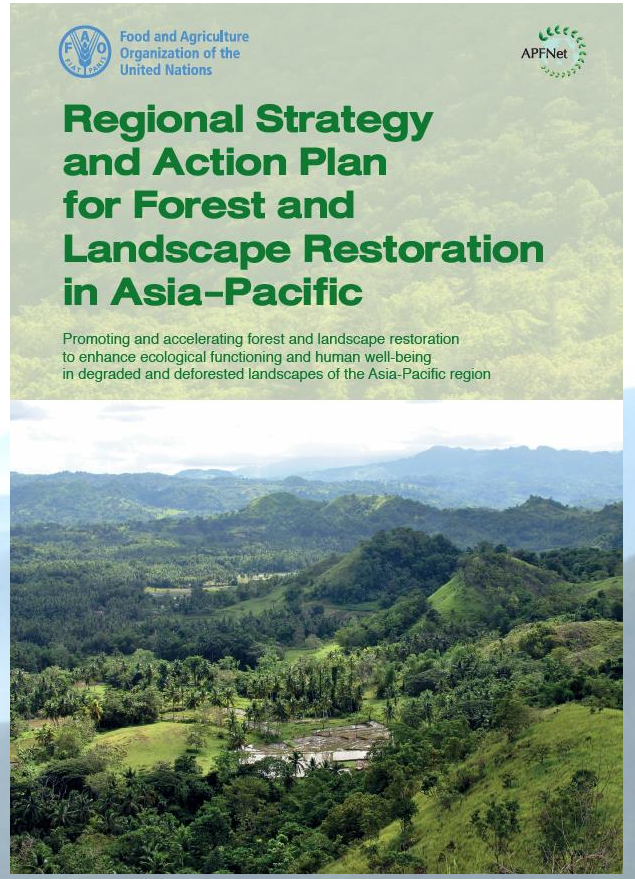
UNCCD
United Nations Convention
to Combat Desertification

UN-REDD
PROGRAMME
Food and Agriculture Organization of the United Nations
UNDP
UNEP

The United Nations Collaborative Programme
on Reducing Emissions from Deforestation
and Forest Degradation in Developing Countries

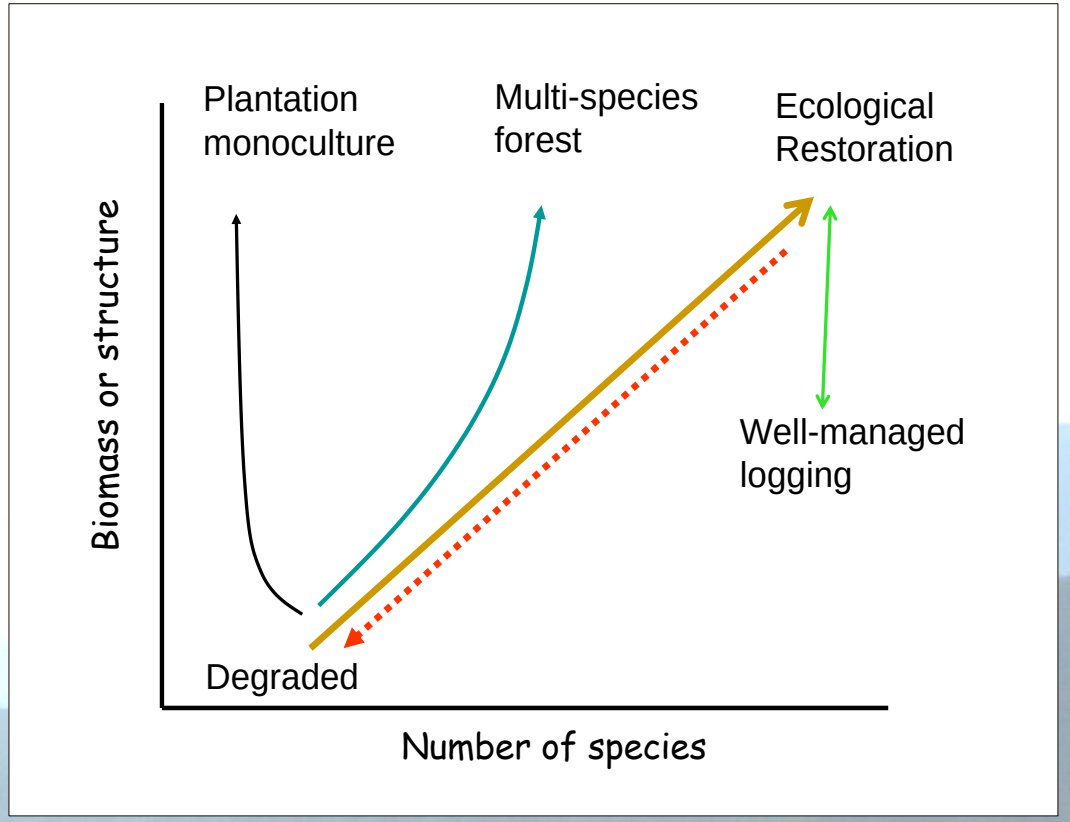
Regional Agreements and Initiatives

- Asia-Pacific Economic Cooperation (APEC) adopted a goal of increasing forest cover in the region by at least 20 million ha by 2020
- Asia-Pacific Rainforest Recovery Plan ("restore 10 million hectares of degraded rainforest by 2020")
- Regional Strategy and Action Plan for Forest Landscape Restoration developed by the Asia-Pacific Forestry Commission (APFC)



Restoration approaches and methods

- Plantations (monoculture or mixed, native or exotic)
- Ecological restoration (native, mixed species)
- Enrichment planting
- Assisted natural regeneration (ANR)
- Agroforestry
- Forest and landscape restoration (a combination, according to local conditions and objectives)



Source: David Lamb

Increasing emphasis on landscape approaches

- Traditional site-based reforestation can generate some goods and services, but not others
- Many ecological processes operate at large spatial scale (hydrology, species regeneration, wildlife habitat, etc.)
- Recognition of the need to balance ecological, social and economic benefits from forests within broader land-use patterns



Deconstructing FLR

Key principles

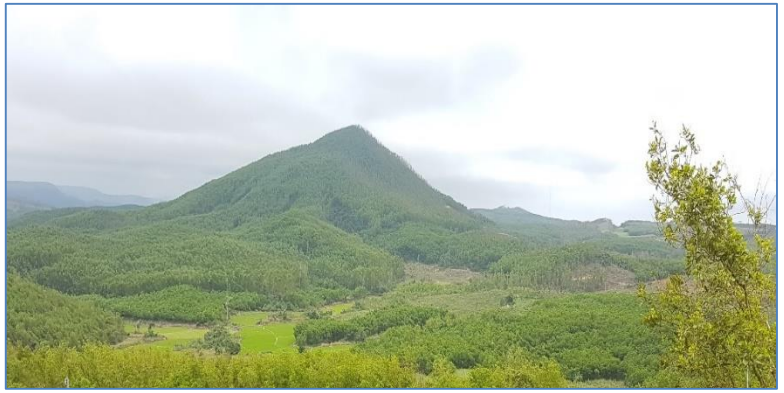
- Focus on landscapes
- Engaging multiple stakeholders
- Balancing ecological functions with human development needs
- Maintaining and enhancing natural ecosystems
- Emphasis on local context
- Adaptive management for long-term resilience

FLR is a process, not just an objective




HOW??

How do we get from this……. to this?

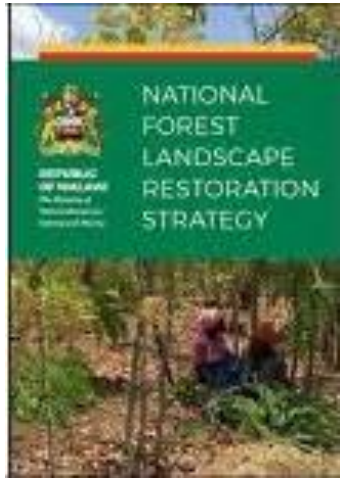


Increasing emphasis on forest and landscape restoration

Let's assume your country has committed to FLR

Perhaps….

- Country has made a Bonn Challenge commitment
- National FLR policy established (maybe even a national strategy formulated)
- Budget allocated
- Key areas identified for FLR attention



Then what? How do we make it happen on the ground?
What are the key challenges in the field?

What are the key challenges of FLR on the ground?

Various policies, governance, financing, etc. may emanate from above, but…

- How does a local FLR facilitator deal with these realities on the ground?
- What are the key challenges for FLR at the implementation level?
- What does FLR mean for local farmers and residents?
- How can FLR initiatives deal effectively with these challenges?

What are the key challenges of FLR on the ground?

- Scale
- Understanding FLR
- Clarifying authorities and mandates
- Engaging stakeholders
- Land and resource tenure
- Financial realities
- Technical matters
- Monitoring, measuring and rewarding restoration “success”

1. Scale of FLR

- "Landscapes" are big areas!
  - Watersheds, river basins
  - "Ridge-to-reef" concept
  - Thousands of hectares?
- Defining the "landscape"
- Encompass diverse ecosystems
- Mosaics of land uses
- In Asia, population densities mean there are people almost everywhere
  - Forest landscapes are crowded places!
  - 25 million people in uplands of Philippines; similar number living in National Reserved Forests public lands of Thailand

Large scale means complexity

- Range of ecological and socio-economic conditions
- To gain the ecological benefits of landscape management, we need to manage the “big picture”
- Small actions coordinated for broader effect (avoid “tyranny of small decisions”)
- Reforestation:
  - Appropriate kind (plantation, ANR, agroforestry)
  - Appropriate place (especially critical for gaining ecological benefits)
  - Appropriate scale
- In many instances, trees may not be the answer!

2. Understanding FLR

- FLR is a relatively new concept (even for forest and land managers)
- Many things called “FLR” aren’t fully consistent with FLR principles
- FLR facilitators need understanding beyond traditional forestry:
  - ANR, agroforestry, biodiversity mgmt
  - Social and institutional dynamics
  - Livelihood development, small business operation
- Also need to build awareness and understanding of FLR among local officials and residents

Forest and Landscape Restoration: What is it??

FLR is more than simply planting trees in straight lines

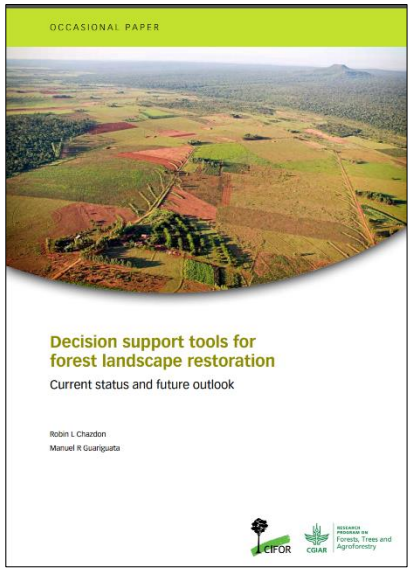
(although that might be part of it!)

3. Clarifying authorities and mandates

- Landscapes often encompass several governmental, bureaucratic and political jurisdictions
- FLR cuts across many technical sectors
- What agency, organization or individual has the authority and mandate to facilitate the FLR process?
- How to avoid institutional feuding?
- Formal agreements/MOUs can be useful
  (e.g., Philippines National Convergence Initiative)
- Local field-level collaboration is often easier than among capital city officials
- Need landscape-level decision-making structure

4. Engaging stakeholders

- The most challenging, but most critical aspect of FLR
- Wide range of stakeholders to engage
- Visioning: desired future state of the landscape
  (adaptive – not a static process)
- Identifying objectives and setting priorities
  (specific areas, species, goods and services, ecosystem functions to be restored)
- Restoration Opportunities Assessment Methodology (ROAM), other diagnostic tools for FLR planning



4. Engaging stakeholders (2)

- Different stakeholders = different visions of the desired future, different objectives and different priorities
- Local people's vision and priorities may not match those of FLR proponents
- Winners and potential losers in FLR initiatives
- Conflict and negotiation
- Trade-offs and compensation for "losers"
- Without the support of local people, FLR cannot succeed!

4. Engaging stakeholders (3)

Potential trade-off issues:

- Food and income vs. ecological functions
- Commercial wood production vs. ecological restoration
- Water demands of trees vs. downstream water yield
- Increased biodiversity: mostly good, but not for everyone

4. Engaging stakeholders (4)

- Compensating potential “losers” of FLR
- Important to recognize that not everyone will stand to immediately gain from FLR
- Potential “losers” must be treated fairly to avoid sabotage of efforts
- “Compensation” can potentially be negotiated:
  - PES?
  - Priority employment
  - Intensifying agricultural production and improving efficiency
  - Access to additional land for growing crops (e.g., firebreaks)
  - Priority access to goods and services from restoration efforts
  - Alternative livelihood support
  - Other in-kind benefits (e.g., roads/trails, irrigation facilities, training)

5. Land and resource tenure

Important factor for success

- Most forest land in Asia is officially government “owned” but much is occupied and claimed by local residents
- Even “private land” in Asia often has multiple claimants
- Secure land tenure is often the most important element of success in forest restoration (e.g., Vietnam’s “Red Book”)
- Land tenure may be separate from resource and tree tenure (e.g., teak and rosewood in Thailand)
- FLR facilitator may not be able to resolve tenure issues, but at minimum needs to be aware of them and implement FLR within such constraints

6. Financial realities

- Funds are always in short supply!
- Careful cost/benefit analyses is essential for efficiency
- Just because an FLR approach is technically feasible doesn't mean that it makes sense financially
- Delayed release of funds
- Funding sources often come with preconceived objectives – lack of flexibility (inherently counter to FLR principles)
- Farmers can usually make much more in the near term growing cash crops other than trees
- We can't expect local people to carry out restoration without compensation (especially if later benefits are in doubt)

Financial realities – look for efficiencies

- Restoration doesn't always require planting trees
- 93% of the world's forests are regenerated naturally – can be given a boost
- Natural regeneration (i.e. ANR) is often a very cost-effective approach for restoration – often under-appreciated

Relative costs of ANR and conventional reforestation

Region	Country	Estimated costs of assisted natural regeneration	Estimated costs of conventional options
Africa/Sahel East Africa	Niger[1] Uganda[2] Rwanda[3]	US$50-100/ha US$15-25/ha US$465/ha but low return on investment compared to several agroforestry options	US$150-300/ha US$925-1 500/ha > US$1 100/ha for several agroforestry options
Mediterranean (Maghreb)	Morocco	US$25/ha/year (incentive to local cooperatives for surface >300 ha)[4]	> US$1 500/ha[5]
Asia-Pacific[6]	Philippines Cambodia Indonesia	US$500-600/ha (US$579) ~ US$250/ha < US$300/ha	> US$750/ha > US$750/ha US$750-1 000/ha

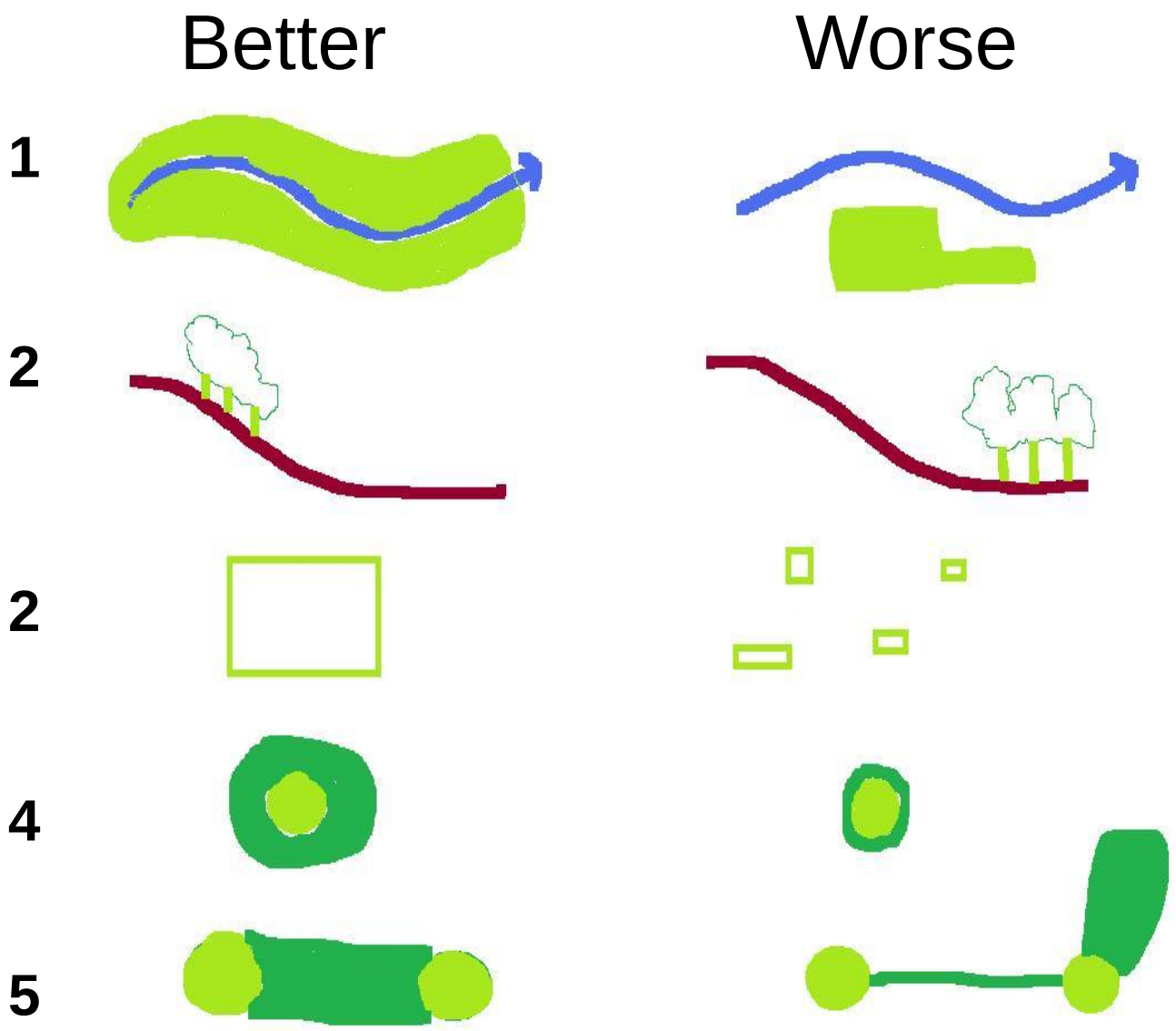
FAO, 2018

7. Technical matters

- Most technical challenges are relatively manageable
- Vision and objectives should guide technical implementation
- Economic attractiveness and social acceptability have to be factored along with technical feasibility
- Importance of maintaining “big picture” perspective in FLR technical matters
- Some biophysical considerations:
  - Natural regeneration vs. planting? Enrichment planting?
  - Species/site matching; seed sources and availability
  - Planting mixtures, density, spatial designs
  - Fire protection
  - Invasive species control
  - Agroforestry interventions
  - Connecting forest remnants; creating corridors

Technical matters

- Keep in mind the landscape implications
- Where will actions best contribute to desired ecosystem services?
- Spatial extent (one large area or many small areas?



Derived from David Lamb, 2017

8. Monitoring, measuring and rewarding "success"

- When exactly is an area "restored"? ("I know it when I see it!")
- Monitoring progress of a process
- Importance of baselines
- Challenges of monitoring changes in water yields and quality, biodiversity, carbon sequestration, etc.
- Measuring improvements in livelihoods, income and employment
- Monitoring natural regeneration is new for many
- Reluctance to pay for natural regeneration
  (it happens "naturally," right?)
- Measuring/rewarding progress
  - "No-fire bonuses"
  - Percent crown cover; canopy closure
  - Areas with hedgerows or terraces developed
  - Increases in biodiversity

Implications for FLR facilitators in the field?

Skills and abilities:

- Visionary
- Participatory planning
- Stakeholder negotiations
- Conflict management
- Diplomacy
- Highly organized
- Networking/coordinating
- Partnering/brokering
- Fund raising
- “Cheerleading” and advocacy
- Technical knowledge

Walk on water??

Do we have people with the necessary skills?
Are we adequately training/preparing people to meet the challenges?

Conclusions

- Tremendous opportunities for FLR in Asia
- Growing awareness of benefits of FLR
- Major challenges of implementation on the ground
- Social, governance and institutional challenges are more daunting than technical challenges
- Talented and motivated facilitators in the field are essential


Thank you!!
Maraming Salamat, po!!