World Agroforestry Centre

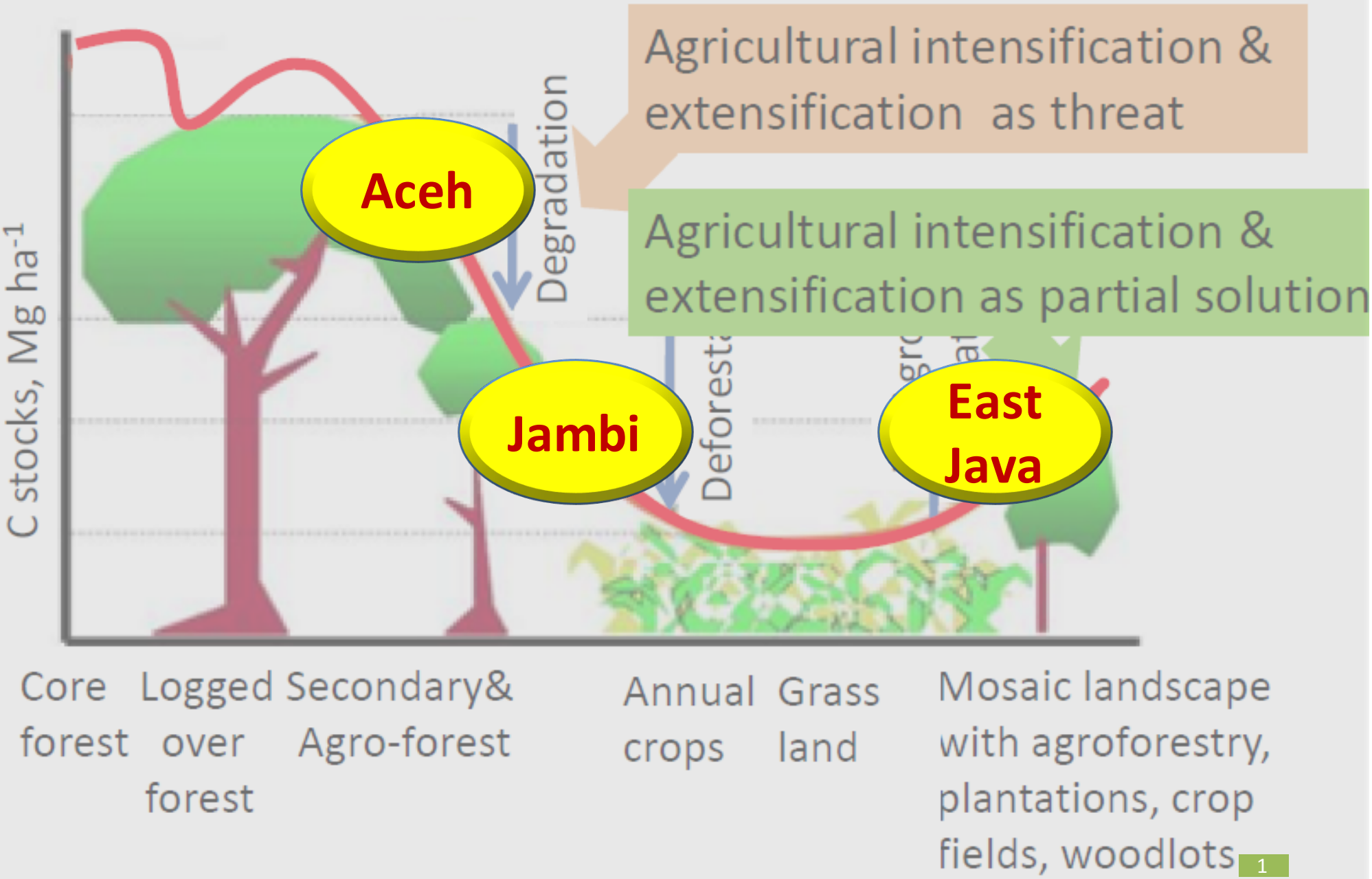
Belajar dari pengalaman: studi kasus inisiatif restorasi di masa lalu dan saat ini

Sonya Dewi

Lokakarya Percepatan Aksi Restorasi Hutan dan Bentang Lahan di Indonesia: Tantangan dan Kesempatan untuk Meningkatkan Ketahanan Ekologi dan Penghidupan Masyarakat, Jakarta, 19-20 April 2015

WORLD AGROFORESTRY CENTRE

Forest & tree cover transition



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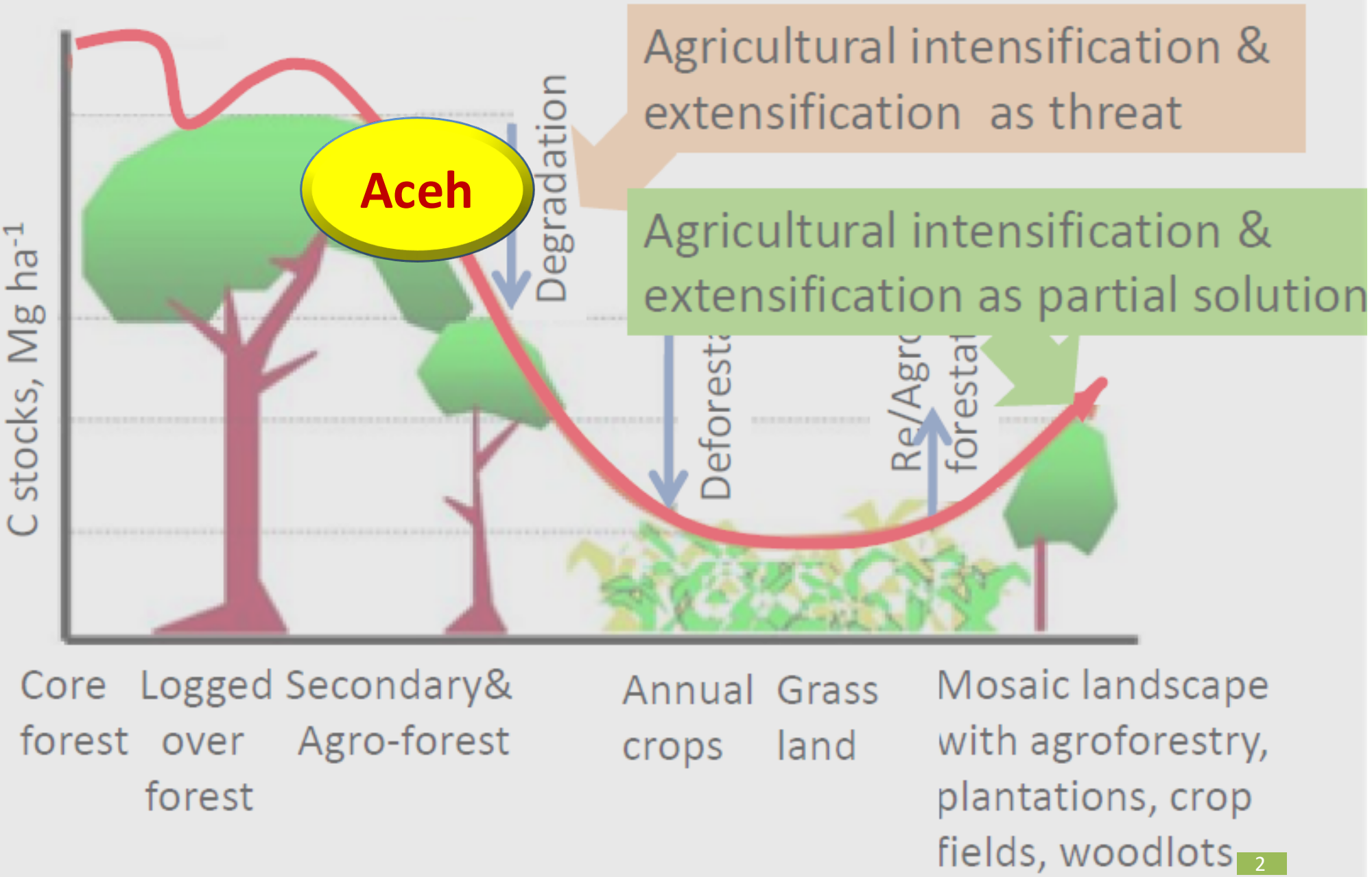

The ReGrIn project focused on 11 villages in West Aceh and North Nias, in areas both affected and unaffected by the tsunami. The project included:

- Comprehensively assessing damage to the natural resources of West Aceh and Nias;
- Comprehensively assessing the impact on the livelihoods of the coastal populations;
- Developing action plans to target rehabilitation in affected areas with economically valuable tree crops that had been selected on the basis of site and tree matching, remote sensing and soil data;
- Producing high quality planting material, with training and support provided to farmers;
- In the long-term, establishing local processing facilities for tree products and developing special markets and trade in developed countries for products from natural disaster affected areas

Innovative approach:

- focusing on building the **social capital** needed for effective coastal zone management rather than meeting physical targets
- the role of tree crops in disaster mitigation and socio-economic recovery and the impact of emergency responses on the tree-crop sector, to be applied to disaster recovery in the future.

Background

- Aceh is one of the poorest provinces in Indonesia despite its rich natural resources. The 3-decade long political conflict, economic isolation, lack of technology and weak institutional setups are some of the reasons;
- The 2004 earthquake and tsunami caused devastating impacts;
- There is much disparity in the poverty of people living in the coastal areas and those living further upland;
- About 54% of the people live inland and nearly 94% of them rely on agriculture compared to 55% in the coastal areas;
- On average 76% of total household income is based on agricultural activities and tree crops are the most important sources, providing 60 to 78% of total household income;
- Rubber, cocoa, areca nuts, coffee, coconut and oil palm are important income generating tree crops. These tree crops are fundamental to the economic prosperity in Aceh and Nias.

Joshi et al., 2008

Lessons learnt

- A focus on **"trees people want"** and tree-based systems and how such forest and agroforest systems can be managed in a sustainable manner is a key to accelerating livelihood recovery and economic and environmental recovery in Aceh and Nias;
- **Technologies for improving the productivity of tree crops** such as rubber and cocoa should be promoted through appropriate skill development and capacity building. Using good quality planting materials, proper tree and field management, appropriate harvest and post-harvest processes coupled with good market linkages, infrastructure development;
- The opportunities for tree crop development are carefully embedded into the **local land use planning**. The government planning agencies should adopt a participatory spatial planning that includes local people's needs and aspiration and meet both economic and environmental objectives.

Joshi et al., 2008

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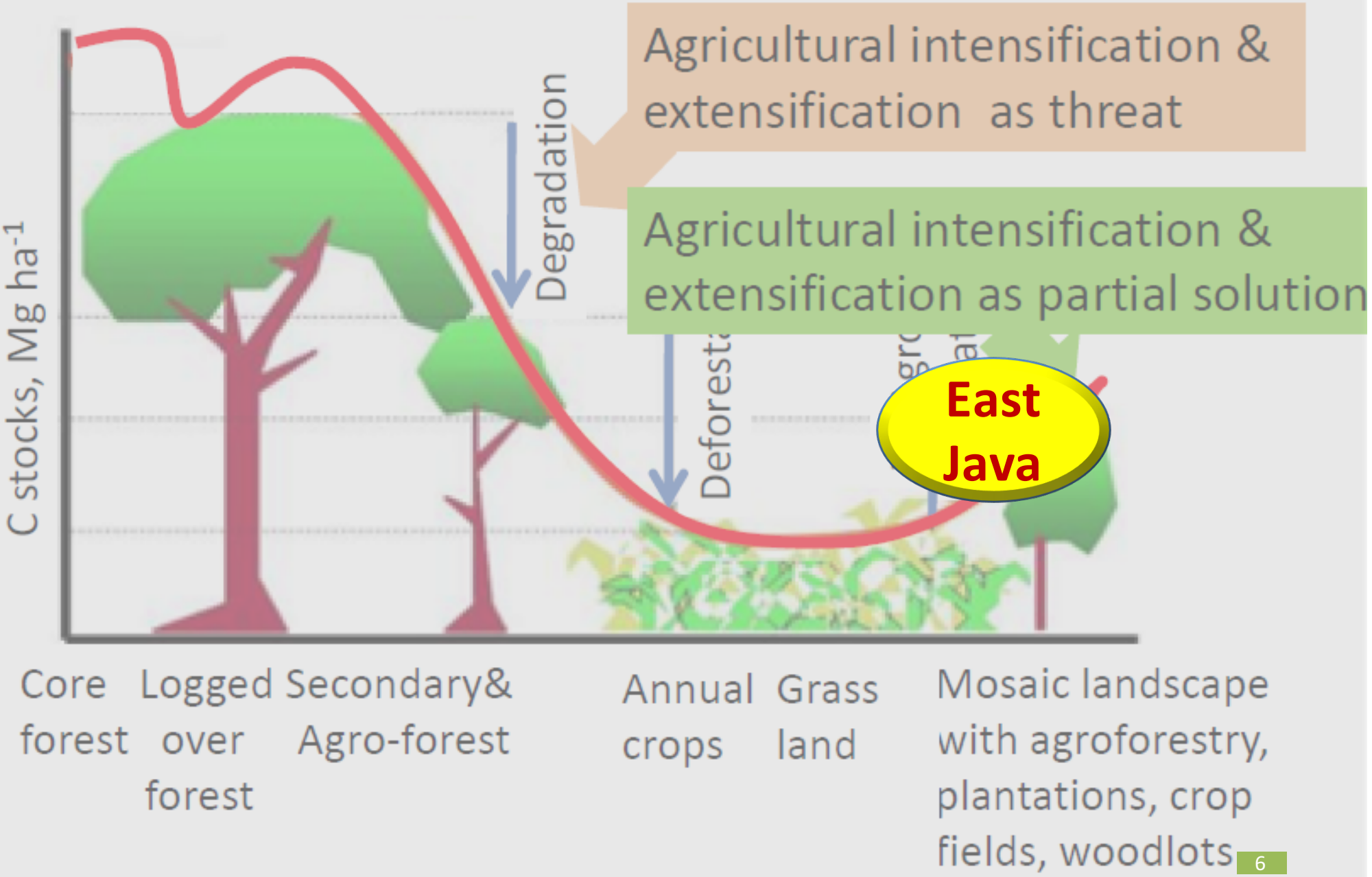

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on

gricultural intensification &
xtensification as threat

gricultural intensification &
xtensification as partial solution

Peat land in Jambi

C stocks,

Core forest

Logged over forest

Secondary& Agro-forest

Annual crops

Grass land

Mosaic landscape with agroforestry, plantations, crop fields, woodlots

https://www.youtube.com/watch?v=VhD5yj67ss8


Review of Forest Rehabilitation
Lessons from the Past
Forest rehabilitation in Indonesia
Where to after more than three decades?
Editors
Ani Adiwinata Nawir
Murniati
Lukas Rumboko

Forest rehabilitation: barriers to success

- The site characterisation as part of the preparation step, consideration for species-site matching, seedling preparation, timely planting, site or land preparation, and maintenance planning are not properly done;
- Initiatives did not take economic aspects as part of the project designs and strategies: (i) Funding sustainability beyond the project period is none; (ii) unclear economic incentives;
- Lack of voluntary community participation

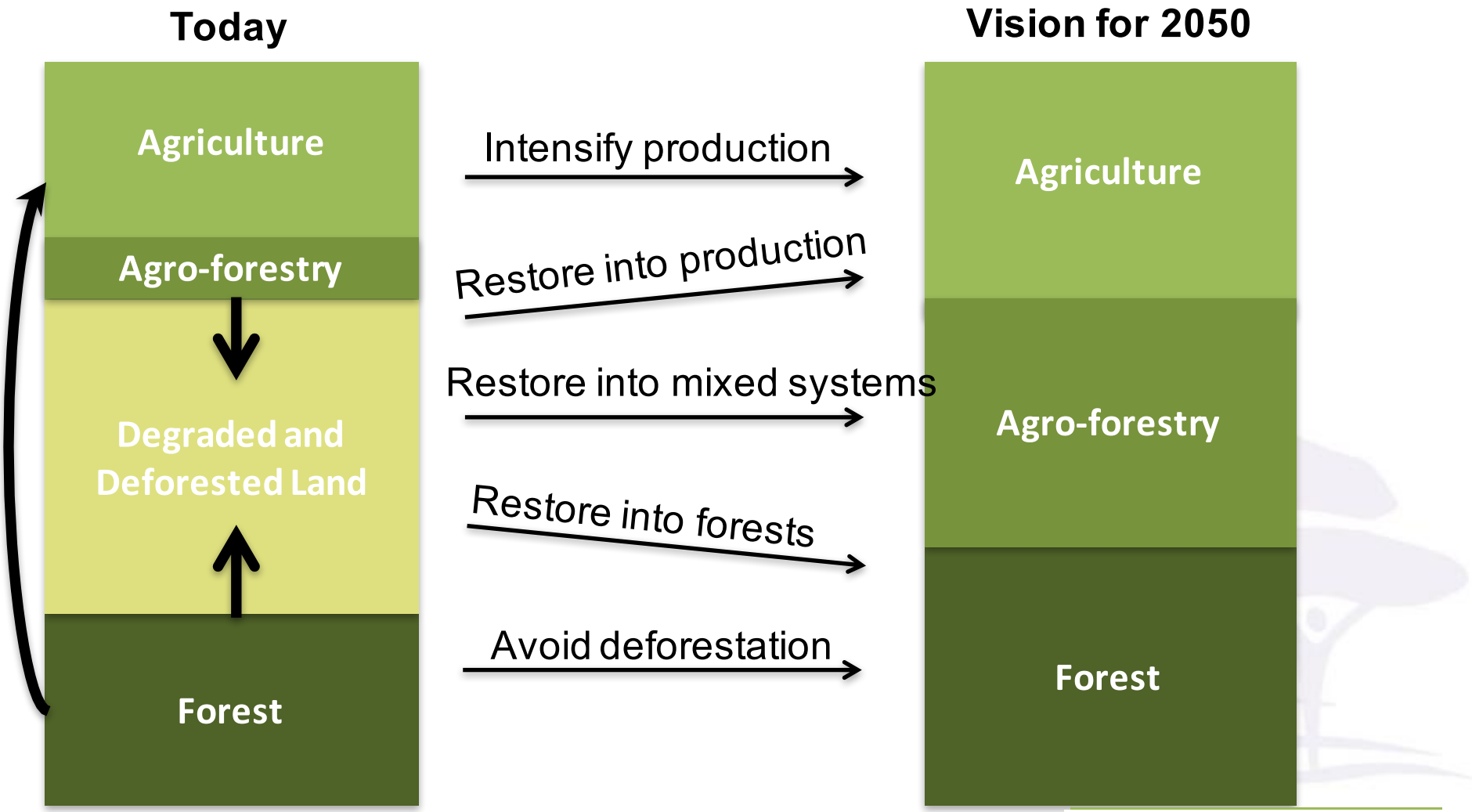
Nawir et al., 2007

Forest rehabilitation: way forward

- Appropriate project design to ensure the generation of multiplier effects;
- Intensive forestry extension to ensure adoption of the rehabilitation approach by communities;
- Enabled policy frameworks;
- Well-planned funding mechanisms to effectively use the reforestation funds;
- An effective mechanism to reconcile the land status before the project starts;
- Communities' engagement, social and economic incentives for sustainabilities

Nawir et al., 2007

Restore productivity and function to degraded and deforested lands



Garrity, 2015

Major challenges

- Causes and drivers of the degradation are difficult to address;
- Forest sectoral approach, as opposed to landscape approach beyond forest restoration and tree planting, is dominating;
- Mismatch of scale of action that causes degradation, scale of impacts of the degradation and scale of responses, incl. restoration: beneficiaries are not identical with cost bearers; short term benefits overrule; incoherent policies at multiple levels;
- Unclear tenure regimes and poor land governance;
- Lack of full participation of local communities;
- Technical and entrepreneurship skills along the value chain are often low;
- Uncertainties and unclear strategies of financing and benefit sharing

Opportunities

- Current global and national commitments can be aligned to achieve all SDGs and to meet the Bonn Challenge;
- Rewarding schemes of ecosystem services, REDD+
- Climate smart agriculture, CC adaptation and mitigation, and green economy are high in the agenda;
- Tools for restoration planning and integrating restoration into broader land use and development planning are available (LUMENS, ROAM, ROOT, InVest);
- Advances in affordable monitoring technologies such as remote sensing are being made;
- Accumulated knowledge across local, policy and scientific domain of knowledge

Way forward

- **Lessons learnt** from success and failure of restoration programs across the world should be used. Compilation, communication and dissemination of **green knowledge** to advise best **options** with local landscape **contexts** as there is no one-size-fits-all strategy in restoration;
- Paradigm change: rather than restoring forest and/or land, **restoring ecosystem function and multifunctional landscape**; restoration ≠ planting trees;
- **Planning and tool, M&E system** for evidence-based restoration;
- The links between **science and policy**, knowledge to action should be strengthened;
- Capacity development of multistakeholders in implementation, planning and M&E;
- The bottleneck in **policies and institutions** are to be addressed;
- Global **partnerships** and public-people-private sector partnerships are to be developed and strengthened


THANK YOU
Photo: Gerhard Sabastian