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Intensively Managed Planted Forests

Phase 2 Dialogue Background Paper

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THE AUSTRALIAN NATIONAL UNIVERSITY

Intensively managed planted forests: starting points for dialogue

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IMPF1: starting points



THE FORESTS DIALOGUE

Intensively Managed Planted Forests

Professor Peter Kanowski - The Australian National University
June 2005

Note: In preparation for TFD's scoping dialogue on IMPF's, the Steering Committee of TFD asked Dr. Kanowski to write a brief report covering the current trends and major stakeholder perspectives on this important issue. The following is a result of his work. TFD is very grateful to Dr. Kanowski for his excellent contribution to this effort.

Introduction

Plantation forests - even-aged stands of a single tree species established primarily for wood production - are one of the defining features and, against many criteria, one of the successes of forestry in the past century. Plantation forest extent increased from negligible to c. 190 M ha; they currently contribute c. one third of world industrial wood supply, and are expected to contribute nearly half by 2040¹. Other forms of planted forests - those established primarily for land restoration, fuelwood or amenity - are also important², but are not the focus of this paper.

An increasing proportion - currently c. 15% - of planted forests are 'intensively managed', and these forests contribute disproportionately to industrial wood supply. 'Intensively managed planted forests' (IMPF) are defined here as plantation forests³ of relatively high productivity, in which the owner makes a sustained investment, over the life of the forest, to optimise returns from industrial wood supply.

As WWF⁴ notes, 'well managed and appropriately located plantations can play an important role in healthy, diverse and multi-functional landscapes', and can generate substantial economic benefits. WWF also notes that plantations can impose significant environmental and social costs: the potential disbenefits of IMPF have been articulated strongly in Carrere and Lohmann's critique of short-rotation pulpwood plantations: 'the results, in country after country, have been impoverishment, environmental degradation, and rural strife'⁵. Critics of IMPF are concerned by the consequences of large-scale land use change and wood fibre-based industrialisation, especially for the rural poor and the environment, and argue that these costs often outweigh the associated benefits.

Intensively managed planted forests - concepts, locations, trends

Definitions of planted forests have been evolving to accommodate new forms of forestry and to clarify the blurred distinction with some forms of managed natural forest⁶. Both some proponents and many critics of IMPF prefer not to use of the term 'forests' in describing them, favouring terms such as 'tree farms' which they believe to better reflect the characteristics of these land use systems.

Contemporary forms of IMPF are distinguished from other forests by composition, scale, management and productivity. IMPF are typified by reliance on one or a few species or interspecific hybrids, established and managed as even-aged plantation stands. The

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THE FORESTS DIALOGUE

Dialogue on Intensively Managed Planted Forests in China

3-6 April 2006 - Zhanjiang and Beihai, P.R. China

Co-Chairs' Summary Report

Gerhard Dieterle, James Griffiths, Stewart Maginnis

From 3 April to 6 April, The Forests Dialogue (TFD) convened 34 international leaders from the forest products industry, NGO community, academia and government in Zhanjiang (Guangdong Province) and Beihai (Guangxi Province), China for site visits and dialogue on the future of intensively managed planted forests (IMPFs).

This dialogue and site visit was a continuation of a June 2005 TFD scoping dialogue held in Gland, Switzerland that explored management strategies and opportunities for increasing consensus and cooperation among IMPF stakeholders. For a summary of the Gland dialogue please go to www.theforestdialogue.org/itm.html.

One of the recommendations coming out of the Gland dialogue was to develop a series of site visit dialogues for a group of leaders to further explore the key issues on the ground and in more depth in IMPF regions. The basic premise of this series of dialogues is to develop strategies to promote continued innovation in IMPF technology to optimize the social and environmental benefits of IMPFs while maintaining their competitive advantage and profitability. The Beihai, China dialogue was the first in this series.

The objectives were to:

- Continue the discussion on how best management practices for IMPFs can act as a basis to minimize conflict and support sustainable development outcomes
- Raise awareness among participants about the unique issues presented by current and future development and management of IMPFs in China
- Review and solicit input to the draft FAO coordinated *Planted Forest Code* and other best management practices in the context of their implementation in China

IMPFs and China: Background and Trends

The demand for timber and wood products in China has skyrocketed over the past five years. Woodchip imports have risen exponentially - from approximately 10,000 bone-dry tons in 2001 to 900,000 bone-dry tons in 2005. Domestic timber supply is insufficient, with China experiencing a 70 million m³ overall shortage of forest products in 2005. That figure is projected to double by 2015. In the southern provinces of Hainan, Guangdong, and Guangxi, demand for hardwood is anticipated to outweigh supply by up to 5 million m³ by 2010.

In response to the rising demand, the Chinese government has promoted the development of domestic wood production and fast-growing tree plantations. Of China's 24 million hectares of commercial forest plantations, overall productivity is low and only 5 million hectares are classified as fast-growing and high-yield. Efforts have focused on improving yield in the southern provinces where optimal climate conditions and 100+ years of eucalyptus cultivation have laid the foundation for IMPF development. The region has cultivated high-yield eucalyptus for 20 years.

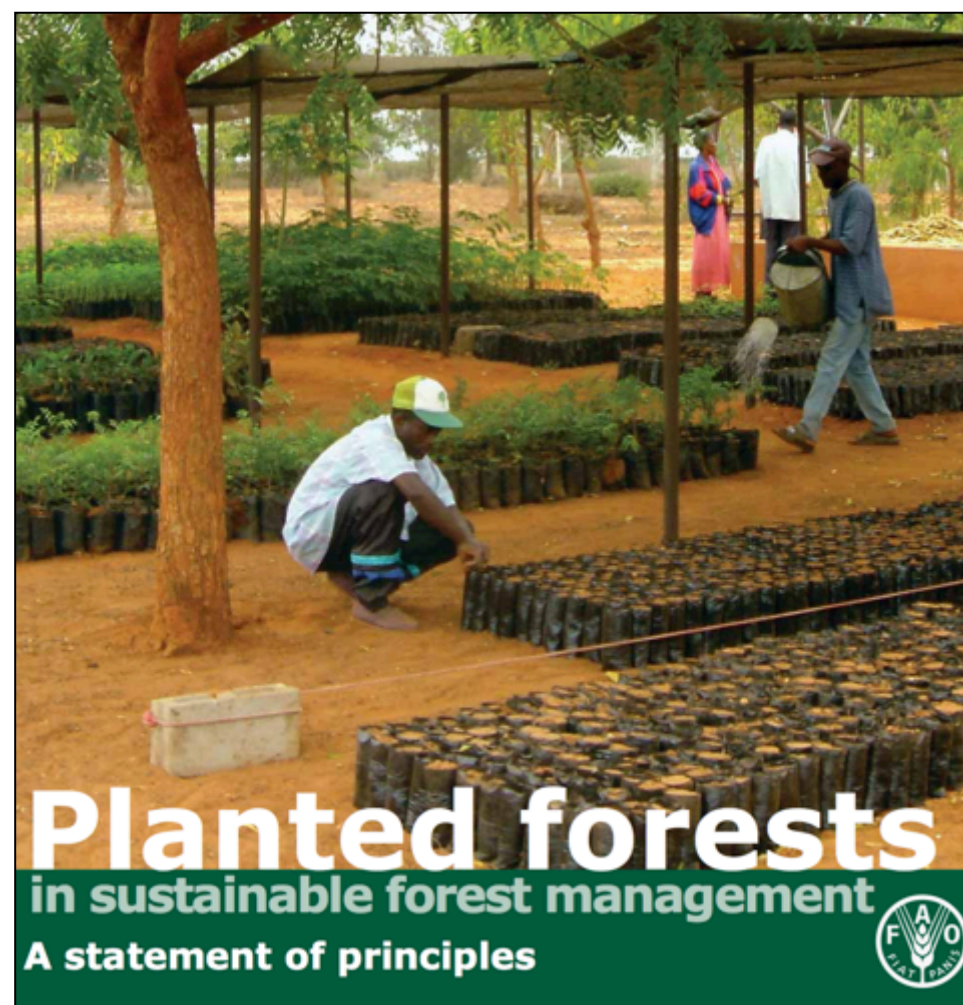
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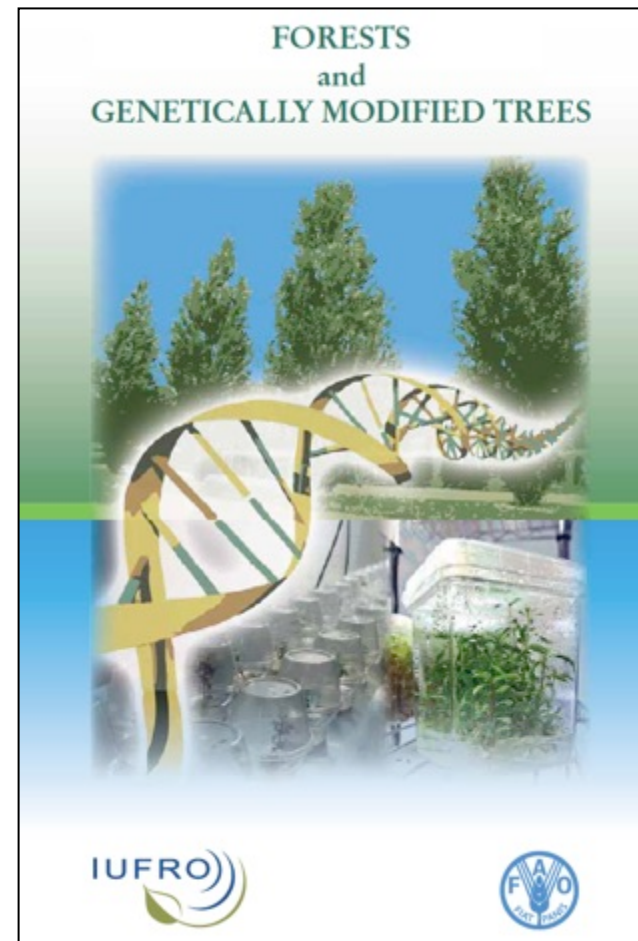
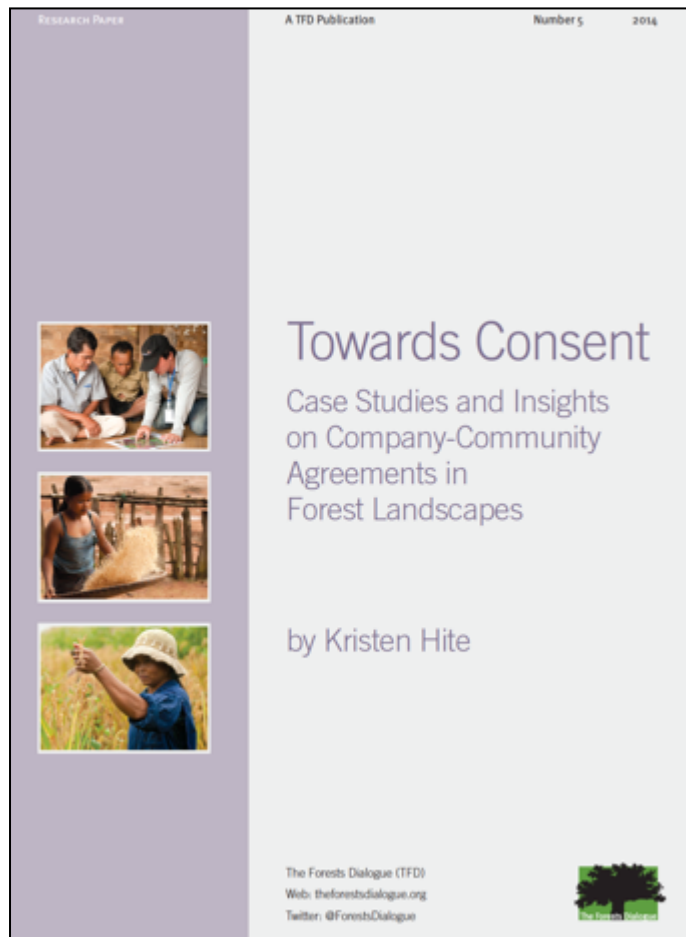
IMPF2: starting points





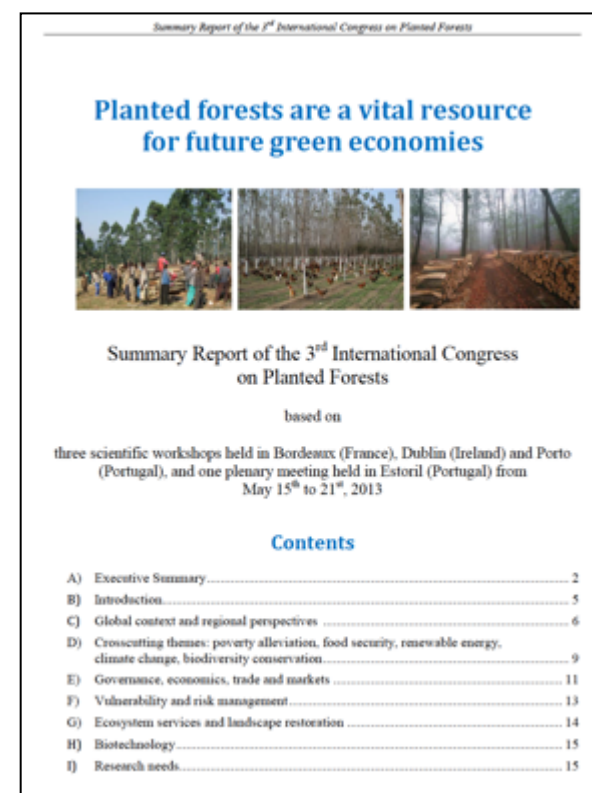
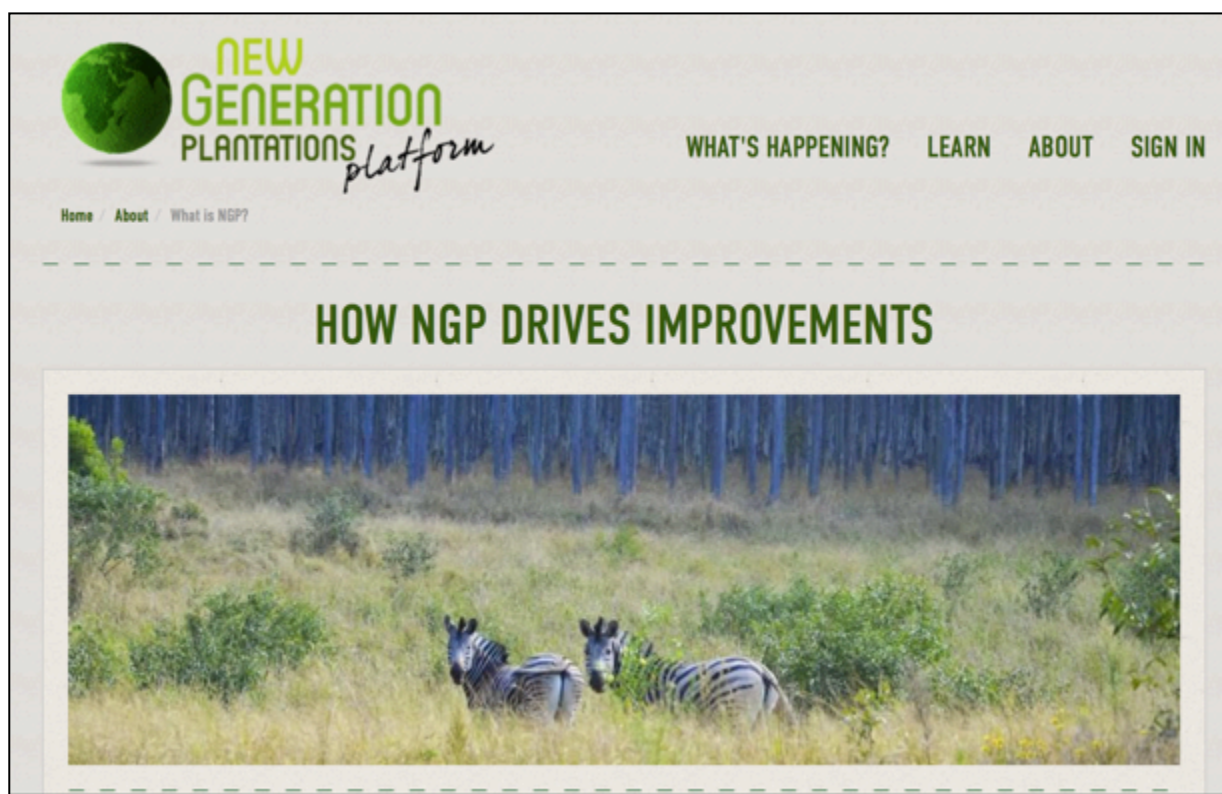
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Various other IMPF2 contexts: eg, TFD FPIC, GMT processes

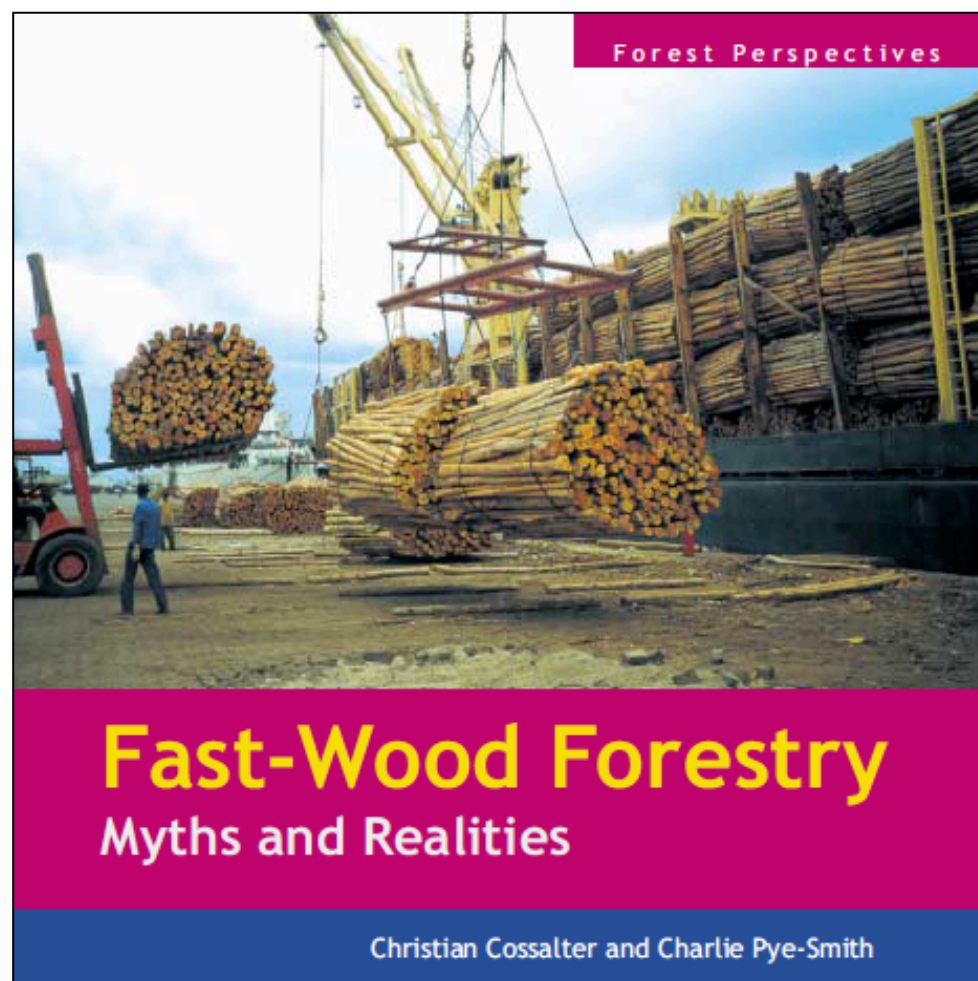
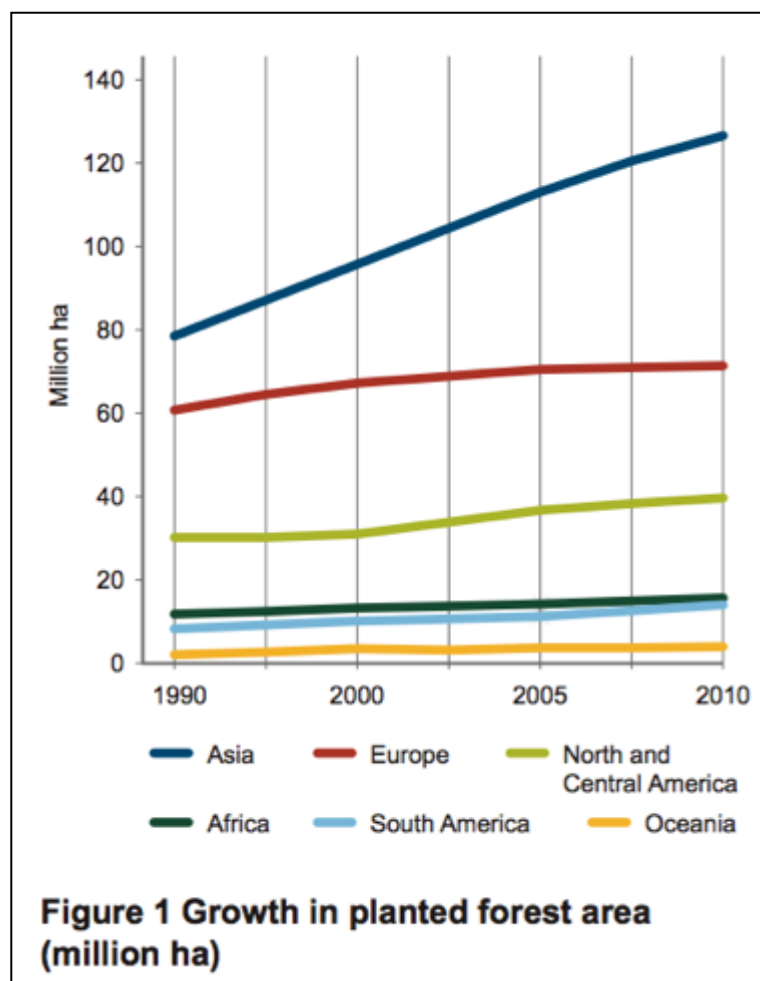




IMPF2: other learning processes



Expansion focused on “fastwood forests”



Changing balance of global wood supply

Biodivers Conserv

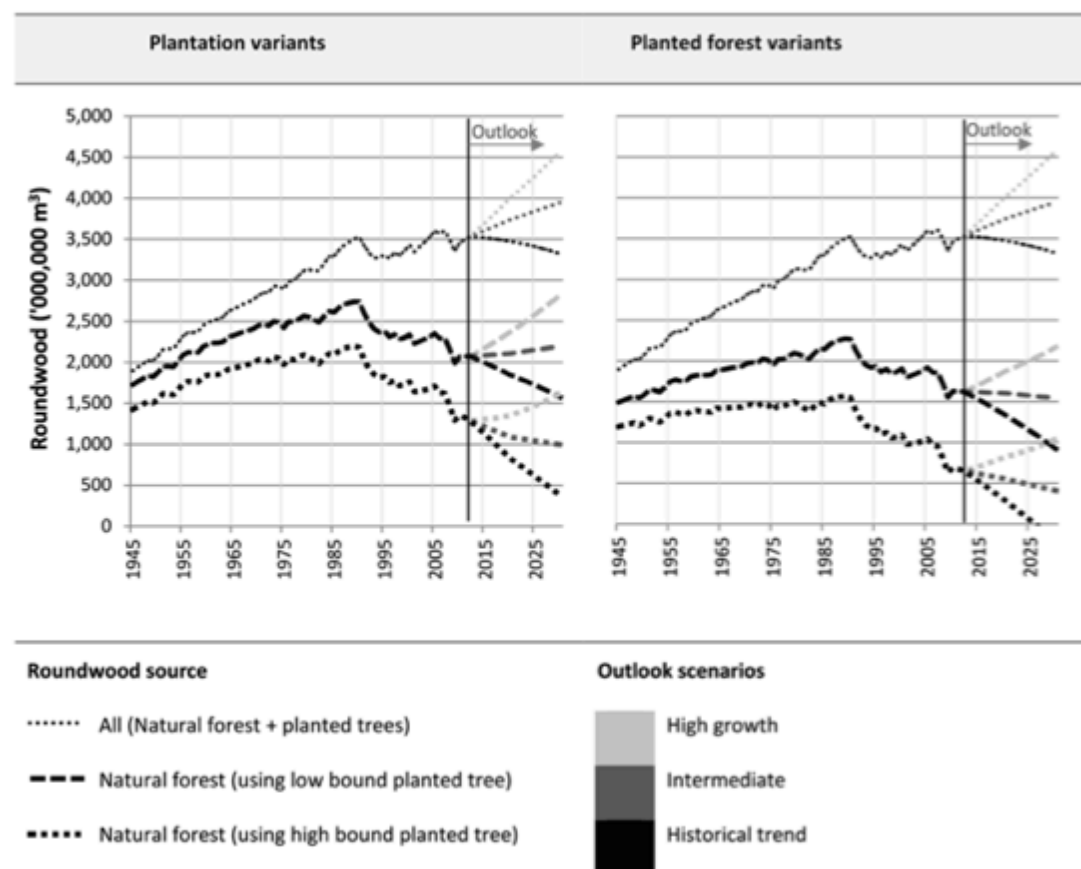


Fig. 6 Estimates of global natural forest roundwood production 1945–2030



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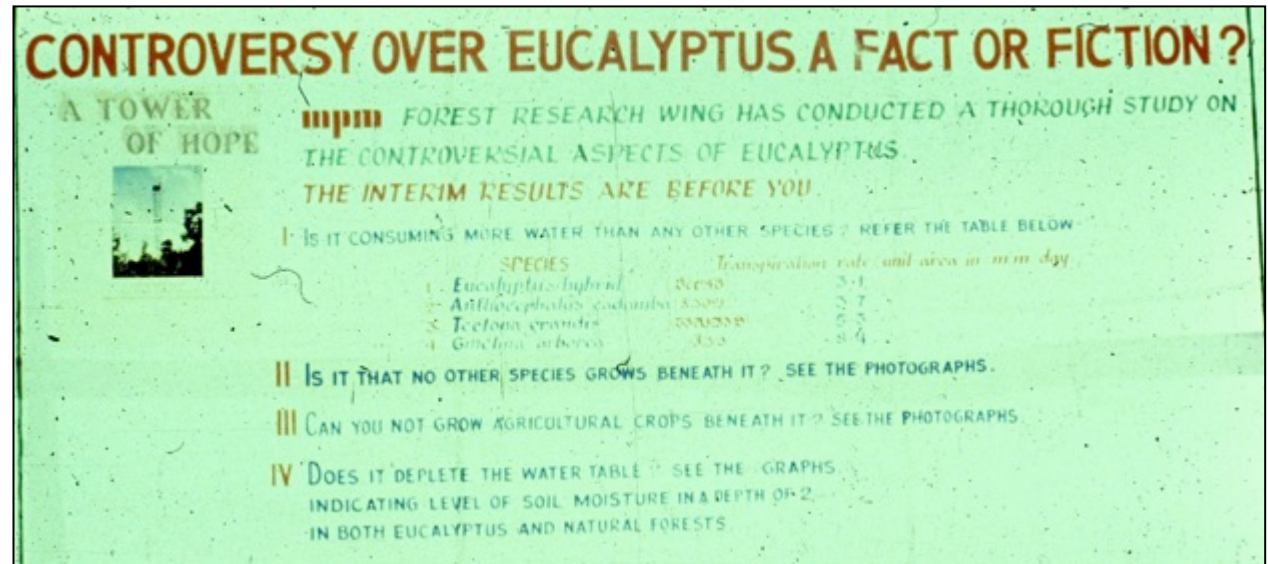
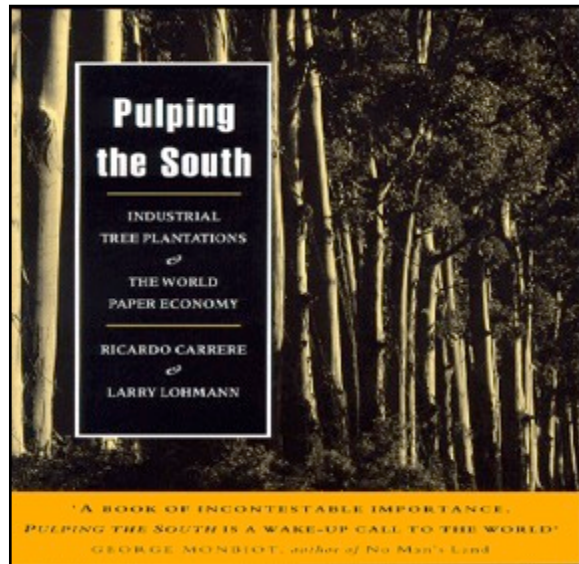
The expansion of other plantation crops ...



Photo: www.mongabay.com



IMPF: a history of contest





... + haze, land grabs, food security ...



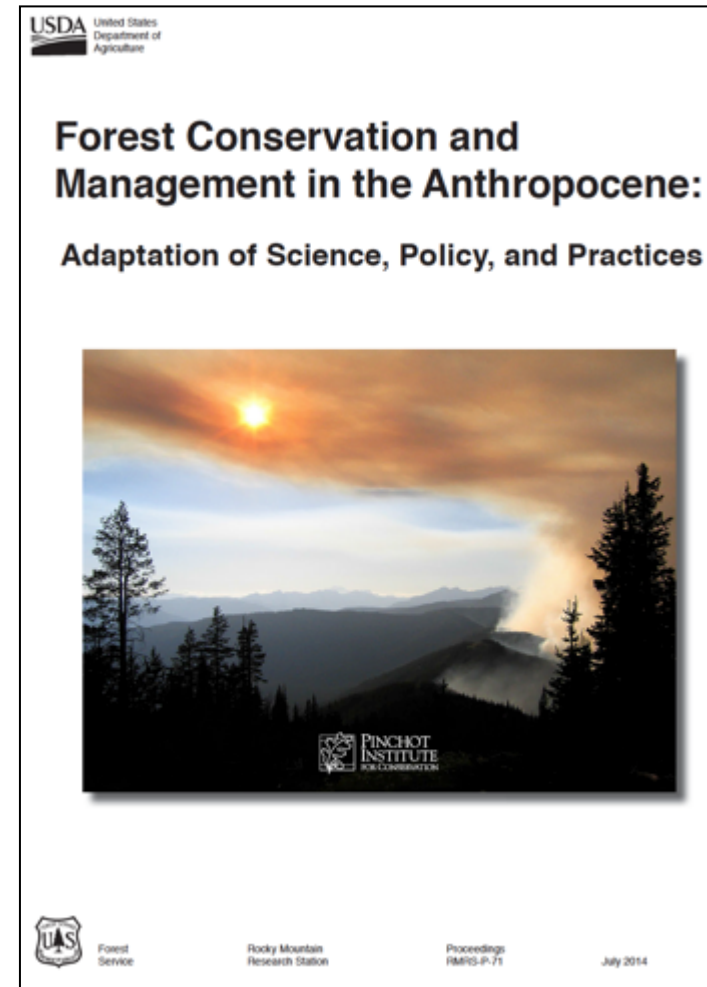
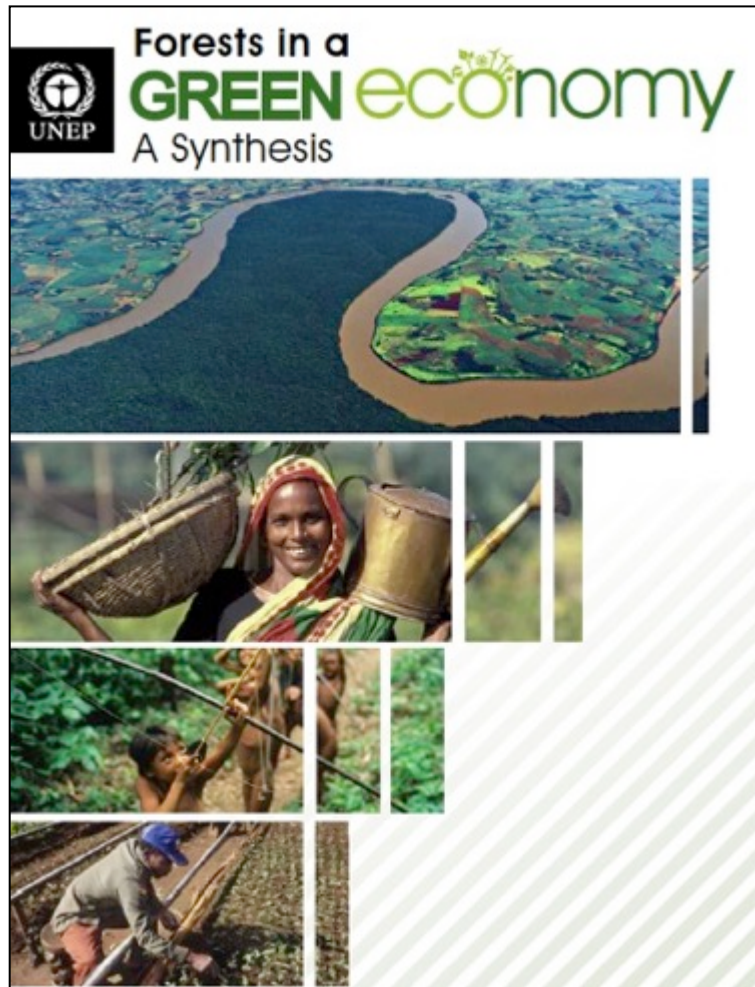
A resident sprays water on a peatland fire in Pekanbaru district in Riau, on February 16, 2014. Indonesia has pledged \$20 million to help minimize the impact of climate change on the Pacific. (AFP Photo)





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The first shoots of a green economy ...



IMPF2 survey

- Online survey of IMPF1 dialogue participants, other TFD processes, NGP, IMPF authors ...
- 55 respondents from 200 invitations
 - 25% corporate forestry
 - 25% NGO or civil society
 - 50% research, government, international orgs, SME
- 50% IMPF or other TFD processes
- 50% NGPP or similar
- 67% 'engaged' with forest certification

IMPF2: starting points



Critically-important factors

- Good governance
- High levels of CSR
- Respect for rights
- Empowerment of workers & smallholders
- Integrated land use
- Dialogue & conflict resolution processes
- Implementation models



IMPF2 survey

– progress against critical factors





IMPF2: starting points



Recommendations

1. Governments

- implement principles
- land use planning

2. Financing institutions

- due diligence, governance

3. Businesses





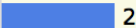
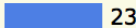


- proactive CSR





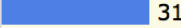
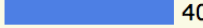



4. All actors

- equitable sharing
of benefits & costs

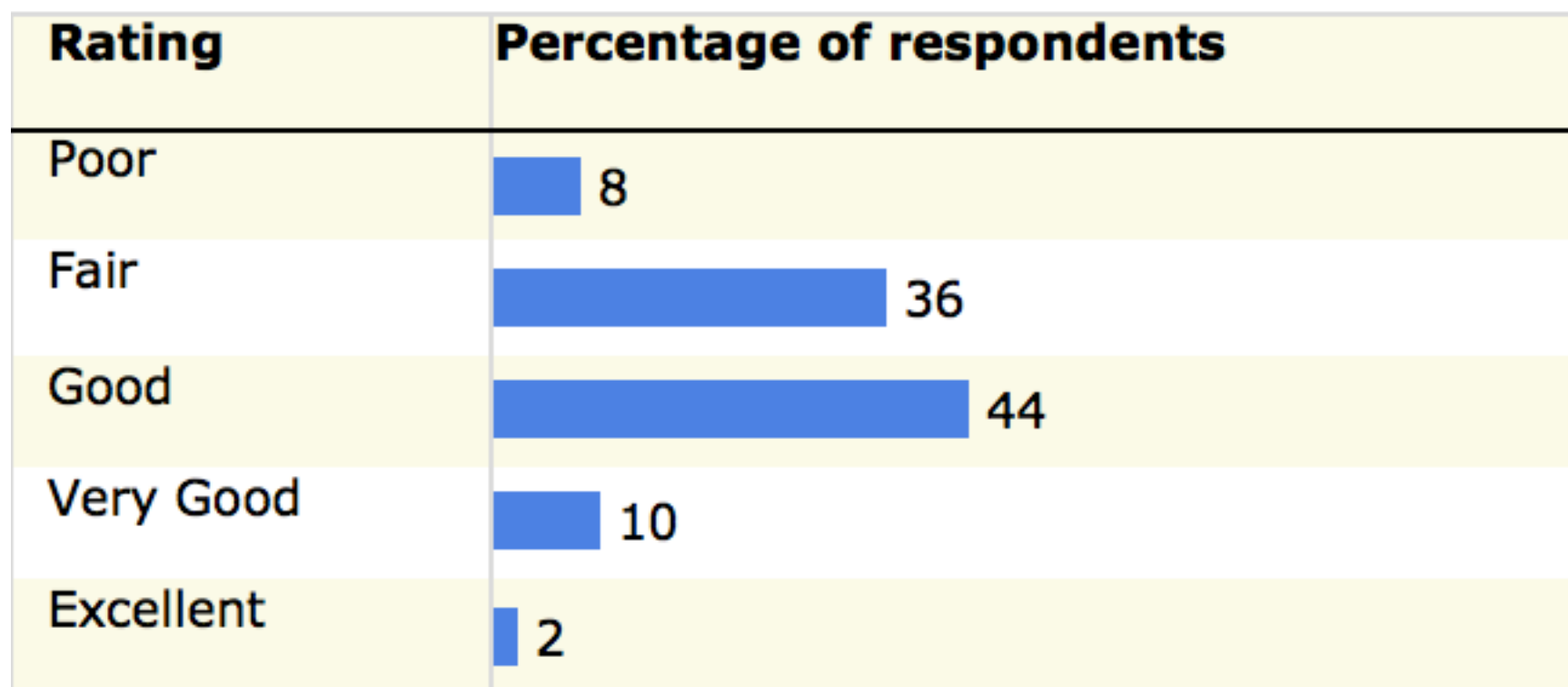
IMPF2 survey

– performance against recommendations

Recommendation	1. Performance of national and sub-national governments	2. Performance of institutions financing or underwriting IMPF investments
Rating	Percentage of respondents	Percentage of respondents
Poor	 21	 9
Fair	 49	 57
Good	 23	 23
Very Good	 6	 11
Excellent	0	0
	Number of respondents: 47	Number of respondents: 47

Recommendation	3. Performance of businesses engaged in IMPF activities	4. Models of IMPF-based development that share benefits and costs equitably
Rating	Percentage of respondents	Percentage of respondents
Poor	 4	 15
Fair	 47	 40
Good	 31	 40
Very Good	 12	 6
Excellent	 6	0
	Number of respondents: 49	Number of respondents: 48

IMPF2 survey: overall performance, against 'own' criteria



Number of respondents: 50

IMPF2 survey: overall performance against own criteria

Generally ...

- evolution rather than transformation
- leaders & laggards
- more progress against environmental than social criteria
- variation within & between regions
- progress on the ground often slower than boardroom commitments



IMPF2 survey: enabling & constraining factors

- + effective engagement between s'holders
- + good governance
- ± principles (need translation to practice)
- ± certification (smallholders disadvantaged)
- workforce & smallholder participation models
- sustainability challenges
- ± 'how we think' about IMPF & forests



IMPF2 survey: what's new & good ...

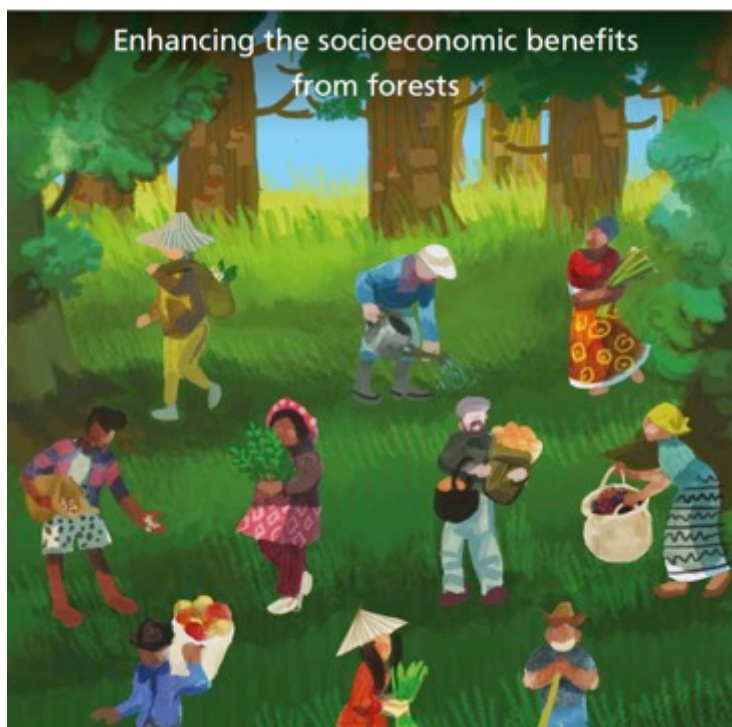
- landscape approaches (eg HCV protection)
- mechanisms for early constructive engagement
- collaborative monitoring & information sharing
- benefit-sharing mechanisms
- wider community dialogue
- co-learning processes
- new technologies, & holistic implementation:
planning, precision forestry, genetics, processing ...



Planted forests: ideotypes ...



State of the World's Forests





Planted forests: ideotypes ...





IMPF: various realities





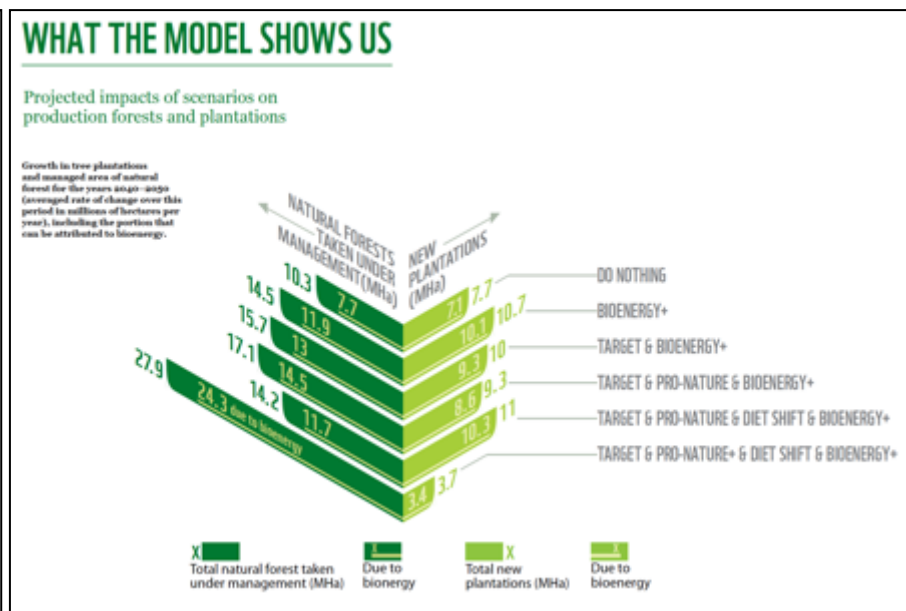
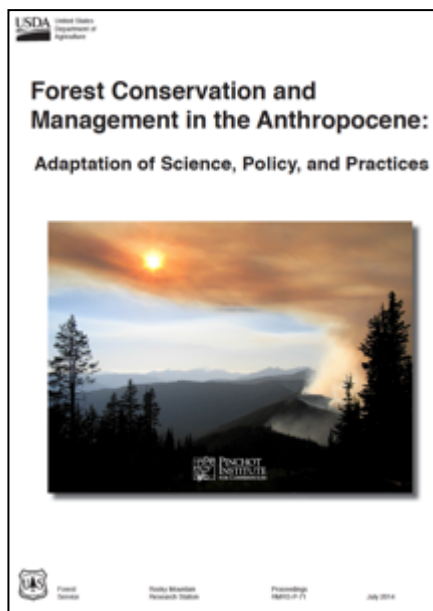
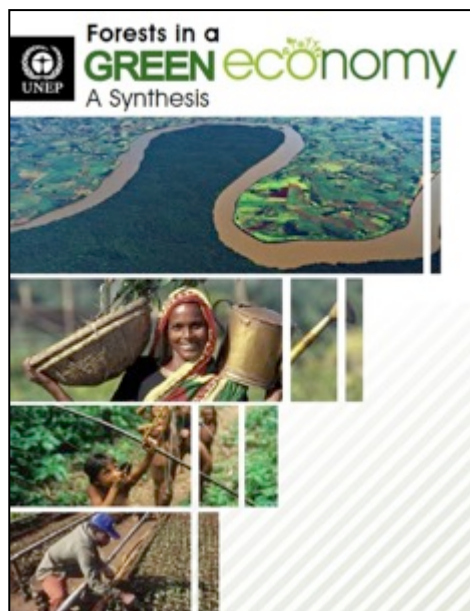
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IMPF: various realities



IMPF: possible foci for dialogue

1. How should IMPF actors respond to drivers?



IMPF: possible foci for dialogue

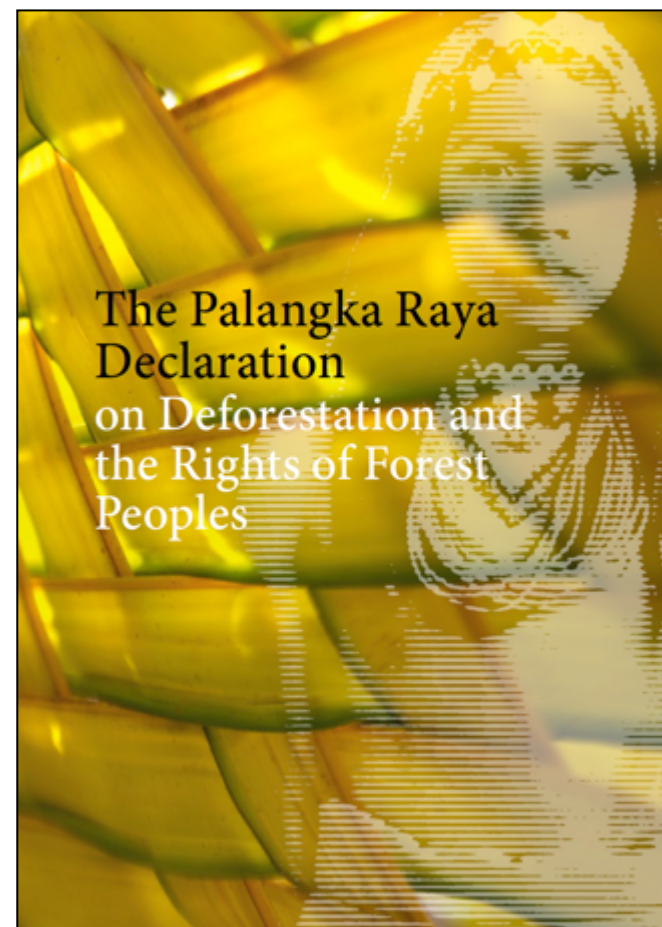
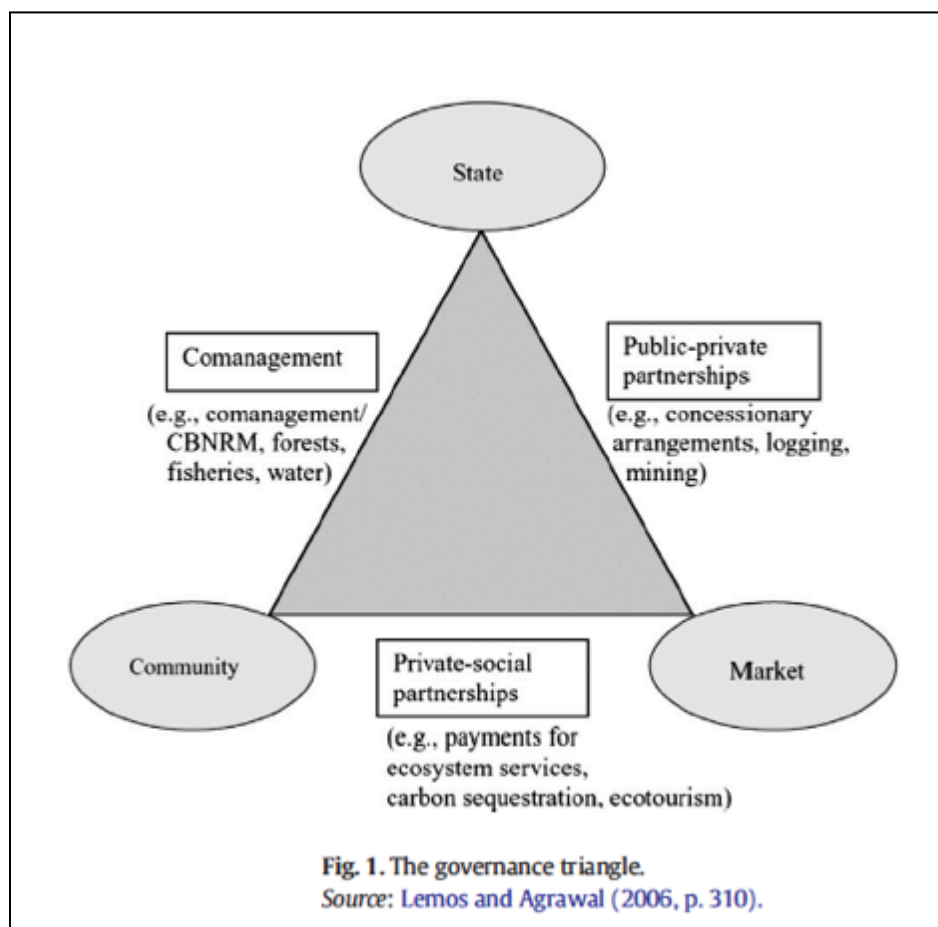
2. Definitions & the scope of dialogue

Figure 1. — Scope and concept of planted forests.

Continuum of Forest Characteristics						Non-forest
Primary	Modified natural	Semi-natural		Plantation		Trees outside forests
		Assisted natural regeneration	Planted	Productive	Protective	
Forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed	Forest of naturally regenerated native species where there are clearly visible indications of human activities	Silvicultural practices for intensive management (weeding, fertilizing, thinning, selective logging)	Forest of native species, established through planting, seeding or coppice of planted trees	Forest of introduced species and in some cases native species, established through planting or seeding mainly for <i>production of wood or non-wood goods</i>	Forest of native or introduced species, established through planting or seeding mainly for <i>provision of services</i>	Stands smaller than 0.5 ha; trees in agricultural land (agroforestry systems, home gardens, orchards); trees in urban environments; and scattered along roads and in landscapes
← Planted Forests →						

IMPF: possible foci for dialogue

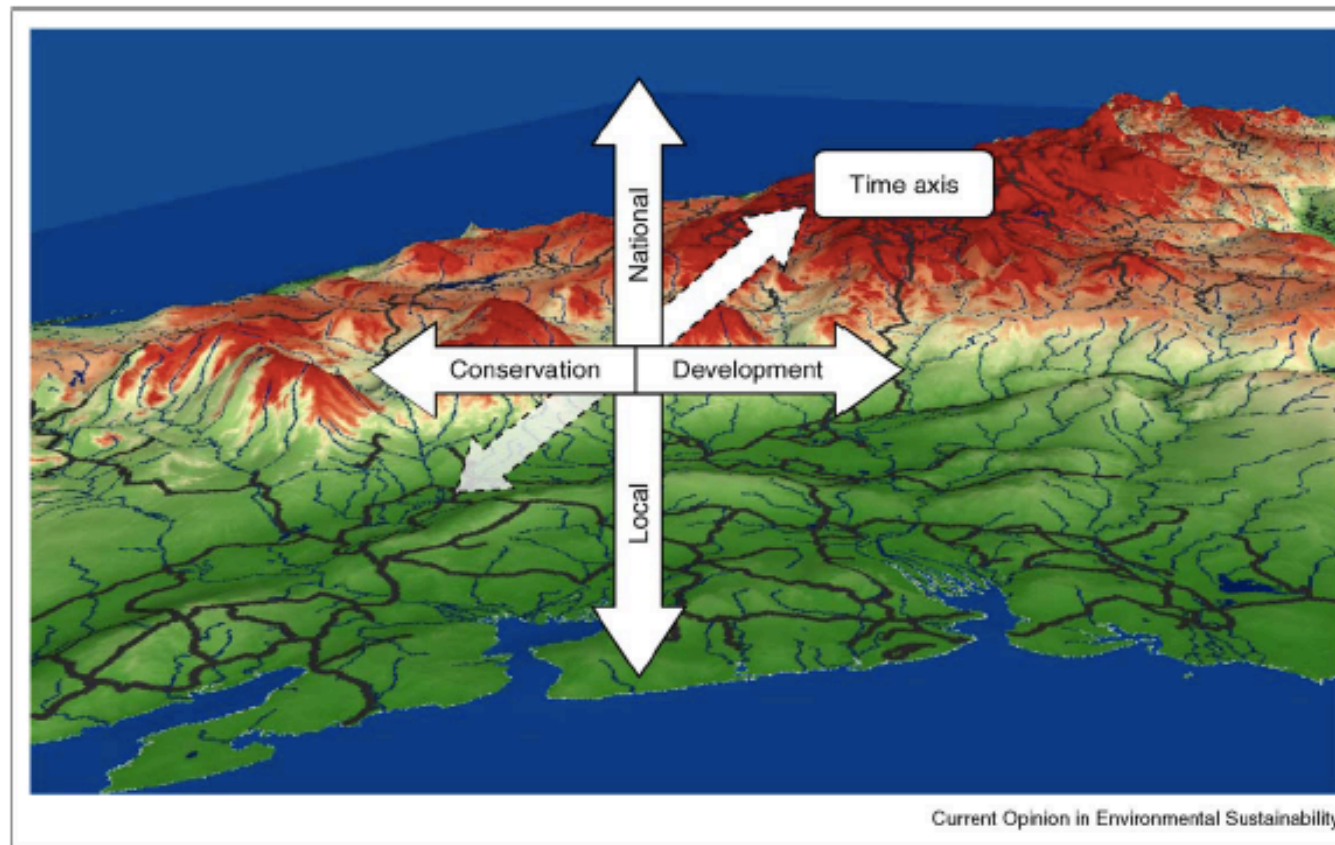
3. Enabling governance



IMPF: possible foci for dialogue

4. Giving effect to a landscape approach

Figure 3





IMPF: possible foci for dialogue

5. Equitable & meaningful benefit sharing





IMPF: possible foci for dialogue

6. Technologies & Sustainability



FuturaGene's eucalyptus is approved for commercial use in Brazil

São Paulo, April 9, 2015 – The Brazilian National Technical Commission on Biosafety (CTNBio) today approved the commercial use of the yield enhanced eucalyptus developed by FuturaGene, a wholly owned subsidiary of Suzano Pulp and Paper. Field experiments conducted since 2006 at various locations in Brazil have demonstrated an approximate 20% increase in yield compared to its equivalent conventional variety.



Australian Government
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International Agricultural Research



Sustainable plantation forestry in South-East Asia

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IMPF: possible foci for dialogue

- IMPF in context – responding to drivers
- Scope & definitions
- Governance systems
- Implementing a landscape approach
- Sharing benefits & costs equitably
- Technologies & sustainability