GEOBENE

UN Climate Change Conference, COP 13, Bali

UN Climate Change Conference 2007
Bali - Indonesia

IIASA - Side Event

Science for Global Insight
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The Political Economy of Avoided Deforestation

The IIASA long-term scenarios on avoided deforestation and afforestation

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Why Avoid Deforestation?

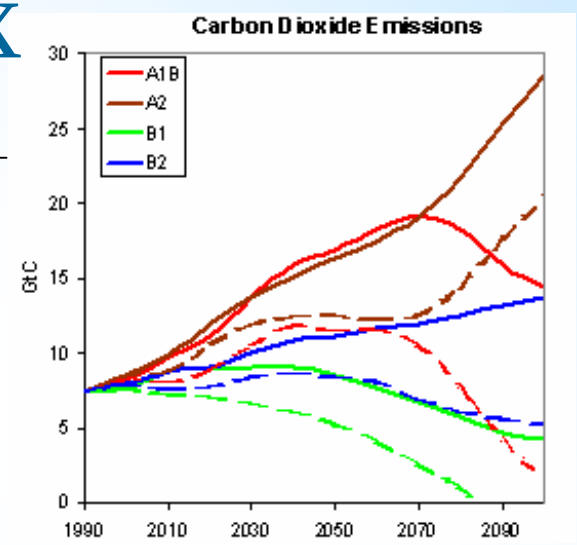
- AFOLU is necessary wedge for ambitious stabilization targets
- Particularly large wedge: AD
- AD under AFOLU is a tool to transfer money from N- S, rural development in developing countries (money pump)
- 200.000.000 ha by 2035 BAU

Tool Box

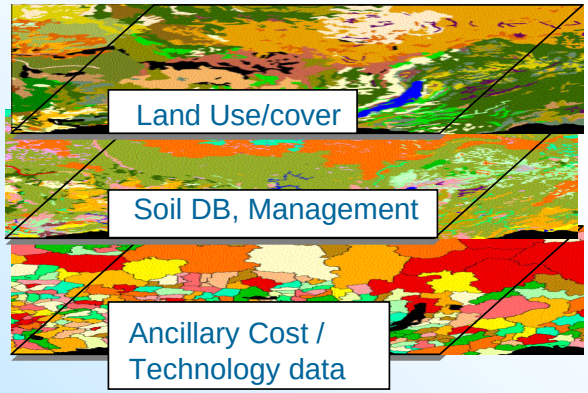
IIASA-toolbox

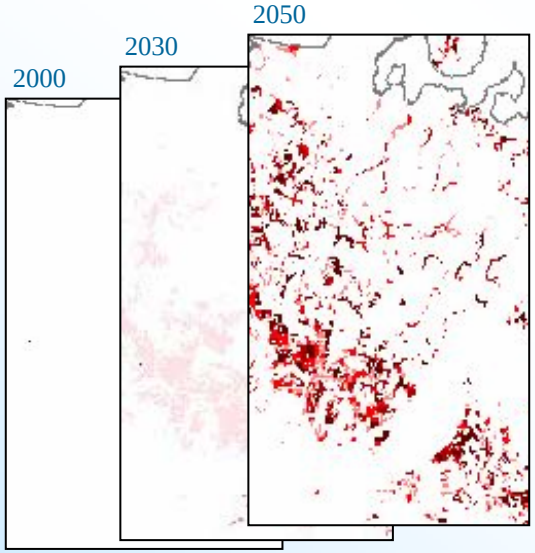
Climate

Change



Link to Energy Models





Sequestered carbon

Non C-GHGs

Biomass crops

Food Crops / Wood

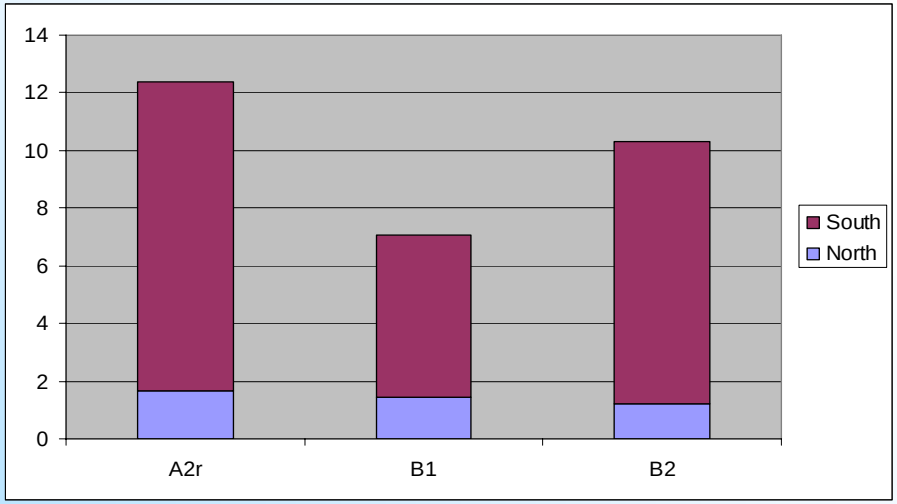
Agricultural forest Market Model

Geography of Production Possibilities

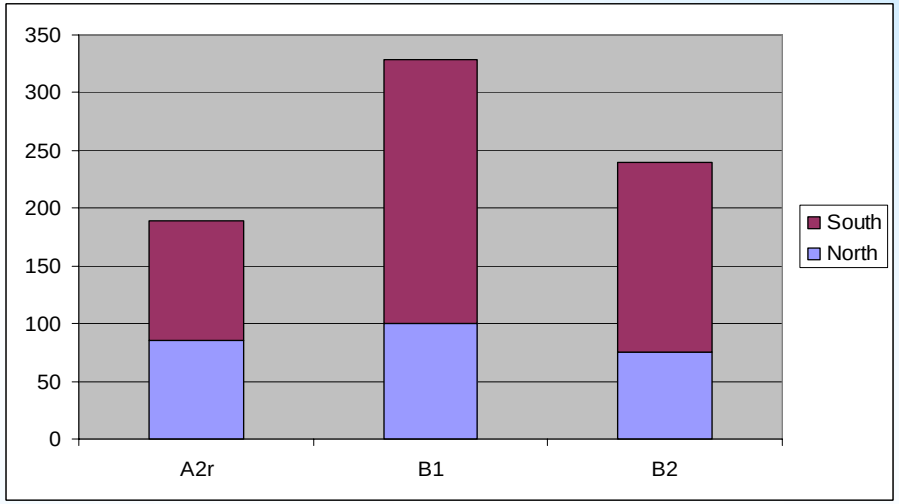
Scenario Drivers

Driver Scenarios 2100

Population (Billion)



GDP (Trillion)

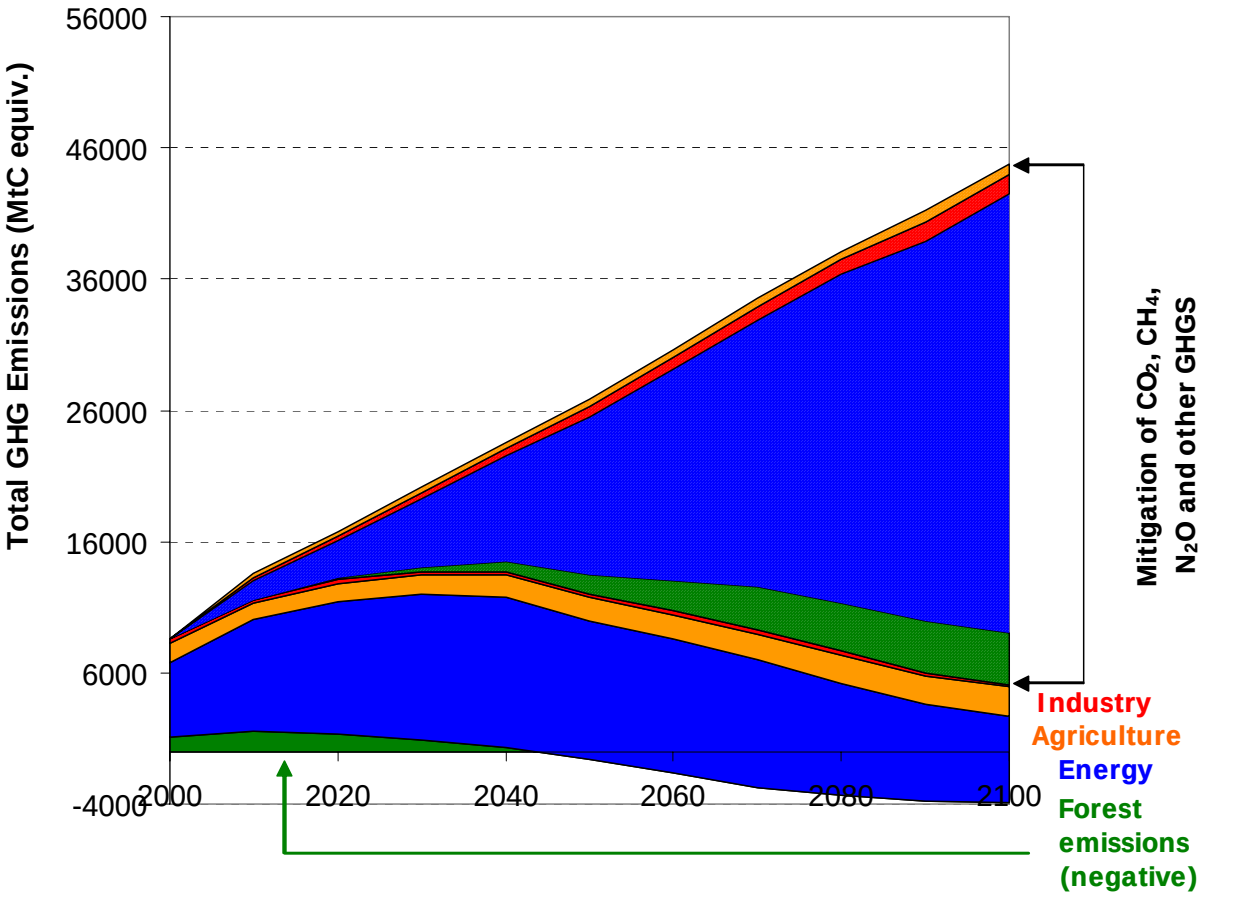


Source: O'Neill et al. 2006

Population density dynamics 2010-2100, B1

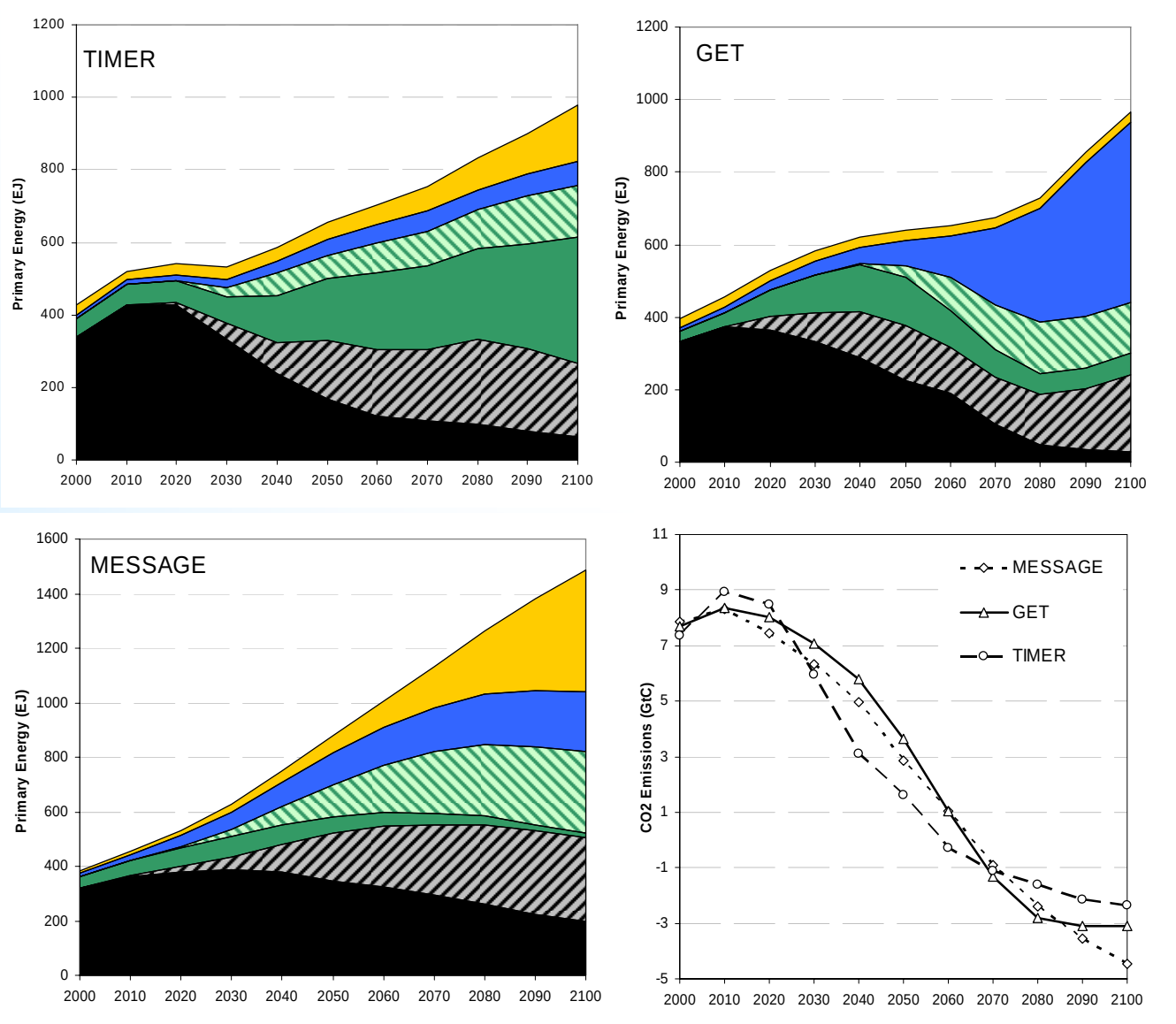
Scenarios

A2-Stabilization Scenario (Fossil Intensive)



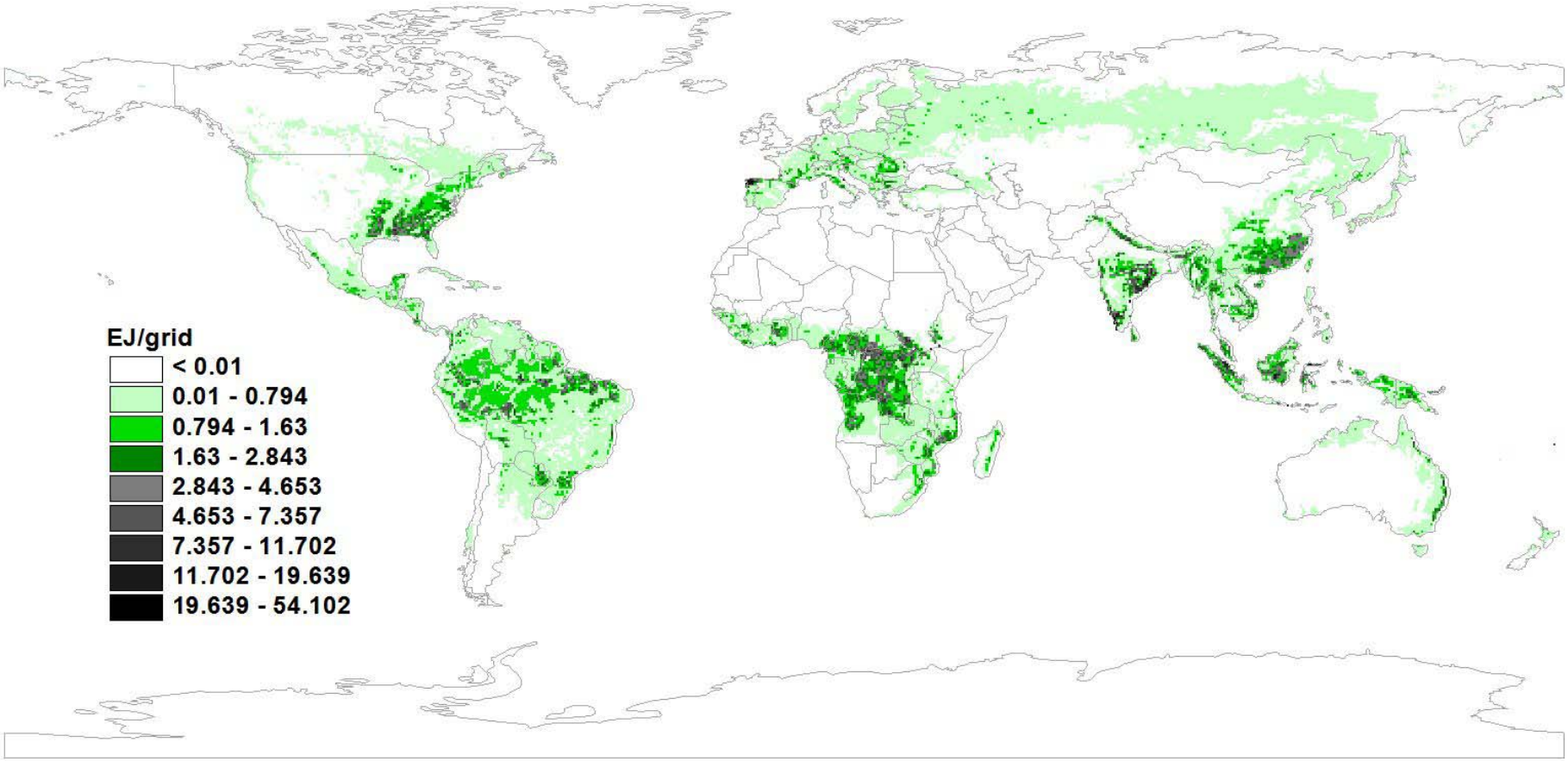
- Energy represents the top sector for potential mitigation
- Sinks contribute significantly in reduction of forest CO2

Global Energy Portfolio



Source: Obersteiner et al. forthcoming

Cumulative biomass production (EJ/grid) for bioenergy 2000 - 2100



Source: Rokitianskii et al. 2006

Intensified Land Use

- Forest conversion (virgin => plantation)
  - <~800 Mha, 20% of forest area

Computation: IIASA GGI/INSEA DIMA model, Rokitianski 2006

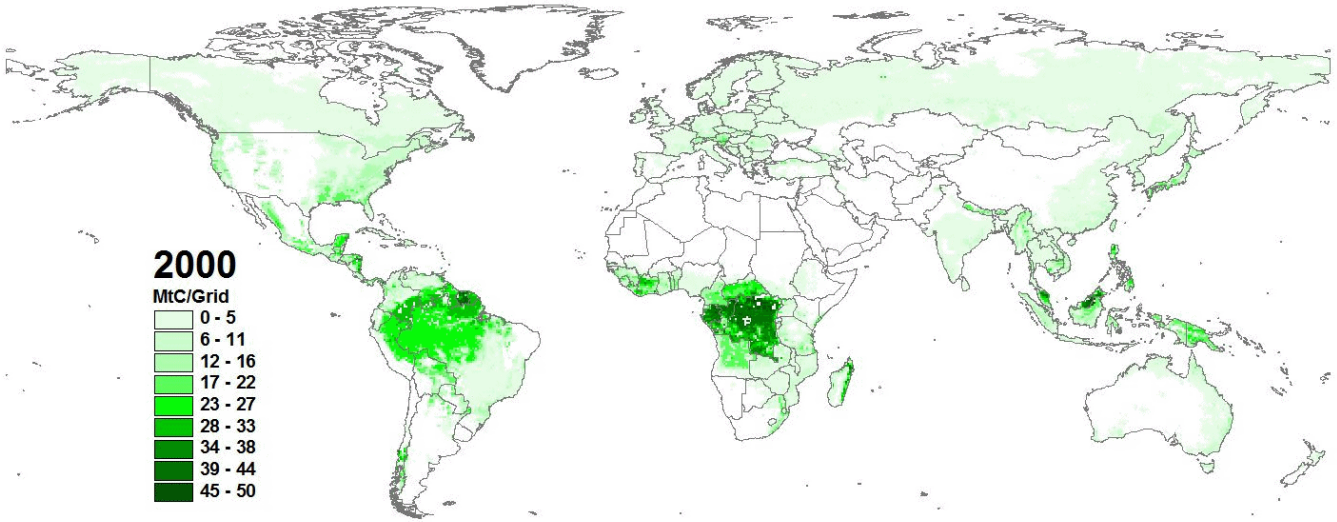
Finance for Rural Development

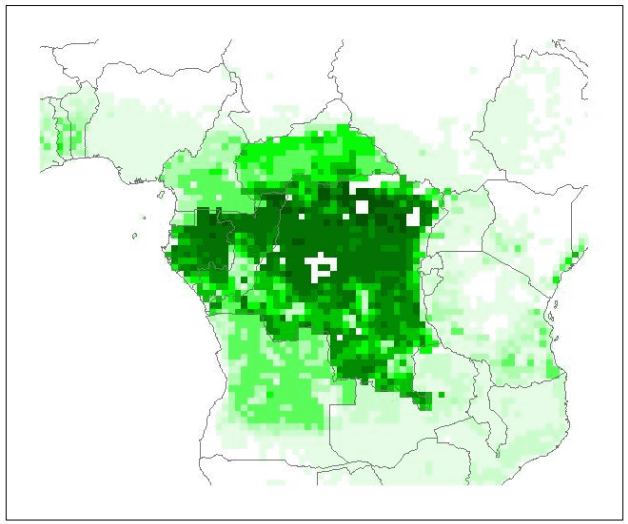
(mainly tropical belt)

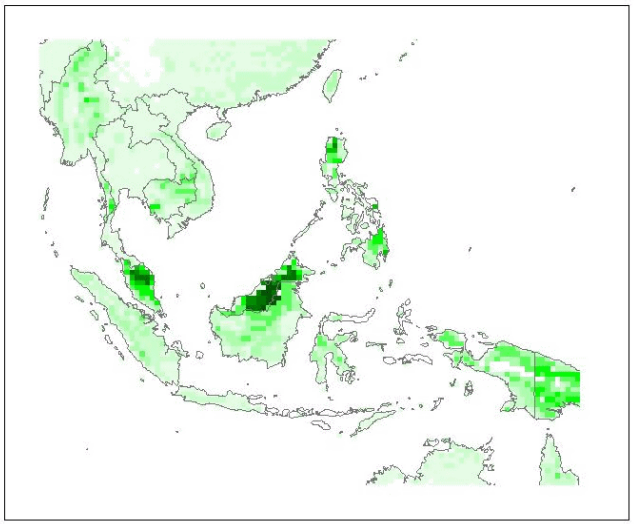
- Bioenergy market
  - 780 billion/a in A2rM (24% due to climate policy)
- Carbon Credit Transfers (Energy => ARD)
  - 245 billion/a in A2rM

Avoided Deforestation

Forest Area Development A2r



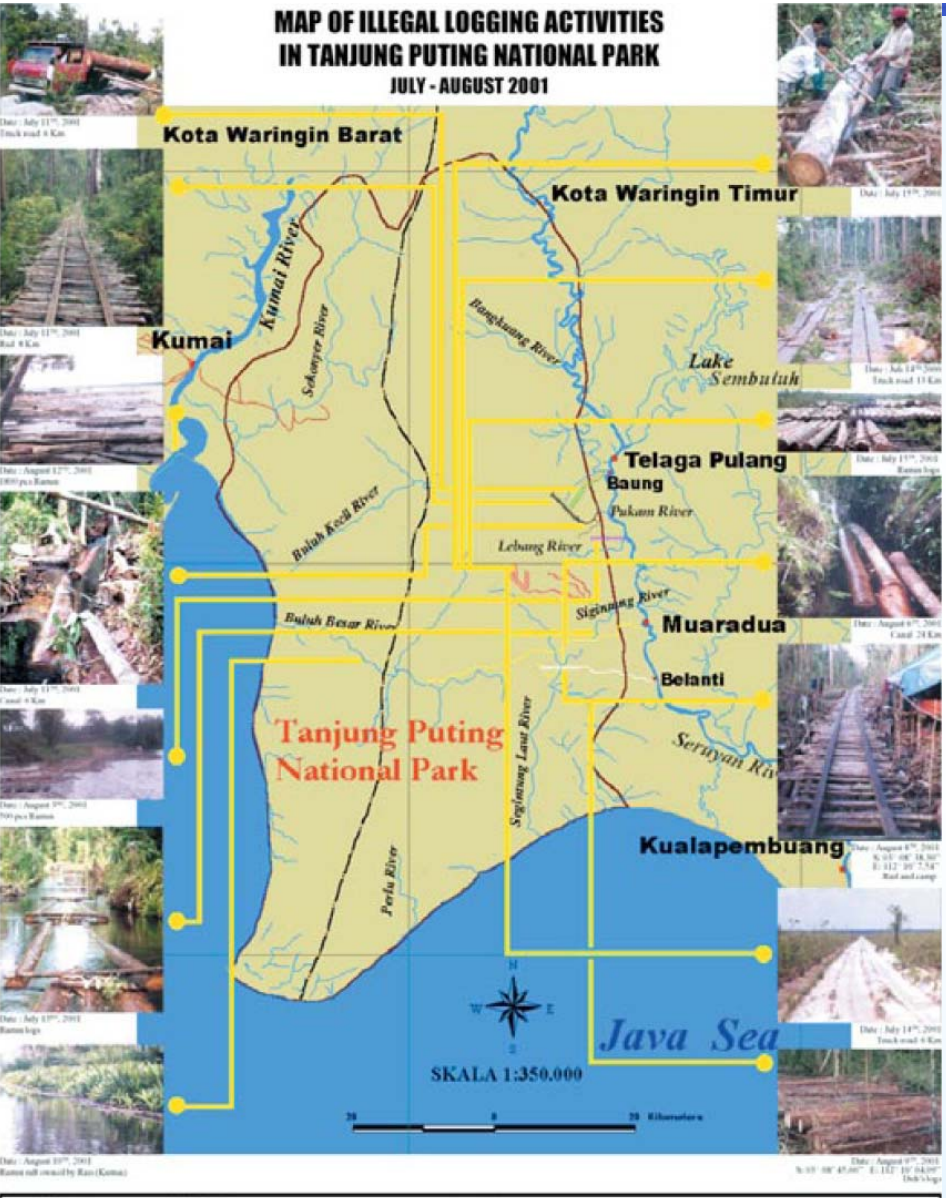




Some more drivers

- Corruption
- Military conflict, social unrest etc..
  - Direct immediate enemy of avoided deforestation
  - Enemy of improved agriculture / land use
- Rural development
  - Land tenure mantra
  - Urbanization
  - AIDS (Africa!)
  - Capitalization and “corporatization” of rural markets

INDONESIA



CAMBODIA

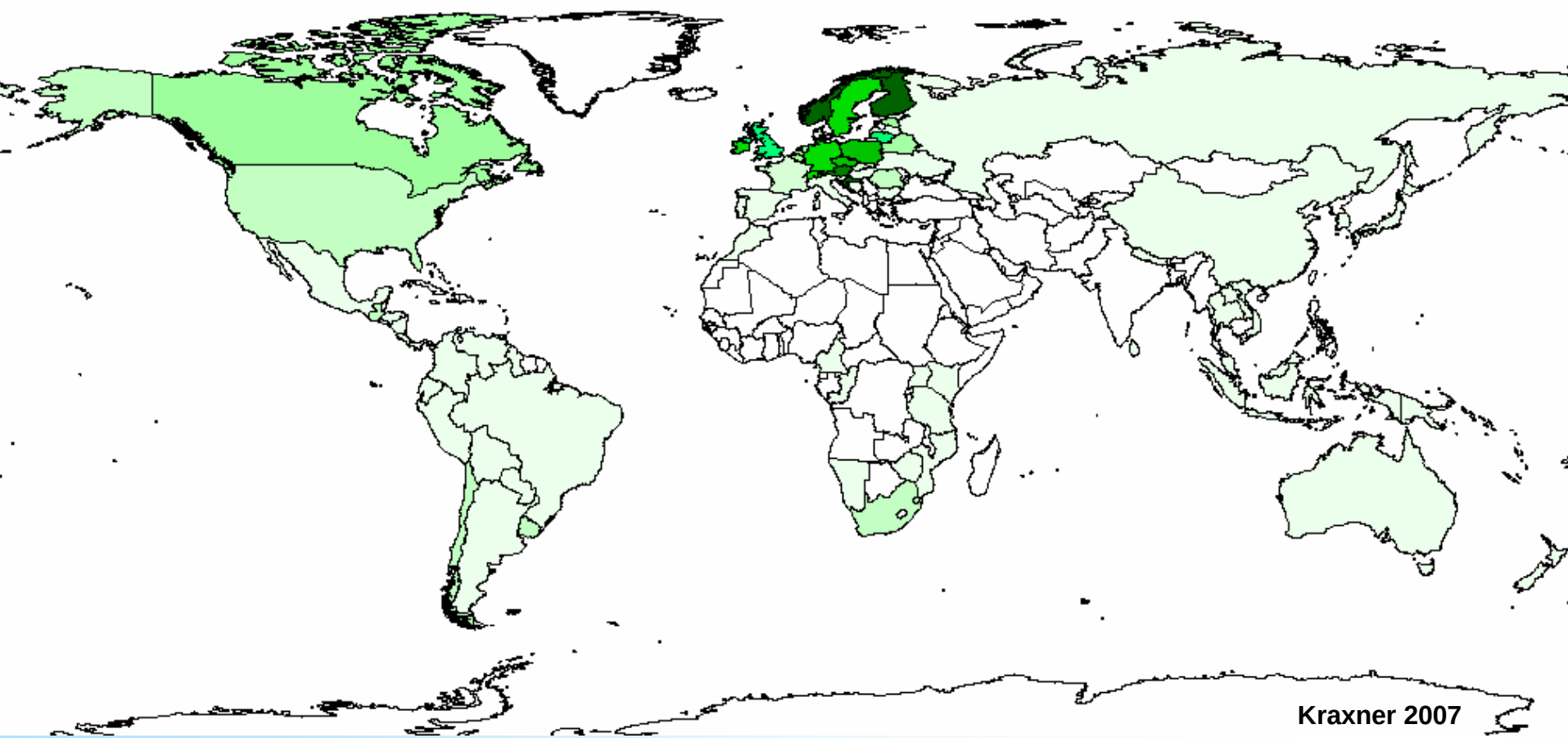
Forest Crimes in Aural Wildlife Sanctuary by Institution:

Royal Government of Cambodia				
Hun Sen, Prime Minister of Cambodia	✪			
Ministry of Defence and RCAF National Command				
General Tea Banh, Co-Minister of Defence	✪			
General Nhek Bun Chhay, Co-Minister of Defence	✪			
General Ke Kimyan, Commander in Chief, RCAF	✪			
General Pol Saroeun, Deputy Commander in Chief, RCAF	✪			
General Meas Sophea, Deputy Commander in Chief, RCAF; Commander, Army	✪			
Military Region 3 Personnel				
Major-General Keo Samuan, Commander, MR3	✪	♁		
Brigadier-General Srun Saroeun	✪	♁	🔫	🔫
Brigadier-General Kong Bunthan	✪	♁		🔫
Major In Sokhear	✪	♁		🔫
Colonel Sort Suy	✪	♁		
Major Tep Sambath	✪	♁		
RCAF Military Intelligence Division				
Lieutenant-General Mol Roeup, National Commander	✪			
Lieutenant-General Dom Hak	✪			
Chan Chao, Military Intelligence Unit operational in Aural		♁		🔫
Hun Sen's Bodyguard Unit B-70				
Major-General Hing Bun Heang, Commander	✪			
Brigadier-General Mao Sophann	✪			
Colonel Mao and Colonel Maorng				🔫
Military Police				
Lieutenant-General Sao Sokha, National Commander	✪	♁		🔫
Man Sibon, Deputy Commander, Kompong Speu Province	✪	♁	🔫	
Saom Puthdara, Commander, Aural District	✪	♁	🔫	🔫
Ministry of Agriculture, Forestry and Fisheries (MAFF)				
Chan Sarun, Minister, MAFF	✪			
Forest Administration				
Ty Sokhun, Director	✪			
Iang Saveth, Head of Forest Crime Monitoring	✪			
Roath Sovannara, Head of Mobile Task Force	✪	♁		
Ta Nang, Deputy-Head of Mobile Task Force		♁		🔫
Phan Pheary, Head, Sangke Sartob Section			🔫	🔫
Ministry of Environment				
Mok Mareth, Minister of Environment	✪			
Chay Samith, Director, Dept. Nature Conservation & Protection	✪			
Ty Tola, Ranger, Aural Wildlife Sanctuary		♁		🔫
Ministry of Interior				
Sar Kheng, Co-Minister of Interior	✪			
Prince Norodom Sirivudh, Co-Minister of Interior	✪			
Police				
General Hok Lundy, National Director-General	✪			
Nob Oeun, Commander, Kompong Speu Province	✪	♁		
Chea Daro, Economic Police, Kompong Speu Province	✪	♁		
Dos Sim, Commander, Aural District	✪	♁		
Local Government				
Ou Bun, Governor, Kompong Speu Province	✪			
Yim Sokhom, Deputy Governor, Kompong Speu Province	✪	♁		
Chem Sarim, Governor, Aural District	✪	♁		

Key ✪ = Command responsibility for subordinates involved in forest crime, ♁ = Receives payments levied through extortion
🔫 = Provides armed protection to timber traders, 🔫 = Participates directly in illegal timber trade

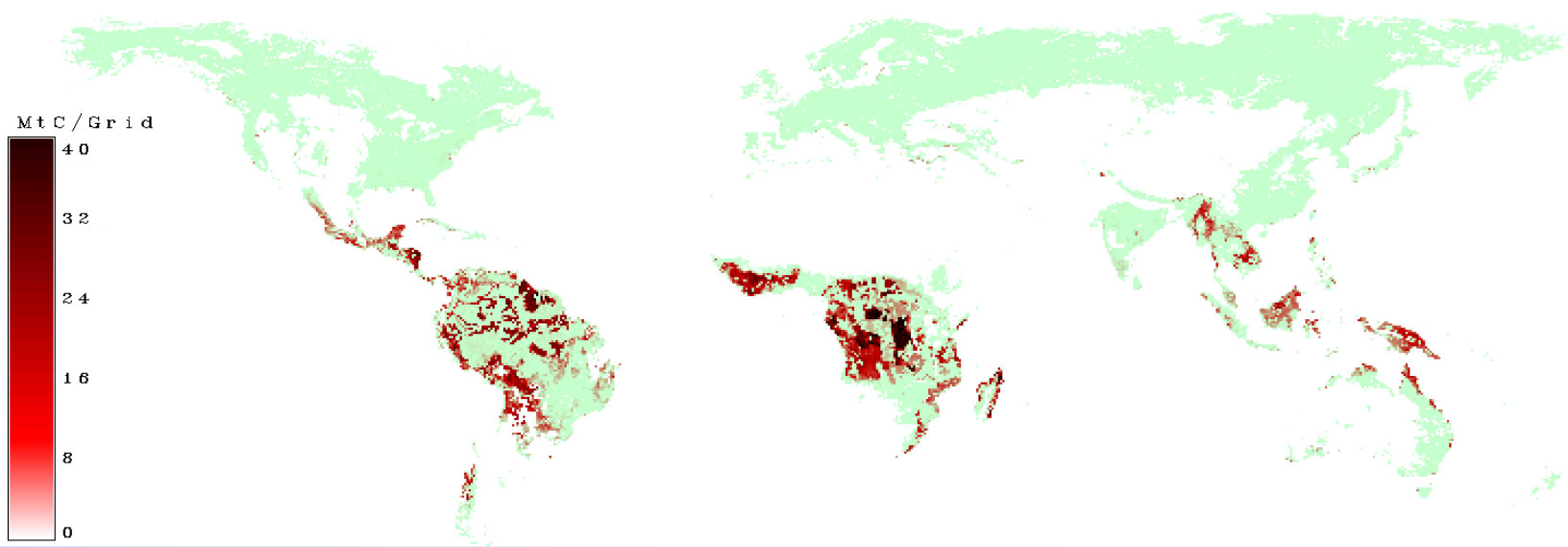
Forest Certification Potential

Certified area relative to forest area by countries



Source: compiled from FAO 2005, 2001; ATFS 2007; FSC 2007; PEFC 2007.

Deforestation Baseline Dima



Conclusions

- **Huge mitigation potential** for avoided deforestation.
- REDD is a **money pump** needed
- Integrative tools such as **certification** needed
- Special drivers such as **corruption** need to be tackled by new institutions