

Carbon Forestry: implementation and financing

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UNIQUE forestry and land use GmbH

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The role of forest management and conservation in a complex international setting.
Göttingen University, November 1st 2011

Structure of the presentation

1. UNIQUE forestry and land use
2. The Science and policy interface
3. Financing
4. Carbon forestry in practice
5. Outlook

1. UNIQUE forestry and land use GmbH

Mission:

- Deep and broad understanding of the forestry and land-use sector
- Constant learning and exchange of experiences of our experts worldwide
- Holistic approach of sustainable forest and land-use management, commitment in FSC and Equator principles



Founded in 1998

Team: 30 in-house experts

Clients:

International institutions, e.g.: World Bank, EU, CDE, FAO, UNDP, UNIDO, UN World Food Programme (WFP), Interamerican Development Bank (IDB), ADB, ICIMOD

Bilateral development institutions, e.g.: KfW, GIZ, DEG, DFID, SDC, DANIDA

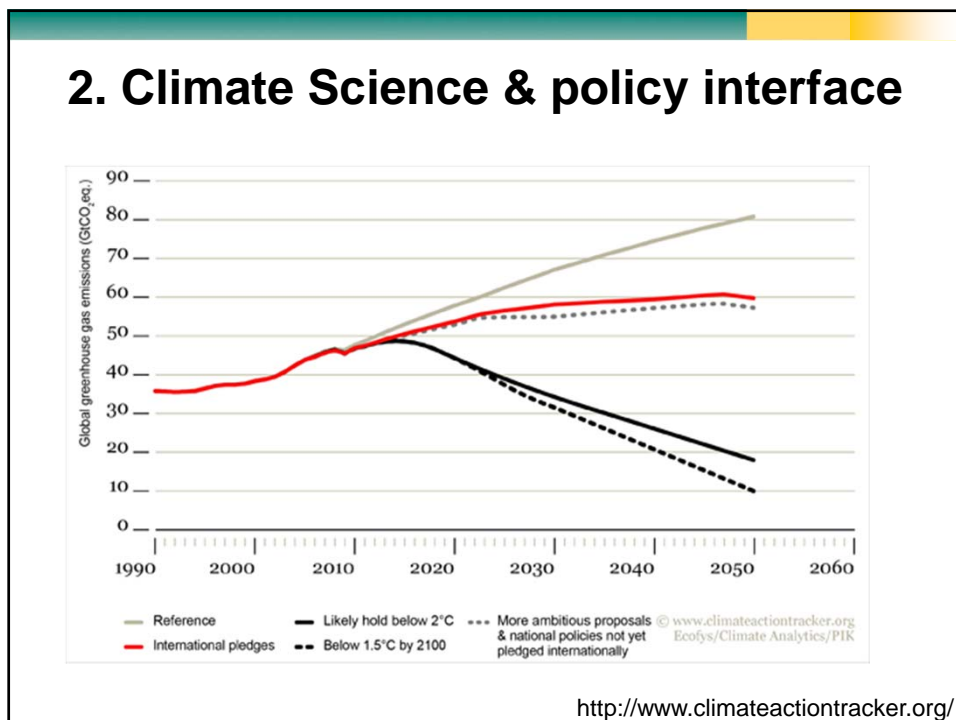
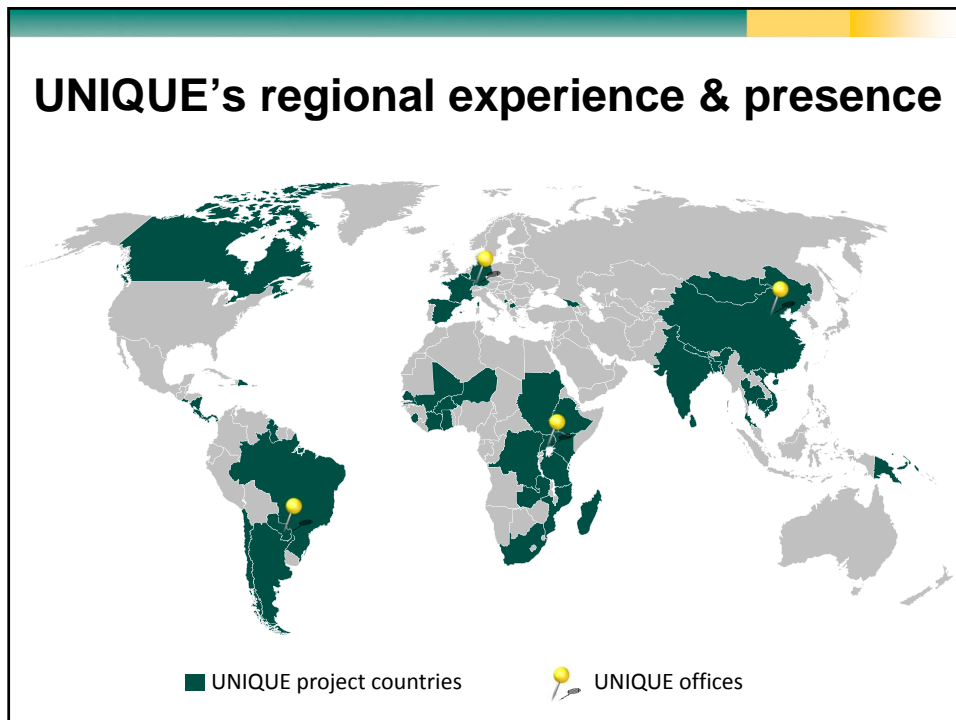
Government Agencies, e.g.: German Environmental Protection Agency, Kenya Ministry of Environment and Natural Resources, Ugandan National Forest Authority (NFA)

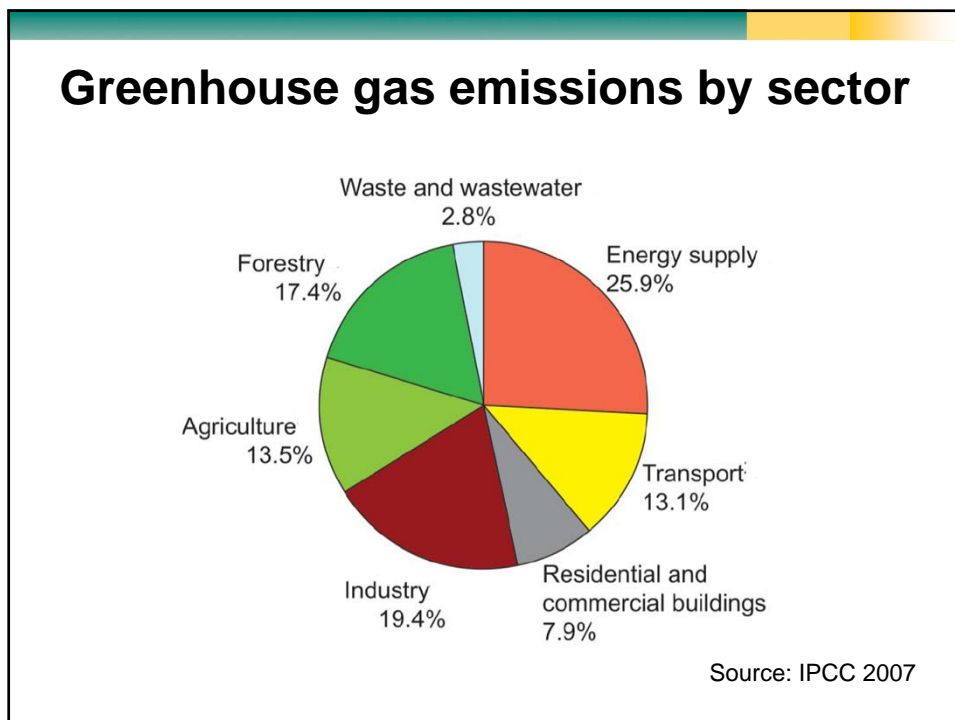
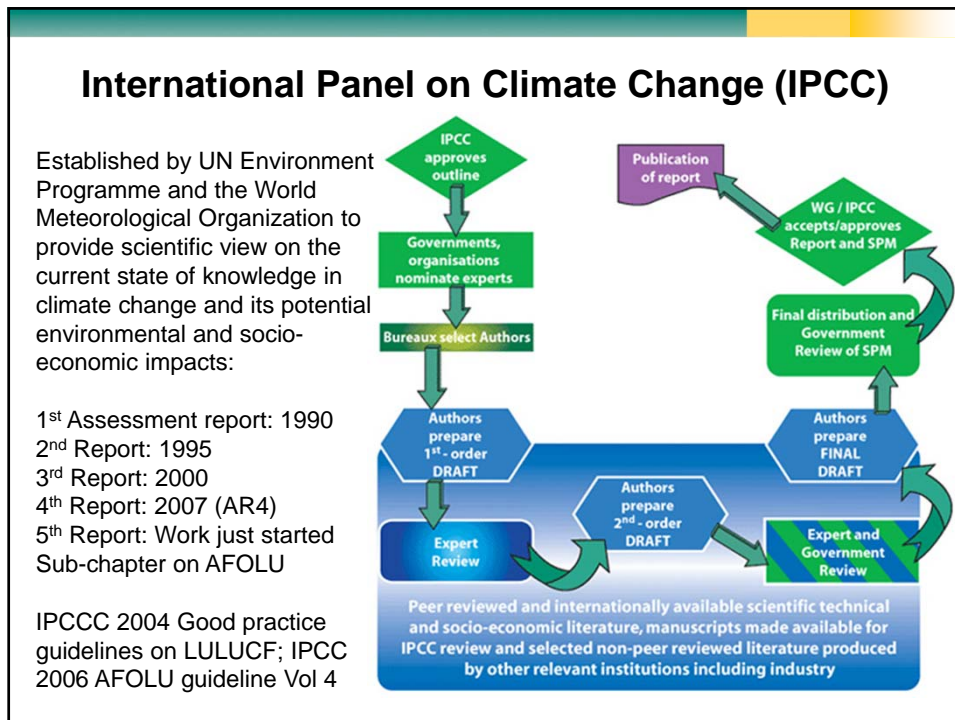
Private sector, e.g.: Danone Group, Barclays, Aldwych International, Deutsche Bahn, E.ON Ruhrgas, EnBW, RWE, Green Resources and various other companies

Foundations, NGOs and business associations, e.g. Rockefeller Foundation, WWF, Chambers of Commerce of different countries (Barbados, Chile, Ethiopia), regional associations

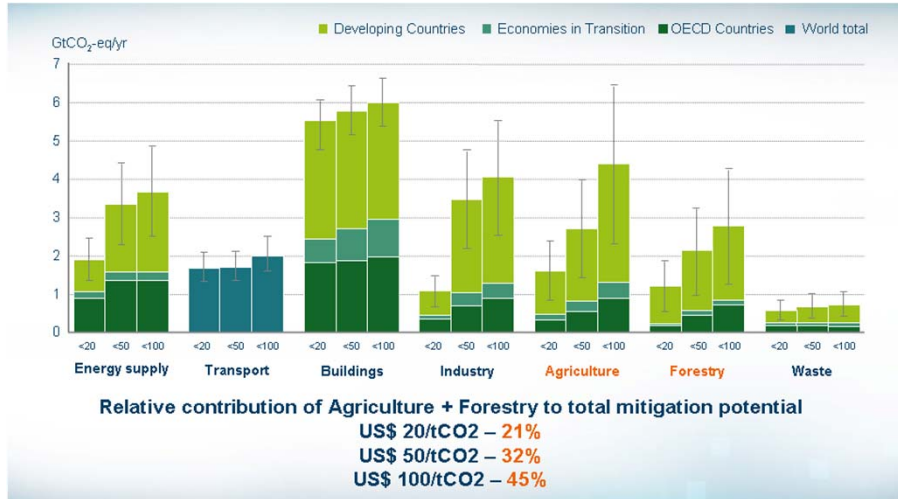
UNIQUE team & organizational structure

Management and Administration			
Managing Directors: Dr. Markus Grulke, Martin Redmann			
Office managers: Tina Raimann, Carmen Sauter			
Project acquisition: Jessica Meyer-Rachner			
Accounts: Carola Deutschmann			
Departments			
Forestry Consulting	Climate	International Cooperation	Forestry Investments
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Dr. Axel Weinreich	Matthias Seebauer	Paul Borsy	Dr. Christian Held
Matthias Wenzel	Eduard Merger	Sofce Spasikova	Dr. Germar Csapek
Jonas Schlenker	Patricia Perez	Britta Ossig	
Metodi Panev	Katalin Solymosi	Laura V.d. Kerchove	
Caroline Chini	Katia Obst		
Regional offices		Representations	
Kampala, Uganda	Asunción, Paraguay	Sgo. del Estero, Argentina	Beijing, China
Kai Windhorst	Rafael Ortiz	Dr. Miguel Brassiolo	Dr. Liu Yunxia
Grit Techel	Wilson Fleitas		
Gilbert Wathum	Alvaro Ramirez		



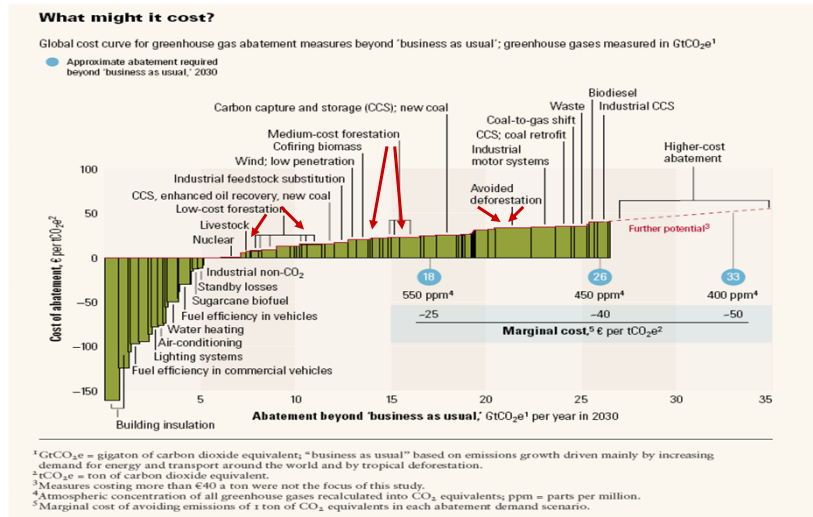


Global economic mitigation potential

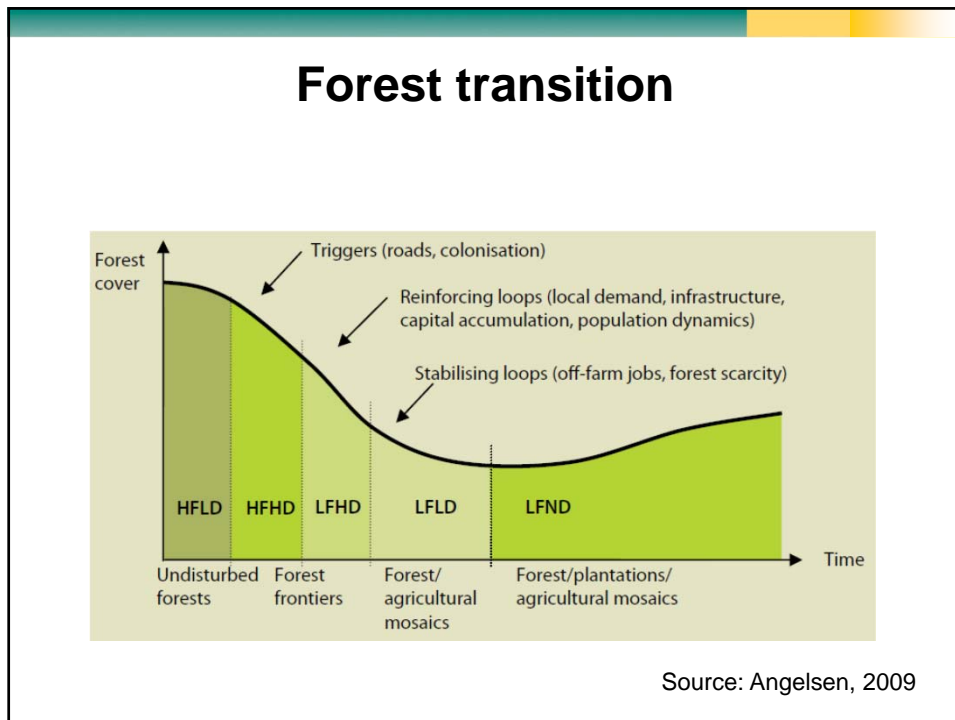


Source: IPCC 2007

GHG abatement costs



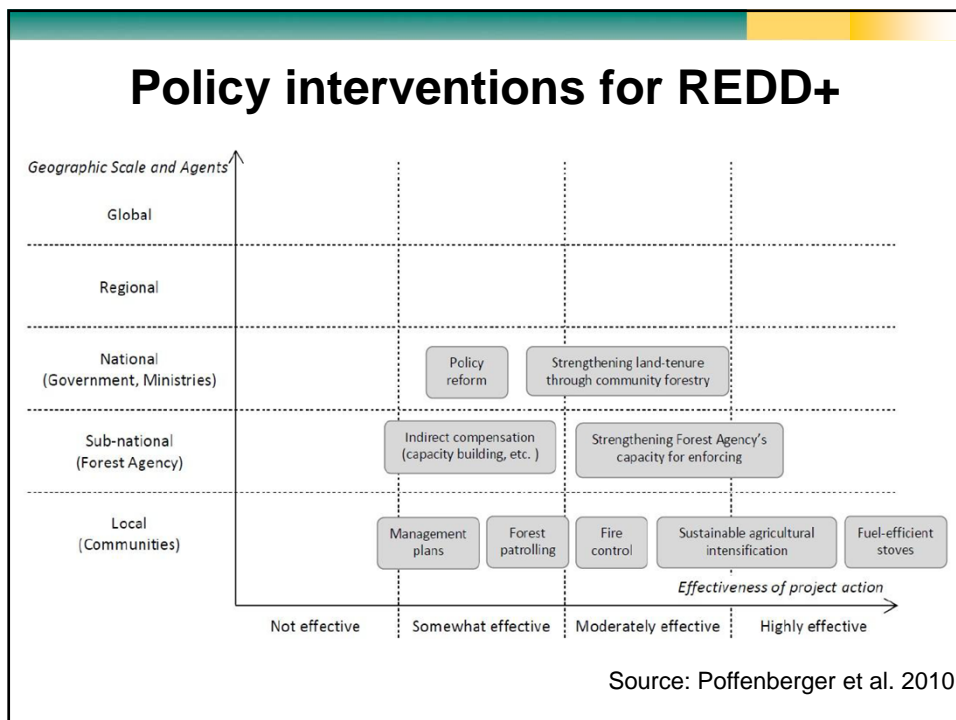
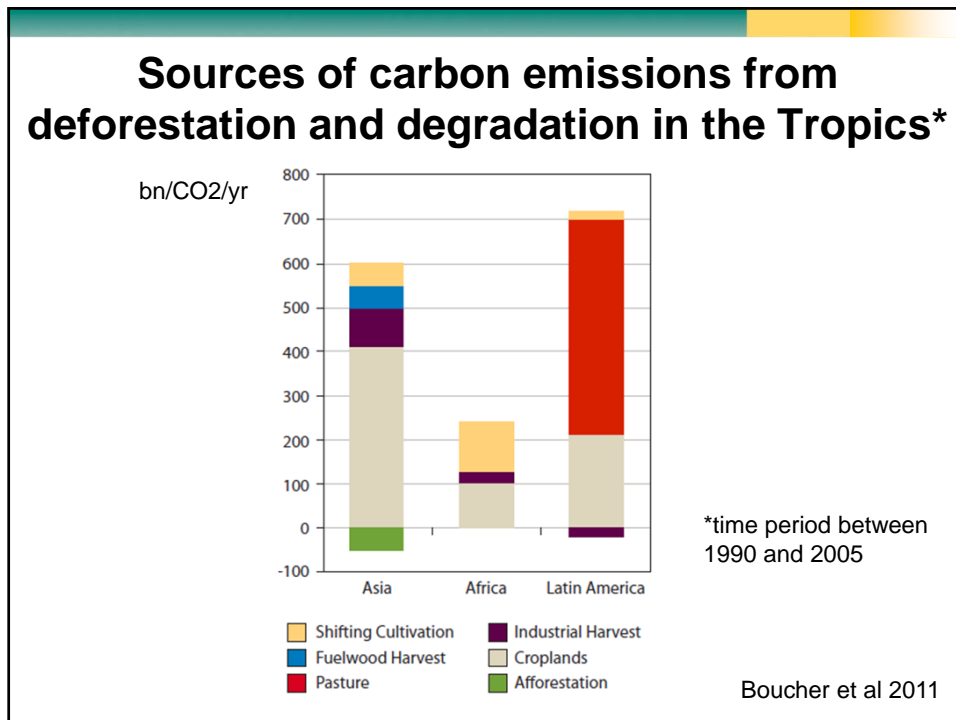
Source: McKinsey / Vattenfall



Country-specific REDD potential

	LOW FOREST COVER (< 50%)	HIGH FOREST COVER (> 50%)
HIGH DEFORESTATION RATE (> 0.22%/yr)	Quadrant I e.g. Guatemala, Thailand, Madagascar No. of Countries: 44 Forest area: 28% Forest carbon total: 22% Deforestation annual 48%	Quadrant III e.g. Papua New Guinea, Brazil, Congo (DR) No. of Countries: 10 Forest area: 39% Forest carbon total: 48% Deforestation annual 47%
LOW DEFORESTATION RATE (< 0.22%/yr)	Quadrant II Dominican Republic, Angola, Vietnam No. of Countries: 15 Forest area: 20% Forest carbon total: 12% Deforestation annual 1%	Quadrant IV e.g. Suriname, Belize, Gabon, No. of Countries: 11 Forest area: 13% Forest carbon total: 18% Deforestation annual 3%

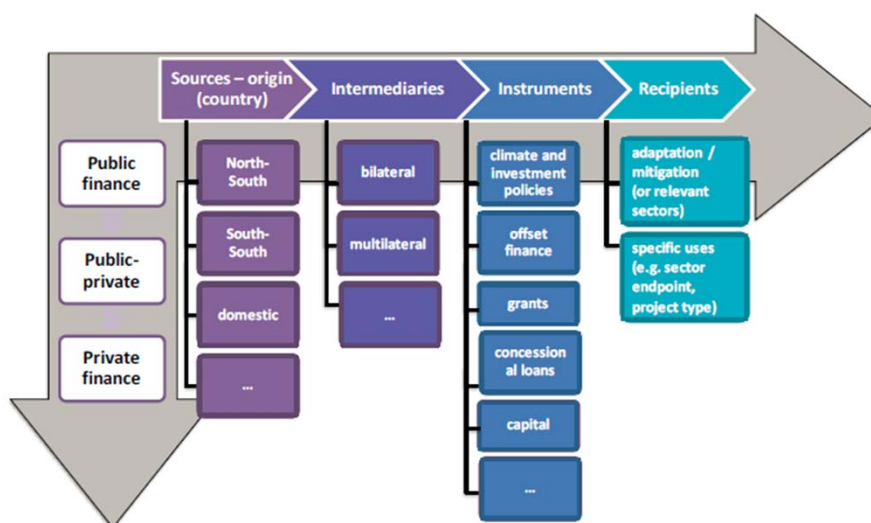
da Fonseca et al 2007



4. Financing

1. Climate financing demand (REDD case study from Tanzania)
2. Financing through carbon markets
3. Financing through NAMAs

Climate finance sources



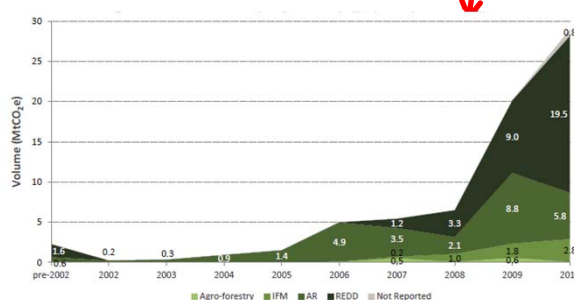
Global Carbon market development

Carbon Market Evolution, values (\$ billion), 2004-10

	EU ETS Allowances	Other Allowances	Primary CDM	Secondary CDM	Other Offsets	Total
2005	7.9	0.1	2.6	0.2	0.3	11.0
2006	24.4	0.3	5.8	0.4	0.3	31.2
2007	49.1	0.3	7.4	5.5	0.8	63.0
2008	100.5	1.0	6.5	26.3	0.8	135.1
2009	118.5	4.3	2.7	17.5	0.7	143.7
2010	119.8	1.1	1.5	18.3	1.2	141.9

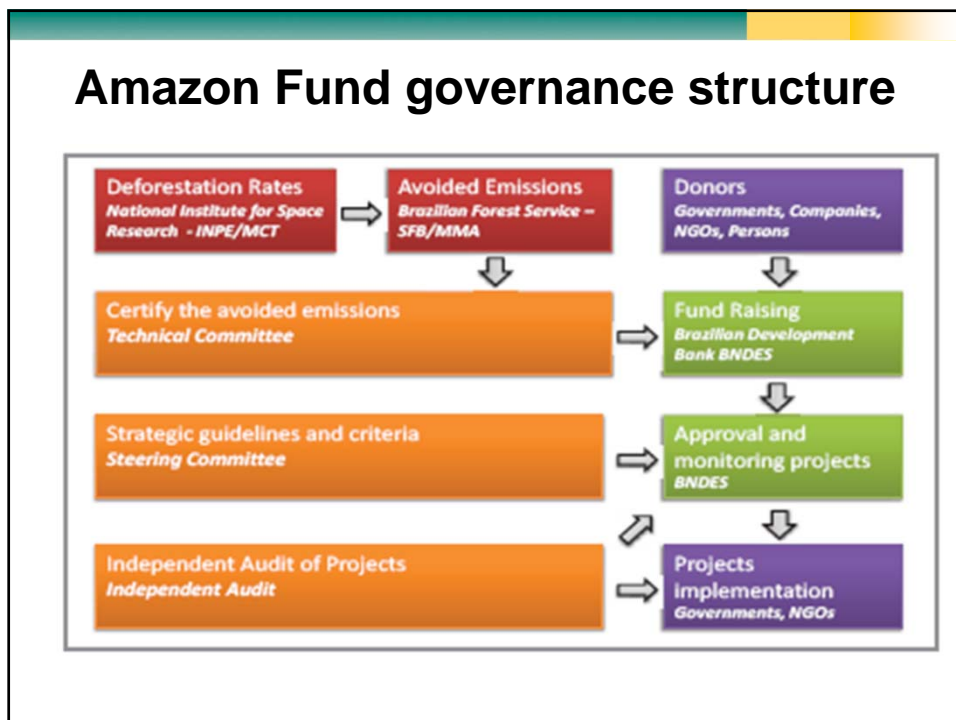
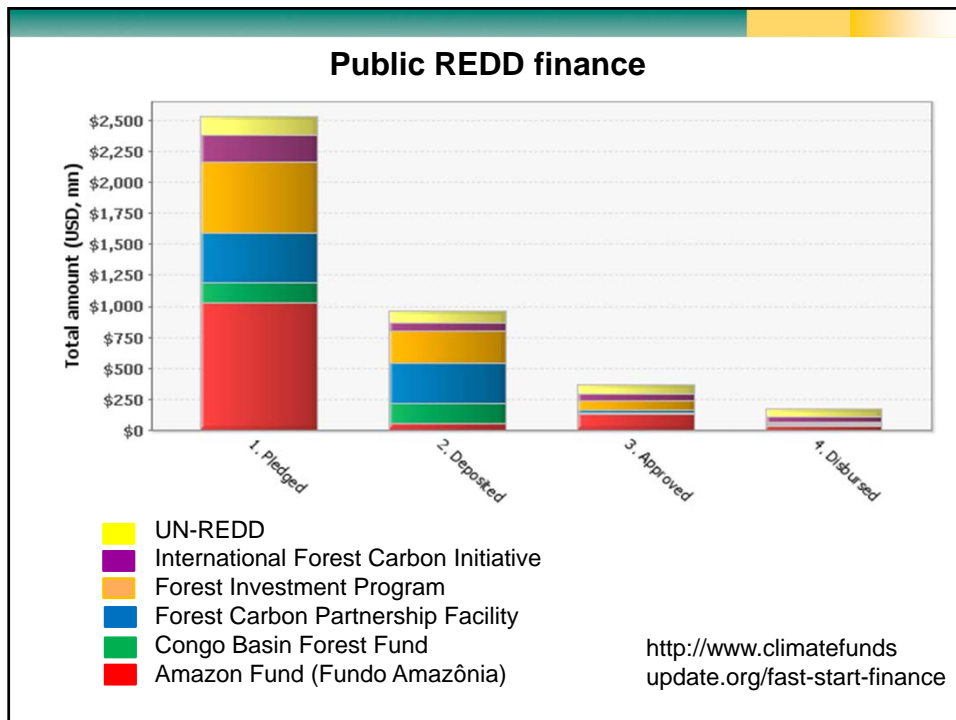
Sources: World Bank, Thomson Reuters Point Carbon, Bloomberg New Energy Finance and Ecosystem Marketplace

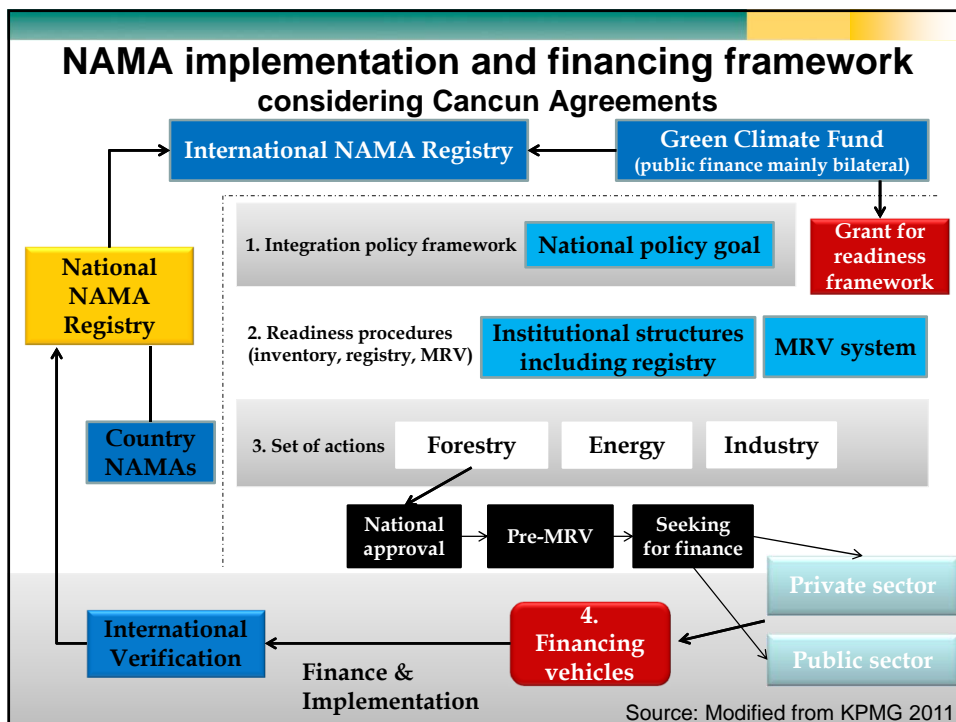
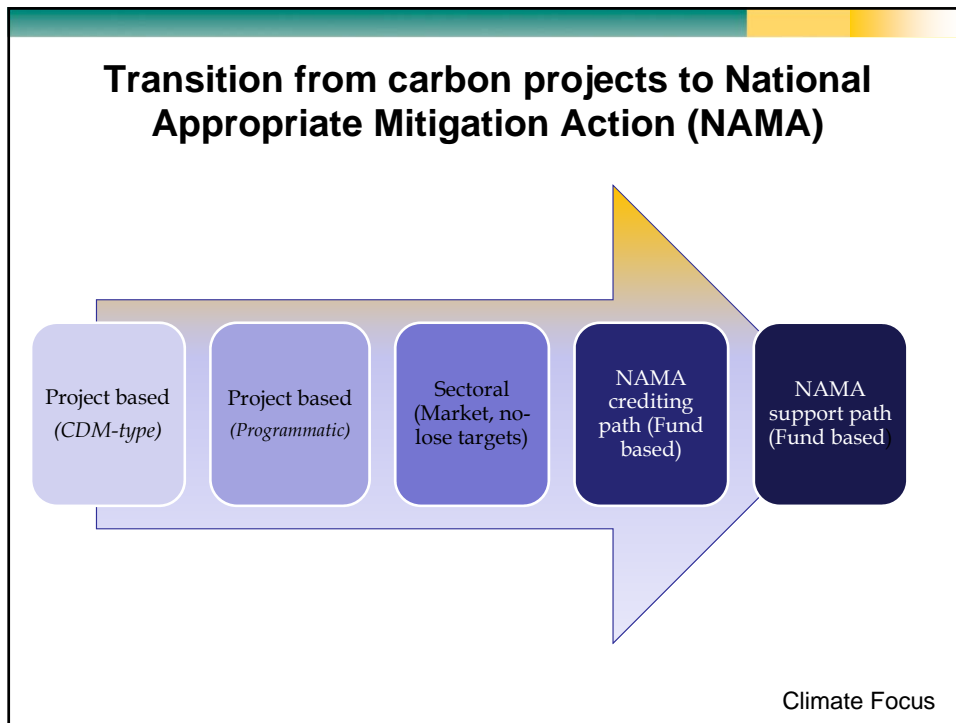
Voluntary forest carbon market



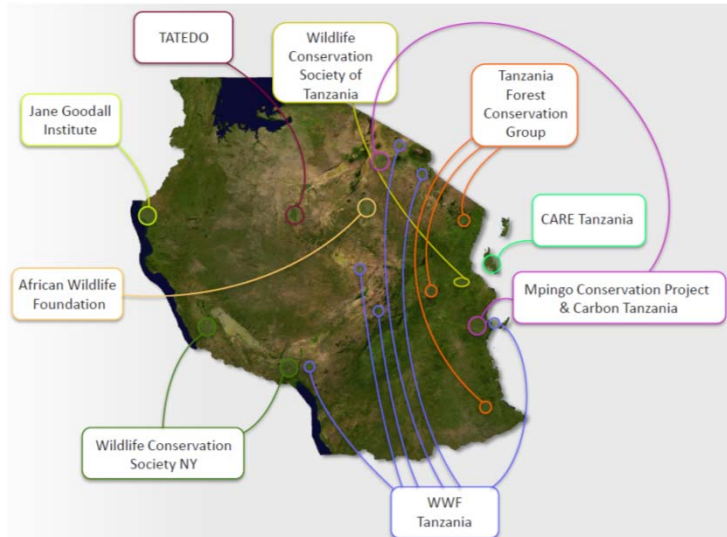
Main reasons to buy REDD carbon credits

- Compliance
- Anticipation of Regulation (i.e., pre-compliance)
- Investment/Resale
- Corporate Social Responsibility (CSR)/Environmental Ethics
- Public Relations/Branding
- Climate-change affected business model (such as re-insurance agencies or ski resorts)





Background Norway's \$100 mio REDD investment Tanzania

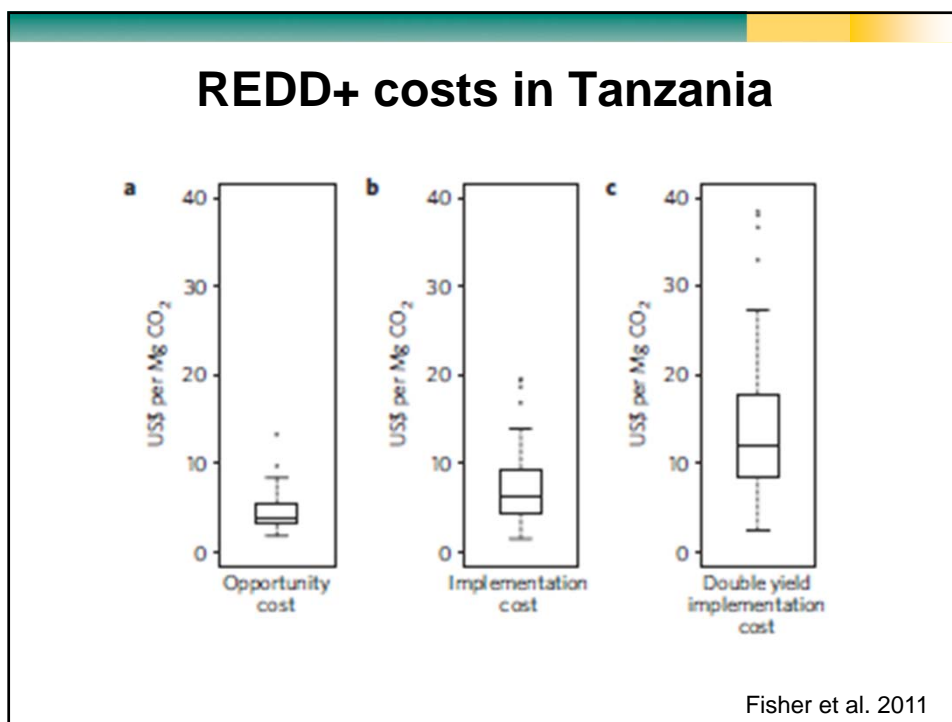


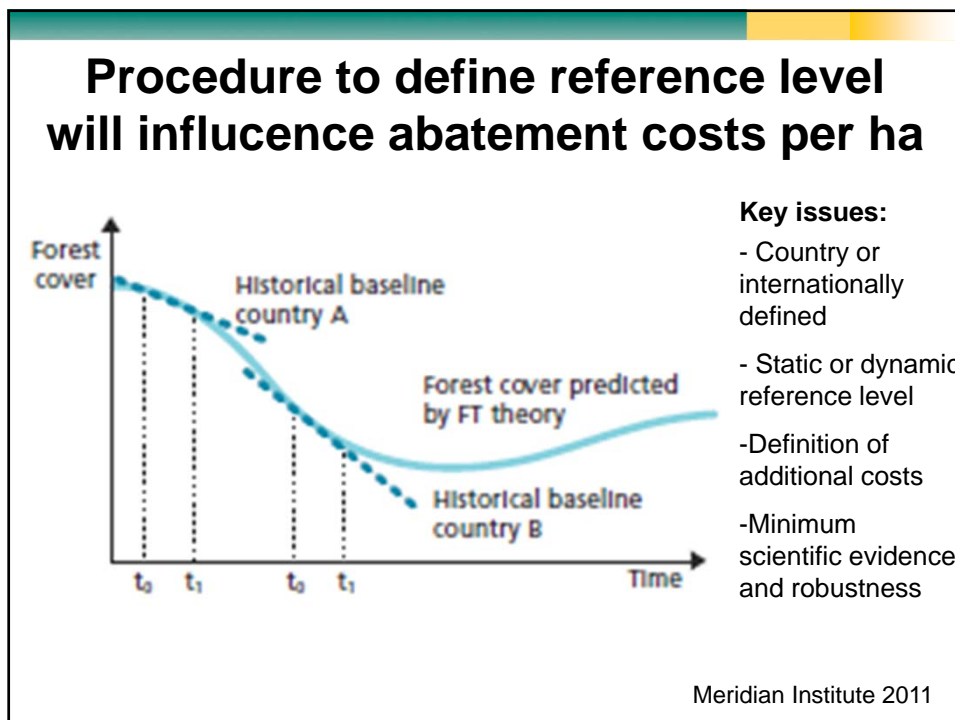
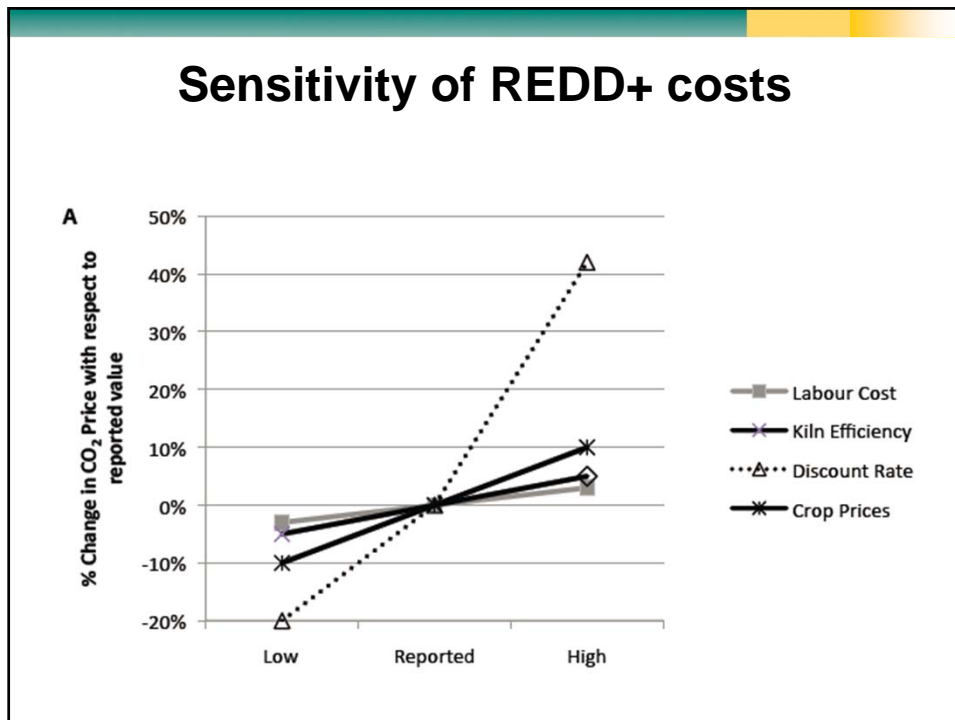
Baseline practices: unsustainable agriculture, charcoal production and unmature tree harvesting

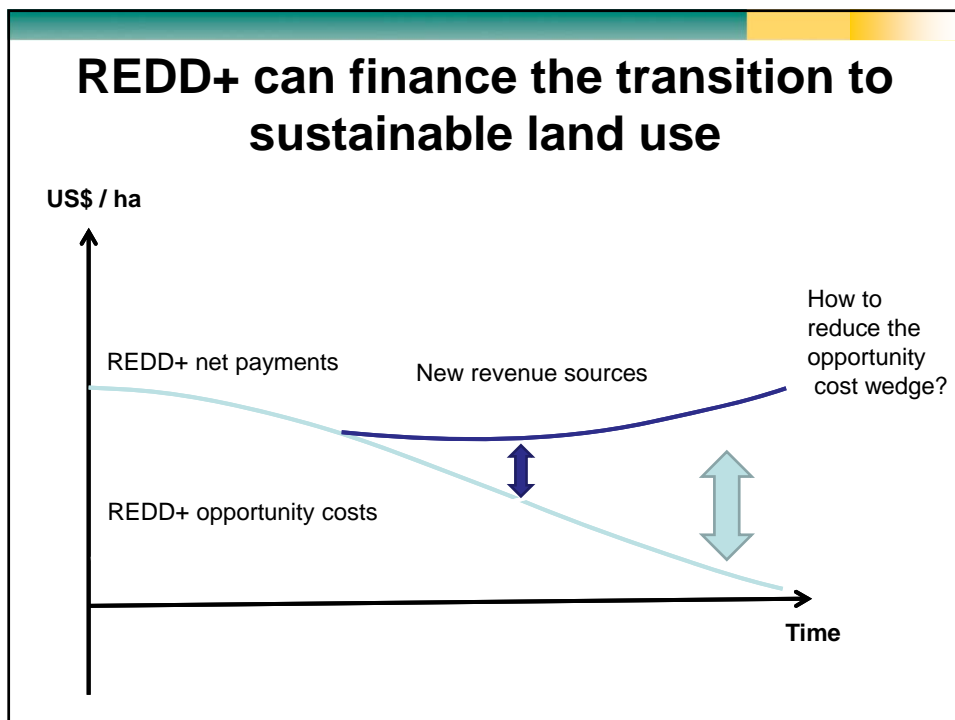
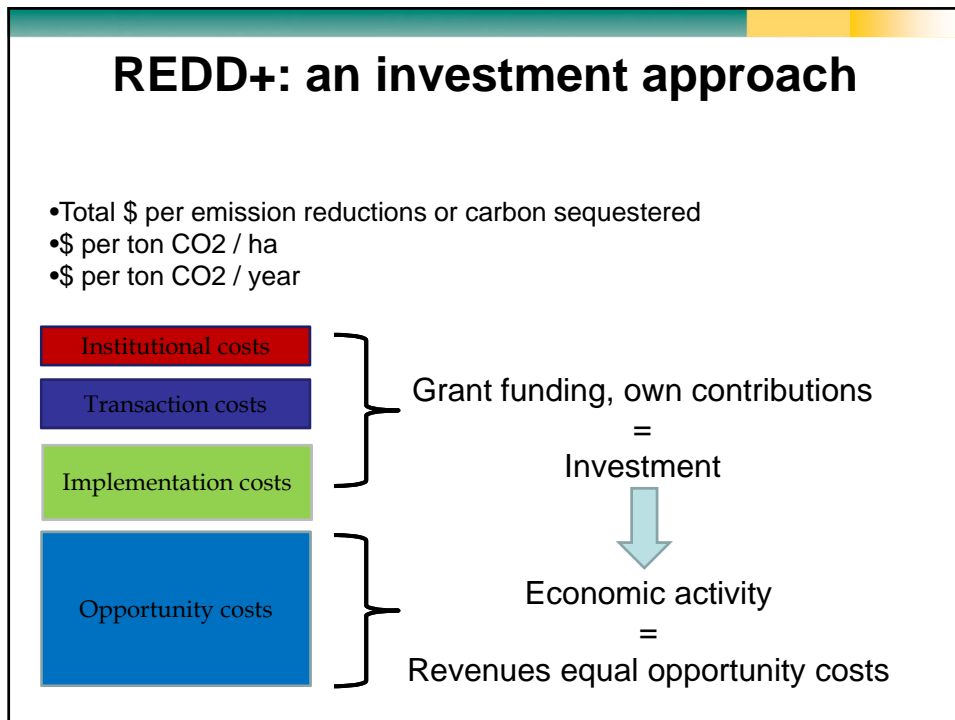


REDD+ costs	
Opportunity	<ul style="list-style-type: none"> • <i>Direct, on-site</i>: profit difference between conserving forests and converting them to other, typically more valuable, land uses • <i>Socio-cultural</i>: livelihoods restricted or changed; psychological, spiritual or emotional impacts • <i>Indirect, off-site</i>: difference in value-added activities (changes in economic sectors attributable to REDD+) • tax revenue differences • agriculture and forest product price increases from economy feedbacks (dynamic not static effects)
Implementation	<ul style="list-style-type: none"> • land use planning • land tenure / governance reform • forest protection, improved forest and agriculture management • job training • administration
Transaction	<ul style="list-style-type: none"> • REDD+ program development • agreement negotiation • emission reduction certification (measuring, reporting, verification: MRV) • stabilization, prevent deforestation moving to other countries (stop leakage)

World Bank 2011



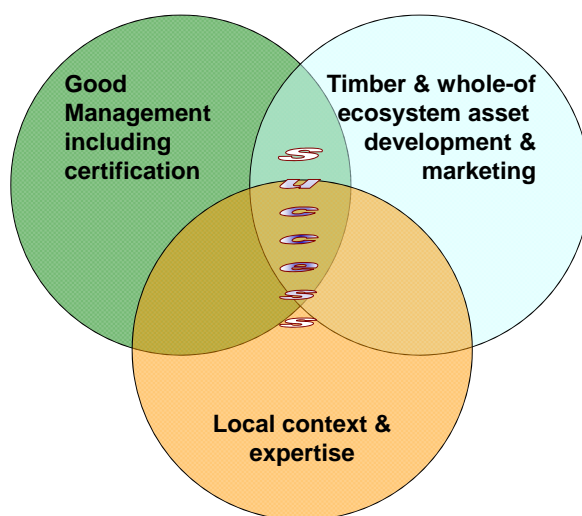


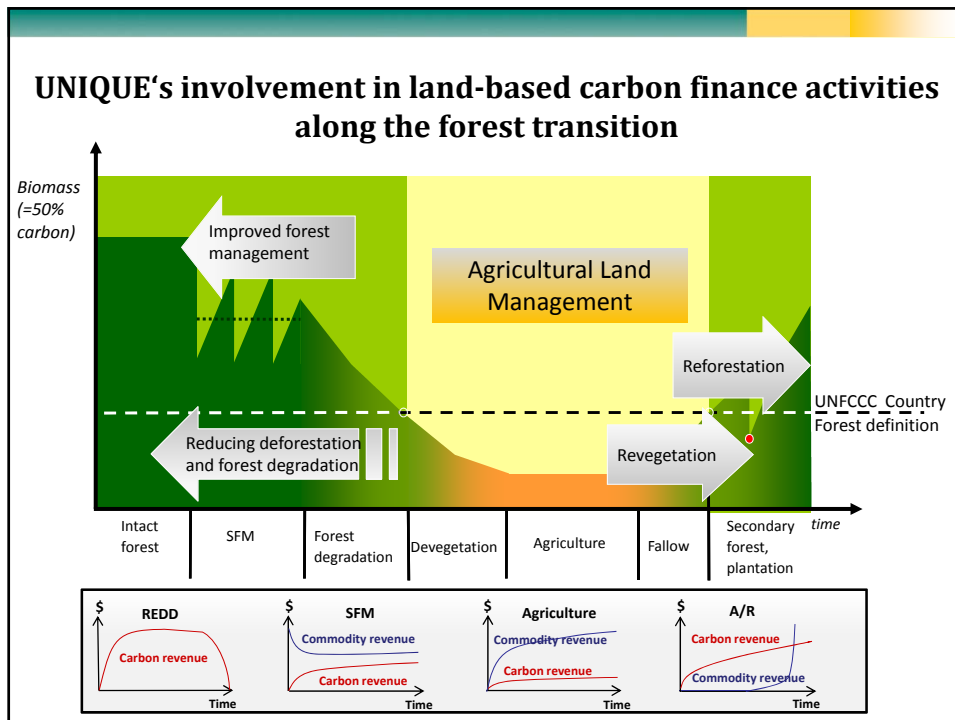


Climate finance for the forestry sector

- Hundreds of EURO billions is required to enable low-carbon development limiting global warming to 2 degrees Celsius and to adapt to climate change
- Main financing instruments will be private finance, carbon markets and public finance for capacity building and research
- Most of the financial resources have to be provided from the private sector. However, there is some resistance in the forest sector to consider market-based approaches
- The forest sector will compete for financial resources and therefore the significant current funding available for REDD, has to be spend effectively to attract future private and public funding

5. Carbon forestry projects in practice





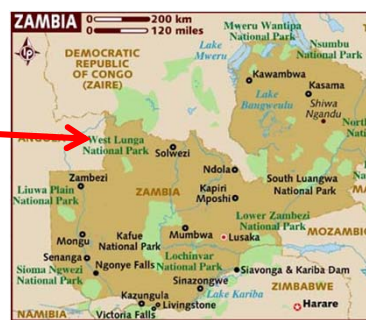
Carbon play in forest projects

Monoculture („classic“)	Mixed stands („advanced“)	Enrichment („innovative“)	Natural forest management
+ AR carbon + Productivity - Difficult to argue additionality - Sustainability/ Image	+ AR carbon + Risk hedging - Complex	+ REDD+ carbon + No impact on food security - Large un-productive areas	+ REDD+ carbon + Resource availability - Productivity - Econ. of scale

UNIQUE Climate: Carbon project track record

Projects some include methodology development	Standard	Client/partner
CDM AR Afforestation projects: - Uganda project portfolio (5 projects), 1 st African UNFCCC registered forestry project - Kenya project portfolio (7 projects) - India Livelihood carbon project (6,000 ha) - India Mangrove restoration (6,000 ha)	UNFCCC/ CDM	World Bank BioCF, EuropeAid, NFA and Greenbelt Movement Danone Danone
REDD+ projects: - Ethiopia 0.5 mio ha - Mozambique 10,000 ha - Zambia 90,000 ha	VCS CCBA VCS	Oromia State Forest Envirotrade UNDP/ICI
Agricultural, soil carbon finance projects: - Kenya Agricultural Carbon Project (80,000 ha) - China: Rangeland restoration (20,000 ha) - Mongolia: Rangeland restoration (200,000 ha)	VCS VCS VCS	World Bank FAO/private sector MSRM/SDC

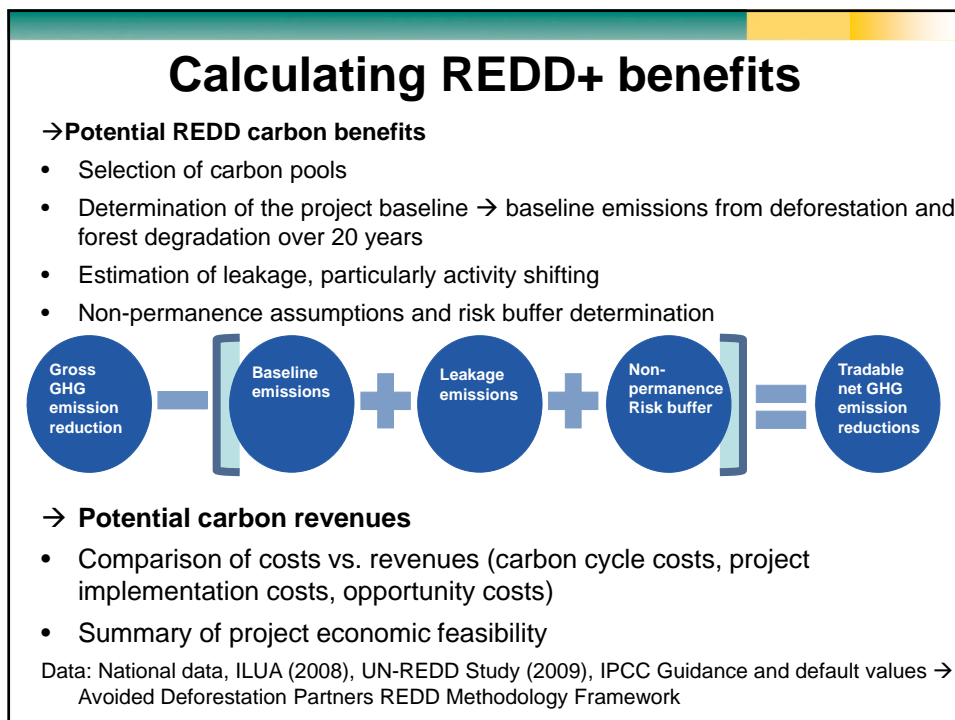
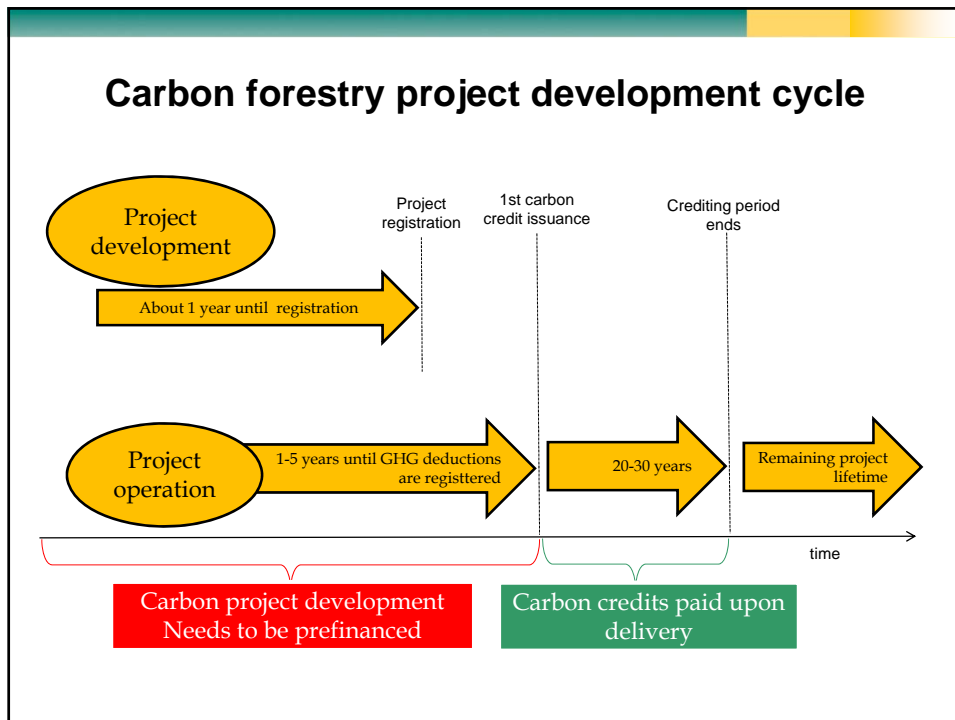
REDD+ case study: West Lunga National Park Zambia

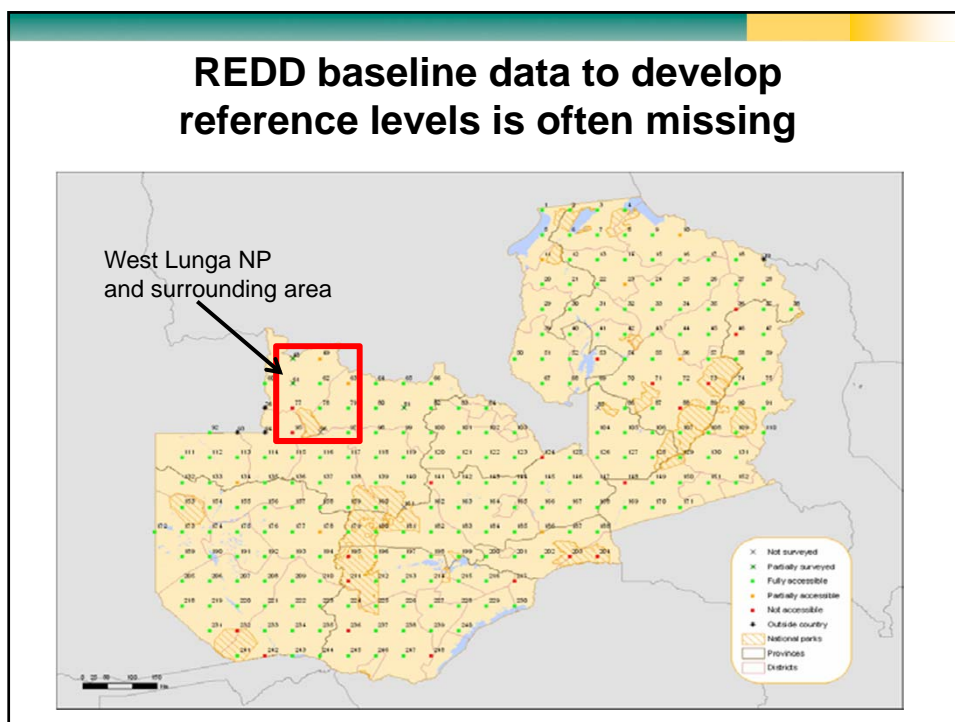


Forest/vegetation types:

- Dry evergreen forest
- Open forests (miombo)
- Kalahari woodlands
- *Ermitaria* vegetation (bush)

Total forest area: 840,000 ha





Sensitivity of REDD+ benefit analysis

Baseline and Management effectiveness sensitivity				
		Baseline deforestation rate		
		0.1 %	0.3 %	0.5 %
Management effectiveness Year 6-20	10%	419.556	570.386	710.375
	25%	539.329	918.599	1.272.762
	50%	689.523	1.358.040	1.987.039
	75%	840.242	1.802.127	2.713.959
	100%	991.491	2.250.905	3.453.727

Deforestation 0.3% Leakage and Non-Permanence Sensitivity					
		Leakage			
		10%	20%	30%	40%
Non-Permanence	10%	2.546.519	2.109.895	1.697.550	1.309.483
	25%	2.364.625	1.934.071	1.527.795	1.145.798
	30%	2.182.730	1.758.246	1.358.040	982.113
	35%	2.000.836	1.582.421	1.188.285	818.427
	40%	1.818.942	1.406.597	1.018.530	654.742

Concluding remarks

- REDD+ is still at the beginning with regards to implementation issues, important accounting questions e.g. how to determine the reference level or additionality are still unclear
- REDD+ payments/deforestation rates have to decrease over time, but opportunity costs are expected to increase. Hence REDD finance is either not a low cost abatement options or not a sustainable financing mechanism
- REDD+ should be considered as an investment for managing the transition to sustainable forest management.
- Increasing the forest value from:
 - emission reductions from harvested wood products and
 - ecosystem servicesis therefore important combined with good governance.
- Durban most likely will result in a “political” second commitment period. Since REDD is among the few consensus building topics this might contribute to maintain the attention on forests.

Thank you !

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