

Designing payments for watershed ecosystem services:

THE POTENTIAL OF REDD IN THE PHILIPPINES

Rodel D. Lasco

World Agroforestry Centre (ICRAF)



Introduction

- Total forest carbon stock determined by two factors: the total forest area, and the carbon per hectare of forest (carbon density).
- Changes can be measured by two factors: area of forest and carbon density.
- There are activities that reduce negative change, and those that enhance positive change.



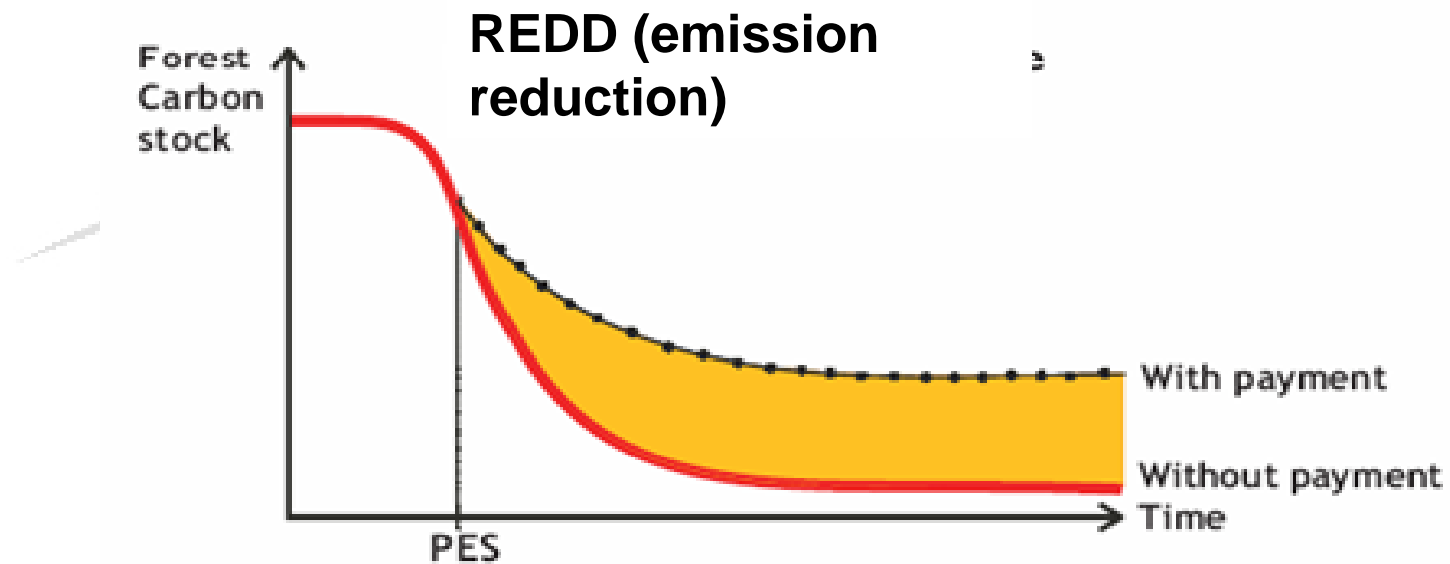
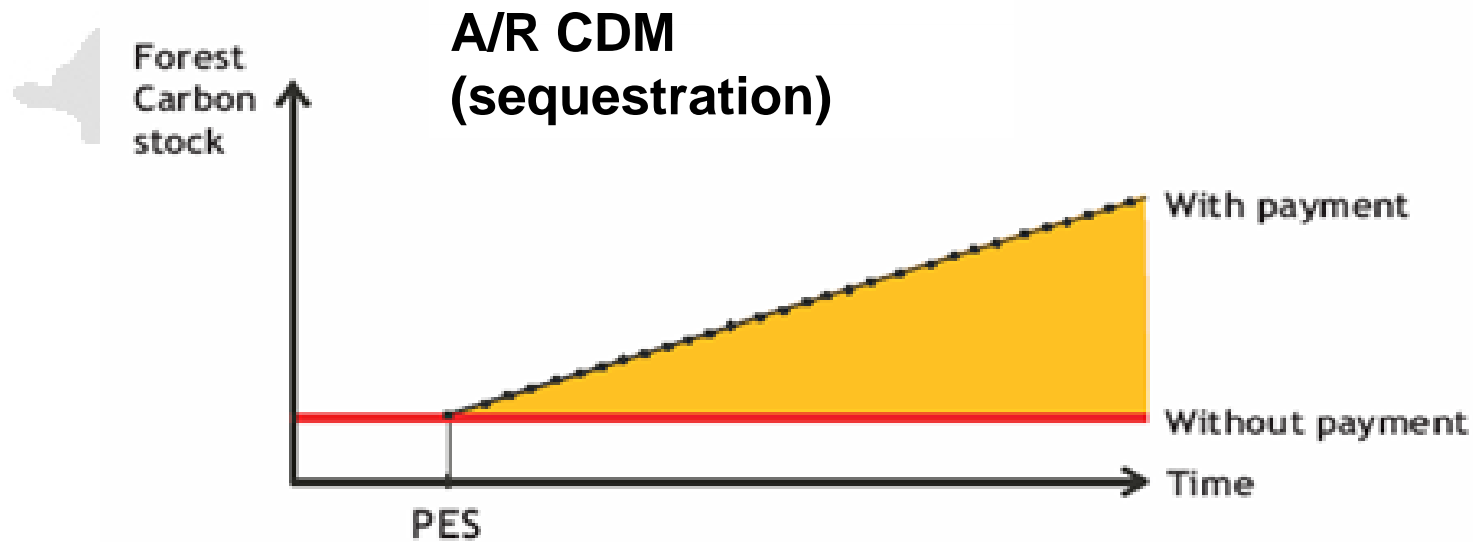
Tree cutting reduces carbon stocks...



Tree planting increases carbon stocks...



CDM vs REDD



Scope of REDD

Changes in:	Reduced negative change	Enhanced positive change	
Forest area (hectare)	Avoided deforestation RED	Afforestation and reforestation (A/R)	CDM
Carbon density (carbon per hectare)	Avoided degradation REDD	Forest restoration and rehabilitation (carbon stock enhancement)	REDD+

REDD++/REALU/AFOLU → including all land uses (eg agriculture)



The Philippines and REDD





Imperata grasslands cover > 2 M ha

AUG 30 2002

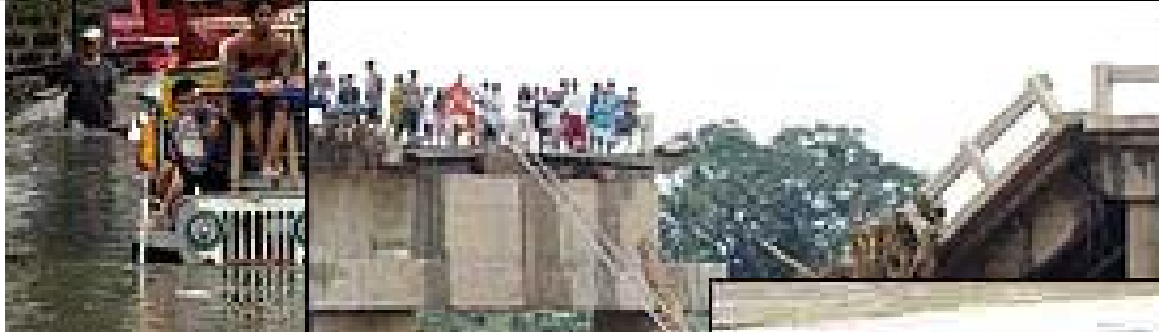




18-20 M people live in the uplands

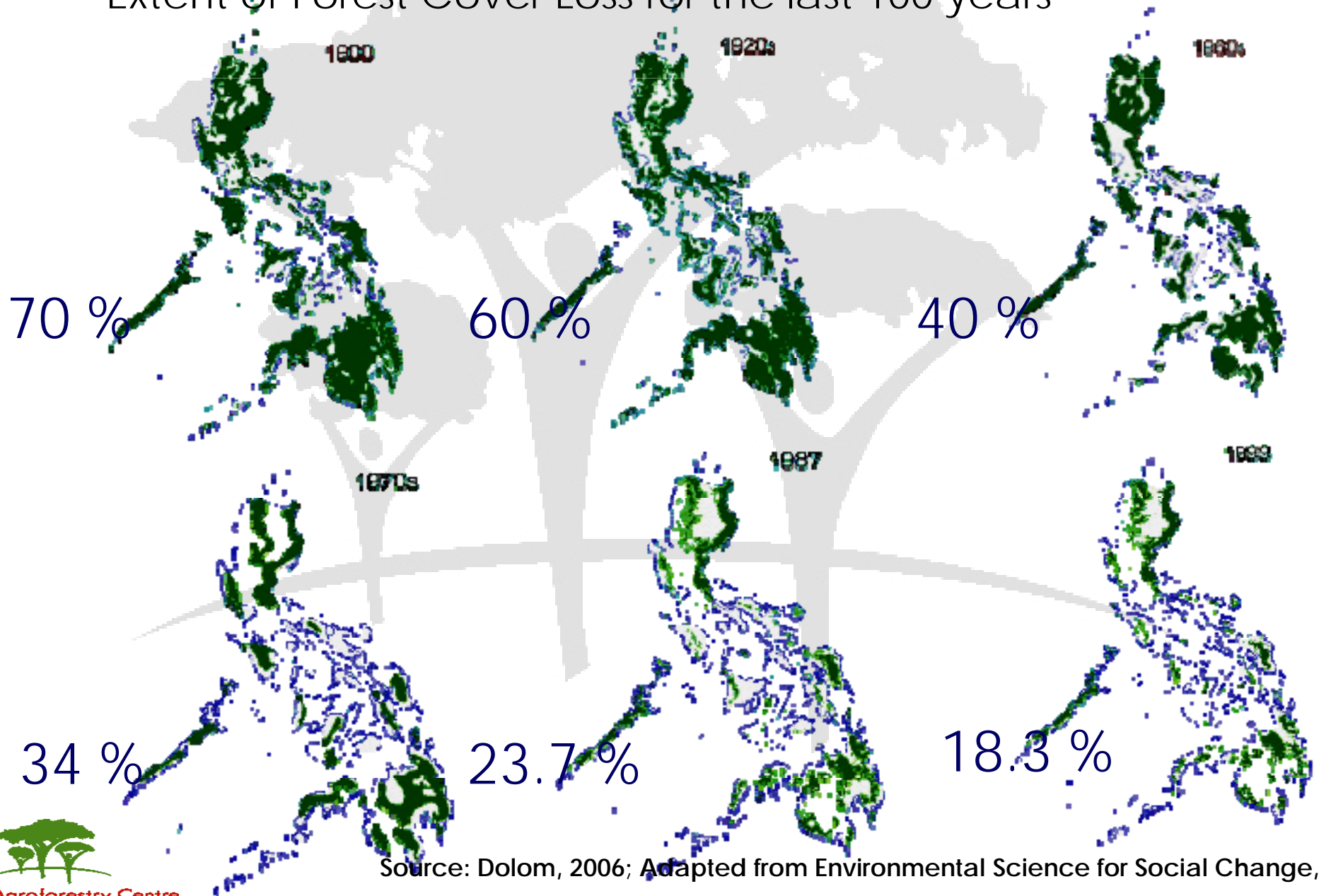
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The vanishing Philippine forests...

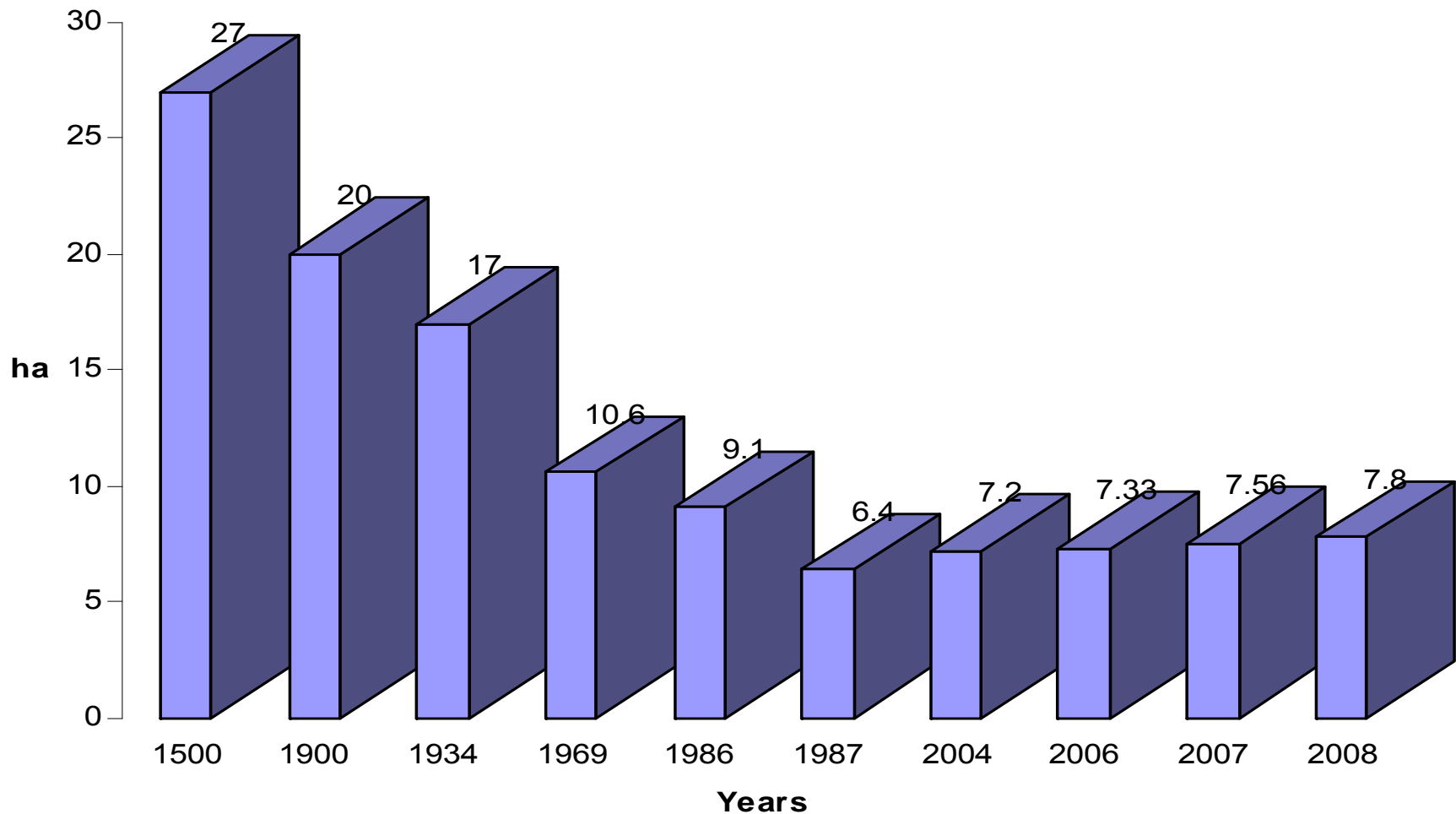
Extent of Forest Cover Loss for the last 100 years



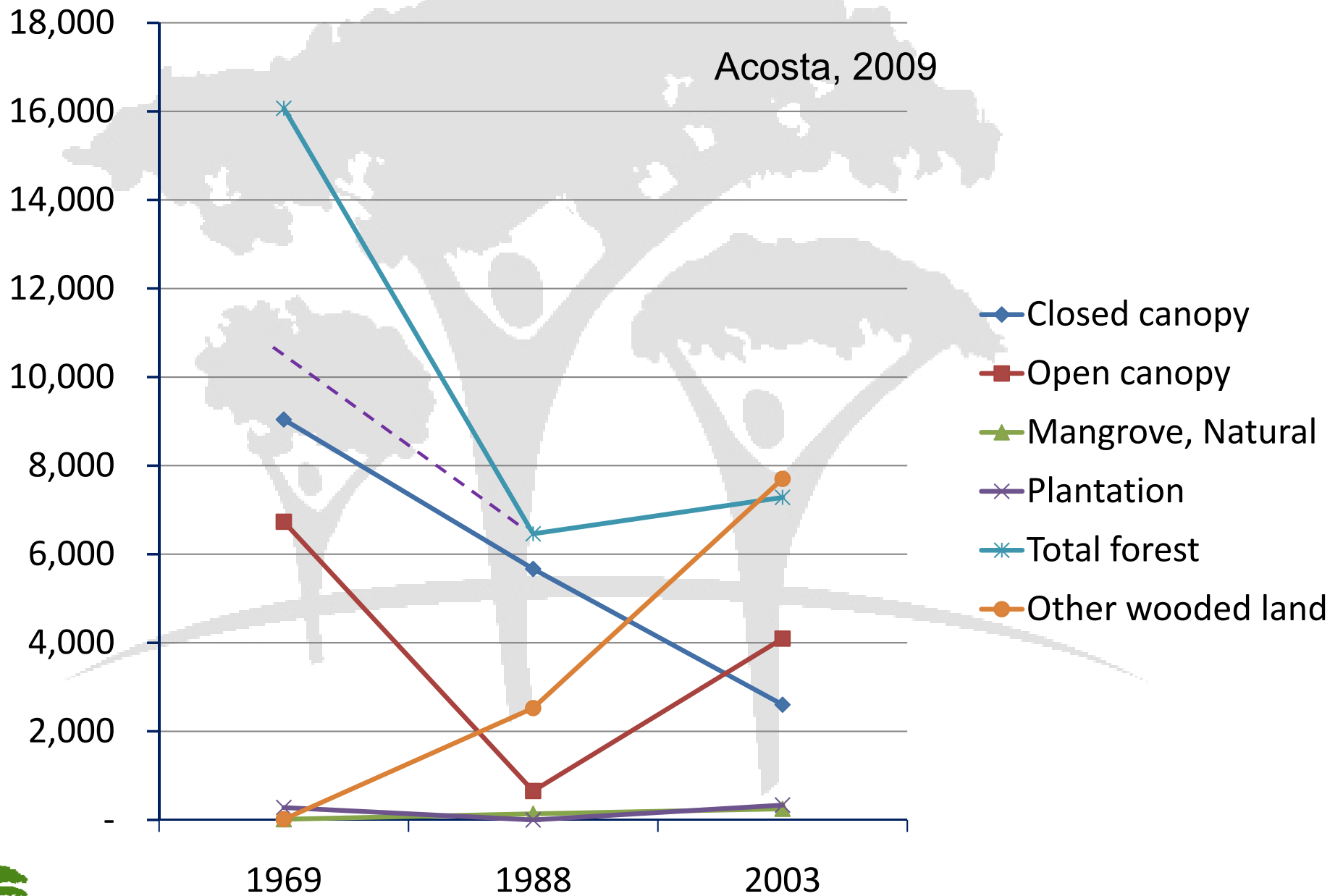
Source: Dolom, 2006; Adapted from Environmental Science for Social Change, 1999

No deforestation?

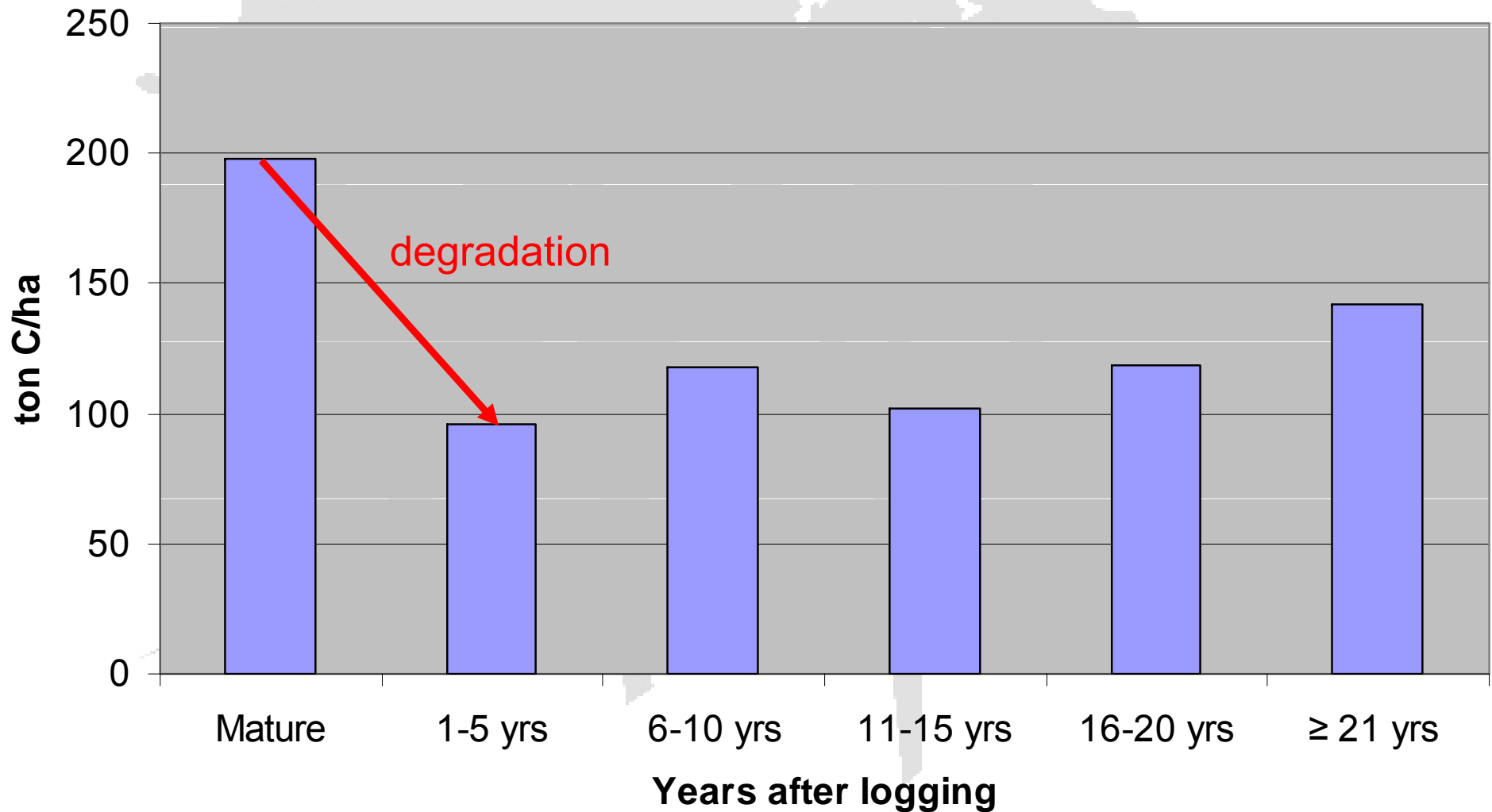
Forest Cover Change in the Philippines



Most likely the 2nd D...



Carbon density of natural forests after logging Mindanao, Philippines (Lasco et al., 2006)



REDD Assessment Framework

REDD Option	Types of Activities Included	Land included	Role of and benefits to smallholders	Policies and Institutions
RED				
REDD				
REDD+				
REDD++/ REALU				



REDD Option	Types of Activities Included	Land included	Role and benefits of CBFM smallholders	Policies and Institutions
RED	NONE-forest area increasing recently so credit for RED unlikely.	Possibly none	None since no land will qualify.	<p>DENR will be the lead unit involved</p> <p>Logging banned in all primary forests (1 M ha)</p> <p>Logging allowed in second-growth forests Protected areas law (NIPAS)</p> <p>Law for indigenous peoples lands (IPRA)</p>



REDD Option	Types of Activities Included	Land included	Role and benefits of CBFM smallholders	Policies and Institutions
REDD	There is anecdotal evidence that forest degradation is going on (eg illegal cutting) .	7 million has	CBFM smallholders potential beneficiaries as “guardians” of the forest. They can help protect forests from loss of biomass through logging and fuelwood gathering. They can also assist local authorities in preventing encroachment of migrants in natural forests. In this role, smallholders could have a share of carbon payments.	DENR will be the lead unit involved Policies same as above



REDD Option	Types of Activities Included	Land included	Role and benefits of CBFM smallholders	Policies and Institutions
REDD+	<p>Reducing the rate of biomass degradation in forests</p> <p>Enrichment planting</p> <p>ANR</p> <p>Reforestation/ agroforestry</p>	<p>7 million has of forests</p> <p>9 million has of open lands in “forest” lands</p>	<p>Same as above.</p> <p>In addition, CBFM smallholders can implement projects that enhance carbon sequestration such as agroforestry, reforestation, and ANR in open lands under their management. These will increase carbon payments for smallholders.</p>	<p>DENR will be the lead unit involved</p> <p>DA could also be involved</p> <p>Policies same as above</p>



REDD Option	Types of Activities Included	Land included	Role and benefits of CBFM smallholders	Policies and Institutions
REDD++/ REALU	All the above Agriculture (eg rice cultivation, fish ponds)	All forest land plus total agricultural land; potentially the whole 30 million ha	Same as above. In addition, agricultural practices that reduce greenhouse gas emissions can generate payments to smallholders.	DENR, DA, DAR Policies above plus AFMA (Ag modernization act) Agrarian reform law (CARP)

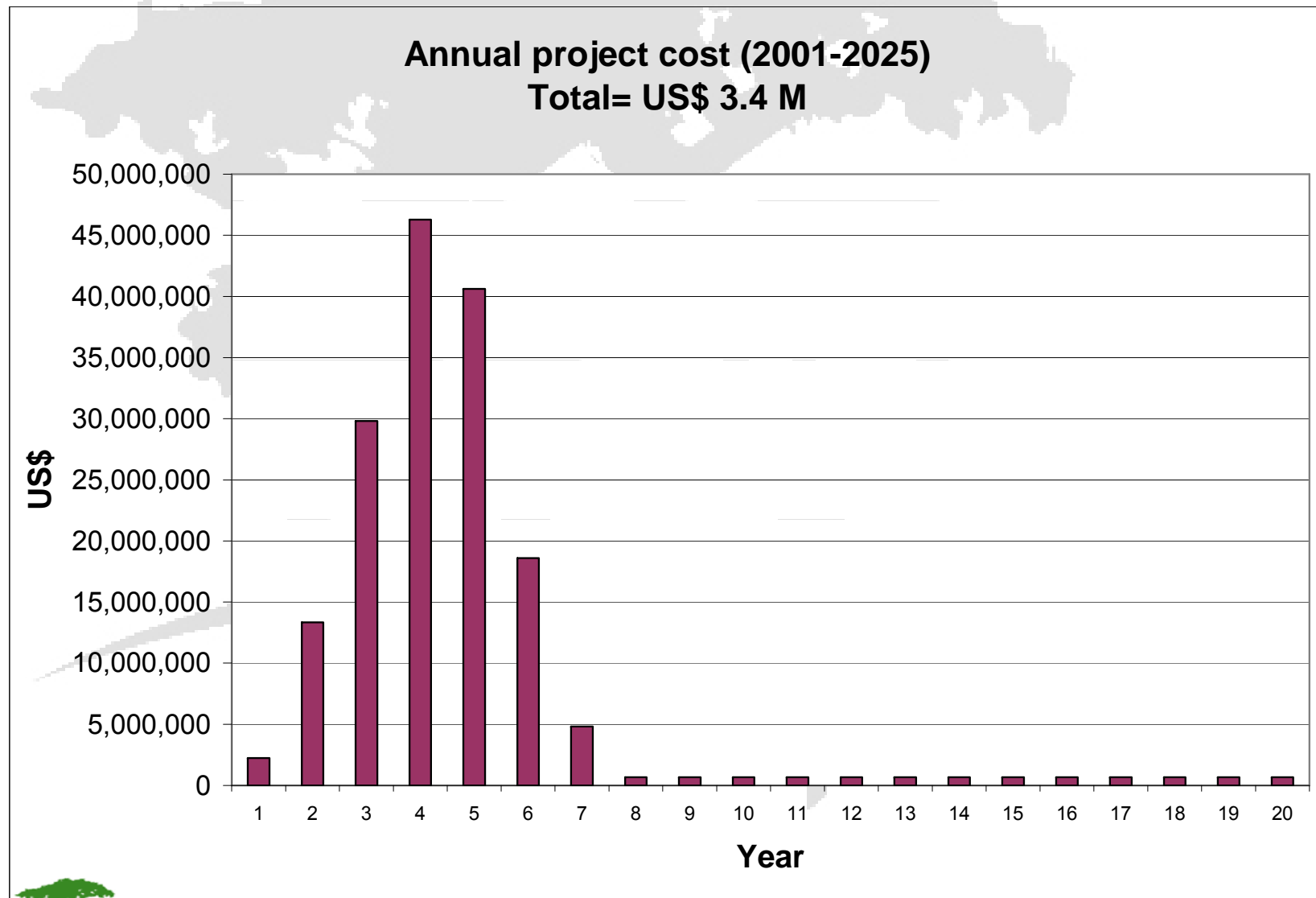


Lessons from the CDM

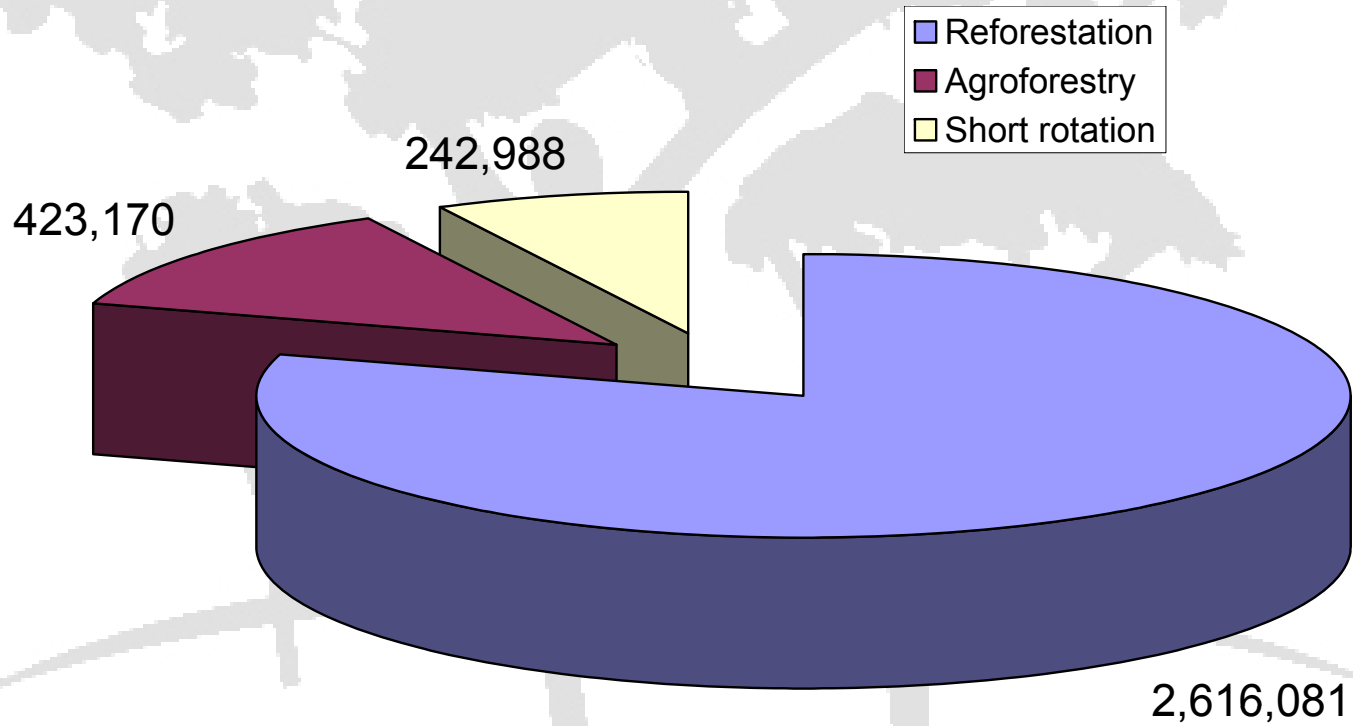
- Base financing for tree planting lacking
- Transaction cost significant (> US\$ 200,000)
- Carbon credits not sufficient to cover total cost of project
- No CDM project has been approved



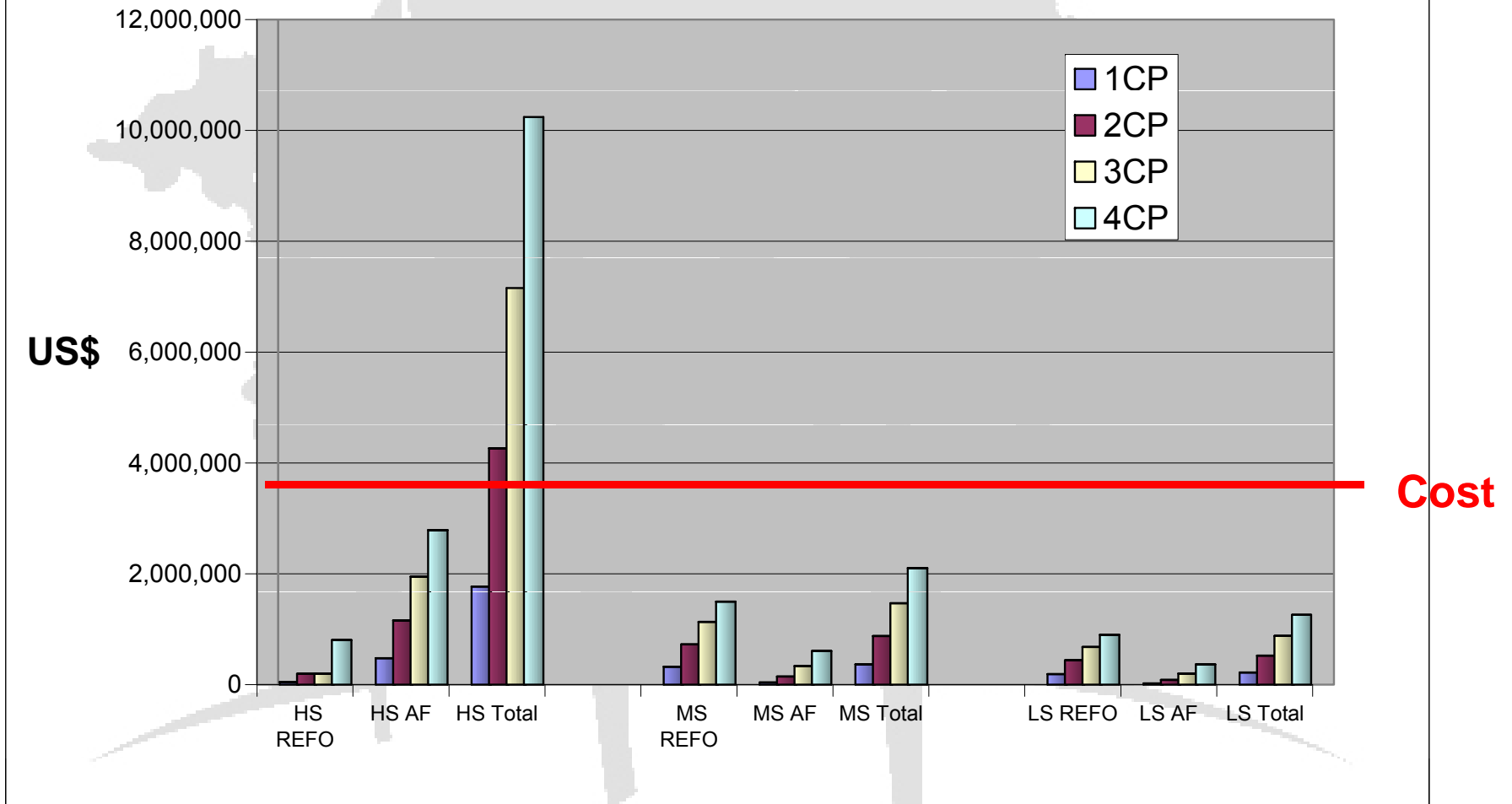
Example: 5,000 ha in the Philippines



Total cost of each project component, in US\$ Total cost= US\$ 3.4 M



Estimated Income from Carbon Credits at US\$ 15/tC



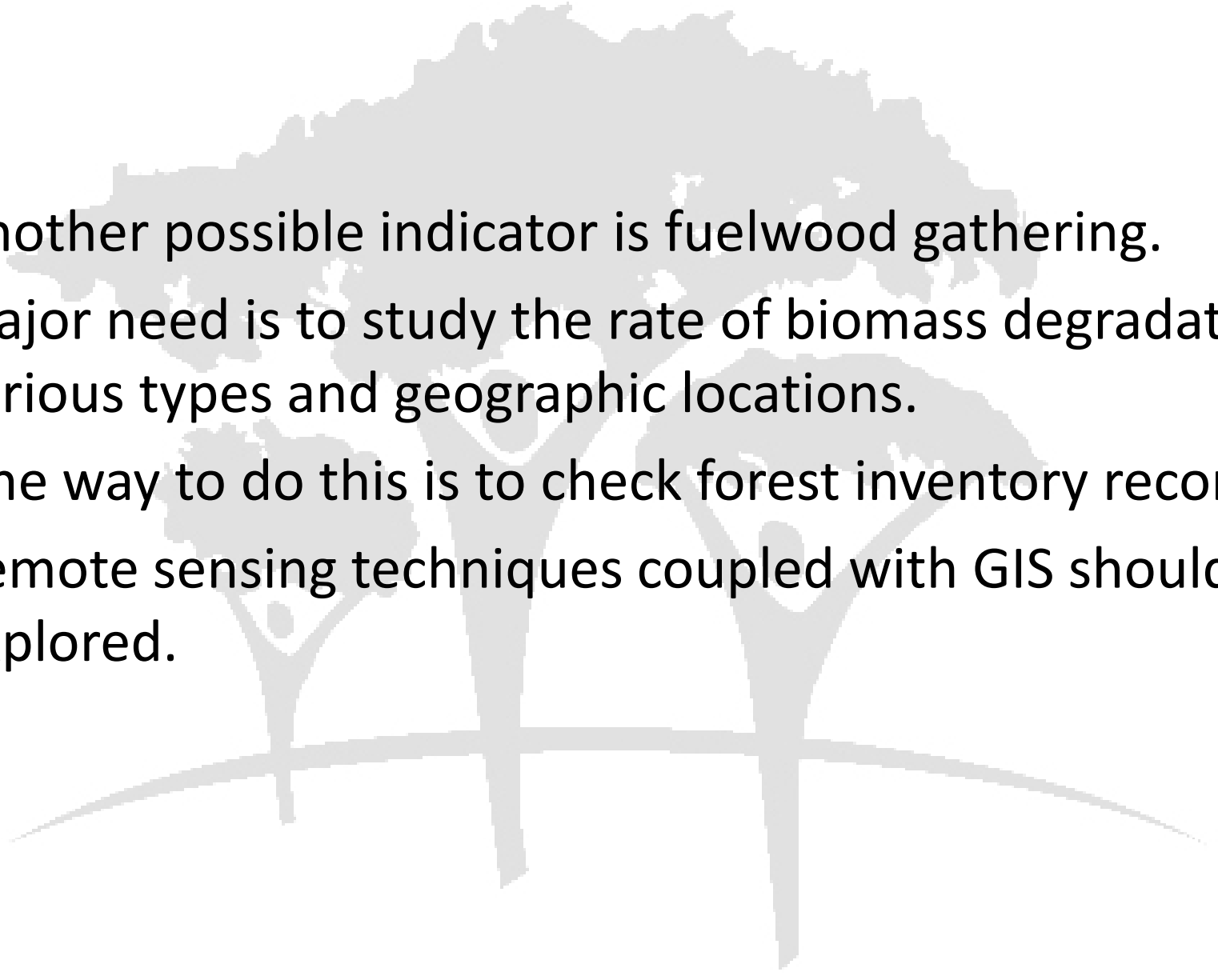
**Can be made profitable by
Including harvest from
products like wood and fruits!**



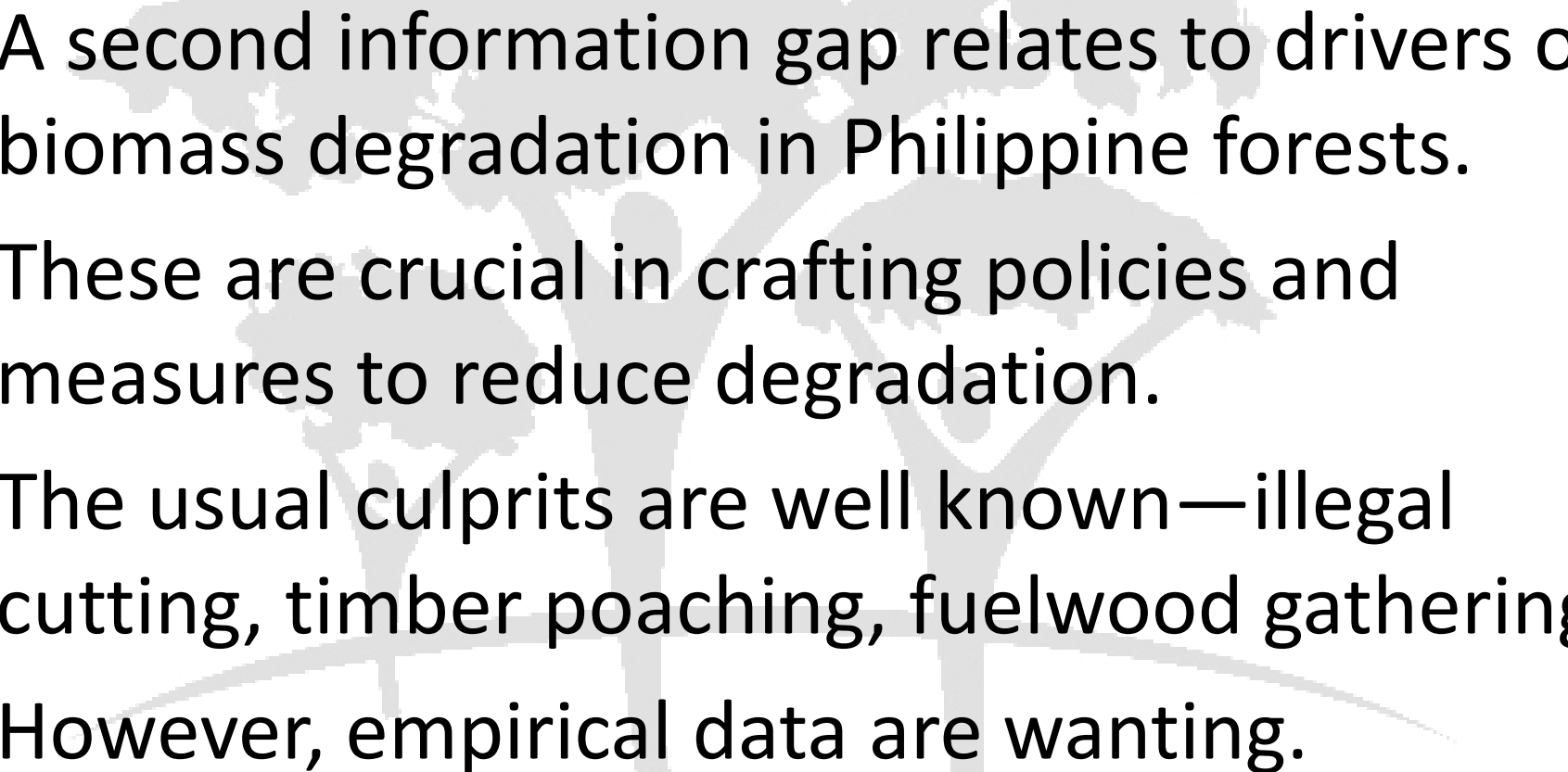
Gaps and Research Needs

- With existing data, it is relatively easier to estimate the potential carbon credits from loss of forests or deforestation.
- However, the Philippines does not stand to gain credit from reducing deforestation
- There is hardly any information on biomass degradation rates in Philippine forests.
- One study showed that logging activities could deplete up to 50% of carbon

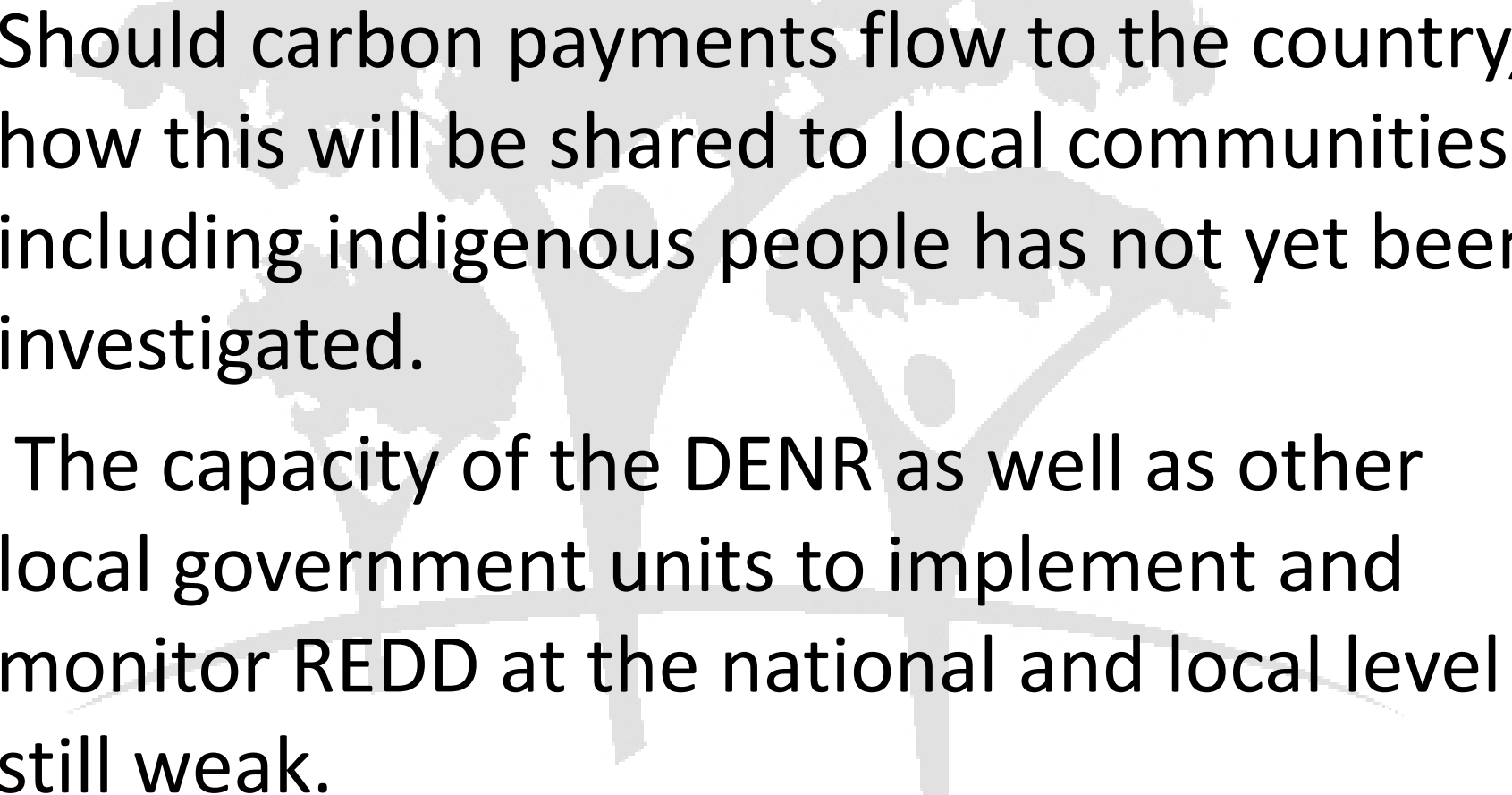


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- Another possible indicator is fuelwood gathering.
 - major need is to study the rate of biomass degradation in various types and geographic locations.
 - One way to do this is to check forest inventory records
 - Remote sensing techniques coupled with GIS should be explored.



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- A second information gap relates to drivers of biomass degradation in Philippine forests.
 - These are crucial in crafting policies and measures to reduce degradation.
 - The usual culprits are well known—illegal cutting, timber poaching, fuelwood gathering.
 - However, empirical data are wanting.



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- Should carbon payments flow to the country, how this will be shared to local communities including indigenous people has not yet been investigated.
 - The capacity of the DENR as well as other local government units to implement and monitor REDD at the national and local level is still weak.



Towards a national REDD strategy

- The Philippines has observer status in UN-REDD
- A national REDD strategy is being drafted
- Research into the dynamics of biomass degradation and aggradation in existing forests and its implications to carbon stocks. Since the country is pinning its hopes on the second D, this is crucial.
- Research into the drivers of biomass degradation and aggradation in natural forests. This will provide us with which levers are significant in minimizing degradation.



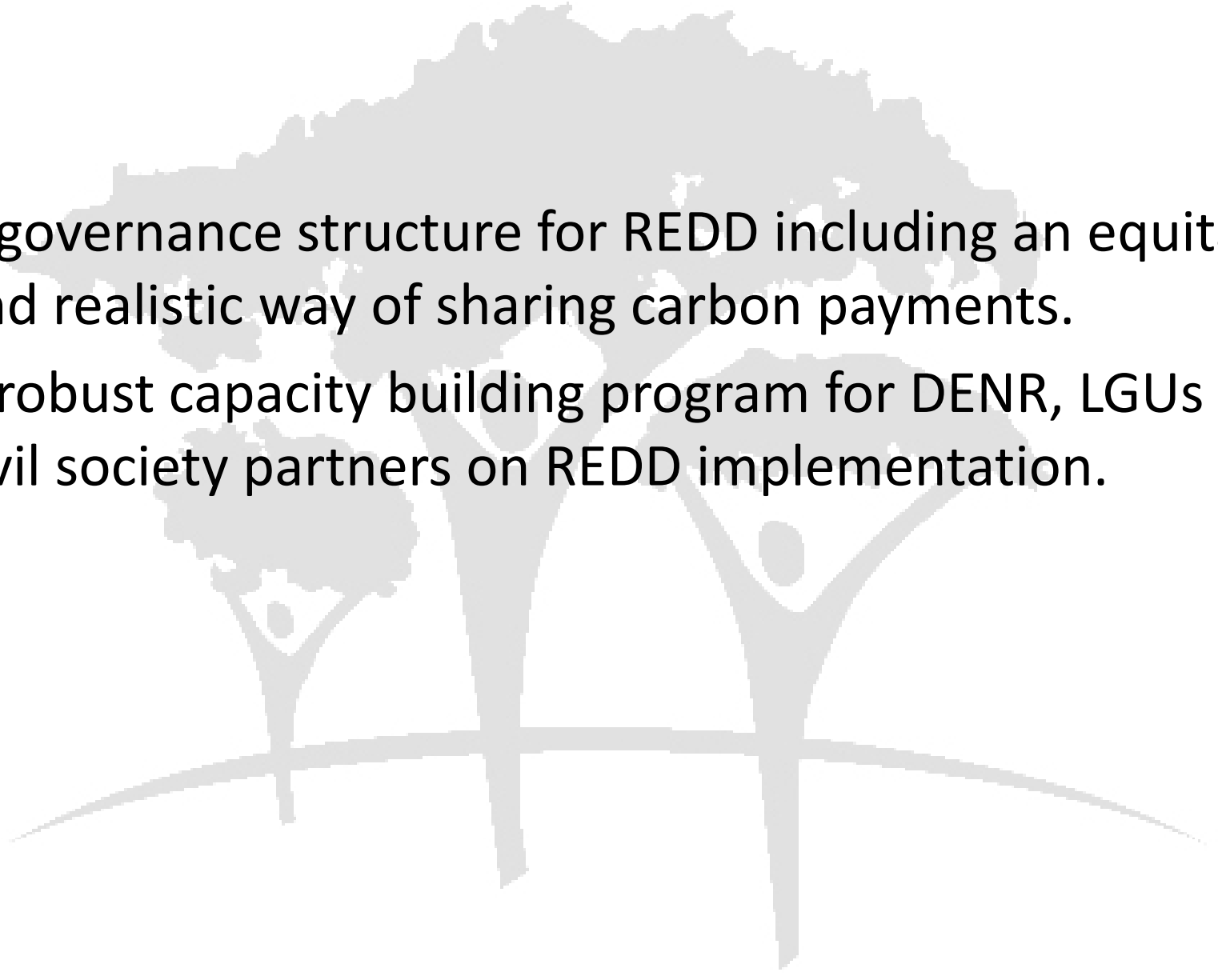
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- A governance structure for REDD including an equitable and realistic way of sharing carbon payments.
 - A robust capacity building program for DENR, LGUs and civil society partners on REDD implementation.



Table 3. First order country estimates based on the Readiness Plan Idea Notes (R-PINs), discussions with developing countries undertaking activities to reduce emissions from deforestation and forest degradation and independent estimates
(thousands of United States Dollars)

Major components of readiness	Estimate ^a	Country ^b	R-PIN ^c	Average ^d
REDD management	440–490	130–430	550–1 115	525
Develop REDD Strategy	500	200–410	400–690	450
Consultations	420	380–440	350–182	365
Environment and social impacts assessments	50	50	50	50
REDD implementation framework	250–500	300–350	150–500	341
Develop reference scenario	500	200–400	300–1 200	516
Design MRV[in full please] system	1 000–1 300	1 000–1 560	250–940	1 008
TOTAL (without annual measurement, reporting and verification costs)	3 160-3 760	2 2640–3 640	2 050–4 627	3 255

^a Bottom up estimates by the World Bank based on the tasks that need to be performed.

^b Estimates by the World Bank based on staff missions to several tropical developing countries and R-PINs submitted by countries.

^c Estimates submitted in the R-PINs, including one or two countries of different tropical regions.

^d The average estimate reflects cost estimates for smaller/medium-sized countries.

Source: World Bank Forest Carbon Partnership Facility presentation at the second Participants Committee, Gamboa 2009. Data up to October 2008.



In Summary...

- The Philippines' rate of total deforestation has tapered off
- Reversing forest degradation has the potential for carbon credits
- Research and capacity building on REDD must be accelerated



Thank you!

