



Transactions and implementation costs of REDD+

Douglas White



Outline

Transactions and implementation costs:

- **What they are**
 - Definitions and examples
 - When they occur
- **Examples**
- **How to estimate T&I costs**
- **Comparison with opportunity costs**
- **How to reduce T&I costs**
- **Who bears REDD+ costs**

Definitions

- **Implementation costs**
 - costs directly associated with actions to reduce deforestation, forest degradation, or enhance carbon stocks
- **Transactions costs**
 - arise from the needs for information before and while making an economic exchange (game rules and refereeing)

Implementation costs

–*Start-up*

- **Capacity building investments**
 - monitoring, evaluation, support services...
- **Reforms**
 - Land tenure, forest policy, banking ...
- **Land use planning**

Implementation costs

–Recurring

- **Forestry**
 - Protection, reforestation, enforcement...
- **Benefit sharing**
 - Intensified crop production, job training...
- **Administration**

Transactions costs

– *Start-up (REDD+ strategy & program)*

- **Institutional finance framework**
 - Performance metrics, procedures, accreditation, funding
- **National consultation and participation**
 - Benefit-sharing mechanisms
- **Standards**
 - Safeguards, additionality, MRV...

Transactions costs

– *Start-up (REDD+ strategy & program)*

- Institutional finance framework
 - Performance metrics, procedures, accreditation, funding
- National consultation and participation
 - Benefit-sharing mechanisms
- Standards
 - Safeguards, additionality, MRV...
- **Baseline and reference emission levels**
- **REDD+ impact and feasibility assessment**
 - Opportunity, transactions, implementation costs
- **Pilot testing**
- **Documentation and fees**

Transactions costs

–Recurring (supervise & coordinate REDD+)

- **Contract management**
- **Financial management**
- **Standards evaluation**
- **Monitor, certify and report**
- **Technical assistance**

From where did this list come?

- **No one source**

- *Estimating the cost of building capacity in rainforest nations to allow them to participate in a global REDD mechanism.* Report for the Eliasch Review produced by Chatham House and ProForest with ODI and EcoSecurities. **Hoare, et al. 2008**
- *Securing Tenure Rights and Reducing Emissions from Deforestation and Degradation (REDD): Costs and Lessons Learned.* Social Development Working Paper No. 120. Washington DC: The World Bank. 18p. **Hatcher, 2009**
- *Estimating the Costs of REDD+ at the Country Level.* Version 2.2. Washington DC: Forest Carbon Partnership Facility, World Bank. **Pagiola and Bosquet, 2009**
- *REDD+ Institutional Options Assessment Developing an Efficient, Effective, and Equitable Institutional Framework for REDD+ under the UNFCCC.* Washington DC: Meridian Institute. 40p. **Streck, et al. 2009**
- *Cost of implementing methodologies and monitoring systems relating to estimates of emissions from deforestation and forest degradation, the assessment of carbon stocks and greenhouse gas emissions from changes in forest cover, and the enhancement of forest carbon stocks.* Technical paper FCCC/TP/2009/1. 31 May. 44p. **UNFCCC. 2009**
- *Estimating the Opportunity Costs of REDD+: A Training Manual.* Alternatives to Slash-and-Burn (ASB) and The World Bank Institute. 257p. **White and Minang, 2011**

Examples

- **REDD Readiness**
- **Land tenure reform**

REDD Readiness

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

Land tenure reform

Country	Type of area	Type of recognition	Cost(USD)	Area (ha)	Cost/ha (USD)	Comment/Source	Average costs/ha: community versus household
Bolivia	Communi						Community territories \$3.31/ha
Brazil	Protect area (s reserve						
Brazil	Indigen territory						
China	Collect forests						
Mozambique	Communi						
Mozambique	Communi						
Cambodia	Household parcel						Household plots \$23.16/ha ¹¹
Indonesia	Household parcel						
Indonesia	Household parcel						
Laos	Household parcel	Title	18	1.57*	11.46	(WB, 2008: personal communication)	
Philippines	Household parcel	Title	51	2.16*	23.61	(WB, 2008: personal communication)	

- 12 Studies, 8 countries
- Costs:
 - Household plots ~\$23/ha
 - Community territories ~\$3
- Q: For entire REDD+ area or specific areas?

CDRI (2001:8); * FAO World Census of Agriculture. 1990.

Hatcher, 2009.

Cost estimates

Type of cost	Specific components	(US\$ ha/yr)	Source
Implementation	Brokerage, verification, certification, insurance	136	Antinori and Sathaye, 2007
	Measurement, monitoring, capacity building, planning, enforcement, governance, social programs	184	Nepstad, 2007
	Initial capacity building	26 – 175	Eliasch, 2008
		4 – 15	Grieg-Gran, 2006
Administration & implementation		4 -184	Hatcher, 2009
Opportunity cost		484-939	Hatcher, 2009



How to add T&I costs to OppCosts?

- **Estimate overall T&I costs**
 - Fixed and/or variable cost structure
- **Units: national, per ha, per tC**
- **Divide by total amount of carbon emissions abated, stocks enhanced**

Option 1:

- add same cost to opportunity cost of all emission abatement options for all sub-national regions

Option 2:

- Distinguish cost difference per type and location of land use change

Ways to reduce T&I costs

- Regional training activities
- Regional MRV
- Regional independent monitoring
- Lower cost providers
 - NGO, CBO involvement
- New technology
 - LIDAR for carbon measurement
 - Peru \$0.08/ha
 - Madagascar \$0.06/ha

Who bears O, T & I costs

- **Accounting stance**
 - the perspective from which benefits and costs are estimated
 - with REDD+ programs, actors involved face different costs
 - perspectives of 3 types of actors are important:
 1. *individual groups*
 2. *national or country*
 3. *budgetary or government agency*

Who bears O, T & I costs

- **Accounting stance**
 - the perspective from which benefits and costs are estimated
 - with REDD+ programs, actors involved face different costs
 - perspectives of 3 types of actors are important:
 1. *individual groups (landusers)*
 2. *national or country*
 3. *budgetary or government agency*

Who bears O, T & I costs

- **Opportunity costs:**
 - Individual groups (landusers, landowners)
 - Country
- **Transactions costs:**
 - Country
 - Government agency
 - Individual groups (if registration fees are imposed)

Who bears O, T & I costs

- **Implementation costs:**
 - **Country**
 - All start-up costs, recurring forestry, admin costs
 - **Budgetary cost**
 - Administration
 - (Benefit-sharing compensation)
 - Funds pass thru government agency (“cost”), but are offset by recipient (“benefit”)