Forest Carbon Partnership Facility

3d. Update on REDD+ Cost Assessment Tools

Eighth Meeting of the Carbon Fund Participants (CF8)

Paris, France

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Key Points

- Cost Assessment is useful to
  - Inform program identification
  - Explore Emissions Reductions (ER) program design options
  - Support informed ERPA negotiations (esp. for Program Proponent)
  - Understand cost-effectiveness of REDD+ (in the long-term)
- Cost tools provide a structured approach to assess and compare costs of ER programs
  - Economic and financial analysis
- Cost assessment can help generate better (more sustainable) ER Programs
  - REDD+ payments help shift to sustainable and profitable land uses through investment in underlying assets
- Tools and Good Practice Guidance will complement the Methodological Framework
  - The Methods Framework does not have specific criteria on costs

World Bank REDD+ Cost Assessment Tool

- Developed jointly with UNDP (Tanzania and DRC) and World Bank Institute
  - Funded by Trust Fund for Environmentally and Socially Sustainable Development (TFESSD)
- Purpose
  - Assess all relevant cost elements (accommodates project to national scale)
  - Generate abatement costs of proposed activities
- Cost concept
  - Cost categories: opportunity, implementation, transaction, institutional costs
  - Cost and carbon comparison for up to 20 land use classes
  - Comparison of reference case (no REDD+) with REDD+ scenario (all 5 activities)
- Key Inputs and Output (per land use class) for each scenario

Inputs	Outputs
Time-average carbon stocks (5 pools)	Net Present Value, Internal Rate of Return
Area at beginning and end of programs (land use change matrix)	Opportunity and Abatement Costs
Cash flow; inflation and discount rate	Difference in GHG emissions
Implementation, institutional, transaction costs (for up to 12 intervention types); includes worksheets for each cost category	Incremental Cash Flow

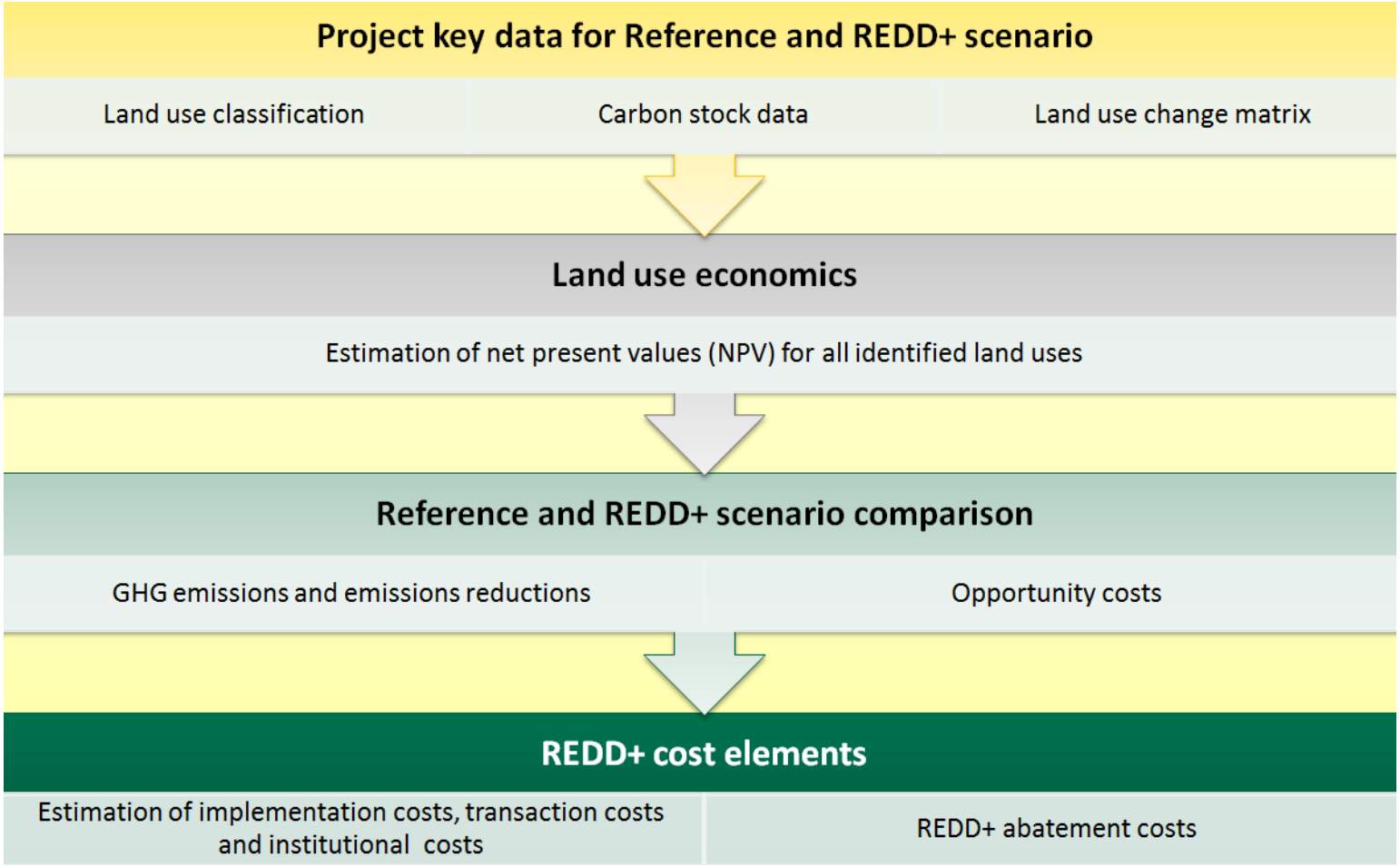
Framework for Cost Assessment

- Opportunity Costs
  - Foregone net benefits of alternative land uses (not just costs associated with conversion of forests, but also other land uses)
- Implementation Costs
  - Investments required to implement REDD+ interventions and minimize displacement
  - Includes operating costs (reoccurring costs after initial investment)
- Transaction Costs
  - For actions necessary to receive REDD+ payments
  - Transactions do not reduce emissions
- Institutional Costs
  - Incurred at political-administrative level to develop and manage REDD+ activities and ensure enabling legal and regulatory environment
- Costs are additional (relative to no REDD+ actions)

Cost Examples by Category

Implementation	Transaction	Institutional
Infrastructure development	Program Documentation	Institutional reform
Extensions support services	Payment distribution	Policy development and formulation
Sustainable forest management practices	Measurement, Reporting, Verification	Establishment and operation of new institutions/authorities
Law enforcement	Contract management (negotiation, compliance etc.)	Knowledge transfer and dissemination (e.g. from national to local)
Investment in agricultural input	Consultation, Marketing	Establishment of participatory mechanism
Staff costs	Registry, Database operation	Training, capacity building

Key Steps in Cost Assessment



Example Empirical Results

Pilot Study Example	Intervention	Opportunity Costs (US$/tCO2)	Projects Costs (Implementation, Transaction, Institutional) (US$/tCO2)
DRC: Ecomakala+ (438,400ha)	Reforestation, micro forest plantations, subsidies for improved cook stoves	4.1	7.5
Colombia: Huila (103,500ha)	Conservation, improve livelihoods	2.6	3.1
Tanzania: Jane Goodall Kigoma (85,200ha)	Conservative, alternative income generation	15	13.8

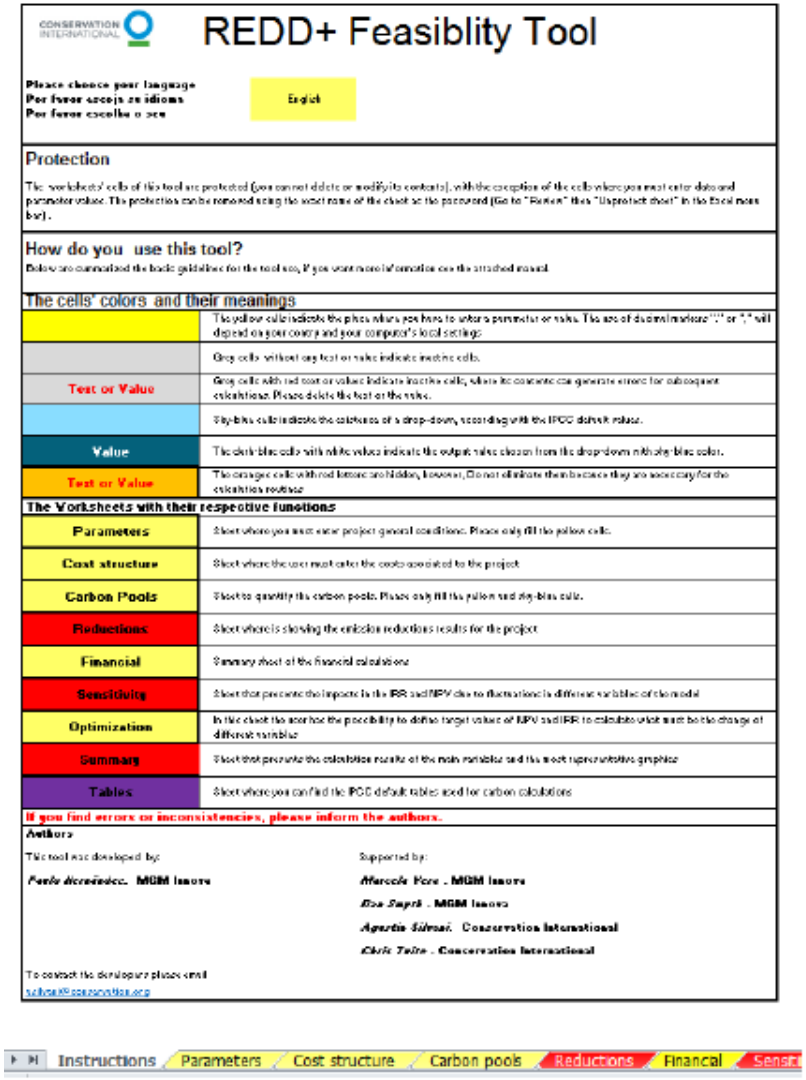
- World Bank cost assessment tool applied for 8 projects
  - Funded by WB TFESSD and UNDP
  - Performed with Unique Forestry, ONFi, World Bank Institute

Some Early Insights

- Transaction and implementation costs can be as high opportunity costs
  - Opportunity costs inform policy and upstream design (e.g., siting of programs)
  - Transaction, institutional and implementation costs are relevant for detailed ER program design
  - Project costs can be similar to opportunity costs and can amount to an average of approx. $7/t CO2
  - Economies of scale: small projects tend to have high unit costs
- Availability of reliable data is sparse
  - Estimates of nascent REDD+ projects at sub-national level largely hinge on short-term budget estimates, not long-term cost estimates
  - Economics of alternative land uses are difficult to estimate: limits utility opportunity cost analysis
- Implementation and transaction costs are crucial for cost-effective ER program design
  - Institutional costs are small and mostly covered by readiness funding
  - Transaction costs (mostly RL and MRV) at national are significant
  - For ER Programs at sub-national level transactions costs need to minimized

Conservation International's Tool for the Financial Analysis of REDD Projects

- REDD+ Feasibility Tool
  - Quick, accurate assessment of site/region's potential for REDD+
  - Detailed financial feasibility breakdown
  - Only requires reasonable expectations of costs, deforestation rates, probability of success
  - Builds on IPCC default values
  - Allow sensitivity analysis (e.g., changes in carbon price)
  - Guides investment decisions



REDD+ Feasiblity Tool

Please choose your language
Por favor escoja su idioma
Por favor escolha o seu

English

Protection

The worksheets' cells of this tool are protected (you cannot delete or modify its contents), with the exception of the cells where you must enter data and parameter values. This protection can be removed using the word name of the sheet as the password (Go to "Review" then "Unprotect sheet" in the Excel menu bar).

How do you use this tool?

Below are summarized the basic guidelines for the tool use, if you want more information see the attached manual

The cells' colors and their meanings

	The yellow cells indicate the places where you have to enter a parameter or value. The use of decimal markers "," or "." will depend on your country and your computer's local settings
	Grey cells without any text or value indicate inactive cells.
Text or Value	Grey cells with red text or values indicate inactive cells, where its contents can generate errors for subsequent calculations. Please delete the text or the value.
	Sky-blue cells indicate the existence of a drop-down, according with the IPCC default values.
Value	The dark blue cells with white values indicate the output values chosen from the drop-down with sky-blue color.
Text or Value	The orange cells with red letters are hidden, however, Do not eliminate them because they are necessary for the calculation routines

The Worksheets with their respective functions

Parameters	Sheet where you must enter project general conditions. Please only fill the yellow cells.
Cost structure	Sheet where the user must enter the costs associated to the project
Carbon Pools	Sheet to quantify the carbon pools. Please only fill the yellow and sky-blue cells.
Reductions	Sheet where is showing the emission reductions results for the project
Financial	Summary sheet of the financial calculations
Sensitivity	Sheet that presents the impacts in the IRR and NPV due to fluctuations in different variables of the model
Optimization	In this sheet the user has the possibility to define target values of NPV and IRR to calculate what must be the change of different variables
Summary	Sheet that presents the calculation results of the main variables and the most representative graphics
Tables	Sheet where you can find the IPCC default tables used for carbon calculations

If you find errors or inconsistencies, please inform the authors.

Authors

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Instructions | Parameters | Cost structure | Carbon pools | Reductions | Financial | Sensit

Some key differences in features between WB and CI tool

	WB Cost Assessment Tool	CI "Financial Analysis of REDD Projects"
Scope	Covers all five REDD+ activities	Only Deforestation (RED)
Carbon Finance	Does not account for carbon revenue	Includes carbon revenue in financial feasibility; also: taxes, capital expenditures and depreciation rate; carbon price development, loan costs
Cost categories (note: tools use different terminology and categorization)	Opportunity, implementation, transaction, institutional costs	Project development, implementation, management, community development, land acquisition, and activity cost
Strengths	Costs and emissions based on detailed land-used change matrix Compares economic implications of a reference (no REDD+) and REDD+ scenario	Detailed cost structure and revenue analysis support sound investment analysis Performs sensitivity and optimization analysis
Weaknesses	Assessment of financial feasibility is limited	Limited land-use differentiation and dynamics

Going forward

- Existing tools can be applied (and further enhanced) in ER Program design and preparation
- Cost-effective design and financial considerations will become more relevant in relation to expected benefits (ER payments)
- There is some experience is assessing and design projects – assessing and costing programs has new challenges

THANK YOU!

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