Forest Carbon Partnership Facility

Portfolio Management and Selection of ER-PINs

Eleventh meeting of the Carbon Fund (CF11)
Washington DC
October 6-8, 2014

Outline

- Overview of portfolio management: What decisions need to be made at CF11 and what are the parameters?
- Long Term Financial Plan: How much money is available to select programs into the pipeline?
- Pipeline simulations

Building the pipeline: ER-PINs in the pipeline/under consideration

	In the pipeline	CF11
Africa	DRC Ghana Republic of Congo	
Asia	Nepal Vietnam	Indonesia
Latin America	Chile Costa Rica Mexico	Guatemala Peru*

* Presented at CF10. Revised, and re-presenting at CF11.

Business Process: Selection of ER Programs

- Two decision points to select ER programs into the Carbon Fund:

1. Select into **pipeline** based on ER-PIN (**concept**-stage ideas)
   → sign Letter of Intent (LOI)
   → allocate up to $650,000 for program development
      – not yet expected to meet every MF standard
      – signing an LOI does not automatically mean an ERPA will be signed
2. Select into **portfolio** based on ER-PD (full proposal)
   → signing of Emission Reductions Payment Agreement (ERPA).

Task at CF11

1. include ER-PIN in pipeline, allocate up to $650,000 (subject to a signed Letter of Intent)
   - to develop ER-PIN into an ER Program Document
   - to support due diligence by World Bank and/or FMT
   - funds will be managed by World Bank and/or FMT
   - ***LOI resolution requires setting a maximum volume to be contracted.***

2. allocate up to $200,000 to support revisions to ER-PIN
   - ER-PIN to be considered for inclusion in pipeline at later stage.
   - funds will be managed by World Bank and/or FMT.

3. not include the ER-PIN
   - If pipeline closes at CF11, any ER-PIN not accepted here cannot be re-presented again.

Business Process: Next steps after Selection into the Pipeline

- Country will have green light to further develop concept.
- Resolution to identify any issues to be addressed *before* signing an LOI. Country is not yet expected to fully comply with Methodological Framework.
- Chair's summary to identify any issues to consider while developing an ER-PD (i.e., *after* signing an LOI).
- Upon signing LOI, $650,000 will be available for Country and World Bank costs for developing an ER-PD and due diligence.
- Funds to be managed by World Bank and/or FMT.
- Countries will need to mobilize existing/additional resources to help advance ER Program development, e.g. from other development partners, Government's own resources, FCPF Readiness Fund.

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Sources

Contributions to the FCPF Carbon Fund as of October 6, 2014 (US$m)								
	FY09	FY10	FY11	FY12	FY13	FY14	FY15-20*	Totals*
Australia			12.7	5.7				18.4
BP Technology Ventures			5.0					5.0
Canada				5.0				5.0
European Commission	6.3	0.4						6.7
France			5.0					5.0
Germany	4.0	3.8	21.1	15.4	6.6	27.3	53.1	131.4
Norway	10.0				161.3			171.3
Switzerland				10.8				10.8
The Nature Conservancy	5.0							5.0
United Kingdom			17.9				72.9	90.8
United States of America			10.0		4.0			14.0
Committed Funding	**25.4**	**4.2**	**71.8**	**36.9**	**171.9**	**27.3**	**126.0**	**463.4**

* Amounts may vary due to exchange rate fluctuations.

Notes on Long Term Sources and Uses

- These figures are financial projections to FY20 so they are necessarily approximations.
- Shared Costs are based on the Long Term Plan for the Readiness Fund which assumes a fairly steady operational budget through FY20.
- 35% of Shared Costs charged to the CF (as per Charter) from July 1, 2011.

Carbon Fund Fixed Costs

Carbon Fund Fixed Costs ($000s)									
	Actual	Actual	Actual	Actual	Actual	Actual	Budget	Projected	
Fixed Costs	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16-20**	**Total**
Carbon Fund Administration[1]		183	366	469	652	626	665	2,500	5,461
Marketing to the Private Sector				1	255		-	-	256
Shared Costs (with Readiness Fund)[2]				1,069	1,236	1,159	1,042	5,252	9,758
Total Fixed Costs ($000s)		**183**	**366**	**1,539**	**2,143**	**1,785**	**1,707**	**7,752**	**15,475**
Total Fixed Costs ($m)		**0.18**	**0.37**	**1.5**	**2.1**	**1.8**	**1.7**	**7.8**	**15.5**

1. Includes meeting costs. Assumes 3 meetings/year through FY15 then reduces frequency in later years.
2. Carbon Fund to pay 35% of Shared costs from FY12 onward

Carbon Fund ER Program Costs

ER Program Costs					
	Cost per year ($000s)	**No of years**	**Cost per project ($000s)**	**No of projects**	**Total Cost ($000s)**
Program Development - across portfolio					447
Preparation			650	9	5,850
Preparation (dropped)			200	2	400
Supervision	125	5	625	9	5,625
Validation				9	
Verification	20	5	250	9	2,250
Country Advisory Support					1,300
TAP					450
Total ER Program Costs				**9**	**16,322**

Assumptions

Number of programs: 9

Average ERPA term: 5 years

Program Preparaton costs per Program: $650k

Number of dropped Programs: 2 (at $200k each)

Supervision Costs per Program: $625k

Verification Costs per Program: $250k

No Validation Costs

Carbon Fund Sources and Uses Summary

Carbon Fund Sources and Uses Summary ($m)	
Sources (Pledges US$m)	**463.4**
Number of ER Programs	**9**
Number of LoIs	11
Uses	
Long Term Fixed Costs (FY10-FY20)	(15.5)
ER Program Costs	(16.3)
Total Costs	**(31.8)**
Available for Purchase of ERs	**431.6**

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Key characteristics of ER-PINs to date

	Costa Rica	Mexico	Ghana	DRC	Nepal	Chile	ROC	Viet-nam	Guate-mala	Peru	Indo-nesia	Total
Accounting Area *[million ha, % of country]*	4.1 (80%)	17.7 (9%)	5.9 (25%)	12.3 (5%)	2.3 (15%)	16.5 (22%)	12.4 (36%)	5.1 (16%)	10.9 (100%)	15.6 (12%)	12.5 (9%)	**115**
Forest Area in Accounting Area *[million ha, % of Accounting Area]*	n/a	17.7 (100%)	4.6 (77%)	9.8 (80%)	1.2 (52%)	8.4 (51%)	12 (97%)	2.3 (45%)	3.7 (34%)	13.1 (84%)	4.2 (34%)	
Average Annual Emissions during Reference Period *[million tCO_2e/yr]*	-4.7[1] (10.6-15.3)	6.2	28.5	23.9	4.4	9.4	6.2	.7[1] (16-15.3)	11.5	17.6	60.7	**195**
HFLD Adjustment *[million tCO_2e/yr]*	n/a	n/a	n/a	6.0	n/a	n/a	5.1	n/a	n/a	3.1	n/a	
Estimated Program ER 2016-2020 (5 years) *[million tCO_2e]*	14.7[2,4]	8.7	18.5	34.2[2]	14.0	7.5	11.7[3]	20.6[2]	21.0	21.3[3,4]	53.4[4]	**226**
Estimated/assumed Program Effectiveness	11%	28%	13%	29%	64%	16%	37%	13%	37%	24%	18%	
Total ERs offered to the Carbon Fund	12.5 (85%)	8.7 (100%)	18.5 (100%)	10.0 (29%)	14.0 (100%)	5.2 (70%)	11.7 (100%)	10.3 (50%)	16.8 (80%)	10.6 (50%)	48.1 (90%)	**166**
Max value at \$5/ton (\$m)[5]	62.5	43.5	92.5	50	70	26	58.5	51.5	84	53	240.5	**832**

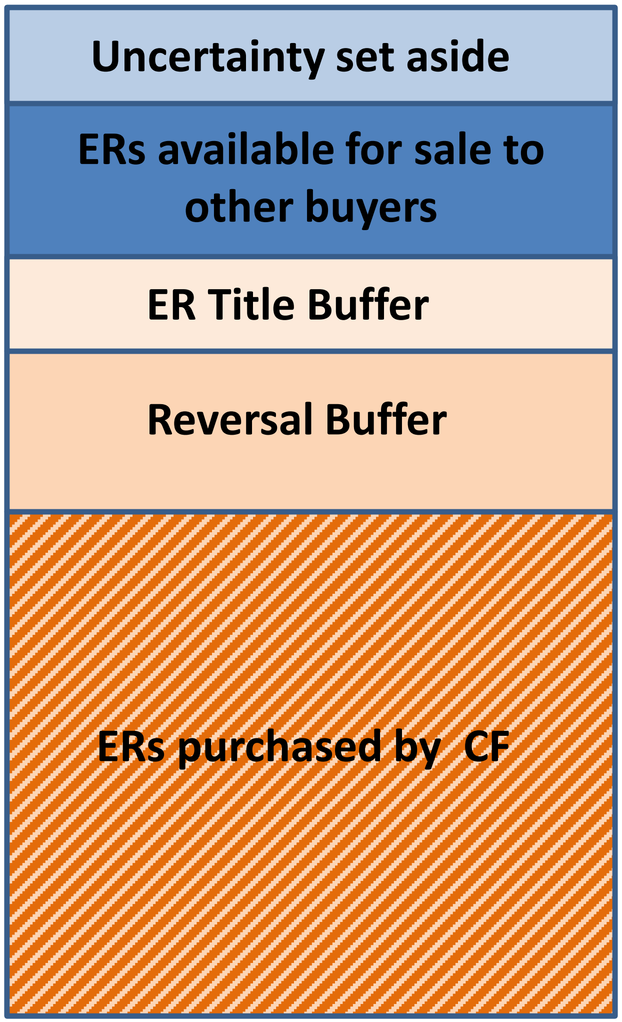
1 Emissions minus Removals
2 ERs from reduced emissions plus enhanced removals
3 Includes adjustment for High Forest Low Deforestation (per Methodological Framework)
4 Adjusted from ER-PIN to align with 5 year program period
5 Figures do not necessarily take into account buffers and set-asides, which would lower total volume and value

Estimated Performance of Emission Reductions Programs

- Each ER-PIN has an assumed **program effectiveness**, i.e., the degree to which Programs are expected to reduce emissions and/or enhance removals (relative to RL emissions) during 2016-2020
  - Ranges from 11-64%
  - Depends, among others, on financing of underlying activities, policy changes, readiness progress, program partners
- ER Programs offer the Carbon Fund 29-100% of total ER Volume expected to be generated in Accounting Area until 2020
  - 4 (of 11) offer 100%
- Important accounting rules in the Methodological Framework
  - Uncertainty discount on ER Volume in Accounting Area (max. 15%)
  - Set-aside for Risk of Reversals (10-40%)
  - Set-aside for Title Risk (fraction to be determined via risk assessment)

Calculation of Emission Reductions (per Carbon Fund Methodological Framework)

ER Volume



- Subtract the reported and verified emissions and removals from the Reference Level.
- Set aside a number of ERs to reflect the level of uncertainty associated with the estimation of ERs (% of ER Volume in the Accounting Area).
- CF will buy % of the ER Volume
- If CF Buffer is used, set-aside of ERs in Buffer to deal with risk of Reversals of ERs purchased by the CF (% of ERs purchased by CF).
- If ER Program Buffer is used to manage risk of transfer of title to ERs→ set-aside of ERs in Buffer to deal with risk associated with ERs purchased by the CF (% of ER purchased by and transferred to CF)
- Remaining ERs available for other use, e.g., sold to other buyers

Portfolio Simulations based on ER-PINs to date

- Assumptions
  - Use estimated ER volume identified in the ER-PIN (at ‘face value’)
  - Reported ER estimates have high uncertainty (i.e., maximum set-aside of 15% on total ER volume from Accounting Area applies)
  - Buffer ERs will be retired at ERPA end (i.e., not paid for)
- Then vary
  - Buffer amount
- … and assess respective capital requirements

Portfolio Simulation

	Example 1	Example 2	Example 3
Price (indicative)	$5/t$CO_2$e	$5/t$CO_2$e	$5/t$CO_2$e
Reversal Buffer	40%	25%	10%
Program Effectiveness	11-64% (as per ER-PIN)	11-64% (as per ER-PIN)	11-64% (as per ER-PIN)
Aggregate ER Payments (11 ER programs)	$467m	$584m	$701m
ER from HFLD adjustment	$35m*	$44m*	$53m*
Average Program Value	$42m	$53m	$64m

* ER amount offered on basis of adjusted RL: below historical average (net positive) for DRC and Peru; above historical average (net negative) for RoC

Program Portfolio Risk Management

Key measures to manage risk of ER Program under-performance or failure, and to minimize its potential impact on the overall portfolio:

Stage 1 - ER Program portfolio selection process

- Select ER Programs on the basis of certain ER Program selection criteria, including country/regional diversification and quality criteria
- Key determinants of program performance (in addition to the criteria defined by CFPs) include
  - Sustainability (alignment of ER objectives with other development objectives and incentives)
  - Effectiveness (availability and targeting of underlying investments that generate ERs)

Program Portfolio Risk Management (cont.)

Stage 2 - ERPA signature process

- Enter into ERPAs only for ER Programs that are finalized or significantly advanced on certain program implementation risk aspects, including
  - Benefit Sharing Plans
  - Safeguards Plans
  - Reversal Management Mechanism
  - Ability to transfer Title to ERs, etc.
- Determine the Contract ER volume conservatively (taking into account additional Buffer volumes)
- Consider the use of
  - Call Options (Buyer's right, but not obligation, to purchase additional ERs) and
  - Put Options (Seller's right, but not obligation, to sell additional ERs);
  - with a preference for Call Options (if negotiable)

Program Portfolio Risk Management (cont.)

Stage 3 - ERPA implementation process

- Provide for reasonable exit strategies, including
  - Fulfilment of certain conditions within specified time period for ERPA sale and purchase obligations to become effective;
  - otherwise: early exit through ERPA termination.
- Allow for certain remedies in case of Events of Default (e.g., contract ER volume reduction, termination, etc.)
- Use of Call Options (if negotiated) to offset under-performance or failure of other ER Programs

Key Messages

- Including Peru as an HFLD country does not jeopardize goal of net emission reductions below historical levels for the portfolio.

- Long program preparation reduces effective ERPA period
  - Estimated ER potential is based on 2016-2020 period
  - If Facility were extended beyond 2020:
    - larger ER volumes may be possible
    - programs may have more time to deliver contracted volumes, reducing risk of under-delivery across the portfolio.

- Timeframe for program implementation remains challenging
  - → Current optimistic timeline: 2.75-4 years of implementation.
  - → Short implementation periods imply selecting more Programs with smaller volumes; decreases ambition of Programs during FCPF lifetime.
  - → Fewer programs increase risk of under-delivery by 2020.
  - → Over-programming risks more countries delivering than can be accommodated in the portfolio; need to manage country expectations.
  - → If aiming for larger volumes per Program, consider extending CF beyond 2020.

FMT Recommendations for CFPs Consideration

- Support additional 3 LOIs (total 11) for an eventual portfolio of 8-9 ERPAs (as per CF9)
  - ER-PD development takes time!
  - New programs can be added if/when new capital becomes available
  - ER volumes tend to be smaller; it will take time for programs to get traction and become effective; expected effectiveness may be optimistic
  - Portfolio can be managed more efficiently: allocate ERs based on better estimates in ER-PD
  - Note: Aggregate value of LOIs can exceed capital as they set a maximum value
- Provide full amount of $650,000 for ER-PINs selected into the pipeline
  - Time to make revisions is very limited

Task to CFPs: Required CF11 Outcomes

- Which of the 3 ER-PINs do CFPs agree to select into the pipeline at CF11?
- For those selected, what is maximum volume in the LOI?
  - Maximum volumes could be determined on the basis of estimated ERs

THANK YOU!

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