



# Forest Carbon Partnership Facility

## Portfolio Management Update

**Twenty Fifth Meeting of the Carbon Fund (CF25)**

September 14, 2022

# Outline of Presentation

- Funding
  - Financial contributions and funds available for purchase of ERs
  - LOI/ERPA commitments
  - ERPA signatures
- Portfolio Management
  - Carbon Fund portfolio summary, ERPA signatures
  - Update on signed ERPAs
  - ER Monitoring Report and Validation & Verification status
  - ERPA Payments status
  - Early results from submitted ER MRs & possible Call Options
  - Monte Carlo simulation
  - ER delivery risk assessment model
  - Summary of different portfolio management models
  - Portfolio Management: Historical Comparisons

# FCPF Carbon Fund Contributions to Date

## FCPF Carbon Fund Donor Contributions as of June 30, 2022 (in \$ thousands)

Participant Name	Total	Outstanding	FY21	FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11	FY10	FY09
Australia	18,392											5,658	12,735		
BP Technology Ventures	5,000												5,000		
Canada	5,015											5,015			
European Commission	6,709													362	6,347
France	5,114								114				5,000		
Germany	321,295			55,974	57,265	29,616	54,771	13,329	32,108	27,280	6,556	15,443	21,125	3,819	4,009
Norway	297,087			27,166	27,618	12,640		58,352			161,310				10,000
Switzerland	10,796											10,796			
The Nature Conservancy	5,000														5,000
United Kingdom	181,582		71,489	92,153									17,940		
United States of America	18,500						4,500				4,000		10,000		
<b>Committed Funding</b>	<b>874,492</b>	<b>0</b>	<b>71,489</b>	<b>175,292</b>	<b>84,883</b>	<b>42,256</b>	<b>59,271</b>	<b>71,681</b>	<b>32,222</b>	<b>27,280</b>	<b>171,866</b>	<b>36,912</b>	<b>71,800</b>	<b>4,181</b>	<b>25,356</b>

\$874.5  
million

# Carbon Fund Financial Situation: Sources and Uses Summary

Carbon Fund Sources and Uses Summary	
<b>Sources (\$m)</b>	<b>874.5</b>
Number of Lols (#)	18
Number of ER Programs	15
<b>Uses</b>	
Costs over Fund Lifetime	
Fixed Costs (FY10 to FY26)	29.4
ER Program Costs	60.2
ER Program's Reversal Management Mechanism	10.0
<b>Total Costs</b>	<b>99.6</b>
Available for Purchase of ERs	<b>774.9</b>
Equivalent to tons @ \$5/ton (millions)	155.0
Average ER Program (15 programs)	51.7

## Available for purchase of ERs

Carbon Fund Sources and Uses Summary (\$m)	
Sources	874.5
Available for purchase of ERs	774.9
Signed ERPAs (15)	721.3
Total uncommitted	<b>53.6</b>

# LOI & ERPA Commitments

Country	Max LOI volume	ERPA contract volume	ERPA Contract value (\$ million)	HFLD	HFLD proportion
<b>Signed ERPAs (15)</b>					
DR Congo	10.0	11.0	55.0	11	
Chile	5.2	5.2	26.0		
Costa Rica	12.0	12.0	60.0		
Cote D'Ivoire	16.5	10.0	50.0		
Dominican Republic	7.5	5.0	25.0		
Fiji	3.6	2.5	12.5		
Ghana	18.5	10.0	50.0		
Indonesia	22.0	22.0	110.0		
Lao PDR	8.4	8.4	42.0		
Madagascar	16.4	10.0	50.0		
Mozambique	8.7	10.0	50.0		
Nepal	14.0	9.0	45.0		
Republic of Congo	11.7	8.4	41.8	8.4	
Vietnam	10.3	10.3	51.5		
Guatemala	10.5	10.5	52.5		
<b>TOTAL</b>	<b>175.3</b>	<b>144.3</b>	<b>721.3</b>	<b>19.4</b>	<b>13%</b>

- Committed funding = \$874.5 million
- Committed through contract volumes in signed ERPAs of 144.3 m tons = \$721.3 million

# ERPA signatures

Country	Year	No.	ERPA Signature
DR Congo	2018	1	September 21, 2018
Mozambique	2019	3	January 16, 2019
Ghana			June 11, 2019
Chile			December 4, 2019
Fiji	2020	6	July 8, 2020
Vietnam			October 22, 2020
Cote D'Ivoire			October 30, 2020
Indonesia			November 25, 2020
Costa Rica			December 8, 2020
Lao PDR			December 30, 2020
Madagascar	2021	5	February 4, 2021
Nepal			February 24, 2021
Dominican Republic			March 1, 2021
Republic of Congo			April 22, 2021
Guatemala			September 13, 2021

# Carbon Fund Portfolio Summary

- Carbon Fund term ends 31 December 2025
- 18 countries submitted Program Documents (ERPDs) and were selected unconditionally into the Carbon Fund portfolio
- 3 ER Programs cancelled (Mexico, Nicaragua, and Peru)
- All remaining 15 ERPAs have been signed: total committed \$721.3 million
- **Conditions of Effectiveness fully met in 12 programs. Guatemala, Republic of Congo and Vietnam are the three remaining programs yet to fulfill COEs.**



# Update on signed ERPAs

## 1. Costa Rica

- Costa Rica was expected to demonstrate ability to transfer ER title for 55% of the 1st RP monitored ERs by the end of verification, however, signature of the sub-agreements with landowners took longer than expected.
- Hence, by end of verification, documentation to support the ability to transfer ER title was completed for only about 38.5% of the 1<sup>st</sup> RP monitored ERs. An additional 16.5% pending to be fulfilled.
- Subsequently, payment for the 1<sup>st</sup> RP was divided into two phases
- First phase of 1st RP payment (covering 38.5%) was \$16.4 million for about 3.2 million ERs (completed) (validation and verification report and ER MR available on FCPF website)
- Second phase (covering 16.5%) about \$7 million for about 1.4 million ERs anticipated in early CY2023 (Validation & Verification Body (VVB) will issue a 'supplementary statement' to cover this remaining portion once documentation for that is completed).
- **Total potential payment for the 1<sup>st</sup> RP is \$24 million**

## 2. Ghana

- 1<sup>st</sup> RP validation & verification report available on FCPF website; updates to the ER MR annexes 1, 2, and 3 are in progress and report expected to be available in September 2022
- **Anticipated payment is \$4.8 million** for about 972k ERs (expected in October 2022)
- Upfront advance payment \$1.3 million to be deducted from this payment

# Update on signed ERPAs

## 3. Mozambique

- One interim advance payment of about \$604K made in FY22 (50% of the monitored ERs)
- 2<sup>nd</sup> RP Verification report available on FCPF website; updates in progress for annexes 1, 2, and 3 of the 2<sup>nd</sup> RP ER MR and expected to be available soon
- Payment for 2<sup>nd</sup> RP anticipated for October/November 2022 (\$2.4 million for about 483K ERs; advance payment to be deducted from this payment)

## 4. Vietnam

- 1<sup>st</sup> RP validation & verification ongoing (ER MR reports delivery of full Contract Volume of 10.3 million ERs and potentially 3.5 million Additional ERs)
- Work in progress to fulfill the two ERPA conditions of effectiveness (COEs). Initial deadline to fulfill COEs was extended to September 30, 2022.
  - Decree related to the condition on demonstration of the ability to transfer ER title is in process of being approved.
  - Final BSP preparation is in progress and expected to be ready by the deadline

## 5. Madagascar

- 1<sup>st</sup> RP ER MR submitted, completeness & quality check done, and remaining revisions in progress. Validation & verification is expected to commence in September
- Madagascar is also now eligible to access upfront advance payment of \$2 million

# Update on signed ERPAs

## 6. Indonesia

- 1<sup>st</sup> Reporting Period (RP) ER MR submitted, and completeness & quality check was conducted. Validation & verification started in September 2022
- ER MR reports a delivery of full Contract Volume of 22 million ERs and a potential volume of about 9 million Additional ERs

## 7. Cote d'Ivoire

- Work in progress to prepare the 1<sup>st</sup> RP ER MR (planned submission in November 2022)
- Upfront advance payment of \$1 million completed

## 8. Fiji

- Draft of the 1<sup>st</sup> RP ER MR submitted in September 2021
- Issues were identified that required a recalculation of the data and total ERs initially reported
- Review of data and revision of ER MR currently in progress

## 9. Dominican Republic

- 1<sup>st</sup> RP ER MR submitted; completeness & quality check done
- Work in progress to revise the ER MR before validation and verification can be initiated

# Update on signed ERPAs

## 10. DR Congo

- ERPA amendment signature is in progress
- All COEs have been fulfilled, final BSP is available on the FCPF website
- DRC is now eligible for the upfront advance payment of \$1.06 million under the Tranche B ERPA only
- Work in progress for the preparation and submission of the 1<sup>st</sup> RP ER MR (planned submission in October 2022)

## 11. Chile

- 1<sup>st</sup> RP ER MR was submitted in June 2021, completeness & quality check was done
- Further analyses is being undertaken on the ER monitoring methodology employed – validation & verification has been put on hold until results of the analyses are available (expected by December 2022)

## 11. Lao PDR

- Work in progress to prepare and submit 1<sup>st</sup> RP ER MR
- Upfront advance payment of \$3 million completed in FY22

## 13. Nepal

- Work in progress to prepare the 1<sup>st</sup> RP ER MR (planned submission in early CY2023)

# Update on signed ERPAs (contd.)

## 14. Republic of Congo

- Two of the six COEs have been fulfilled. Final BSP is available on the FCPF website
- The deadline for meeting the remaining five conditions has been extended to October 5.
- Bank task team is working closely with ROC to ensure progress on the remaining conditions.
- Work in progress for the preparation and submission of the 1<sup>st</sup> RP ER MR (planned submission in November 2022)

## 15. Guatemala

- Work is ongoing to meet the four conditions of effectiveness under the ERPAs however, delays are expected that will likely warrant an extension of the deadline to end of CY2022 (currently September 13)
- Bank task team is working closely with the government to ensure progress in the next few months
- 1<sup>st</sup> RP ER MR was submitted and revisions ongoing to address issues raised from the completeness & quality check

# ER MR submissions & Validation Verification - Summary

Country	ER MR	Validation and Verification status
Chile	Draft submitted (1 <sup>st</sup> RP)	Not yet started
Costa Rica	Final available online (1 <sup>st</sup> RP)	Completed (VV report available online)
Fiji	Draft submitted (1 <sup>st</sup> RP)	Not yet started
Ghana	Final version pending (1 <sup>st</sup> RP)	Completed (VV report available online)
Indonesia	Draft available online (1 <sup>st</sup> RP)	Started in September 2022
Madagascar	Draft submitted (1 <sup>st</sup> RP)	Expected to start in September 2022
Mozambique	Final available online (1 <sup>st</sup> RP)	VV report online
	Final version pending (2 <sup>nd</sup> RP)	VV report online
Vietnam	Draft available online (1 <sup>st</sup> RP)	Ongoing
DR	Draft submitted (1 <sup>st</sup> RP)	Not yet started
Guatemala	Draft submitted	Not yet started
Cote d'Ivoire, Nepal, ROC, DRC, Lao PDR	Not yet submitted	To be determined

# ERPA payment status

Country	ER/advance payment	Status
Mozambique	1 <sup>st</sup> RP payment	FY22
	First interim advance payment	FY22
	2 <sup>nd</sup> RP payment	Planned FY23
Costa Rica	1 <sup>st</sup> RP payment (first phase)	FY23
	1 <sup>st</sup> RP payment (second phase)	Planned within FY23
Ghana	Upfront advance payment	FY21
	1 <sup>st</sup> RP payment	Planned FY23
Cote d'Ivoire	Upfront advance payment	FY22
Lao PDR	Upfront advance payment	FY22
Vietnam	1 <sup>st</sup> RP payment	Pending completion of validation & verification and fulfillment of COEs
Indonesia, Madagascar, DR, Chile, Fiji	1 <sup>st</sup> RP payment	Pending completion of validation & verification
DRC	Upfront advance payment	Pending completion of ERPA amendment
	1 <sup>st</sup> RP payment	To be determined
ROC, Guatemala, Nepal	1 <sup>st</sup> RP payment	To be determined

# Early results from submitted ER Monitoring Reports & possible Call Options

- Estimated portfolio delivery to date stands at **27%** (delivery against contract volumes only)
- Total potential payment to date w/o Call Option is about **\$192 million** (taking into account Costa Rica, Ghana, Indonesia, Mozambique, Vietnam)
- Early results from some of the ER MRs that are still under validation & verification show a delivery of ERs in addition to the contract volume (about 12 million ERs)
- Estimated total portfolio delivery (contract volumes + potential additional ERs) is 35%
- Availability of any additional ERs subject to conclusion of validation & verification
  - Could potentially be considered under Call Option
  - Summary below of Call Option composition of FCPF ERPAs

Call Option pricing categories	ERPAs	Countries
With price to be negotiated under both Tr A & Tr B	6	Chile, Costa Rica, DR, Indonesia, Mozambique, Nepal
With fixed price for Tr A and to be negotiated for Tr B	5	Cote d'Ivoire, Guatemala, Lao PDR, Madagascar, ROC
With fixed price under both Tr A and Tr B	4	DRC, Fiji, Ghana, Vietnam





# **FCPF Carbon Fund**

## **Monte Carlo simulation**

# Monte Carlo Simulation

- Performs risk analysis by building models of possible results by substituting a range of values—a probability distribution—for any factor that has inherent uncertainty
- Then calculates results over and over, each time using a different set of random values from the probability functions
- As the portfolio develops the FMT is using increasingly accurate values and narrower ranges of uncertainty

# Today's Programs:

## Estimated Reference Levels and Program Effectiveness

	<i>Unit: [million tCO<sub>2</sub>e/year]</i>	HFLD Adjustment <small>(% of total emissions)</small>	Emissions	Removals	Effectiveness <small>(% estimate, indicative)</small>
Final ER-PD	Chile		19.1	-12.6	5%
Final ER-PD	Congo, Dem Rep	5.6 (13%)	43.5	-1.4	18%
Final ER-PD	Congo Rep	5.4 (72%)	7.5	0.0	35%
1st ER MR	Costa Rica		7.4	-4.8	43%
Final ER-PD	Cote d'Ivoire		9.7	-0.1	63%
1st ER MR	Dominican Rep		2.5	-2.8	40%
Final ER-PD	Fiji		3.6	-2.0	12%
1st ER MR	Ghana		4.6	-0.1	49%
Final ER-PD	Guatemala		15.3	-2.2	20%
Final ER-PD	Indonesia		68.4	0.0	25%
Final ER-PD	Lao PDR		10.5	-2.0	26%
1st ER MR	Madagascar		11.3	0.0	31%
1st & 2nd ER MR	Mozambique		5.3	0.0	26%
Final ER-PD	Nepal		1.6	-0.7	98%
1st ER MR	Vietnam		12.1	-6.9	52%
	<b>Total</b>	<b>12.9 (4%)</b>	<b>222.4</b>	<b>-35.6</b>	

# Key variables that affect the eventual ER Volume in the Carbon Fund portfolio

## 1. Updates to Reference Level (RL) estimates

- RL is more carefully estimated for the ER-PD and sometimes later (e.g., ER Monitoring Reports)

## 2. Program Effectiveness (*percentage change in rate of emissions or removals during program implementation*)

- ER-PDs have more details on implementation design and hence effectiveness



## 3. Quality of Measurement (*statistical uncertainty associated with measured emission reductions*)

- Improved measurement (e.g., better data) lowers uncertainty
- Uncertainty (confidence in estimates) used for conservativeness factors (ER discount)



## 4. Share of Total ERs offered to the Carbon Fund

- Countries may choose to retain a certain portion of ERs for sale to other buyers or may not be able to transfer title



# Key variables that affect the eventual ER Volume in the Carbon Fund portfolio (cont.)

## 4. Risk of Reversals (*disturbance events lead to emissions that impact ERs paid for by the Carbon Fund*)

- Risk is assessed during verification
- Risk of reversal can be mitigated (through program design) and managed (a reversal buffer)
- A portion of ERs (10-40%) is set-aside in a Reversal Buffer account (and only released if reversal risk is reduced)



## 5. Length of the ERPA Term

- Carbon Fund until 2025



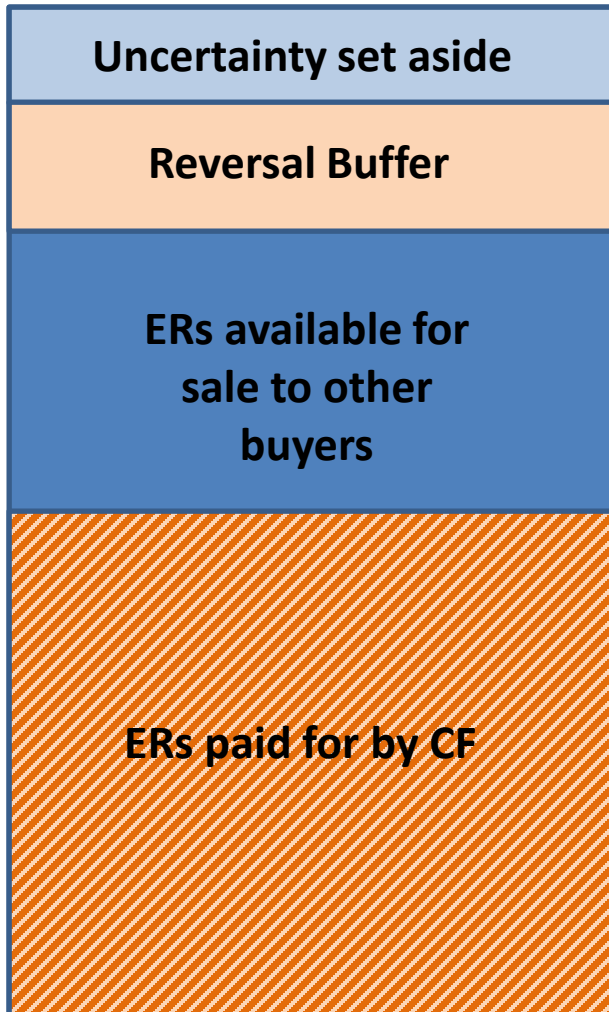
## 6. Portfolio attrition



# Carbon Accounting

## Calculation of Emission Reductions (ERs)

### Total ER Volume



- Subtract the reported and verified emissions and removals from RL
- Set aside number of ERs to reflect the level of uncertainty associated with the estimation of ERs (percentage of ER Volume)
- Set-aside number of ERs in CF Buffer to deal with risk of Reversals
- CF will buy percentage of the ER Volume
- Remaining ERs can be sold to other buyers

# Monte Carlo-Based Portfolio Simulations



# First, set variables ...

Portfolio Variable	Chile	Congo, Dem Rep of	Congo, Rep of	Costa Rica	Cote d'Ivoire	Dominican Republic	Fiji	Ghana	Guatemala	Indonesia	Lao, PDR of	Madagascar	Mozambique	Nepal	Vietnam
Change relative to RL	+/-5%														
Program effectiveness	0-20%	10-30%	20-40%	35-55%	45-65%	30-50%	10-30%	45-65%	10-20%	20-40%	20-30%	20-40%	20-40%	30-90%	45-65%
Uncertainty Buffer set-aside	8%	8%	8%	12%	4%	15%	4%	8%	15%	4%	11%	8%	3%	12%	12%
Reversal Buffer set-aside	21%	20%	23%	10%	23%	20%	26%	18%	23%	26%	23%	28%	39%	11%	21%
Share offered to Carbon Fund	80%	38%	69%	37%	40%	70%	67%	85%	90%	51%	77%	74%	115%	72%	17%
ERPA Term	6.00	6.00	5.00	7.00	4.17	3.84	5.48	5.56	5.00	5.54	6.00	4.78	6.63	6.53	6.92
LOI drop rate	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%



# ... and examine the outcome!

<i>[million tCO<sub>2</sub>e]</i>	Net emission reductions	ER Volume in CF portfolio			Buffer	
	< historical*	Average*	Max	Min	Uncertainty*	Reversal*
Chile	19.5	<b>11.3</b>	23.3	0.0	1.6	3.0
Congo, Dem Rep of	51.5	<b>23.9</b>	34.3	14.4	6.8	6.0
Congo, Rep of	11.1	<b>18.7</b>	21.5	16.2	3.0	5.6
Costa Rica	38.5	<b>11.3</b>	13.9	8.8	4.6	1.3
Cote d'Ivoire	22.7	<b>6.7</b>	8.3	4.9	0.9	2.0
Dominican Republic	8.3	<b>3.9</b>	5.0	2.8	1.2	1.0
Fiji	6.1	<b>2.9</b>	4.7	1.2	0.2	1.0
Ghana	14.2	<b>9.1</b>	11.5	7.0	1.1	2.0
Guatemala	13.0	<b>6.9</b>	10.9	3.0	1.9	2.1
Indonesia	104.9	<b>37.8</b>	59.3	15.5	4.2	13.3
Lao, PDR of	18.9	<b>9.9</b>	13.1	6.5	2.1	3.0
Madagascar	16.5	<b>8.1</b>	11.7	4.3	1.3	3.1
Mozambique	10.4	<b>4.4</b>	6.2	2.6	0.3	2.8
Nepal	8.6	<b>4.8</b>	7.2	2.4	1.0	0.6
Vietnam	71.8	<b>8.4</b>	10.3	6.7	8.6	2.2

# Aggregate Simulated Portfolio at CF24

[million tCO <sub>2</sub> e]	Net emission reductions	ER Volume in CF portfolio			Buffer	
		Average*	Max	Min	Uncertainty*	Reversal*
Total	416.0	<b>168.3</b>	241.1	96.4	39.1	48.9



# FCPF Carbon Fund

ER delivery risk assessment model

# ER delivery risk assessment model

- Projects expected ER delivery for each program, considered in light of its ERPA purchase
- Can inform ERPA contracting, business planning and portfolio management
- Builds on the WB's Systematic Operations Risk-rating Tool (SORT) tool
- SORT risk categories are unpacked in order to consider the contributing factors in each category explicitly:
  - Makes it possible to compute probabilities
  - Allows issues that are contributing to high risk ratings to be systematically tracked and addressed

# ER delivery risk assessment model – cont'd

- Development process relied on FMT/World Bank team of experts and included:
  - Identifying the major causes and sources of ER delivery, in alignment with SORT
  - Establishing interdependencies among the factors and their impact on the ER delivery through various causal chains
  - Quantifying those dependencies in terms of probability estimates elicited from team of experts
  - Testing, calibrating and validating the model
- **Model can learn from data; over time, parameters could be adjusted based on evidence and lessons learned**
- **Model should be more useful for portfolio management now that all ERPAs are signed**

# ER delivery risk assessment model – cont'd

*SORT risk categories and unpacked ER delivery risk assessment factors:*

1. Political and governance
2. Macroeconomic
3. Sector strategies and policies:
  - Government ownership
  - Relevant sectoral policies, including those outside of the forest sector
  - Land tenure
4. Technical design of project or program:
  - Addresses the drivers of deforestation/degradation/land use change
  - Prioritizes proposed program activities from the available strategic options
  - Incorporates appropriate incentives tailored to different types of stakeholders
  - Proposed approaches are sufficiently diverse
  - Resources are flexible enough
  - Program costs have been appropriately identified
  - Proposed program activities have a track record of being effective
  - Program design reflects capacity of stakeholders involved in implementation

# ER delivery risk assessment model – cont'd

*SORT risk categories and unpacked ER delivery risk assessment factors:*

## 5. Institutional capacity for implementation and sustainability:

- Capacity of coordinating entity and stakeholders involved in implementation
- Program complexity
- Monitoring, reporting and verification (MRV)
- Monitoring and evaluation

## 6. Fiduciary:

- Secured financing

## 7. Environment and social

## 8. Stakeholders

# Hypothetical scenarios

## 1. “High risk” program (#1 in table):

- Low-income country with poor political and macroeconomic stability
- Likely that environmental/anthropogenic events could affect program implementation
- Program design generally adequate, with a few challenging elements
- Despite a few favorable conditions, generally challenging environment for implementation, with capacity and financing being significant issues

## 2. “Medium risk” program (#2 in table):

- Middle-income country with good political and macroeconomic stability
- Unlikely that environmental/anthropogenic events could affect program implementation
- Strong program design, well tailored to country circumstances
- Good enabling environment for implementation, high capacity and adequate financing

Program Name	Program ERs	Risk Factor (% delivery)	Risk- Adjusted Program ERs	Expected ERPA Delivery		
				ERPA Contracted ERs	Expected ERPA Delivery	% ERPA Delivery
Program #1 (high risk)	20,000	15%	3,000	6,000	3,000	50%
Program #2 (medium risk)	14,400	35%	5,040	10,000	5,040	50%
<b>TOTAL</b>	<b>34,400</b>		<b>8,040</b>	<b>16,000</b>	<b>8,040</b>	<b>50%</b>



# FCPF Carbon Fund preliminary ER delivery risk assessment

- Preliminary estimates:
  - Indicates net program ERs (after deduction of buffers) from current portfolio of 282 million (over \$1.41 billion @ \$5 per ton)
  - Risk factor (% delivery) of between **55% and 79%** across programs
  - Results in a portfolio delivery of around **185.1 million** risk-adjusted ERs over ERPA periods (**\$925 million @ \$5 per ton**)
    - ER estimates based on:
      - Latest versions of the ER Monitoring Reports from Costa Rica, Dominican Republic, Ghana, Madagascar, Mozambique and Vietnam
      - Latest versions of ERPDs
      - Contracted volumes and expected contract volumes

# FCPF Carbon Fund preliminary ER delivery risk assessment

- ER delivery risk assessment tool:
  - Generates a risk discount factor (%) based on a program's *specific* risk assessment at a certain point in time
  - Discount factor is applied to ER volume in ERPD or in ER Monitoring Reports (or best available estimate), after adjusting for the uncertainty and reversal buffers
  - Over time as ERPAs are signed and first Monitoring Reports are submitted, and as program risk is assessed better, tool expected to provide most relevant ER delivery data

## Carbon Fund: Portfolio Management: Summary

- Available for purchase of ERs: approximately \$775 million
- Assuming \$5 per ton
- Monte Carlo: Average \$841 million (168.3 million tons)
- ER delivery risk assessment model: around \$925 million (185.1 million tons)
- Delivery risk remains difficult to predict in several of the programs so diversification remains important

# Portfolio Management: Historical Comparisons

	CF15	CF16	CF17	CF18	CF19	CF20	CF21	CF22	CF23	CF24	CF25
Available for purchase of ERs (\$m)	681	681	844	857	840	839	816	791.6	782.7	785	775
LOI maximum volume (m tons)	235	213	213	213	213	213	201.4	201.4	175.3	175.3	175.3
Monte Carlo 6 years/25% (m tons)	397	323	358	333	-	-	-				
Monte Carlo 5 years/33% (m tons)	330	270	297	277	-	-	-				
Monte Carlo (m tons) ERPA signature date					208	200					
Monte Carlo (m tons) portfolio selection date						240					
Monte Carlo (m tons)							230	213	184	164	168
Delivery Risk Assessment (m tons)	70-90	70-90	90	90	90	90	102	120	153	182	185



THANK YOU!

[www.forestcarbonpartnership.org](http://www.forestcarbonpartnership.org)