



WORLD BANK CARBON FINANCE UNIT CARBON PARTNERSHIP FACILITY 2014 ANNUAL MEETING

CPF CARBON FUND PORTFOLIO/PIPELINE



WORLD BANK CARBON FINANCE UNIT CARBON PARTNERSHIP FACILITY 2014 ANNUAL MEETING

BRAZIL CAIXA SOLID WASTE MANAGEMENT PROGRAM

BRAZIL INTEGRATED SOLID WASTE MANAGEMENT PROGRAM



Contract Volume: 3.0 million tCO₂e

Implementation Status	CDM Status
<ul style="list-style-type: none"> ◆ First CPA: CTR Santa Rosa (6 MtCO₂e between 2012-2018) <ul style="list-style-type: none"> - Sub-ERPA signed December 2011. - LFG system commissioned on November 13, 2012 ◆ Additional CPAs: São Gonçalo (0.3 MtCO₂e between 2015-2018) <ul style="list-style-type: none"> - Sub-ERPA signed with Caixa in December 2011 - LFG system to be commissioned in 2015 Five additional CPAs currently under evaluation by Caixa ◆ Isolated Projects selling post-2012 CERs to Caixa: <ol style="list-style-type: none"> 1. Itaoca (0.2 MtCO₂e between 2012-2018) 2. Candeias (1.1 MtCO₂e between 2012-2018) <ul style="list-style-type: none"> - Sub-ERPAs signed with Caixa in December 2011 - Candeias LFG system commissioned in January, 2013 ◆ CDM Operations plan: <ul style="list-style-type: none"> - Draft received May 2014. Final version expected by June 2014. 	<ul style="list-style-type: none"> ◆ PoA Registration Status : <ul style="list-style-type: none"> - Program registered on October 5, 2012. - Next CPA inclusion (São Gonçalo) estimated for 1st semester of 2015 ◆ PoA Verification Status : <ul style="list-style-type: none"> - Santa Rosa 2012-2013 verification site visit completed March 2014. - Ongoing verification. ER estimates ~125,000 tCO₂e ◆ Isolated Projects Registration Status: <ol style="list-style-type: none"> 1. Itaoca. Registered on August 11, 2011 2. Candeias. Registered on September 29, 2011 ◆ Isolated Projects Verification Status: <ul style="list-style-type: none"> - Candeias 2012-2013 verification site visit completed March 2014. - Ongoing verification. ER estimates ~100,000 tCO₂e

Next Steps/Timetable
<ul style="list-style-type: none"> ◆ Completion of SCF Novagerar II ERPA cancellation / Caixa ERPA amendment. 2012/2013 vintages will be sold to CPF ◆ Inclusion of the next CPA (São Gonçalo) ◆ Evaluation of additional CPAs ◆ Implementation of the CDM Operations Plan



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MOROCCO SOLID WASTE MANAGEMENT PROGRAM

Morocco Municipal Solid Waste Management Program



Contract Volume: 2.25 - 4.5 million tCO₂e from 2013-2020

Implementation Status

First CPA:

Greater Rabat (Oum Azza) - Lol signed with FEC.
Target is to sign sub-ERPA by May 27, 2014.
Investment by private sector participant conditional on signature of sub-ERPA with FEC and Local authorities. ±0.8 MtCO₂e between 2014-2018.

Additional CPAs:

Preparation work (feasibility studies and CPA-DDs) for 3 additional CPAs has started.

CDM Status

◆ Validation Status:

- PoA validation completed
- First CPA validation completed

◆ Registration Status:

- Program registered – Notification received from the CDM EB on 2 April 2013.
- Program registration date is 18 December 2012

◆ Inclusion of additional CPAs

- Procedure to include 3 additional CPAs to be completed by end 2014.

Next Steps/Timetable

- ◆ **ERPA signed** in August 2013.
- ◆ Field visit took place in October 2013 to draft the **CDM Operations Plan** for CPA implementers.
- ◆ **First sub-ERPA signature** between FEC, private sector operator and municipality (expected: May 2014).
- ◆ **Commissioning of LFG system** on first CPA landfill (expected: September 2014).



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VIETNAM RENEWABLE ENERGY PROGRAM

Vietnam Renewable Energy Development Program (REDP)



Contract Volume: 3.0 million tCO₂e from 2013-2020

Implementation Status

- ◆ The first CPA Sung Vui (18 MW) hydropower project is in the advance construction stage. Commissioned on March 28, 2013.
- ◆ 5 projects from the REDP pipeline have expressed their interest in joining the CPF program. 5 new projects have expressed their interest in joining the REDP/CPF bringing the total installed capacity to 200+ MW and potential ERs of 580ktCO₂e/year when fully commissioned.
- ◆ 4 additional CPAs are expected to be commissioned in 2014.

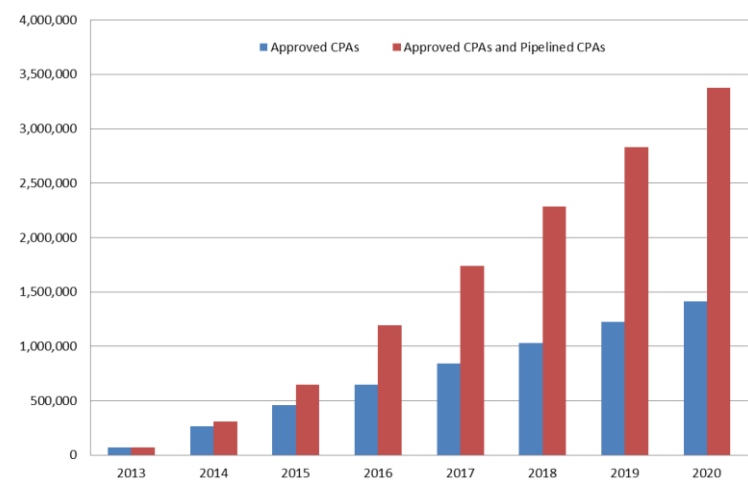
CDM Status

- ◆ **Registration Status:**
 - Registered on June 7, 2013.
 - CPA Inclusions (4 CPAs) to be developed during the 1st half of 2014
 - **CDM Operations Plan** to be completed in May 2014
 - 1st verification of CPA 1 is on progress (DOE's site visit conducted in April 2014) : 31,888 CERs expected to be issued in 2014.

Next Steps/Timetable

- ◆ **PoA included in the portfolio** on April 28, 2013
- ◆ **ERPA signature** on December 20, 2013
- ◆ **First five Sub-ERPAs** to be signed by September 2014

Cumulative Emission Reductions (2013-2020)





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THAILAND ENERGY EFFICIENCY PROGRAM

THAILAND - Energy Efficiency (EE) Program

Contract Volume 0.825 million tCO₂e from 2013-2020

CME: Provincial Electricity Authority of Thailand (PEA)

Implementation Status

- ◆ The program has been approved by PEA Board
- ◆ Pilot program started to be implemented on March 14, 2014.
- ◆ A cabinet approval (expected in October 2014) is needed before the ERPA signature. Now Ministry of Finance is requesting PEA to submit the exact value of energy saving from the program before the PEA's submission of the cabinet approval. PEA is planning to conduct the F/S in September 2014 after the four pilot projects started in August 2014.

CDM Status

- ◆ Thailand Energy Efficiency Improvement for Street Lighting Program of Activities (PoA 8055) has been approved by UNFCCC (the effectiveness date of registration November 6, 2012)
- ◆ CPA 2 is expected to be included in May/June 2014. Soon after its inclusion, the inclusion of the additional three CPAs will start.
- ◆ CDM Operations Plan is expected to be completed in June/July 2014.

Next Steps/Timetable

- ◆ **Emission Reduction Purchase Agreement (ERPA) will be signed in Q4, 2014.**





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TANZANIA RENEWABLE ENERGY PROGRAM

Tanzania Renewable Energy Program

Expected contract volume – 850,000 tCO₂e

Implementation Status

- REA has been very active in promoting the program – several workshops conducted
- 5 CPAs with a total capacity of about 25 MW are expected to be included into the registered PoA by December 2014.
- REA has successfully mobilized \$6.5 million (from Russia) for the REA Revolving Fund that would provide upfront financing to project developers
- REA is working with Bank on preparation of SREP project to support its ongoing Rural Energy Program (US\$ 45 Mil)
- REA is working with AFD on another project to support its ongoing Rural Energy Program (US\$ 20 Mil.)
- Operational Guidelines for implementing the carbon linked equity advance scheme, has been finalized..
- REA has a dedicated team to focus on carbon finance program, and has been training its staff to ensure smooth implementation
- 2 CPAs have already started construction..

CDM Status

◆ PoA Validation Status (ongoing):

- PoA validation is completed and package submitted for registration
- Registration expected around September/October, 2014
- 3 additional CPAs expected to be included into the POA by December, 2014

Inclusion of the Program in CPF

- Seller Participation Agreement signed with REA
- Emission reduction Purchase Agreement signed in April 2014.

Next Steps/Timetable

- ◆ Completion of ongoing validation of 3 additional CPAs by August 2014.
- ◆ Implementation of the CME systems (under development)
- ◆ Signing of sub-ERPA agreement with CPA implementers – June, 2014 onwards



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EGYPT VEHICLE SCRAPPING AND RECYCLING PROGRAM

Egypt Vehicle Scrapping and Recycling Program

Revised expected contract volume – 150,000-200,000 tCO₂e

Implementation Status

- ◆ **Part** of data needed to calculate compliance rate of Traffic Law #121 has now been received from Ministry of Interior concerning all 27 Governorates, which is considered a very good step, remaining data will follow.
- ◆ New traffic vehicles entering the program by a rate of 10-15 per day.
- ◆ More vehicles flow is expected as a new phase has started in 17th of March 2013. Given the expansion plans already in process in other governorates.

CDM Status

- ◆ Draft Monitoring report and Draft Operations Plan available.
- ◆ Pre-verification concluded in February 2014.
- ◆ Start of verification will be after completing the additional data from MOI.
- ◆ Plan B to proceed for deviation request is possible, if data continues to remain incomplete, although MOF is escalating the issue to the ministerial level and very optimistic regarding it.

Next Steps/Timetable

- ◆ ERPA is expected to be negotiated in June/July, to be signed in September 2014. Pending Region's clearance requirements.
- ◆ Finalization of Monitoring report and hiring of DOE by end of June 2014, contingent on full data availability.
- ◆ 1st verification is planned to be arranged in mid-2014.



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PHILIPPINES ANIMAL WASTE METHANE PROGRAM

- ◆ **CME: Land Bank of the Philippines (LBP)**
- ◆ **Expected Results:** The PoA has the potential to reduce more than 300,000 tons of GHG emissions annually between 2015 and 2020 from large and medium size commercial pig farms. Farms already included or ready for inclusion process estimated to result in 200,000 tons of emission reductions per year.



PHILIPPINES ANIMAL WASTE METHANE PROGRAM

CPA Development

- ◆ There is a significant increase in the potential farms for inclusion from 28 to 93 farms which have an estimated CERs of 2 Million tCO₂e up to 2020.
- ◆ In the long-term, program scale-up is expected, as the livestock sector is eyed to be export-competitive within the ASEAN region in 2015.
- ◆ For 2014, three (3) CPAs are about to be included based on geographic location and project readiness in order to save on inclusion cost.

CPA projects	Estimated Annual CERs (tCO ₂ e)
Marcela Farm	15,275
Biotech Farm	37,674
2014 Additional:	
Luzon Bundle	50,310
Mindanao Bundle	13,783
SURE Bundle	50,000
TOTAL	167,042

Philippines Animal Waste Methane Program

Expected contract volume: 2.0 MtCO₂e

Implementation Status

- ◆ First CPA (Marcela): Included in May 2012.
- ◆ Second CPA (Biotech): Included in September 2013
- ◆ Additional CPA Design Documents for bundled farms being drafted.
- ◆ DOE contract for additional inclusions in place.
- ◆ CDM Manual of Operations drafted.
- ◆ Monitoring plan at the Program and CPA level drafted.
- ◆ LANDBANK, as CME, has a dedicated team that were trained on CDM, monitoring, QA/QC and data handling and transmission
- ◆ WB conducted Mid-Term Review on the operations of the POA

CDM Status

- ◆ Registered on 10 May 2012.
- ◆ Ongoing monitoring of CER generation for the first 2 CPAs

Next Steps/Timetable

- ◆ Inclusion in CPF Carbon Fund portfolio June 2014
- ◆ ERPA negotiation and signing July 2014
- ◆ Sub-project Purchase Agreements (TBD)
- ◆ Intensify promotion of the PoA
- ◆ Develop financing mechanisms and incentives





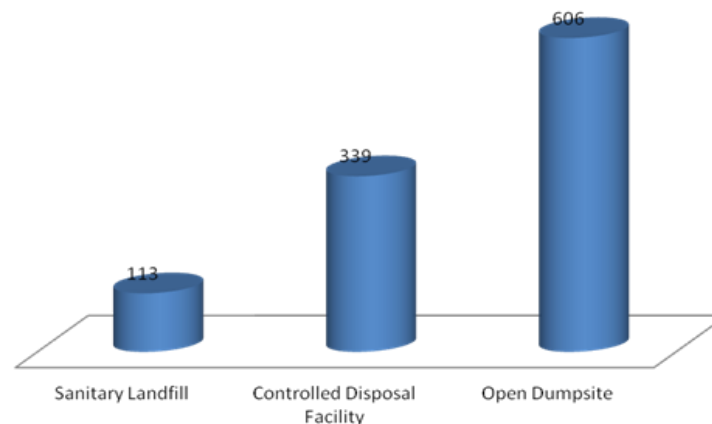
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PHILIPPINES SOLID WASTE MANAGEMENT PROGRAM

Philippines Solid Waste Management Program

- ◆ **CME: Land Bank of the Philippines (LBP)**
- ◆ **Expected Results:** The program will encourage Local Government Units (LGUs) and private operators to set up proper sanitary landfills in compliance with RA 9003 and benefit from the revenues that may be generated from a CDM project. The PoA has the potential to reduce more than 1.5 million tons of GHG emissions between 2014 and 2020.

Source: Philippine National Solid Waste Management Commission



CPA Development

- ◆ Since the signing of the SPA in 2013, marketing has accelerated; program staff increased; and capacity building undertaken to strengthen the portfolio development that had been dormant prior to the SPA.
- ◆ The World Bank has hired a consultant to train Land Bank of Philippines' expanded Carbon Finance Facility staff to identify potential CPAs.
- ◆ Specifically, the consultant is working with Land Bank to determine current and future methane emission projections for a range of landfills and dumpsites; energy generation potential, economic and risk management, and options for CDM operation design and monitoring systems.
- ◆ The consultant will also provide quality control of ER estimates for potential CPAs. A summary of ER potential for previously identified landfills is expected in June.
- ◆ The consultant will also work with potential CPAs to explain design and operating options that will lead to successful participation in the program.



CPA Development

- ◆ There are fifteen (15) sites under various stages of evaluation and other potential sites identified. Landfill gas expert currently leading an assessment of potential sites. Examples of CER potential (without electricity generation):

No.	Project Name	Estimated CERs up to 2020 (tCO ₂ e)
1	CPA 1 – Bulacan Engineered SLF	280,549
2	AEC Consolacion SLF	221,660
3	Iloilo City SLF	68,750
4	Olongapo City SLF	45,833
TOTAL		616,792



Philippines Solid Waste Management Program

Contract Volume: up to 1.50 MtCO₂e up to 2020

Implementation Status

◆ **First CPA:**

Bulacan Engineered Sanitary landfill was sold in late 2013. New owner plans construction of CDM project (flaring component) in second half of 2014.

◆ **Additional CPAs:**

- Consultant currently helping Land Bank assess ER potential and design options.
- 3 shortlisted projects undergoing further evaluation and documentation processes.
- Other cities at the identification stage, including some that are part of World Bank grant and lending programs.

◆ LANDBANK, as CME, trained officers / staff on CDM, monitoring, Quality Assurance / Quality Control and data handling and transmission

CDM Status

◆ **Registration Status:**

- Program registration date is 20 July 2012

Next Steps/Timetable

- ◆ Seller Participant Agreement signed June 2013
- ◆ Inclusion in CPF Carbon Fund portfolio by end of 2014
- ◆ ERPA negotiation and signing by end of 2014
- ◆ Sub-project Purchase Agreements (TBD)
- ◆ Intensify POA promotion



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PORTFOLIO/PIPELINE VOLUMES

CPF Portfolio -- Expected Contract Volumes



Program	Contract Volume (MtCO ₂ e)
Caixa SWM	3.00
Morocco MSWM	4.50
Thailand EE	0.83
Vietnam REDP	3.00
Tanzania RE	0.85
Egypt VRSP	0.20
Philippine Animal Waste	2.00
Philippine SWM	1.50
TOTAL	15.88