CASE STUDY
Philippines

Climate Change Mitigation through the Carbon Finance Support Facility (CFSF) in the Philippines

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Introduction

The Carbon Finance Support Facility (CFSF), as the flagship program for climate change-mitigation projects of Land Bank of the Philippines (LANDBANK), is its institutionalized response to the worldwide challenge of reducing impacts of global warming and climate change, through implementation of methane recovery initiatives and programs eligible under the Clean Development Mechanism (CDM).

The CFSF is one of the various programs under the Climate SMART (Synergistic Mitigation, Adaptation, Resiliency, and Transformation) Financing Program, which is LANDBANK's umbrella program for supporting climate change-related projects and activities. Projects under the Climate SMART may be classified into any of these action categories, namely: Mitigation, Adaptation, and Resiliency.

The projects under the CFSF fall into the Mitigation category of the Climate SMART. Such Mitigation projects are geared toward contributing to overall reduction in greenhouse gas (GHG) emissions. For this Case Study, the focus is mainly on the CFSF Program.

The CDM emerged as one of the "flexibility mechanisms" of the Kyoto Protocol convention of 1997, which allows for industrialized nations to purchase carbon credits from developing countries with projects that reduce GHG emissions, in order to achieve the emission targets of participating industrialized nations.

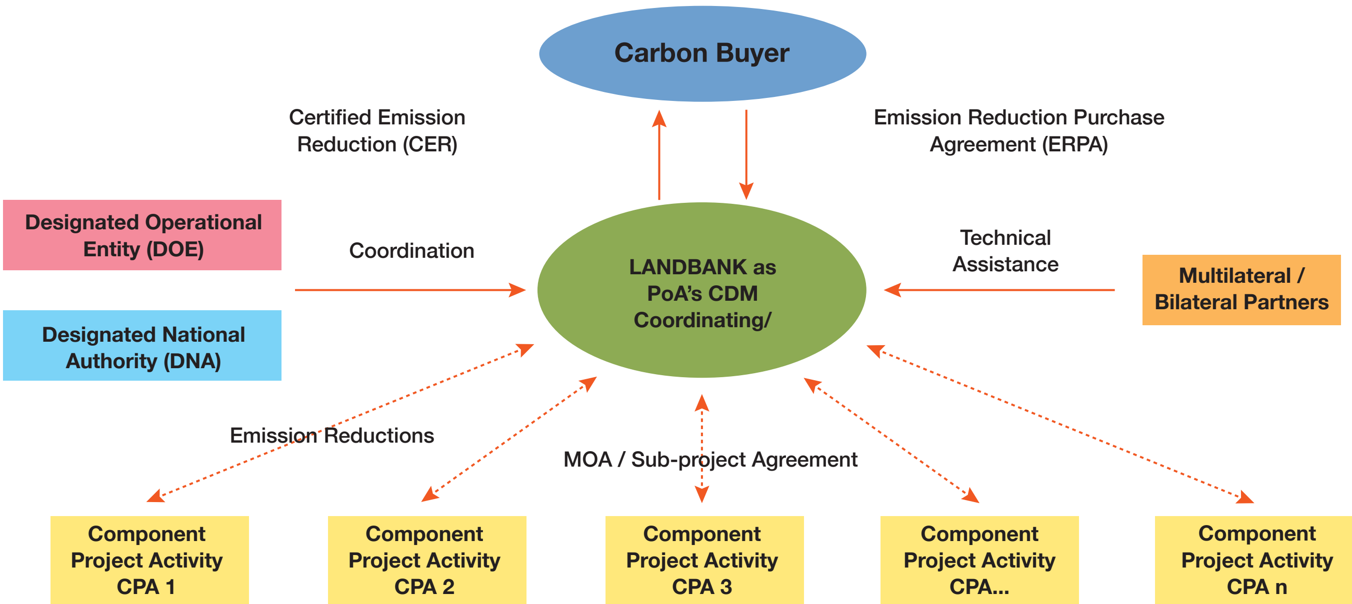
It is through the CFSF that LANDBANK is able to implement a voluntary coordinated action by introducing and supporting projects with CDM-eligibility potentials, which could lead to GHG emission reductions, and at the same time, provide incentives through generation of additional revenue in the form of carbon credits.

LANDBANK, through the Environmental Program and Management Department (EPMD) serves as the Coordinating and Managing Entity (CME) for the following CDM Program of Activities (PoA) which have been developed and registered with the United Nations Framework Convention on Climate Change (UNFCCC), with assistance from the World Bank (WB):

- CDM PoA 6707 – Landfill gas recovery and combustion with renewable energy generation from sanitary landfill sites;
- CDM PoA 5979 – Methane recovery and combustion with renewable energy generation from anaerobic animal manure management systems; and
- CDM PoA 8674 – Philippines' Mini-Hydro under LANDBANK CFSF.s

Below is a diagram on how LBP's CFSF is structured:

Inventory of GHG Emissions in MT CO_2 Equivalent



For the landfill CDM PoA, 1,750,000 total carbon credit units (or tons CO_2-equivalent units recovered) are targeted to be achieved by projects implemented under CFSF; for the piggery CDM PoA, the target is 2,000,000 total carbon credit units.

As of this writing, inclusion of applicable projects into the CDM PoA for Mini-Hydro is on hold, pending securing of interested foreign entity-participant buyers for equivalent carbon credit units generated from such projects. However, it must be noted that LANDBANK has accepted, and continues to accept and consider, loan applications for hydropower projects under its renewable energy portfolio of accounts.

Legal and Institutional Framework

The development of LANDBANK's Climate SMART Financing Program was in cognizance of the enactment of various climate-related national laws, such as the Disaster Risk Reduction and Management Act (RA 10121), Renewable Energy Act of 2008 (RA 9513), Biofuels Act of 2006 (RA 9367), and the Climate Change Act of 2009 (RA 9729).

On the other hand, the CFSF was institutionalized through Management Committee Resolution No. 21 series of 2006, as also guided by LANDBANK's vision of protecting the environment. This was further enabled by LANDBANK Executive Order No. 002 Series of 2013, which establishes the guidelines for the implementation of the PoA's under the CFSF. The said implementation guidelines cover details on the processing, administration, and management of CDM-eligible projects, as well as the crediting and distribution of proceeds from carbon credits generated.

The implementation of CFSF is also aligned with LANBANK Credit Policy issuance (CPI) No. 002 series of 2009, or the Environmental Policy Relative to Credit Delivery, which is implemented in support of the Bank's corporate environmental policy of actively promoting environmental protection and sustainable development. This is accomplished through the Environmental Due Diligence (EDD) system wherein all projects directly financed by LANDBANK, as well as collaterals offered as security, are subjected to environmental assessment and compliance monitoring. Detailed EDD is applied to projects covered by the Philippine EIS system to identify, mitigate and monitor the adverse impacts of the LBP-financed project to the environment.

With the EDD system as an encompassing framework, the implementation of CFSF is in line with the relevant Philippine national and local laws and regulations, along with the World Bank Safeguards Policies. The application of Philippine environmental laws are deemed not to present any conflict with World Bank safeguards issuances: The safeguards requirements build upon these national guidelines and requirements in order to streamline, to the extent possible, the documents required for each project under the CFSF without compromising in any manner the relevant legal requirements under the system of laws under the Philippine government, or the Safeguard requirements of the World Bank.

Existing Climate Finance Gaps

Some of the climate finance gaps observed and learned from the implementation of various piggery and landfill projects under the CFSF relate to conditions inherent in these two sectors, such as:

- **For landfill**: Lack of landfill areas with enough scale (in terms of waste acceptance rate and gas production volume) to support the economics of scale of biogas plant construction and operation. This restricts the number of potential landfill areas identified and selected for development.

- **For piggeries**: The need for more bio-digester technology providers to offer proponents more flexibility in terms of price and technology options. Currently, there are a small number of identified technology providers in the country.

It is a given that high investment costs are involved in the implementation of these gas-to-energy projects under the CFSF. Recognizing and addressing the above identified gaps would seek to moderate the impacts of perceived risks, especially in the part of proponents, in the face of such high investment costs.

On the financing aspect, given that environmental protection and sustainable development are the main driver values of LANDBANK for supporting projects under the CFSF, climate finance gaps herewith stated are more related to technical proficiency in the credit proposal preparation and evaluation for such projects; to wit:

- The need for training and developing account officers for enhanced capability in design evaluation and cost determination (in context of credit proposals);

- The need for training for enhanced technical proficiency for conducting due diligence and monitoring activities (in context of projects already in operational mode).

Financial Framework of the Project's Implementation

Implementation of the CFSF is covered by the Carbon Partnership Facility (CPF), one of the major carbon finance instruments set up by the World Bank, with the declared objective of developing emission reductions (hereby qualified as carbon credit units) and supporting their purchase through the provision of carbon finance to long-term investments. The CPF, in particular, is about collaborations with governments and market participants on investment programs that are consistent with the low-carbon economic growth and sustainable development priorities of developing countries.

The CPF is composed of two trust funds, namely:

- Carbon Asset Development Fund (CADF) – for the preparation and implementation of emission-reduction programs; and
- Carbon Fund (CF) – for the purchase of carbon credits from the pool of emission-reduction programs.[1]

LANDBANK's CFSF is covered by the following emission reduction purchase agreements (ERPA):

- Carbon Partnership Facility Clean Development Mechanism Certified Emission Reductions Purchase Agreement (for Landfill projects), signed and dated December 15, 2015; and
- Carbon Partnership Facility Clean Development Mechanism Certified Emission Reductions Purchase Agreement (for Piggery projects), signed and dated May 25, 2015.

The aforementioned ERPAs cover for the purchase of 2,000,000 certified emission reductions (CERs) from piggery projects and 1,750,000 CERs for landfill projects until 2020.

The financing of landfill and piggery projects under the CFSF is funded using the internal funds of the Bank.

Estimated or Achieved Impacts, to-date

As of August 2017, the CDM PoA for Landfill projects has the following projects implemented and registered:

- Quezon City Controlled Disposal Facility Biogas Emission Reduction Project (CDM Reference Number 1258) of Pangea Green Energy Philippines, Inc. (PGEP); and
- Landfill Gas Recovery and Combustion with Renewable Energy Generation from Sanitary Landfill Sites of Montalban Methane Power Corporation (MMPC).

As of this writing, an expansion project under the existing biogas power plant project of PGEP is being prepared for registration under the applicable CDM PoA.

The table below shows the estimated amount of CERs expected to be realized from the CDM PoA for Landfill projects.

Results Indicators	Output for the Period	Estimated CERs to be Delivered (Metric tCO2e)	Description
Sanitary Landfills (SLF) Registered	2	2,073,922	Cumulative number of SLF that have been included in the PoA.
SLF undergoing Registration	1	331,591	Number of SLF that have been assessed by the designated operational entity (DOE) for inclusion.
TOTAL	3	2,405,513	**137%** of 2020 ERPA Commitment

[1] As presented in https://cpf.wbcarbonfinance.org/content/what-cpf.

On the other hand, the CDM PoA for Piggery projects has the following first three (3) projects registered/implemented, as of August 2017:

- Biotech Farms;
- Marcela Farms, and
- Mega Pork, Inc.

As of this writing, a total of 45 piggery projects and one (1) sanitary landfill project, at various stages of CDM-documentations, are being facilitated for inclusion/registration under the CDM PoAs.

The table below shows the estimated amount of CERs expected to be realized from the CDM PoA for Piggery projects:

Results Indicators	Output for the Period	Estimated CERs to be Delivered 2018-2020 (Metric tCO_2e)	Description
Pig Farms Registered	3	70,973	Cumulative number of pig farms that have been included in the PoA (since the start of the PoA)
Pig Farms Undergoing Inclusion	34	910,360	Pig farms scheduled for Inclusion-Validation by October 2017
Pig Farms Scheduled for Inclusion	11	143,000	
TOTAL	48	1,124,337	**64%** of 2020 ERPA Commitment