What efforts exist to reform the CDM so that more projects reach poor people and communities in least developed countries, including donor initiatives

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## **Report summary**

This brief report has been produced in response to an Evidence on Demand Helpdesk request. It has been produced in support of a proposed DFID project business case to increase the flow of international carbon finance to Least Developed Countries (LDCs) – with a focus on Africa – to support poor peoples' access to clean energy and other poverty reducing technologies.

The report provides information on the ongoing efforts to reform the CDM so that more projects reach poor people and communities in least developed countries, including donor initiatives. The key areas of recent reforms identified in addition to those already considered by DFID are (a) Adoption of a new approach for demonstrating additionality (b) Adoption of Suppressed Demand guidelines (c) Adoption for default values of non-renewable biomass (NRB) (d) Launch of CDM Help Desks.

On other donor activities it is evident by the number of initiatives listed that there is recognition on the importance of a balanced regional distribution of CDM and the win-win opportunity that it presents. The number of initiatives range from the Programme of Activity (PoA) Support Centre in Germany managed by KfW Bankengruppe, to the recently launched World Bank Carbon Initiative for Development (CI-Dev) fund.

These sets of information show that the CDM reform efforts, if realised, will make clean energy and other low carbon technologies more affordable for poor people in LDCs. This would help expand energy access – through community and household based off-grid renewable technologies (like solar, biogas and micro hydro). It brings to show that international carbon market mechanisms will remain a key tool for delivering global emissions reductions and equally transform the lives for poor people in the LDCs – whilst also reducing carbon emissions.



## **Acronyms & Abbreviations**

ACAD ACSP AfDB CADF CDM CDM EB CER CE	Africa Carbon Asset Development Initiative African Carbon Support Programme African Development Bank Asset Development Fund Carbon Clean Development Mechanism CDM Executive Board Carbon Emissions Reductions
CI-Dev	Carbon Initiative for Development fund
CPF	Carbon Partnership Facility
DFID	Department for International Development
DNAs	Designated National Authorities
DOE	Designated Operational Entity
EU	European Union
FCA	Carbon Fund for Africa
GHG	Greenhouse Gas
GWH	Gigawatt Hour
KP	Kyoto Protocol
LDCs	Least Developed Countries
LOA	Letters of Approval
MDG	Millennium Development Goal
MWH	Megawatt Hour
NRB	Non Renewable Biomass
pCDM	Programmatic Clean Development Mechanism
PDD	Project Design Document
PIN	Project Idea Note
PoA	Programme of Activity
REDD	Reducing Emissions from Deforestation and forest Degradation
SIDS	Small Island Developing States
SIMES	Small and Medium Enterprises
55A	Sub-Sanaran Africa Special Linderdeveloped Zone
50Z	Tennes of earbon dioxide equivalent
	Lipited Nations Development Programme
	United Nations Developmental Programma
	United Nations Environmental FloyIdnine United Nations Framework Convention on Climate Change
WB	World Bank



# SECTION 01 Introduction

This report is produced in response to an Evidence on Demand Helpdesk request. It supports a DFID project business case to increase the flow of international carbon finance to Least Developed Countries (LDCs) – with a particular focus on Africa – to support poor people's access to clean energy and other poverty reducing technologies.

Carbon finance is the generic name for the revenue streams generated by projects - such as those of the Clean Development Mechanism (CDM) - from the sale of their Green House Gas (GHG) reductions.<sup>1</sup> It is well recognised that carbon finance could make clean energy and other low carbon technologies more affordable for poor people in LDCs.<sup>2</sup> If realised this would help expand energy access to the 1.3 billion people without electricity and the 2.6 billion who do not have access to clean cooking facilities<sup>3</sup> – through community and household based off-grid renewable technologies.<sup>4</sup> However, carbon finance flows for access to energy technologies remain minimal – particularly to the LDCs that need it the most. Some of the reasons recognised by DFID for the minimal flows include: (a) the cost to demonstrate carbon reductions is currently prohibitive for small scale projects; (b) uncertain returns from the technologies discourages investment; (c) a gap in skills and experience; (d) the uncertainty in the carbon market is causing very low prices.

It is against this background that DFID wants to test new methods and approaches specifically designed and with particular focus to the CDM to help LDCs access carbon finance whilst ensuring they are well placed to participate in the future carbon market and develop along a low emissions pathway.

## **Report objectives**

The report presents information that exists on current efforts to reform the CDM so that more projects reach the poor and most vulnerable communities in Africa. The work specifically takes into account recent reform developments at the CDM Executive Board (CDM EB) and other donors' initiatives set up to assist carbon market finance for community and household level.

The approach of the work has been limited to information available in the public domain and through the author's experience. The report does not provide any information for those CDM reform efforts already taken into consideration by DFID - these are the key reforms of (a) Programme of Activity (PoA); (b) Interest-free loan scheme; (c) Standardised baselines and including the EU's decision on banning the use of Carbon Emissions Reductions (CERs) originating from CDM projects registered after 2012 in countries other than LDCs.



<sup>&</sup>lt;sup>1</sup> World Bank 2010b

<sup>&</sup>lt;sup>2</sup> Copenhagen Accord

<sup>&</sup>lt;sup>3</sup> IEA 2006

# SECTION 02

## **Background Need for Reform**

The CDM is the flagship carbon instrument under the 1997 Kyoto Protocol (KP). It stimulates sustainable development and emission reductions, while giving developed countries some flexibility in how they meet their emission reduction targets. The scheme has expanded rapidly in recent years and there are now 5,511 CDM projects registered across 105 developing countries<sup>5</sup>, representing a considerable financial flow to these countries. The Asia Pacific region account for 85% of the registered projects, with only 2% in Africa (see Figure 1). China and India host two thirds of all registered projects as can be seen in Figure 2 below.<sup>6</sup>



#### Figure 1 Distribution of registered projects by UNFCCC region

Source UNFCCC as at 31 Dec 2012



#### Figure 2 Distribution of registered projects by Host Party

Source UNFCCC as at 31 Dec 2012

<sup>6</sup> Shishlov 2012



<sup>&</sup>lt;sup>5</sup> UNFCCC Data as of 31 December 2012



Most countries in Africa, as well as most LDCs have no registered projects at all, although this pattern appears to be gradually changing with the emergence of PoAs (See Figure 3).<sup>7</sup> Table 1 shows host countries and the number of PoAs registered.



Figure 3 Comparison of regional distribution of PoA (pCDM) and CDM

**Source PoA pipeline** 

#### Table 1 Host countries of registered PoAs

Latin America		Asia & Pacific		Africa		Middle East	
Host	Registered	Host	Registered	Host	Registered	Host	Registered
Brazil	5	Bangladesh	3	Egypt	1	Israel	1
Chile	1	China	4	Ghana	1		
EI							
Salvador	1	India	6	Kenya	4		
Honduras	1	Indonesia	5	Nigeria	1		
Mexico	3	Malaysia	1	Rwanda	1		
				South			
Nicaragua	1	Philippines	2	Africa	5		
		South					
Peru	2	Korea	3	Tanzania	1		
		Sri Lanka	1	Tunisia	1		
		Thailand	1	Uganda	2		
		Vietnam	5				

Source PoA pipeline modified by author to table form. Highlighted countries are LDCs

<sup>7</sup> CDM Policy Dialogue (2012b)





Figure 4 below gives further information on the technologies and types of projects PoA cover.



#### Figure 4 PoA Distribution by Type

Source PoA Pipeline

The figures clearly show that LDCs with relatively low levels of emissions at present have largely been by-passed by the CDM experience to date. Therefore efforts are needed to remove the CDM specific barriers that are preventing it from reaching these countries and to contribute to access to energy and poverty reduction more meaningfully. Some of the specific barriers previously<sup>8</sup> and most recently<sup>9</sup> highlighted by UNFCCC in looking to address the issue include:

**Financial issues** – there has been insufficient access to funds for technical assistance and even capacity building and insufficient access to project finance;

**Structural and institutional issues** – a weak institutional and administrative capacity to the development of CDM project activities;

**CDM specific capacity issues** – a lack of CDM related awareness and experience in relevant sectors, investment conditions and small size of projects;

**CDM process issues** - a complexity of processes and methodologies, insufficient guidance on bundling and lack of clarity with regard to the relationship of official development assistance involvement in the project cycle;

Uncertainty - the role of CDM post 2012.



<sup>&</sup>lt;sup>8</sup> CDM EB 32 Annex 6, FCCC/KP/CMP/2006/4/Add.1 (Part I)

<sup>&</sup>lt;sup>9</sup> CDM Policy Dialogue (ibid)



As a result, there are various measures that are being discussed, with some already implemented, in an attempt to address this uneven distribution. Some of the recent ones that are most relevant to this report are discussed in section 3 below. Other examples include targeted capacity-building efforts, the elaboration of methodologies that are likely to be particularly applicable to under-represented countries such as the CDM EB twenty seventh meeting<sup>10</sup> aimed at creating a concise list of broadly applicable methodologies and eliminating inconsistencies among them<sup>11</sup>, and the creation of a loan scheme to support the development of projects in countries with fewer than ten registered projects. Although a considerable amount of efforts has been undertaken there is still room for improvement and carbon finance is key and seen as an important catalyst. CDM projects have demonstrated that they can complement and leverage other resources to unlock low carbon investment by overcoming barriers, driving innovation, and creating a revenue stream that sustains projects over time.<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> World Bank 2010



<sup>&</sup>lt;sup>10</sup> This occurred in 29 October - 1 November 2006

<sup>&</sup>lt;sup>11</sup> Shishlov 2012



# SECTION 03 Reforms - Landscape

## **CDM Executive Board Reforms**

This section provides a summary of information on additional CDM reform efforts, selected as particularly relevant to the scope of this report.

## 1. Adoption of a new approach for demonstrating additionality

A key requirement of the CDM is that projects produce emission reductions that are additional to what would have occurred without the project. This requirement is normally demonstrated by the aid of an additionality tool. According to the tool, project participants need to identify all the alternatives and demonstrate that their project is less preferable to any of the alternatives without the CDM.<sup>13</sup> The proof of additionality represents one of the major obstacles to CDM project development, particularly for small scale projects, that are more prevalent in LDCs.<sup>14</sup>

Because of the difficulties in demonstrating additionality, CDM EB initially simplified its guideline in 2005.<sup>15</sup> This was in support of the small scale projects pertinent to LDCs. The simplification approach resulted in the adoption of "Guidelines for demonstrating additionality for renewable energy projects of less than 5 MW and energy efficiency projects with energy savings of less than 20 GWH per year.<sup>16</sup> Since then there have been further simplifications of this guideline including expansion of scope to include micro scale<sup>17</sup>. The most recent<sup>18</sup> expanded the list of projects that automatically qualify due to their obvious ability to reduce emissions and obvious barriers they face to implementation.

Those that are automatically considered as additional include the following:

- a. The grid connected renewable electricity technologies<sup>19</sup>
  - i. Solar technologies (photovoltaic and solar thermal electricity generation);
  - ii. Off-shore wind technologies;
  - iii. Marine technologies (wave, tidal);
  - iv. Building integrated wind turbines or household rooftop wind turbines of a size up to 100 kW.
- b. The off-grid electricity generation technologies<sup>20</sup>

<sup>&</sup>lt;sup>20</sup> Individual units do not exceed the thresholds indicated in parentheses with the aggregate project installed capacity not exceeding 15 MW



<sup>&</sup>lt;sup>13</sup> UNFCCC, 2008

<sup>&</sup>lt;sup>14</sup> IGES 2011

<sup>&</sup>lt;sup>15</sup> UNFCCC, 2005

<sup>&</sup>lt;sup>16</sup> At the CDM EB fifty fourth meeting

<sup>&</sup>lt;sup>17</sup> Also termed as Very Small Scale CDM (VSSC)

<sup>&</sup>lt;sup>18</sup> Was that adopted at the CDM EB sixty eighth meeting

<sup>&</sup>lt;sup>19</sup> Installed capacity up to 15 MW



- i. Micro/pico-hydro (with power plant size up to 100 kW);
- Micro/pico-wind turbine (up to 100 kW); ii.
- PV-wind hybrid (up to 100 kW); iii.
- Geothermal (up to 200 kW); iv.
- Biomass gasification/biogas (up to 100 kW). ٧.
- Project activities solely composed of isolated units where the end users of the C. technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the smallscale CDM thresholds.
- d. Rural electrification project activities using renewable energy sources in countries with rural electrification rate is less than 20%.

For micro scale, size is considered 'additional' if it satisfies any one of the conditions listed in Table 2.

		Renewable energy <=5 MW	EE with energy savings <=20 GWH per year		Other project activities with reductions no more than 20 ktCO2e per year	
(a) Geographical location of project activity		The project activity is in one of LDCs or SIDs or in a special underdeveloped zone (SUZ) <sup>21</sup> of the host country identified by Government			a special identified by	
(b) Status of grid connection		An off grid activity supplying energy to households/communities <sup>22</sup>		None required	None required	
(c) Distributed energy generation <sup>23</sup>	Independent subsystems/ measures	Smaller than or equal to 1500 kW electrical installed capacity		Estimated annual energy savings of equal to or smalle than 600 MW	Achieves an estimated annual emission reduction equal to or less than 600tCO <sub>2</sub> e per year	
	End users of the subsystems or measures	Households/comm SMEs	nunities/	Households/com munities/ SMEs	Households/comm unities/ SMEs	
(d) Technology measure		Recommended by the host country DNA and approved by the Board to be additional in the host country as per the conditions <sup>24</sup> .		None required	None required	

#### Table 2 Guidelines for Demonstrating Additionality for Micro Scale Project Activities

Source IGES 2011 validated with information from UNFCCC

<sup>&</sup>lt;sup>24</sup> As specified in CDM EB sixty eighth meeting report, Annex 26, paragraph 2 (d)



<sup>&</sup>lt;sup>21</sup> A SUZ is a region in the host country identified by the government satisfying any one of the following conditions using most recent available data: (a) The proportion of population with income less than USD 2 per day (PPP) in the region is greater than 50%; (b) The GNI per capita in the country is less than USD 3000 and the population of the region is among the poorest 20% in the poverty ranking of the host country as per the applicable national policies and procedures. <sup>22</sup> Less than 12 hours grid availability per 24 hours is also considered as 'off grid' for this assessment

<sup>&</sup>lt;sup>23</sup> Not connected to a national grid, with both of the below conditions satisfied



The adoption of the guidelines will overcome a major barrier to small scale project development in LDCs. An analysis carried out<sup>25</sup> stated that the guidelines have enhanced project development by removing this barrier. This is attributed to the simplicity of applying the guidelines to projects in LDCs, in that project participants only need to state that it takes place in an LDC.

Taking into account the above information, a sample for demonstrating additionality of micro scale renewable energy projects is presented in Figure 4 below.

#### Figure 5 Approach to simplified additionality test for micro scale renewable energy project



The micro scale development should reinforce the pipeline of small-scale CDM projects in LDCs and SIDs. Evidence shows a number of Designated National Authorities (DNAs) (Korea, Chile, Uruguay, Brazil, Thailand, Peru, Sri Lanka, Macedonia, Iran, Ecuador and Mongolia)<sup>26</sup> have proposed specific renewable technologies/measures for consideration by the CDM EB for automatic additionality. It is still not clear how widespread its usage is amongst project participants however a brief review of projects requesting registration<sup>27</sup> showed that 7 out of 167 projects have used the micro scale guideline to demonstrate additionality. Of the seven, one is based in Rwanda and the other six in India.



<sup>&</sup>lt;sup>25</sup> IGES 2011

<sup>&</sup>lt;sup>26</sup> http://cdm.unfccc.int/DNA/submissions/index.html

<sup>&</sup>lt;sup>27</sup> As of 28 Jan 2013



## 2. Adoption of Suppressed Demand guidelines

The methodologies that consider only current levels of energy consumption, particularly in relation to household level services (e.g. cooking energy, potable water), may fail to reflect the real demand for these services – a situation usually termed as Suppressed Demand. In these types of situations demand is, in many cases, arguably higher than consumption on account of a lack of infrastructure, or poverty, particularly given the high cost of these services relative to household incomes. As such a Suppressed Demand guideline provides for the possibility to incorporate a minimum service level in a baseline scenario i.e. a baseline when the minimum human needs, such as energy for cooking, lighting and water supply, are taken into account. Taking account of this Suppressed Demand usually increases the level of potential emissions in a country or sector, attracting investors as it would be expected to do.

The Suppressed Demand guideline was adopted at the CDM EB sixty eight meeting.<sup>28</sup> The guideline provides generic approaches that should be used in CDM methodologies to address the demand issue. Addressing such situations is especially important for LDCs, where the demand for GHG emitting services, e.g. energy, is not met. A comprehensive analysis of its usage is beyond the scope of this report however a review of projects seeking registration<sup>29</sup> did not reveal its application.

As a priority, the CDM EB also agreed on a list of approved methodologies for the work by the Small Scale Working Group to explore the application of this guideline. This list includes small scale methodologies methodology e.g. AMS.I-A (Electricity generation by the user) AMS-I.L (Electrification of rural communities using renewable energy and AMS-III.AV (Low greenhouse gas emitting water purification systems A review by the author confirms that AMS.I-A<sup>30</sup> has since been revised to account for suppressed demand in baseline calculations. No information was available on progress with the other two, it is assumed that these are still under development.

## 3. Adoption for default values of non-renewable biomass (NRB)

The use of non-renewable biomass for energy supply is widespread in LDCs. Wood and charcoal represent the most common sources of primary energy. For example in Sub-Saharan Africa (SSA), around 90 per cent of the population is dependent on wood and charcoal for cooking, with the urban settlements relying heavily on charcoal and rural areas being more dependent on firewood.<sup>31</sup> A CDM project such as efficient cook stoves, can reduce the use of NRB for energy. However, many project developers lack the necessary knowledge and financial resources for determining their NRB fraction and incorporating it into their project development planning. For many projects located in LDCs with little CDM activity so far, only little statistical data on the NRB fraction is available. The NRB determination, therefore, constitutes a crucial bottleneck.

The CDM EB, at its sixty seventh meeting<sup>32</sup> approved the approach to calculate default NRB fraction values<sup>33</sup> for LDCs, SIDS and Parties with 10 or less registered CDM project activities as of 31 December 2010. It also approved the default values for LDCs, SIDS already

<sup>&</sup>lt;sup>33</sup> Annex 22



<sup>&</sup>lt;sup>28</sup> This occurred in 16 - 20 July 2012

<sup>&</sup>lt;sup>2929</sup> As of 27 Jan 2013

<sup>&</sup>lt;sup>30</sup> http://cdm.unfccc.int/methodologies/DB/8FKZFJ7SG551TS2C4MPK78G12LSTW3

<sup>&</sup>lt;sup>31</sup> IEA 2006

<sup>&</sup>lt;sup>32</sup> This occurred in 7 - 11 May 2012



existing. The CDM EB further requested the secretariat to continue to determine NRB factors for Parties with 10 or less registered CDM project activities as of 31 December 2010. In addition the secretariat is to recommend default values for application in these countries to CDM EB.

The listed default values can be applied in small scale CDM project activities and PoAs, if they have been approved by the DNAs of the respective host countries. So far, the following DNAs have accepted the proposed default values: Angola, Chad, Ethiopia, Gambia, Jamaica, Liberia, Senegal, Uganda, and Bahrain.

The adoption is seen as a success for LDCs especially where the use of non-renewable biomass for energy supply is widespread.

## 4. A launch of CDM Helpdesks

The CDM has established two help desks to improve the distribution of projects, targeting under-represented countries.

The first helpdesk was that of DNAs, launched on 02 August 2012. It was created to provide targeted DNA with advice, support and assistance with the submission of:

- Proposals for standardised baselines
- Recommendations of micro scale renewable energy technologies for automatic additionality
- Grid emission factors

It is managed by the Secretariat. The targeted DNAs are from LDCs, SIDS, African countries, or Parties with less than 10 registered projects as of 31 December 2010. It is possible for project participants and Designated Operational Entities (DOEs) to liaise with a DNA to submit a request on their behalf.

The DNA Help Desk has prepared a step-by-step guide to help DNA prepare recommendations for automatic additionality for CDM micro scale project activities since its launch.

The second helpdesk was launched on 02 September 2012 and is for stakeholders (CDM project participants, developers, coordinating and/or managing entities (CMEs), DNAs and DOEs) in Africa, LDCs, SIDs or countries with 10 or fewer registered CDM projects as of 31 December 2010. This second helpdesk is also managed by the Secretariat and provides technical assistance for activities in the process of validation or verification. The helpdesk was seen as a positive step in an attempt to enhance communication between UNFCCC and its stakeholders although no further information has been established on its work since its launch.





## **Other Donor Initiatives Reforms**

This section provides information on other donor initiative reforms set up to assist carbon market finance at the community and household level.

## 1. KfW Bankengruppe Carbon Fund (PoA Support Centre)

The KfW Carbon Fund has been operating the PoA Support Centre in Germany since October 2008. The Support Centre aims to promote viable programmatic approaches by reaching so far untapped small and micro emission sources that would not be able to afford the CDM transaction costs individually. Since its inception the PoA Support Centre has been able to assist 40 projects.<sup>34</sup> There is no evidence in the public domain on the type of projects supported or an indication on those already registered by CDM EB.

KfW offers advisory, structuring and assessment services for programme proposals as well as financing and grants to cover the preparation of programme concepts, project design documents (PDDs) and monitoring plans. In addition, it offers know how to help with programme implementation and can assist with marketing expected carbon credits.

## 2. Africa Carbon Asset Development Initiative (ACAD)

ACAD is a public-private partnership launched in 2009 facilitated by United Nations Environmental Programme (UNEP) and its Risoe Center, and supported by the German Government's International Climate Initiative. The ACAD aims to support highly replicable demonstration projects by reducing the early-stage investment risks associated with African carbon projects.

It supports potential CDM projects with:

- Targeted grants for early stage costs;
- Technical assistance for local project developers;
- Carbon finance training for local financial institutions.

Afforestation and reforestation projects are excluded.

#### 3. African Carbon Support Programme (ACSP) by the African Development Bank (AfDB)

The ACSP is a two year technical assistance programme launched in 2010. It is being implemented by the AfDB Energy, Environment and Climate Change Department.

The ACSP supports potential CDM projects contained in the AfDB project portfolio by: (a) Providing technical assistance to develop the CDM component of eligible projects (b) Developing project idea notes (PINs) and PDDs for a few selected projects (c) Securing funds to cover transaction costs for potential carbon credit buyers or other sources (e.g. UNFCCC Loan Scheme, ACAD) (d) Offering capacity-building upon request to CDM Designated National Authorities (DNAs) and other national institutions in AfDB's regional member countries.

The programme was marked to expire in December 2012, there is no evidence in the public domain if the programme has ended or will be extended for a second phase.

<sup>34</sup> http://www.kfw-

entwicklungsbank.de/ebank/EN\_Home/Climate\_Change/Sustainability\_and\_Climate\_Protection/index.jsp





## 4. Carbon Fund for Africa (FCA)

This is an initiative of the West Africa Development Bank, Caisse des Dépôts and the French Development Agency Group "Proparco". It is currently under development.

#### 5. UNDP'S Millennium Development Goals (MDG) Carbon Facility (LDC Support)

The Carbon Facility of the United Nations Development Programme was launched in 2007. It supports projects in countries with few or no CDM projects. It focusses on projects that strongly contribute to the MDGs in LDCs.

Its primary objective is to facilitate market transformation by serving as a bridge between developing countries and the global carbon market. The facility would exit a market once a developing country gains expertise in carbon finance by attracting private-sector investment and developing project technologies that deliver longer-term development benefit.

The facility is being run in a three step approach. Over the last few years, UNDP has engaged in the first two steps of:

- Removing barriers to direct investments in climate-friendly technologies
- Establishing efficient host country procedures in CDM approval by supporting DNAs.

It is now in its final stage in which it is working to: (a) Leverage UNDP's local presence to identify priority sectors and opportunities (b) Develop emission reduction projects that can be used as "showcase" projects to increase private-sector interest in, and understanding of, carbon finance; (c) Compile, analyse and disseminate experiences and lessons learned.

The project types targeted thus far are shown in the Table 3 below.

#### Table 3 MDG Carbon Facility project types

Renewable Energy	Energy Efficiency	Cleaner energy	Waste to energy	Fugitive emissions reductions
Grid-connected electricity and/or heat: wind, solar, hydro, biomass	Building efficiencies - new and retrofit	Co-firing of biomass/wastes	Waste heat capture and use from industrial processes	Landfill gas capture and flare or productive use
Off-grid electricity: solar PV , micro hydro	Industrial energy efficiency, including cogeneration	Fuel switching to cleaner fossil fuels: coal to gas, diesel to LPG	Process changes to reduce energy content of product	Animal waste digestion gas capture and flare or productive use
Refurbishment/upgrade of existing renewable energy plants, notably hydropower	Energy efficient installations in programmatic approach – appliances, stoves		Bio-digestors to produce usable methane as fuel	Avoidance of industrial fugitive emissions from natural gas pipelines/ installations
	Supply side energy efficiency improvements		Use of landfill gas for electricity generation	

Source MDG Carbon Facility Website





# 6. Carbon Funds and Initiatives under the Umbrella of the World Bank Group

Of the 15 carbon funds managed by the World Bank, three are open for CDM support. These are (a) Carbon Partnership Facility (CPF) (b) Biocarbon Fund (Afforestation and reforestation Support) and (c) Carbon Initiative for Development.

#### The Carbon Partnership Facility (CPF)

The CPF is one of the WB new carbon finance instruments targeting the post-2012 period. It supports PoAs by developing large scale emission reduction projects and purchasing the resulting CERs. This is through two trust funds: (a) the Carbon Asset Development Fund (CADF) to prepare and implement emission reduction programmes; (b) the Carbon Fund (CF) to purchase carbon credits from the pool of emission reduction programmes.

It enables the implementation of low carbon programmes across a variety of sectors and technologies - energy generation and distribution, energy efficiency, and waste management. These initiatives have to be consistent with low carbon economic growth and the sustainable development priorities of developing countries.

It also targets areas that have not been reached effectively by CDM in the past, such as energy efficiency.

#### **Biocarbon Fund (Afforestation and reforestation Support)**

The Biocarbon Fund is a public-private initiative administered by the World Bank. It aims to deliver cost effective emission reductions, while promoting biodiversity conservation and poverty alleviation.

The Fund is composed of three phases. Phase one started operations in May 2004, had a total capital of \$53.8 million. Phase two started in March 2007 and has a total capital of \$36.6 million. Both tranches are now closed to new fund participation (phase 3).

Phase 3 of this fund was launched in Durban in December 2011 with the aim of increasing the number of projects that sequester or conserve carbon in forests and landscapes, such as through Reducing Emissions from Deforestation and forest Degradation (REDD) and afforestation and reforestation CDM projects.

#### Carbon Initiative for Development (CI-Dev) fund

The fund is unique in comparison to other WB funds in the sense that it provides up-front finance for emission reduction projects in LDCs viewed as high risk by investors. According to point carbon news<sup>35</sup> the first \$10 million in finance will be used to help fund capacity building and the drawing up of methodologies, while a further \$50 million of upfront financing will be used to kick-start projects in areas where getting projects up and running is often difficult. Another €50 million (\$70 million) will then be raised through the private sector and governments in credit purchase agreements similar to the more traditional funds.

<sup>&</sup>lt;sup>35</sup> Published 11 Aug 2011





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