



PROJECT IDENTIFICATION FORM (PIF)¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: Multi-Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Pilot African Climate Technology Finance Center and Network		
Country(ies):	Regional	GEF Project ID: ²	4904
GEF Agency(ies):	AfDB (select) (select)	GEF Agency Project ID:	TBC
Other Executing Partner(s):	Private Sectors / National bodies, agencies and governments / Academia, Centers of Excellences and Research centers	Submission Date:	2012-03-23
GEF Focal Area (s):	Climate Change	Project Duration (Months)	36
Name of parent program (if applicable): • For SFM/REDD+ <input type="checkbox"/>	N.A.	Agency Fee (\$):	1,434,000

A. FOCAL AREA STRATEGY FRAMEWORK³:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-1 (select)	Outcome 1.1: Technologies successfully demonstrated, deployed, and transferred	Output 1.1: Innovative low-carbon technologies demonstrated and deployed on the ground Indicator 1.1-Percentage of technology demonstrations reaching its planned goals	GEFTF	2,900,000	15,000,000
CCM-1 (select)	Outcome 1.2: Enabling policy environment and mechanisms created for technology transfer	Output 1.2: National strategies for the deployment and commercialization of innovative low-carbon technologies adopted Indicator 1.2-Extent to which policies and mechanisms are adopted for technology transfer (score of 1 to 5)	GEFTF	1,500,000	4,000,000
CCM-2 (select)	Outcome 2.1: Appropriate policy, legal and regulatory frameworks adopted and enforced	Output 2.1: Energy efficiency policy and regulation in place Indicator 2.1-Extent to which EE policies and regulations are adopted and enforced (score of 1 to 5)	GEFTF	500,000	2,000,000
CCM-2 (select)	Outcome 2.2: Sustainable financing and delivery mechanisms established and operational	Output 2.2: Investment mobilized (in mUS\$) Ind 2.2-Volume of investment mobilized (Target AfDB 30mUS - targeted leverage ratio 1:3) Output 2.3: Energy savings achieved through investments Indicator 2.3:Energy saved :25 MWh	GEFTF	677,971	11,000,000
CCM-3 (select)	Outcome 3.1: Favorable policy and regulatory	Output 3.1: Renewable energy policy and regulation in place	GEFTF	750,000	1,500,000

¹ It is very important to consult the PIF preparation guidelines when completing this template.

² Project ID number will be assigned by GEFSEC.

³ Refer to the reference attached on the [Focal Area Results Framework](#) when filling up the table in item A.

	environment created for renewable energy investments	Indicator 3.1-Extent to which RE policies and regulations are adopted and enforced (score of 1 to 5)			
CCM-3 (select)	Outcome 3.2: Investment in renewable energy technologies increased	Output 3.2: Investment mobilized Ind 3.2-Volume of investment mobilized (Target AfDB 100mUS - targeted leverage ratio 1:4) Output 3.3: Renewable energy capacity installed Indicator 3.3: RE capacity 150 MW	GEFTF	1,250,000	18,500,000
CCM-4 (select)	Outcome 4.1: Sustainable transport and urban policy and regulatory frameworks adopted and implemented	Output 4.1 Cities adopting low-carbon programs Indicator 4.1-Number of cities adopting sustainable transport and urban policies and regulations	GEFTF	500,000	1,500,000
CCM-4 (select)	Outcome 4.2: Increased investment in less-GHG intensive transport and urban systems	Output 4.2: Investment mobilized (in mUS\$) Indicator 4.2-Volume of investment mobilized (Target AfDB 50mUS - targeted leverage ratio 1:3)	GEFTF	600,000	6,500,000
CCA-3 (select)	Outcome 3.1: Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas	Output 3.1: Relevant adaptation technology transferred to targeted groups Indicator CCA-1-Type and No. of adaptation technologies transferred to targeted groups (Type and No.)	SCCF	3,500,000	28,000,000
CCA-3 (select)	Outcome 3.2: Enhanced enabling environment to support adaptation-related technology transfer	Output 3.2: Skills increased for relevant individuals in transfer of adaptation technologies Indicator CCA-2- Policy environment and regulatory framework for adaptation-related technology transfer established or strengthened (capacity building included)	SCCF	1,512,029	2,000,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
Sub-Total				13,690,000	90,000,000
Project Management Cost ⁴			GEFTF	412,029	3,000,000
			SCCF	237,971	2,000,000
Total Project Cost				14,340,000	96,000,000

B. PROJECT FRAMEWORK

⁴ GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

Project Objective: Development and transfer of climate technologies in African countries to contribute to the reduction of GHG emissions and vulnerability to climate change

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
<p>1. Enhance cooperation with development partners to maximize technology transfer and financing</p> <p>CCM-1, CCM-2, CCM-3, CCM-4 (Climate technology country-focused knowledge is created and disseminate among financial, technical and decisional partners)</p>	TA	<p>1.1 Knowledge: Identify barriers and environmental and social acceptable technologies</p> <p>1.2 Networking: Facilitate and ensure the rapid and efficient dissemination of existing and created knowledge on ESTs</p>	<p>Country-tailored guidelines with identified (i) barriers, (ii) types of technologies and (iii) financing options are produced</p> <p>Thematic climate technology networks are created and operational by technology sector for low-carbon</p> <p>Indicator .Guidelines and knowledge products are produced and disseminated</p> <p>Indicator .Networks are created and operational (# of networks and meetings)</p>	GEFTF	1,335,000	4,000,000
1. CCA-3 (as Above)	TA	1.3. As above: Knowledge and networking on adaptation technologies	(as above, with focus on adaptation technologies)	SCCF	762,029	1,000,000
<p>2. Enabling the scaling-up of technology transfer in the policy, institutional and organizational reforms</p> <p>CCM-1, CCM-2, CCM-3, CCM-4</p>	TA	2.1 Enabling sub-regional and country environment for catalyzing low-carbon technology investments	<p>Country-adapted pro-climate policies supporting climate technology transfer and investors incentives</p> <p>Barriers to technology transfer are removed</p> <p>Potential investments, including financing and technology needs are identified at country levels</p> <p>Technology needs are fully considered in the national communications and documents (i.e.NAMAs, policies, strategies)</p> <p>Indicator - Reports and documents include low-carbon technology transfer considerations</p>	GEFTF	1,342,971	5,000,000
2. As above for CCA-3	TA	2.2 Enabling sub-regional and country environment for catalyzing climate-resilient development investmentss	<p>Country-adapted pro-climate policies supporting climate technology transfer and investors incentives</p> <p>Climate change technology adaptation is mainstreamed in key sector policies and</p>	SCCF	750,000	1,000,000

			regulations Indicator - Reports and documents include adaptation technology transfer considerations				
3. Integrate technology needs into programs, plans and investment priorities CCM-1, CCM-2, CCM-3, CCM-4	Inv	3.1 Mainstreaming technology transfer in country programming 3.3 Catalyze investment in environmentally sound technologies	National development strategies (country strategy papers) and investment priorities integrate comprehensively (tech, social, etc) the technology needs Financing mobilized for ESTs (Estimated target 180mUS\$) Energy capacity installed and saved 175MW GHG emissions avoided (RE, EE and transport): Estimated target: 9170000 ton CO2e)	GEFTF	6,000,000	51,000,000	
3. As Above-CCA	Inv	3.2 Demonstration, deployment, and transfer of relevant adaptation technology in targeted areas by mainstreaming technology transfer in country programming (Intermediate Outcome)	Adaptive technologies in development projects are financed and implemented Technologies – linked to TNAs when possible - are fully considered in the implementation of pilot and demonstrative climate-resilient projects	SCCF	3,500,000	28,000,000	
	(select)			(select)			
	(select)			(select)			
	(select)			(select)			
	(select)			(select)			
Sub-Total						13,690,000	90,000,000
Project Management Cost ⁵					GEFTF	412,029	3,000,000
					SCCF	237971	2,000,000
Total Project Costs						14,340,000	95,000,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
GEF Agency	AfDB –Sustainable Energy Fund for Africa (Danish Government)	Grant	63,000,000
GEF Agency	AfDB - Climate for Development in African Program	Grant	32,000,000

⁵ Same as footnote #3.

(select)		Grant	
(select)		Grant	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Cofinancing			95,000,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)²	Total c=a+b
AfDB	GEFTF	Climate Change	Africa	9,090,000	909,000	9,999,000
AfDB	SCCF	Climate Change	Africa	5,250,000	525,000	5,775,000
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
Total Grant Resources				14,340,000	1,434,000	15,774,000

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

² Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1 the [GEF focal area/LDCF/SCCF](#) strategies:

The agreements under the United Nations Framework Convention on Climate Change (UNFCCC), including the Bali Action Plan and Cancun Agreements, emphasize the use of finance, technology, and capacity building as tools to address climate change. The Conference of the Parties to the UNFCCC, by its Decision 1/CP.16, established a Technology Mechanism that consists of a Technology Executive Committee and a Climate Technology Centre and Network with their respective functions. At COP17, it has been recognized that the extent to which developing country Parties will implement their commitments will depend on developed country commitment related to financial resources and transfer of technologies implement their commitments. At COP17 Decision 2/CP.17 “ *Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention* “ chapter V on *Technology development and transfer* has also defined the required arrangement to make the technology mechanism fully operational in 2012. In this context a call for proposal to host the CTCN has been launched and 9 organizations have responded to the call. The selected center and network and the associated regional centers and networks are recognized as essential drivers to accelerate the transition to low-carbon and climate-resilient development through technology transfers in developing countries and contribute to developed countries commitments.

The Pilot African Climate Technology Finance Center and Network will support on the ground the deployment of technologies for both climate change mitigation and adaptation in developing countries of Africa. The center will support the aims and activities of the Technology Mechanism established under the UNFCCC.

The overall goal of the GEF in climate change mitigation is to support developing countries’ movement toward a low-carbon development path. The project is consistent with this overall goal, promoting the use of technologies and matching the adequate technology with the needed finance structure for deployment on the ground.

The main objective of the center is to promote the demonstration, deployment and transfer of innovative low-carbon technologies that are commercially available but have not been adopted in the national markets because of the lack of an enabling policy environment and mechanism for technology transfer (CCM-1). The project seeks also to raise investment in energy efficiency (CCM-2) and renewable energies (CCM-3), primarily in small and medium-size enterprises, and ensuring that environmentally sound technologies are considered at early stages of large investment projects. In ensuring the sustainable development of African cities, the project will be promoting pilot investments in the area of sustainable transport and urban systems (CCM-4).

The project is consistent with Objective CCA-3 of the GEF-5 strategy on Adaptation to Climate Change for the Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF), as it focuses on the promotion and transfer of adaptation technologies.

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

The SCCF was established with four funding windows, of which only two are operational: adaptation and transfer of technologies. On the technology transfer window, as defined by Decision 5/CP.9, the SCCF can support the following priority areas:

- (a) Implementation of the results of technology needs assessments;
- (b) Technology information;
- (c) Capacity-building for technology transfer; and
- (d) Enabling environments.

In the proposed project, capacity building for technology transfer is approached across three components; knowledge and networking, enabling environment, and technology implementation. Those components are fully aligned with the above-mentioned SCCF priority areas

The project is in line with the GEF-5 Strategy and responds to the LDCF/SCCF results-based management (RBM) framework by supporting developing countries to become climate-resilient by integrating adaptation measures and technologies in development policies, plans, programs and projects. Specifically, the project will focus on the promotion and transfer and adaption of adaptation strategy by:

CCA-3 (Outcome 3.1) Promoting the demonstration deployment and transfer of relevant adaptation technology in targeted areas, and

CCA-3 (Outcome 3.2) Enhanced enabling environment to support adaptation related technology transfer

Thirty of Africa's 54 countries (including South Sudan) are LDCs. For these countries, the initial step, under the knowledge component is to assess adaptation technology needs identified in NAPAs and barriers to and opportunities for technology investment. Identified technologies will be tested in collaboration with the ClimDev program hosted at the AfDB. Further analysis and networking meetings will support the integration of adaptation technologies in public sector-financed investments using proven technologies.

For the other African countries, the project will seek opportunities to deploy new technologies. The project will include technical assistance in finding technology information and building financing opportunities across the developed networks.

- A.2. national strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

Conventions Level

It is obvious that the development and transfer of technologies and know-how plays a key role in the mitigation of and adaptation to climate change. As evidence of its importance, development and transfer of environmentally sound technologies (ESTs) has occurred, since COP 4 (Buenos Aires, November 1998), at each session of the COP. Over the years the negotiations under the UNFCCC have created a framework to promote this transfer.

In order to enhance technology transfer development, in 2008 the Global Environment Facility

(GEF) launched the Poznan Strategic Programme on Technology Transfer at COP 14. Decision 2/CP.14, in Paragraph 2, asked the GEF to, among other things, consider the long-term implementation of the strategic program, including addressing the gaps identified in current operations of the GEF that relate to investment in the transfer of environmentally sound technologies, leveraging the private sector, and promoting innovative project development.

In response to this request and considering the results achieved under the Poznan program, the GEF has submitted to COP 16 a long-term strategic program on technology transfer. In line with the GEF-5 strategy, the Long-Term Program on Technology Transfer comprises the following elements:

- Support for climate technology centers and a Climate Technology Network
- Piloting priority technology projects to foster innovation and investments
- Public-private partnership (PPP) for technology transfer
- Technology needs assessments (TNA)
- GEF as a catalytic supporting institution for technology transfer

Alongside with the GEF program, the Conference of the Parties to the UNFCCC, by its Decision 1/CP.16, established a Technology Mechanism consisting of a Technology Executive Committee and a Climate Technology Center and Network (CTCN).

The mission of the CTCN is to stimulate technology cooperation; enhance the development and transfer of technologies; and assist developing countries to build or strengthen their capacity to identify technology needs, facilitate the preparation and implementation of technology projects and strategies to support climate mitigation and adaptation, and enhance low emissions and climate-resilient development.

The proposed project is in line with the UNFCCC decisions on the technology mechanism; the experience gained from the pilot project will help to support implementing the regional CTCNs.

African Level

In their African Action Plan 2010–2015,⁶ the African Union and the New Partnership for Africa’s Development (NEPAD) called for the creation of regional knowledge bases that will aid in the sharing of best practices and foster development and innovation across African countries and regions, offering better and less costly access to best practices and data. In the specific AU/NEPAD action plan for science and technology (S&T),⁷ the call was for a center for renewable energy technologies and active networks of centers of excellence for energy, water, and desertification, with three main pillars:

- (i) Capacity building: development of human skills in science and technology to solve African problems;
- (ii) Knowledge production: generation of scientific and technical knowledge of African problems and how to solve them; and
- (iii) Technological innovation: Innovation of specific products, processes, and services in an African context.

The proposed climate change technology transfer center is therefore aligned with the AU/NEPAD action plan for S&T as well as with the more specific guidelines of the Nairobi

⁶ Review of the AU/NEPAD African Action Plan: Strategic Overview and Revised Plan, 2010–2015

⁷ Science & Technology and Regional Integration in Africa (The AU/NEPAD African Action Plan 2010–2015: Advancing Regional And Continental Integration in Africa)

Declaration on the African Process for Combating Climate Change, adopted by African ministers in May 2009, which highlights technology development and transfer as critical to the achievement of both adaptation and mitigation in Africa and furthermore identified specific areas of focus: (i) hard technologies (e.g., drip irrigation, water harvesting, drought-resistant crop varieties, renewable energy etc.) and soft technologies (e.g., knowledge, systems, procedures, and best practices); (ii) barriers to technology transfer, including trade rules, intellectual property rights and technical barriers (e.g. standards and eco-labeling); (iii) capacity building in African countries to foster the development and local manufacturing of cleaner mitigation and adaptation technologies; and (iv) technology cooperation between African countries and other countries/regions of the world. This need has been highlighted in later decisions, such as the AMCEN 2010 decision in Mali, which emphasizes that Africa requires substantially scaled-up finance, technology and capacity building for adaptation and risk management.

Country level

The AfDB ensures that all investments and projects are demand-driven, respond to national needs and priorities, and are fully aligned with Poverty Reduction Strategy Papers (PRSPs) and coordinated with development partners.

The project will support African countries in meeting the growing demand for the related investments captured in their national plans and strategies, such as National Climate Change Strategies and related action plans: low carbon development plans/Nationally Appropriate Mitigation Actions (NAMAs), National Adaptation Programmes of Action (NAPAs) (NAPAs), national communications to the UNFCCC, National Energy Plans and Strategies, and Technology Needs Assessments (TNAs). In order to achieve this objective, the project will remove/mitigate technology transfer barriers, including in the development dialogue strategy, and leverage financial resources.

The project will finance activities that promote the transfer of technologies related to adaptation. Adaptive proposed technologies will be consistent with technologies identified in the TNAs and national communications. The project will also support baseline investments by bringing in technology options and will assist in the enhancement of national and regional centers and information networks.

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

The first phase of the efforts at increasing technology transfer via the SCCF and the Poznan strategy has achieved remarkable results by identifying barriers and needs (in TNAs) and demonstrating, with pilot projects, the key role of technology transfer in the climate change arena. Recent publications⁸ have described those barriers and classified them in 10 categories as follows:

- 1- Economic and financial: lack of access to finance, high cost of capital, financial viability, inappropriate incentives
- 2- Market failure: poor market infrastructure, uneven playing field, inadequate sources of increasing returns, market control by incumbents
- 3- Policy, legal and regulatory: insufficient legal framework, highly controlled sector, clash of interests, political instability, bureaucracy, rent-seeking behaviour

⁸ Overcoming Barriers to the Transfer and Diffusion of Climate Technologies, January 2012, GEF & UNEP Riso Center; Technology and Innovation Report, November 2011: Powering Development with Renewable Energy Technologies, UNCTA; Financing Renewable Energy in Developing Countries, February 2012: Drivers and Barriers for Private Finance in Sub-Saharan Africa

- 4- Network failure: weak connectivity between actors, incumbent networks being favored
- 5- Institutional and organizational capacity: lack of professional institutions, limited institutional capacity
- 6- Human skills: inadequate training, lack of skilled personnel in identifying and analyzing barriers
- 7- Social, cultural and behavioral: consumer preferences and social biases, traditions, dispersed settlements
- 8- Information and awareness: inadequate information, missing feedback, lack of awareness
- 9- Technical: uneven technical competition, lack of standards and codes, lack of operation and maintenance (O&M), unreliable product
- 10- Other: environmental impact, lack of physical infrastructure

In the adaptation arena, the main concerns and barriers related to the successful implementation of technologies for adaptation are the lack of information and awareness-raising (26%) and financial needs (30%). With regard to mitigation, the other barriers are the lack of adequate policies, technical limitations, the lack of human capacity and the lack of institutional capacity. In addition to that, the cultural or social barrier should be included.

Besides the acknowledgment of the existence of those barriers and the identification of methodologies for addressing some of them, there is a recognized need to go beyond current practices by scaling up investment in environmentally sound technologies (ESTs).

But there are tremendous financial needs involved in scaling up those investments. As an illustration, in the energy sector, the total investment required to implement the AfDB scenario for universal access⁹ to reliable and cleaner electric power in all 53 countries on the African continent by 2030 is estimated at USD 547 billion. This averages out at USD 23.8 billion per year. For the sub-Saharan countries and the island states, the total capital requirement is estimated at USD 282 billion—or, on average, USD 12.3 billion per year.

But besides that lack of access to finance, developers often raise the **lack of appropriate climate information** as a major obstacle to addressing the challenges of climate change in Africa. The continent has the lowest density and quality of climate reporting stations in the world, about one-eighth the minimum number required to support development. Consequently, African government institutions, development practitioners, and service providers engaged in climate-sensitive sectors are unable to effectively manage climate risks, and rarely link climate change to development. For a continent where so many lives, livelihoods and even whole national economies depend on climate-sensitive sectors, it is unacceptable that so little use is made of routine climate information to guide investors, management and technical technological decisions.

Project Baseline

Three baseline projects are provided, one at the framework level, the CCAP, and two others at the operationalization level: SEFA and ClimDev

AfDB—Climate Change Action Plan (CCAP)

AfDB is tackling the need for investment in climate change in a comprehensive manner. In November 2011, the Board of Directors approved the Climate Change Action Plan (CCAP)

⁹ AfDB scenario for universal access: Attain by 2030 reliable electric power for at least 90% of sub-Saharan Africa's rural population, 100% of its urban population, and 100% of both the rural and urban populations in the Northern African MICs, South Africa and the six island states.

2011–2015, which has been designed to support AfDB regional member countries to mitigate climate change and adapt to its effects while supporting the Bank’s focus on infrastructure development and regional operations. The CCAP is organized around three pillars: (i) low-carbon development, (ii) climate-resilient development, and (iii) a funding platform; to help African countries strengthen their capacity to respond to climate change and to mobilize resources from existing and proposed sources of climate finance , the private sector and market mechanisms.

The CCAP defines which funds could be raised in order to achieve those objectives. Among those funds the Bank expects to get access to resources such as the Climate Investment Funds (CIFs), the Global Environment Facility (GEF), and the Adaptation Fund. Those funds will ensure, among others, that Bank business as usual investment under ADB and ADF moves to higher consideration of climate change by, in the specific case of this project, integrating “climate-technology transfer aspects“: TNA consideration into development decisions, expertise views is the adequacy of technologies and knowledge creation related to technologies implementations (barriers analysis, financing aspects, etc)

The Climate Technology Finance Center and Network suits perfectly to address the lack of expertise and advisory services needs for guidance and support of RMCs in reforming regulatory frameworks and selecting financial instruments that will contribute to creating the needed enabling environment for investment and private-sector development.

- Situation: Existing of an Action plan that seeks for financing support advisory services needed to expand climate resilient development and low carbon development AfDB operations
- Problem (BaU): Lack of expertise at the Bank in climate technology and technology transfer. Lack of mainstreaming technologies in development interventions. Lack of finance to support technology transfer services
- Proposal: The proposed CC technology transfer center and network will seek to address technology transfer investment barriers by supporting activities in:
 - Sharing knowledge and networking: Analysing specific barriers, identifying adequate technologies, and proposing funding mechanisms.
 - Enabling the scale-up of technology transfer in policy, institutional, and organizational reforms for mitigation and adaptation.
 - Integrating technology needs into programs, plans, and investment priorities.

In addition to the technology transfer–oriented advisory services that the climate technology transfer center will provide, the project will seek to address the barriers to financing and scale up investment using ClimDev and SEFA initiatives as a baseline. ClimDev and the Sustainable Energy Fund for Africa (SEFA) initiative have already been approved by the AfDB Board. As of January 2012 the SEFA is in the process of launching operations and ClimDev is mobilizing additional resources to start implementation.

ClimDev

The ClimDev adaptation program is a joint initiative of the African Union Commission (AUC), the United Nations Economic Commission for Africa (UNECA) and the AfDB. The program responds to the urgent challenge that climate change poses to the achievement of Africa’s development objectives. It seeks to overcome the lack of necessary information, analysis, and options required by policy and decision makers at all levels. The total resource requirements for

the 2012-2014 is estimated to EUR 145 million for project investments split into three components:

Component 1: Generate and widely disseminate reliable and high-quality climate information

Component 2: Quality analysis to enhance capacity building of policymakers and policy support institutions to integrate climate change into development plans. The activities under this area of intervention will be supported by ClimDev as well as the African Climate Policy Centre (ACPC).

Component 3: Outreach and implementation of pilot adaptation practices that demonstrate the value of mainstreaming climate information into development:

- The proposed CC technology center and network will offer the required assistance to ensure that technologies are fully considered in the implementation of pilot and demonstrative climate-resilient projects of ClimDev Component 3.
- The proposed CC technology transfer center and network will support ClimDev activities for strengthening existing and needed national and regional centers and information networks for rapid response to extreme weather events, ensuring that information technology is fully considered.
- The proposed CC technology finance center and network will ensure that part of the above mentioned services will satisfactorily integrate technology transfer consideration and will significantly contribute to a cleaner portfolio.

Sustainable Energy Fund for Africa

AfDB has been able to fund projects in the area of technology transfer, but the majority is not being pursued at the moment. The Bank's efforts are limited because either it does not have adequate internal resources to assist proponents in developing their ideas into bankable projects, or else the size of investment falls below the present minimum level of funding required for the Bank to get involved. The baseline project, the Sustainable Energy Fund for Africa (SEFA), has been developed with this in mind and with the objective of addressing some of the obstacles by providing funding for strengthening the capacity of the AfDB to deal with this segment of smaller RE/EE projects. The SEFA is a trust fund administrated by the AfDB, the implementation of which will start in 2012. SEFA's current resources are approximately USD 57 million to support (i) activities for SMEs in RE/EE and energy efficiency projects and (ii) project preparation grants for small and medium scale (USD 30–75 million).

SEFA seeks to address a primary barrier to the profusion of small and medium-scale renewable energy development in Africa. It helps private sponsors to sufficiently overcome the engagement hurdle in their pursuit of financing. Very few private clean energy projects on the continent have been realized because they cannot satisfy requisite risk evaluations at commercial banks, and there are no other sources of financing currently available. To respond to this, two operational modalities or components have been defined:

Component 1: Project preparation envelope (USD 15 million) for support medium sized (USD 30-75 million) sustainable energy projects. The component covers up to 70% of project preparation studies costs. The project preparation assistance will be undertaken either as direct grants or as a convertible grant. In this sense, this component provides much-needed seed

capital to entrepreneurs on the continent. The support should enable sponsors to solicit financing, both from the AfDB and other commercial banks. Nevertheless, the implementation of economically and financially viable projects is blocked by regulatory and administrative hurdles at the country level. This may require assistance to activities that can contribute to the introduction or further development of regulations and of administrative procedures. Component 1 in particular and the baseline project in general do not cover those purposes. There is therefore room to address those needs by carrying out parallel activities in the framework of the Climate Technology Finance Center and Network.

Component 2 supports investment in SME renewable and energy efficiency interventions. It comprises 66% of current resources (USD 45 million). Component 2 will mainly target small renewable energy and energy efficiency projects with total capital needs in the order of USD 10–30 million. The component will primarily address two key problems: (i) lack of access to startup and growth finance and (ii) lack of management capability and technical know-how of entrepreneurs. This will be done by providing mainly investment finance through a private equity fund as well as support to smaller businesses for preparation of their renewable energy projects and for running their businesses effectively. As with Component 1, the component will not be addressing aspects of the enabling environment, and it will need additional support in the technology transfer and networking area in area to facilitate investment in the sector.

- The proposed CC technology finance center offers the required assistance to ensure that the enabling environments, technology dissemination and other services at SEFA-proposed investments are adequately considered.
- The proposed Climate Technology Finance Center and Network will ensure that part of the above mentioned services will satisfactorily integrate technology transfer consideration and will significantly contribute to a more clean technology-focused portfolio for the Bank.

The Project

The first activity of the GEF's long-term strategic program on technology transfer provides support for Climate Technology Centers and Climate Technology Networks. This project seeks to establish an African Climate Technology Finance Center and Network on a pilot basis to provide support services and support operationalization of the CTCN in the above mentioned COP context.

The project is structured into three components (see figure below) composed of activities involving technical assistance, training, information sharing, knowledge management and investments. The aim is to catalyze public and private finance for low-carbon technologies and climate resilient development projects while assisting with integrating technology transfer considerations into developing countries' policies and investment programs and strengthening design and enforcement capacities of public institutions.

This objective will be achieved by implementing the following three components: (i) knowledge transfer and networking (ii) support services at country level, and (iii) mobilizing financial resources – investments- and support services at investment level. Capacity building for different actors—bank staff, national counterparts, private investors, etc.—will be treated as a cross-cutting issue as it is a necessary element for the successful implementation of each of the project components.

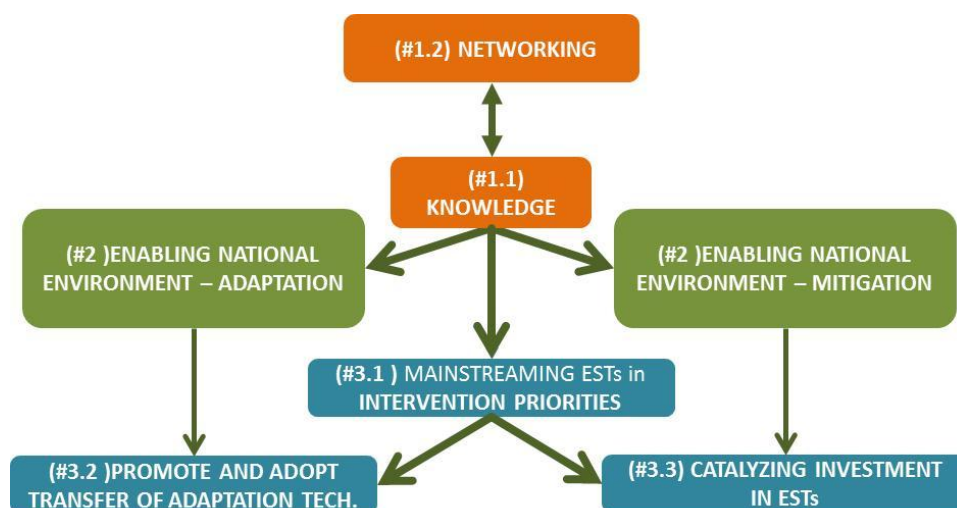


Figure - Logic of change – From Knowledge and Networking to investments.

Component 1: Enhance cooperation with development partners to maximize technology transfer and financing

The objective of this component is to promote knowledge sharing and the necessary strategic partnerships for technology acquisition, dissemination, and funding. The component is divided into two main subcomponents, one with the purpose of creating the network and the second on production and transfer of knowledge among the network members.

1.1 Knowledge transfer

This subcomponent is focused on addressing the information and awareness barriers and getting relevant information on social cultural and behaviors related to the potential deployment of specific technologies. The project will create information and knowledge, mainly at the national and local level. The knowledge component will feed the other project components by identifying the adequate technologies and funding mechanism, analyzing specific barriers and building guidelines that will facilitate integration of technology transfer at the investment (Component 3) and country level (Component 4). All shareholders and network parties will benefit; in particular, project developers will find key information that will facilitate their investments.

The main activities under this subcomponent are:

- Production of guidelines for governments, communities, private sector operators, and utilities/agencies for strategic planning and budgeting and for the identification, preparation, and implementation of projects, including proposals for mobilizing global funds (e.g. CIF, GEF, CDM)
- Development of critical economic sector work (studies, sector reviews, etc.), impact assessment and scoping studies for business development
- Establishment of key advocacy and training programs

1.2 Networking

Network failures, including weak connectivity among actors, had been identified as one of the barriers for the deployment of technologies. This sub-component, exclusively dedicated to networking seeks to facilitate and ensure the rapid and efficient dissemination of existing and created knowledge on ESTs.

In addition to the expected direct results, such as dissemination of (i) knowledge and (ii) best practices, the network will be bringing partners together as a source of private and public financing arrangements.

The main activities under this subcomponent are:

- Transfers of knowledge and competencies
 - o From AfDB-hosted climate center to subregional and country-level Centers of Excellence
 - o South-south and north-south cooperation
- Establishing thematic networking by technology sector for low-carbon and climate-resilient development (adaptation in fragile states, private-public partnerships, sectoral, etc.)
- Networking events, such as technology forums

Pre-identified partners (B.5):

- UN system: relevant agencies: UNEP, UNDP
- UNFCCC Secretariat: Coordinate participation with the UNFCCC center and network
- GEF: Strengthen partnership and regular consultation
- Strengthen collaboration and continue building engagement with the other UN Conventions: UNCCD, UNCBD
- Bilateral agencies: AFD, DfID, USAID, JICA, SIDA, CIDA, Portuguese Technical Cooperation, etc.
- International and subregional financing institutions
- African Union; RECs; UN-ECA
- Strengthen dialogue on climate change with finance ministers during annual meetings and other forums
- Cities Alliance, local government organizations and mayors to address urban challenges
- Global Forest Partnership
- NGOs: Regular consultations with NGO community; exchanges and cooperation on specific topics, such as selected methodologies and sector indicators
- Research institutions
- Private sector: Establish innovative partnerships on bond and insurance products, technology, etc.

Component 2: Enabling the scaling-up of technology transfer in policy, institutional and organizational national reforms addressing mitigation and adaptation (country and sub-regional levels).

This component provides technical assistance to support enabling conditions for technology transfer. The component is divided into two subcomponents that differentiate the needs in adaptation and mitigation. Capacity building at institutional levels will be provided to ensure ownership of the regulations and policies and facilitate the dialogue and future investments

2-1-Enabling subregional and country environment for catalyzing low-carbon technology investments (Mitigation)

This subcomponent aims to improve the investment environment for low-carbon investment. It will operate at different levels, from removing barriers to technology transfer to the promotion of reforms that stimulate clean energy investment (for instance, environmental fiscal reforms), development of master plans and promotion of ESTs in national communication and documents (NAMAs, green growth strategies, etc.).

The direct beneficiary of the activities is the government, but the activities will mainly benefit investors and project developers in the short term and the population in the long run (employment, health, etc.).

- Revision/establishment of climate-related investment, fiscal, and key sector policies and regulations to stimulate and attract investment in clean energy sectors, including bioenergy
- Remove of barriers to technology transfer identified at the country of multi-countries level at knowledge section implementation
- Identification of key investments, including financing and technology needs in the medium and long terms and the development of countries' green growth strategies
- Integration of technology consideration in the development and support to implementation of NAMAs
- Development of renewable energy, urban, and transport master plans, including traffic management systems; development of REDD+ regulatory frameworks as well as other frameworks that will enable African countries to take advantage of existing and new carbon finance products and instruments

2.2 Enabling sub-regional and country environment for catalyzing climate-resilient development investments (Adaptation)

This subcomponent aims to enable the environment at the institutional level by creating incentives and mainstreaming adaptation technology transfer in key sector policies and regulations. In this way the component will tackle two barriers, the lack of adequate policies and the lack of institutional capacity.

For instance, the development of water efficiency regulations will be linked to best practices and existing technologies that will then create the regulatory framework for projects.

The direct beneficiary of the activities will be the governmental institutions, being the final beneficiary of the technology users and the associated population.

- Promote policies that will provide incentives to stakeholders using priority adaptation technologies (e.g. water conservation and storage, zero-tillage cultivation) and policies that promote adaptation in key sectors (e.g. marine and river water management, coastal zone management, zero-tillage cultivation); AfDB budget operations could be the baseline vehicle to promote that environment
- Mainstreaming of climate change adaptation in key sector policies and regulations (including agriculture and forests, marine and river water management, coastal zone management, urban drainage and solid waste management, and climate-proofing infrastructure investments)

Component 3: Integrate technology needs into programs, plans and investment priorities (AfDB investment level)

Component 3 is focused on achieving investments. The integration of technology responds primarily to the identified barrier of a lack of access to finance. The component is divided into three components, one dedicated to adaptation promotion and investment, one dedicated to scaling up low-carbon technologies and the last one dedicated to Bank operations, from programming to investment, associated with the transfer of technologies. As presented in the logic of change of the project (see figure above) the interventions in adaptation (see Component 3.1) and mitigation (see Component 3.3) are primarily enabled by the institutional barrier and capacity development (see Component 2.1 and 2.2) built in Component 2 and by integrating climate change analysis into the country programming cycle of development assistance. The adaptation subcomponent will be focused on the transfer and adaptation of relevant climate resilient technology, and the mitigation subcomponent will be focused on catalyzing private

and public investments.

3.1 Mainstreaming technology transfer into country development programming

The objective of this sub-component is to enable countries to mainstream and promote financing and technical considerations for the deployment, diffusion and transfer of technologies that have been identified as national priorities through TNAs, national communications, etc., into national development strategies (CSP-country strategy papers) and investment prioritization.

This will be done by integrating climate change analyses into the country programming cycle of the Bank and its partners. The analysis will cover both potentials for mitigation and adaptation technology, including increased opportunities for climate financing (CDM, GEF and future opportunities through the Africa Green Fund) and related policy reform identification, institutional support, and capacity building needed. This will be done mainly through the development of the Bank's Country Strategy Papers and Regional Strategy Papers as well as the level of midterm evaluation of projects. This subcomponent will be fed from knowledge acquired in Component 1 and will define the investment and interventions under Components 3.2 and 3.3.

3.2 Promote and adopt the transfer of relevant adaptation technology

The adaptation technology piloting and deployment intervention will be undertaken utilizing AfDB and partners development project as baselines. At the identification stages three activities have been defined, other activities will be defined during project preparation:

- Ensure that technologies—linked to TNAs when possible—are fully considered in the implementation of pilot and demonstrative climate-resilient AfDB development projects
- Adopt and demonstrate relevant adaptive technologies in development projects with adaptation components.
- Strengthen existing and needed national and regional centres and information networks for rapid response to extreme weather events, ensuring that information technology is fully considered.

3.3 Catalyzing investment in environmentally sound technologies (Mitigation)

This subcomponent represents the final objective in the mitigation arena and seeks to operationalize the investment, mobilizing the needed financial resources and facilitate project finance for climate technology transfer by supporting ADB pipeline investment projects. Two of the recognized activities, at identification stage, are:

- Assist in the mobilization of financial resources from both public and private sources to catalyze investments in national prioritized ESTs
- Technically support the SEFA coordination team—financially focused—by offering a narrow technological focus that will promote transfer and diffusion of ESTs

Capacity building: Based on GEF experience in the implementation of the Poznan strategy, the project will integrate capacity building at all relevant levels in a comprehensive manner.

Mitigation and adaptation: When possible, the project will look for mitigation and adaptation

linkages by promoting adaptive technologies that are low-carbon (i.e., solar water pumping) or by exploring synergies in the agriculture and forestry sectors.

Implementation:

- The Climate Technology Finance Center will be managed by the Environment and Climate Change Division within the AfDB. A steering committee formed by technical staff from the energy, transport, water, health, agriculture, and private sector divisions will be created. Under the guidance of the Environment and Climate Change division manager and the steering committee, the project coordinator will work in close relation with the partnership and cooperation unit as well as SEFA and ClimDev coordinators in managing and addressing the needs addressed by the steering committee.
- The coordinator will consult, through the network in the annual priorities and activities to be undertaken.
- AfDB's Field Office and Regional Resources Center will be fully involved in the implementation, networking, and dissemination of the Fund.
- The Center will link with the other regional center as well as with the UNFCCC center and network to ensure consideration of lessons learned and best practices dissemination.

Sector Priorities

The main operational focus of AfDB interventions is in infrastructure. In this sense the project intervention will prioritize the main Bank sectors of interventions: energy and transport. Allocating 48% of GEF resources to the renewable energy sector, followed by 31 % in the energy efficiency and 21% to the sustainable transport sector. Those priorities are aligned with the priorities identified in the TNA synthesis report¹⁰ of the UNFCCC that reviews the sectors, subsectors and technologies commonly considered by Parties in their TNAs exercises relating to mitigation and adaptation. As a summary of this report:

- For mitigation the prioritized sectors are energy, particularly energy generation, followed by energy efficiency appliance. The second sector is the development of technologies related to the agriculture and forestry and the 3rd sector is transport. Other considered sectors are waste management, industry and energy transmission. The proposed technology center will liaise those selected focus to
- For adaptation the priorities at the regional level are on the agriculture and forest cluster, particularly on crop and land management followed by forest, the second sector is on the observation and monitoring follow by the water transfer and water recycling under the water sector. Consequently those adaptive technology sub-sectors will be prioritized during project implementation.

The above presented priorities respond to the main trends reflected at the continental level. Those trends will be confirmed at endorsement stage and then will be precisely defined country by country during implementation. It should be noted that while investment financing may prioritize the prioritized sectors, the project will also facilitate networks and institutional strengthening of other emerging priority sectors.

- B. 2. [incremental /Additional cost reasoning](#): describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated [global environmental benefits](#) (GEF Trust Fund/NPIF) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

¹⁰ Second synthesis report on technology needs identified by Parties not included in Annex I to the Convention-2009-UNFCCC-SBSTA

The framework CCAP, as well as the two support and investment-oriented initiatives hosted at AfDB (ClimDev Africa and SEFA), will induce investors to the “adaptation” and low-carbon development sectors. With the additional GEF financing, the Climate Technology Center will further increase the scope, range and focus of climate-friendly technologies considered in order to leverage additional global benefits. It will allow inclusion of specific references to technology finance needs into national development strategies and investment priorities that have traditionally focused on project-based finance.

In the mitigation area, GEF financing will be instrumental in demonstrating selected low-carbon technologies and, at the country level, by financing and leveraging investments and consequently significantly reducing the current barriers that will support economic and social development and reducing GHG emissions. The specific global environmental contributions expected from GEF financing activities are:

- The breaking of financial, institutional, and knowledge barriers to the deployment of technology transfer
- Technology transfer mainstreamed in country programming
- Technologies successfully demonstrated, deployed, and transferred
- The component on mainstreaming technology transfer and technology finance into country development programming is key in the additional dimension of the GEF, particularly in the attribution of additional GHG emissions reductions to GEF finance. In fact mainstreaming the adoption of technology transfer in the Climate change sections of the development strategy paper and investment programs will lead to further consideration at the operational stage, inducing additional emission reductions that would not occur without GEF funding. Therefore GEF finance should contribute to an expect increase in low carbon investments. Under this rational,) the project expected GHG direct reductions are estimated at 8,000,000 tCO₂e (150 MW) in GHG reductions attributable to the additional on project investments for a 16 year project lifetime average of RREE projects In the energy efficiency sector the saving are expected to be 820,000 tCO₂e and in the transport sector 350,000 tCO₂e (see Annex for the calculation details) .

In addition to that, GEF funds will:

- 1- Ensure sustainability and relevance of AfDB investment by providing knowledge on the decisions, support on the selection of the more adequate technologies and addressing the necessary barriers. In addition to that, bringing together private investors and development partners under the established network will help to get additional funds to the low carbon and adaptation technology transfer.
 - 2- Address the adequate barriers that are not considered under SEFA but are necessary for its adequate implementation.
- A more accurate estimate of GHG emissions reductions will be improved during the full size proposal preparation. The final estimation will clearly differentiate between the GHG attributable to the GEF funding and to the baseline.

For adaptation, the final goal is to make African countries development strategies robust to climate change by promoting the deployment, transfer and adoption of relevant technologies for adaptation.¹¹ Since most adaptation technologies may be suitable for accomplishing wider sustainable development objectives¹² the project seeks to find the adequate synergies between development agenda and technologies as identified in the TNAs. The inclusion of those identified technologies in the development business model will be undertaken by (i) successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas and

¹¹ Technologies for adaptation are “the equipment, techniques, practical knowledge and skills” that enable this adaptive adjustment (definition at IPCC-2000).

¹² Technology for Adaptation: Perspectives and Practical Experiences. UNEP RISO Center, November 2011.

(ii) enabling the environment to support adaptation-related technology transfer, by supporting companies with climate-resilient technology products to find opportunities in development projects and then in markets.

SCCF resources will also assist in catalyzing investments through the testing and development of innovative financing approaches for the deployment of relevant adaptation technologies through the baseline project and the Bank's investment, mainly in the public sector. The establishment of networks, the support of policies and national frameworks, and the inclusion of technologies in the development strategy agenda will enhance project sustainability.

The regional dimension: The regional approach has several positive impacts that are presented here below in 3 major groups: integration, cooperation and joint development:

- Deepen **integration** among African countries by helping to eliminate barriers to the investment transfer of technologies specifically :
 - the expansion of market size which will facilitate greater specialization and industrialization through economies of scale, thereby helping to overcome the small-size problem of African countries and economies;
 - improved donor co-ordination through the networking, leading to a systematic exchange of information and mutually beneficial efficiency in the use of scarce development resources;
 - increased incentives for the adoption of new technologies and methods of production alongside rapid innovation;
 - comprehensive approach of investments, for instance in the interconnection of electric power grids
- Facilitate **cooperation** among RMCs in tackling common problems for technology transfer, including joint approaches to capacity-building and policy harmonization – for example:
 - collaboration among RMCs in the formulation and implementation of policy at the sub-regional level;
 - building capacities and share experiences in the transfer of technologies;
 - strengthening regional centres of excellence for specialized skills;
 - establishing regional early-warning systems on climatic factors, integrated with agriculture, food security forecasting and renewable energy potentials etc.
- Support **joint development** of shared natural resources in an environmental sustainable manner, including :
 - integrated management of trans-boundary fresh water basins in the development of hydro-related projects
 - the harmonization, among RMCs, of legal and regulatory frameworks for sustainable development of shared natural resources in the context of climate change;
 - the establishment of economically sound incentives to attract domestic and international private initiative;
 - Sustainable development of renewable energy resources; etc.
 - comprehensive project approaches in adaptation to climate change adaptation of specific communities such as pastoralist

B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read [Mainstreaming Gender at the GEF.](#)":

Africa's social economic development is threatened by climate change. Many aspects of life on the continent will be affected; changes in agriculture, water, health, natural resources and infrastructures are among the most important. The proposed technology transfer center will

support technology needs and priority sectors defined in TNA or national official document. In Africa, those technology needs and priority sectors tend to follow the policy objectives of the national governments.¹³

In the adaptation area, the socioeconomic benefits are linked to effect of the deployment of the promoted technologies. In the agriculture sector, the improvement of water harvesting, water efficiency technologies and technologies applied to selected crops will be key in increasing productivity in a climate change context and for the prioritized sector in the TNA for LDCs and African regions: agriculture and forestry. The transfer of ICT “technologies” for adaption will also be tested following recommendations and findings of recent AfDB-financed publications;¹⁴ this transfer will contribute to filling ICT gaps between countries.

In the mitigation area, the diversification of energy sources and the promotion of clean and sustainable energy will increase grid reliability and reduce risk of energy price peaks, therefore making economic activities more appealing and decreasing vulnerability to price variations and uncertainty. The project will pay careful attention to gender issues and as much as possible give preference to facilitating the transfer of technologies that will directly benefit women. Small-scale renewables, cook-stoves, and off-grid solutions will also be promoted. The deployment of those technologies will have a direct impact at the household level, enhancing quality of life, improving maternal and infant health, access to communication and information, and so on.

In addition to the above, transfer of technologies will be a source of job creation and opportunities for young people.

- B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

The main risks and their associated mitigation measure are presented by level, in the table below:

Level	Risk	Mitigation action
International	Lack of international agreements in the support of technology mechanism, financing, and other linked mechanisms	Engagement of AfDB and regional partners on the development of the international and regional decision related to climate change
Corporate level	Lack of commitment and enthusiasm from the AfDB in the area of climate change	Climate change and green growth are part of the long-term strategy of AfDB
Sub-regional / national	Political and macroeconomic instability in countries that may affect national priorities, market conditions, and the policy environment for technology development and transfer	Flexible project design and Bank enhanced support to fragile states should mitigate the risk
National / governmental	Lack of commitment from government and stakeholders to the implementation of the adequate policies and	Participatory approach during inception, implementation, and monitoring of progress of activities will be prioritized

¹³ Second synthesis report on technology needs identified by Parties not included in Annex I to the Convention-2009-UNFCCC-SBSTA

¹⁴ IISD-AFDB-2012-Africa Transformation-Ready: The Strategic Application of Information and Communication Technologies to Climate Change Adaptation in Africa

	institutional reforms	Capacity building activities, workshops, knowledge sharing events, and seminars will be supportive of policies and institutional reforms Bank's parallel PBO (Policy-Based Operation) will also play a key role in the implementation of adequate policies and institutional reforms
Sub-national population	Lack of qualified and available staff and experts (especially technology experts) to participate in project support activities	A cross-cutting capacity building component, as recommended by UNFCC decision, is proposed in the project The establishment of the network in the project will support the identification of qualified experts for the - project
Technology Users	The proposed technologies are not adequately adapted to practices	Early stage consultations and social analysis will be undertaken to ensure project ownership and adequacy of the technology
Project implementation level	Project activities and TA support are not well designed; the project takes time to start implementations	During project preparation, terms of reference are prepared as a result of the consultation process, and a procurement plan and request for proposals are prepared before CEO endorsement

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The project will seek collaboration and partnership with institutions and enterprises that have demonstrated capability to analyze the needs of the climate economy and suggest pragmatic solutions. In particular, the project will strengthen the collaboration with the GEF in the transfer of technology areas, and it will also operationalize the collaboration between the Bank and organization such as WRI, the Global Green Growth Institute, etc.

The main, but not exclusive, stakeholders of the pilot African Climate Technology Finance Center and Network are:

The **African Union (AU)** is the core intergovernmental institution for addressing climate change at the continental level; the issue is being integrated with its overall development focus for the continent. The Bank is a key partner, and the Climate Technology Finance Center is aligned with the AU's priorities

Regional Economic Communities (RECs) such as ECOWAS, COMESA, IGAD, EAC, Mano River Authority, etc., and specialized agencies of those communities such as the ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE), will be political as well as technical partners in preparation and implementation.

River basin authorities (Volta Basin, Mano River, Nile Basin Initiative, Niger Basin

Authority, Lake Chad Authority, Lake Victoria Basin Commission, etc.) play a key role in the adaptation arena in seeking comprehensive solutions at the basin level.

At the national institutional level:

- National climate change focal points and staff from national/regional climate change offices/departments: They will play a key role in the consultation process and implementation by raising awareness, disseminating relevant information and leading the government institutions to adopt the necessary strategies, policies and regulations for climate technology transfer.
- Line ministries and related institutions: They exchange with AfDB managers in the preparation of development projects, and they will directly benefit from the project activities. They will also be key partners in the implementation by enabling conditions and incentives for climate technology transfer.
- Public investment agencies and funds and related investment entities: They will directly benefit from the project activities and play a key role in providing investments for project development and implementation phases.

United Nations

UNFCCC: The project will seek synergies and partnership with the upcoming UNFCCC Climate Technology Center and Network.

UNECA: The ACPC, established in 2010 at UNECA, serves as the knowledge management and policy facilitation arm of the ClimDev program.

UNEP and UNDP: The two have several initiatives in the continent. For instance, both organizations implement the Climate Change Adaptation and Development Initiative (CC-DARE) seeks to remove barriers and create opportunities for integrating climate change adaptation into the national development planning and decision-making framework. The proposed center will seek to avoid duplication and find the best ways to complement these ongoing activities.

Private sector and investors

- Private sector technology developers, industries, manufactures, installers: They will directly benefit from the project activities and play a key role in developing and implementing projects for the deployment of ESTs.
- Private investors, banks and other financial institutions: They will directly benefit from the project activities and play a key role in providing investments for project development phase and implementation phase for the improvement and deployment of ESTs.

Technical and research Institutions

Universities, think tanks, research centers, technical institutions, centers of excellence, and social society NGOs will directly benefit from the project activities and provide support, advice and expertise for policy, market mechanisms, and project development.

Development partners, bilateral and multilateral

- Global Environment Facility: The GEF is a catalytic supporting Institution for Technology Transfer, with sizable experience on the subject relating to mitigation and adaptation
- The European Union: The EU—in particular its Global Climate Change Alliance (GCCA) with poor developing countries most vulnerable to climate change, in particular the LDCs and SIDs—is a key partner.
- Multilateral and regional development banks: The projects will also liaise with the

World Bank and subregional development banks such as the West African Development Bank (BOAD). In addition the project will liaise with and exchange experiences with other regional banks such as the Asian Development Bank and Inter-American Development Bank.

- Bilateral partners: Brazil, Canada, China, France, German, Japan, Korea, Norway, the UK, the US, etc. are key partners in the dissemination of technologies and potential co-financier at the project level.

Population and technology users

- Technology users and local population, as end users and affected stakeholders, will be approached at initial stages: barriers and impact analysis and investment stage through consultations.

B.6. Outline the coordination with other related initiatives:

The coordination will be at different levels, at the regional level, the coordination will primarily take place with the AU and on-going activities such as the ACPC.

Most of the above mentioned activities, undertaken by partners will be considered. During appraisal a detailed mapping of the on-going activities and potential synergies among those activities will be undertaken to ensure coordination among partners. In terms of overall coordination it's expected the establishment of a steering committee that will be defined at appraisal stage.

The Least Developed Countries (LDC) work program defined at COP 7 addresses the specific needs of LDCs—including the “development and transfer of technology, particularly adaptation technologies—as well as the need for strengthening the capacity for data collection to support the implementation of the NAPAs. Since up to today, almost all African LDCs had completed the NAPA preparation process, and some of those countries are in the implementation phase. It is now the moment to link the identified national adaptation priorities with the available adaptation technologies in order to respond in a more efficient way to the challenges LDCs face and to move forward in the LDC work program. The proposed climate technology center will support LDCs in adopting relevant, best-practice adaptation technologies in future measures to address their NAPA priorities.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

Relevance and efficiency (Bank's capacity to achieve results)

The African Development Bank has the institutional structure, processes and accumulated extensive experience in implementing projects and programs using special funds and other resources earmarked for funding specific initiatives, such as the African Water Facility, the Congo Forest Fund, the African Carbon Support Programme, and the project baselines, the ClimDev fund and SEFA. In addition to those thematic funds, the Bank also hosts several bilateral trust funds.

The proposal for the Bank to host and manage the Climate Technology Finance Center and Network is therefore based on the adequacy of the Bank's mission, capacity, and procedures as well as on its extensive experience in managing donor resources and similar dedicated funds.

In operational terms, a new dedicated Department of Energy, Environment and Climate Change was created in 2010 to drive forward implementation of the climate change agenda, to step up investment in clean energy, and to improve access and reliability.

Sustainability and relevance

The proposed project has been designed to be fully aligned with the CCAP. This alignment ensures high management consideration, ownership, and sustainability of the project.

Quality at entry

AfDB's comparative advantage also includes the ability to design and implement projects at the country and regional (multi-country) level, with a particular emphasis in fragile states (all LDCs). Those projects follow a readiness review process and different panels that ensures the quality at entry, their alignment with the Bank, national and regional priorities and the achievement of development outcome.

Effectiveness and leverage of resources

As the major African development finance institution, the Bank has the capacity to mobilize development partners—bilateral and multilateral—as well as private sector investor's partners maximizing the leverage effect from the use of special purpose funding, such as the Technology transfer. From its own accounts, the Bank's total lending volume from 2008 to 2010 was USD 24.8 billion, comprising USD 14.4 billion in non-concessionary loans and USD 10.4 billion in concessionary loans and grants. Of these resources, 60% was invested in infrastructure across the continent; 22% was invested in governance and capacity building investments and 14% in investments promoting regional integration, with the remaining investment shares split across the agriculture, health, environment, and climate change and education sectors. As an illustration in the energy sector, some USD 10 billion in funding is expected to be available for AfDB public and private sector energy projects for the next five years between 2012 and 2016. This constitutes a relevant budgetary share of the Bank, which amounted to USD 5.5 billion in 2010. The Bank expects its energy investments to catalyze and enable more private sector funding in the sector. In addition, it is the Bank's intention to draw from the trust funds it manages and incorporate additional funds from international climate finance and other programs. Those funds are expected to support Bank investments by providing the adequate resources for the advisory services, technology dissemination and demonstration and additional investment co-financing.

The existence of two major initiatives, ClimDev and SEFA, and the integration of the climate finance and network center at their early stage of implementation enhance their synchronization and alignment with the final objective of bringing the technology transfer aspect into climate change project development.

C.1 Indicate the co-financing amount the GEF agency is bringing to the project:

AfDB's support for the project includes the following: (i) early stage finance to startup companies with sustainable energy investments is estimated to amount to USD 45 million; (ii) approximately USD 15 million from SEFA technical assistance funds, for project preparation studies; (iii) USD 30 million dedicated pilot adaptation projects under ClimDev¹⁵ (vi) supervising staff resources; and (iv) office space for the project.

In addition to the pre-identified co-financing, the project manager will be seeking opportunities for leveraging funds from donors and AfDB-hosted trust funds for the organization of conferences, meeting, ad hoc studies, and TAs.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

¹⁵ USD 30 million corresponds to the expected project investment funding and also corresponds to the amount committed by the AfDB. It should be noted that as per the 2012–2014 work plan, the estimated budget is EUR 145 million. This expected budget should be confirmed upon confirmation of the funds' availability.

The African Development Bank is responding to climate change as part of a broader agenda of promoting environmentally sustainable and inclusive growth in Africa, as outlined in its Medium-Term Strategy (MTS), which covers 2008-2012. The MTS called for AfDB's investment in its capacity to address the climate change agenda in Africa, primarily through work on the special challenges of adaptation and climate-proofing. In addition, two strategic documents were then developed: the Clean Energy Investment Framework (CEIF) and the Climate Risk Management and Adaptation Strategy (CRMA) which are of particular relevance in articulating AfDB's response to the challenges posed by climate change and providing strategic guidance for the recently approved (November 2011) Climate Change Action Plan (CCAP) 2011–2015. As already mentioned, the perfect alignment of the proposed project with the CCAP, but also with two other documents currently in development, the Green Growth Strategy and the AfDB Long-Term Strategy, which give significant importance to climate change in Africa.

In addition to that, the role given to the Bank in the African Consensus statement to Rio+20 and the highlighted importance of capacity building and technology transfer is an evidence of the engagement of AfDB to the promotion and deployment of ESTs.

In terms of country staff capacity, it should be noted that AfDB, with its headquarters in Abidjan, West Africa, and its Temporary Relocation Agency (TRA) in Tunis, North Africa, has identified decentralization as one of the key mechanisms for enhancing institutional effectiveness in the Mid-Term Review of the MTS. A Decentralization Roadmap (2011–2015) was approved by the Board in 2011.

The report proposes a roadmap for the decentralization over the period 2011–2015 based on carefully considered criteria for the following three pillars: (i) strengthening existing field offices, (ii) Expanding presence in fragile states and (iii) consolidating regional capacity. Since the approval of the roadmap, specific action under those three pillars has been undertaken: (i) increasing the number of staff deployed to the existing and newly opened field offices, (ii); the opening (or upcoming open) of four new field offices in the following fragile states: Burundi, the Central African Republic, Liberia, and Togo, as well as liaison offices in Mauritius and Comoros, bringing the presence in the continent to 34 of 54 African countries; and (iii) the designation of two existing field offices as Regional Resource Centers, one in Nairobi (Kenya) and one in Pretoria (South Africa), with strengthened delegation of authority. This accrued presence in the field will facilitate contact with the key partners during project implementation.


The AfDB division in charge of the project administration, the Environment, and Climate Change Division as five climate change experts, six environmentalists (including a GEF coordinator), two renewable energy experts, and four social experts. A project coordinator will be dedicated to the preparation and implementation of the project with the required support from TA and consultants.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
N.A.			

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
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ANNEX – EMISSION ESTIMATIONS CALCULATIONS

Renewable Energies

For a total investment of 100millios US\$ is expected a total production of 150 MW from a mix of sources presenting different values of production and losses (efficiency). This allows the calculation of the electricity per hour et per year. Given an average emission factor of 0.683 for Africa and the cumulative emission reduction that depends on the energy sources, the total expected reduction on CO₂e is of almost 8,000,000 CO₂e, for the 16 years.

RENEWABLE ENERGIES	Power (MW)	hours/year	Efficiency (a)	Grid emission factor (b) (tCO₂/Mwh)	Emission Reduction/year (tCo₂)	Years	Total tCO₂e
Solar	150	2800	0.8	0.683	229,488	10	2,294,880
wind	150	7200	0.8	0.683	590,112	20	11,802,240
Hydro(small)	150	7200	0.8	0.683	590,112	15	8,851,680
Geothermal	150	7200	0.8	0.683	590,112	15	8,851,680
Total (average)							7,950,120

(a) In practice the loss is accounted to be 5%-20% due to conversion of DC to AC and transmission. A conservative value of 20 % is considered in this case.

(b) Source: http://www.eia.gov/oiaf/1605/pdf/Appendix%20F_r071023.pdf

Energy Efficiency

An estimated of the amount of electrical of electrical energy saved due to the investments is calculated dividing the total investments (30 mUS\$) the levelized energy saving cost over 10 years (\$/kWh). A levelized cost of unit energy efficiency savings over the life time of the investments is established based upon staff estimates adjusted appropriately to reflect the immature nature of the technologies. This can then be multiplied by the regional emissions factor of 0.683 to get the estimation of the emissions reduction realized over a ten-year period following the implementation of the investment projects.

ENERGY EFFICIENCY	VALUES
Investment (\$)	30,000,000
Levelized energy saving cost -10y (\$/MWh)	25
Grid Emission Factor (tCO₂/MWh)	0.683
tCO₂e	819,600

Transport

As per the energy efficiency total investment mobilized for transport is divided by the cost of energy savings to give the amount of energy savings realized through the investment over the investment lifetime. This value is then then multiplied by the emissions factor for a unit of oil to give the emissions reductions over the 10 years investment. It should be noted that Africa is considered to have the the highest CO₂ emissions (274 tCO₂/1000 toe)

TRANSPORT	VALUES
Investment (\$)	50,000,000
Levelized energy cost of oil 10y (\$/boe)	41
Unit emission for oil (tCo₂/boe)	0.274
tCO₂e	334,146

Source <http://www.iea-etsap.org/web/E-TechDS/PDF/P01-Conv-Oil&Gas-GS-gct-AD.pdf>