



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

THE LEAST DEVELOPED COUNTRIES FUND FOR CLIMATE CHANGE (LDCF)<sup>1</sup>

**Re-submission Date:** July 6, 2010

GEFSEC PROJECT ID<sup>2</sup>:  
 GEF AGENCY PROJECT ID: 4069  
 COUNTRY (IES): Mozambique  
 PROJECT TITLE: Adaptation in the coastal zones of Mozambique  
 GEF AGENCY (IES): UNDP, (select), (select)  
 OTHER EXECUTING PARTNER(S): Ministry for the Coordination of the Environment (MICOA)  
 GEF FOCAL AREA: Climate Change

INDICATIVE CALENDAR (mm/dd/yy)	
Milestones	Expected Dates
Work Program (for FSP)	June 2010
CEO Endorsement/Approval	July 2011
Agency Approval Date	July 2011
Implementation Start	Sep 2011
Mid-term Review (if planned)	Sep 2013
Project Closing	Sep 2015

## A. PROJECT FRAMEWORK

<b>Project Objective:</b> To develop capacity of communities living in the coastal zone to manage climate change risks.								
Project Components	Indicate whether Investment, TA, or STA <sup>b</sup>	Expected Outcomes	Expected Outputs	Indicative LDCF Financing		Indicative Co-Financing		Total (\$) c = a+b
				(\$ a)	%	(\$ b)	%	
1. Institutional capacity development	STA,TA	1. Coastal climate change risks integrated into key decision-making processes at the local, sub-national and national levels.	1. Coastal erosion and climate change risk profiles developed and/or improved. 2. Climate change risk analysis on coastal zones incorporated into coastal development policies, strategies and investment plans, 3. National spending plans adjusted to enable replication of cost effective adaptation measures in coastal zones.	2,575,000	33	5,150,000	67	7,725,000
2. Demonstration activities	TA, Investment	2. Adaptive capacity of coastal communities improved and coastal zone resilience to climate change enhanced.	1. Priority community-based adaptation projects implemented in pilot sites (with a focus on alternative livelihoods and improved ecosystem resilience to climate change).	1,050,000	33	2,100,000	67	3,150,000
3. Knowledge management	TA	3. Best practices documented and disseminated.	1. Knowledge and lessons learned to support implementation of adaptation measures compiled and disseminated at a national and regional level. 2. Replication plan for	375,000	33	750,000	67	1,125,000

<sup>1</sup> This template is for the use of LDCF Adaptation projects only.

<sup>2</sup> Project ID number will be assigned initially by GEFSEC. If PIF has been submitted earlier, use the same ID number as PIF.

			successful coastal adaptation pilots developed. 3. Awareness campaign on climate sensitive coastal management undertaken in selected areas of the coastal zone.					
4. Project management				433,000	33	866,000	67	1,299,000
<b>Total project costs</b>				4,433,000	33	8,866,000	67	13,299,000

<sup>a</sup> List the \$ by project components. The percentage is the share of LDCF and Co-financing respectively to the total amount for the component.

<sup>b</sup> TA = Technical Assistance; STA = Scientific & Technical Analysis

**B. INDICATIVE CO-FINANCING FOR PROJECT BY SOURCE AND BY NAME**  
(in parenthesis) if available, (\$)

Sources of Co-financing	Type of Co-financing	Project
Project Government Contribution MICOA (some funding from DANIDA):	In-kind, parallel	\$2,766,000
GEF Agency(ies) (UNDP): AAP, INGC	Cash, In-kind, Parallel	\$3,300,000
Bilateral Aid Agency(ies)		
Multilateral Agency(ies): PPCR	Parallel	\$2,800,000
<b>Total co-financing</b>		<b>\$8,866,000</b>

**C. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT (\$)**

	Previous Project Preparation Amount (a) <sup>3</sup>	Project (b)	Total c = a + b	Agency Fee
LDCF	0	4,433,000	4,433,000	443,300
Co-financing	0	8,866,000	8,866,000	
<b>Total</b>	0	13,299,000	13,299,000	443,300

**D. FOR MULTI AGENCIES/COUNTRIES (IN \$)<sup>1</sup>**

GEF Agency	Country Name	(in \$)		
		Project (a)	Agency Fee (b) <sup>2</sup>	Total (c) c=a+b
(select)				
(select)				
(select)				
(select)				
(select)				
(select)				
<b>Total LDCF Resources</b>		0	2	0

<sup>1</sup> No need to provide information for this table if it is a single country and/or single GEF Agency project.

<sup>2</sup> Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.

**PART II: PROJECT JUSTIFICATION**

**A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED ADAPTATION BENEFITS TO BE DELIVERED:** The Government of Mozambique (GoM) seeks LDCF funding for a Full-Sized Project (FSP) to implement

<sup>3</sup> Include project preparation fundings that were previously approved and exclude PPGs that are awaiting for approval.

priority 3 “Reduction of climate change impacts in coastal zones” of the National Adaptation Programme of Action (NAPA), which was submitted to the UNFCCC in 2007.

## PROBLEM STATEMENT

### *Climate change problem*

Climate change-related sea level rise (SLR), increase in mean sea temperature, increasing intensity and frequency of tropical cyclones and storm surges are likely to continue to have major adverse impacts on the Mozambique coastline. Whilst the entire length of the coastline is at risk, much of the south and central parts of the Mozambique coastline are particularly vulnerable. This is in part due to the many sections of low-lying flat coastal zones and river basins. The north is slightly less vulnerable due to the protection offered to the coastline by numerous coral reef systems as well as the lower frequency of cyclones relative to the south. However, the north will still be impacted by climate related SLR and coral reef systems may provide reduced protection in the future as they are likely to be degraded via: i) destructive maritime hazards; ii) increases in mean sea temperature; and iii) coral bleaching as a result of climate change impacts by as early as 2050. Furthermore changes in mean sea temperature may contribute to a shift in geographical location of cyclones on the Mozambique coastline.

### *Baseline problem*

Many anthropogenic activities in both urban and rural settings are impacting on coastal zones e.g. urban expansion, tourism, and in some point localities, industrial activity (e.g. industry in Maputo and oil exploration activities on the coast of Cabo Delgado). In addition, subsistence activities (including fishing, farming and wood collection) are impacting on critical ecosystem services provided by mangrove swamps, dune systems and coral reefs. These ecosystem services, however, are critical in providing resilience against SLR and destructive maritime hazards (such as storm surges, tsunamis and tropical cyclones). Predicted climate change impacts threaten the livelihoods of rural populations, food security, economic development and infrastructure in Mozambique.

The majority of coastal communities in Mozambique lack: i) the technical capacity; and ii) the physical and financial resources, to adapt to and overcome climate change and climate variability, particularly problems associated with climate change-induced coastal erosion.

Mozambique has the third longest maritime coastline in Africa (2700km) and the majority of the population (60%) live in coastal zones. Most of the poor and rural population situated in coastal zones depend on coastal resources for subsistence and livelihoods. For this reason, these populations are particularly vulnerable to the adverse impacts of climate change.

**PROJECT INTERVENTION:** The **goal** of the project is to support Mozambique to increase resilience to climate change through both immediate and long-term adaptation measures in development policies, plans, programmes, projects and actions. The **objective** of the project is to develop the capacity of communities living in the coastal zones of Mozambique to manage climate change by: i) generating climate change risk and adaptation options analysis and mainstreaming it into policies, investment plans and sector budgets at the national and sub-national level ii) piloting demonstration projects to increase capacity of communities living in the coastal zone to cope with climate change impacts such as coastal erosion and to improve coastal ecosystem resilience to climate change; and iii) knowledge management to enable replication of climate change adaptation measures in coastal zones.

The project will:

- i. provide a coastal focus that is not being addressed through other programmes. It will help to strengthen the activities carried out by other adaptation interventions (see Section D), including:
  - a. understanding climate change risk;
  - b. building capacity- this will be a major focus particularly within MICOA and the three Centres for Sustainable Development;
  - c. strengthening of multi-sectoral institutional coordination;
  - d. motivating policy and budget alterations;
  - e. disseminating knowledge and lessons learned.
- ii. enable the scaling up successful pilot projects that are currently being piloted (see Section D).

**ADAPTATION BENEFITS:** The proposed LDCF project will contribute to better environmental sustainability, food security and gender equality, positively affecting MDG 1, 3 and 7. Further development of the benefits analysis will be developed during the PPG phase.

**B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL/REGIONAL PRIORITIES/PLANS:** In the Government's Five Year Plan and the Poverty Reduction Strategy Paper (PARPA II)<sup>4</sup> the sustainable use of natural resources (including water), and transparent mechanisms for the management and rational exploitation of those resources are listed among its priorities. The need to mitigate the negative effects of droughts and floods is acknowledged. However, climate change as a driver of droughts, floods and sea level rise is not acknowledged in the PARPA II. The LDCF project will seek to generate policy-relevant information to help mainstream climate change adaptation into the national planning processes.

One of the Government plans relevant to the proposed LDCF project is the National Action Plan on Erosion. This nationwide action plan covers all forms of erosion, and acts as an important baseline but does not have a particular focus on climate change-induced erosion and the impacts of climate change on the coastline. Additionally, the government (led by MICOA and funded by DANIDA) is about to engage in the development of a Strategic Environmental Assessment (SEA) which will focus on the entire coastline of Mozambique. This will be undertaken over the next three years, will involve extensive data collection and stakeholder involvement from all sectors and will, once complete, inform land-use decision-making and territorial planning at all levels (local, sub-national and national) in coastal zones. The proposed LDCF project's focus on coastal zones and climate change-induced erosion is consistent with these plans and processes and will contribute knowledge to them.

The Government of Mozambique became a signatory to the UNFCCC in June 1992 and ratified the Kyoto Protocol on 18 January 2005.

**C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH LDCF ELIGIBILITY CRITERIA AND PRIORITIES:** The project conforms to the three principles of the LDCF. a) Country-drivenness: the project is in line with the Government's Five Year Plan and PARPA II<sup>5</sup> and other plans and projects as outlined above in Section B. b) Implementing NAPA priorities: Mozambique submitted its NAPA in 2007, the proposed LDCF project focuses on priority 3 of the NAPA, "Reduction of climate change impacts in coastal zones". c) Supporting a learning-by-doing approach: the project will use the pilot projects to demonstrate ways of managing climate change impacts such as coastal erosion, including alternative livelihoods. This will include generating the evidence on the cost effectiveness of adaptation options to make the case for policy and budgetary adjustment. The project's results will be disseminated to Government and other stakeholders to inform future investment planning in the coastal zone.

**D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:** The proposed LDCF project will complement a number of activities and programmes that are already underway or about to begin implementation in Mozambique. The key climate risk management programmes include:

- i. Africa Adaptation Programme (AAP) funded by the Government of Japan through UNDP (*provides support for developing a programmatic framework for adaptation*);
- ii. Pilot Programme for Climate Resilience (PPCR), led by World Bank (*support for piloting and demonstrating approaches for integration of climate risks and climate resilience into development policies and planning*).
- iii. Strategic Environmental Assessment (SEA), led by MICOA and funded by DANIDA. (*provides the baseline activity to which we wish to bolt on the climate risk management focus*).
- iv. Joint Programme in Environmental Mainstreaming and Adaptation to Climate Change in Mozambique, funded by MDG-F UNDP-Spain (*focuses on the inland Limpopo River Basin and does not have any coastal relevance, however the LDCF project will complement it in terms of capacity development in a different geographical context*);
- v. Joint Programme on Strengthening Disaster Risk Reduction and Emergency Preparedness (under the 'Delivering As One' programme), convened by UNDP (*focuses on disaster risk reduction on a broad level; the LDCF will complement this by providing much needed baseline analysis in coastal zones, which can filter into disaster risk reduction plans*);
- vi. Coping with Drought and Climate Change, funded by SCCF (*focuses on coping with drought in a number of pilot sites; the LDCF project will complement this by providing coping mechanisms for other climate change induced challenges such as flooding and salt water intrusion*);

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<sup>4</sup> The project should also be in line with the Plano Quinquenal and the PARPA III which will likely be finalized by the time this project is approved.

<sup>5</sup> The project should also be in line with the Plano Quinquenal and the PARPA III which will likely be finalized by the time this project is approved.

- vii. The long-term adaptation programme (INGC phase II project) under the National Disaster Management Institute (INGC) (*focuses on a strategy for climate change and is strongly linked to the AAP; much of the AAP provides the funding for the activities under this programme; the LDCF project will add to these activities by providing a coastal focus and will allow for more in-depth analysis, and pilot interventions in this geographical context*); and

The LDCF project will contribute knowledge on coastal zone climate change adaptation to the AAP, PPCR and the INGC processes.

Based on activities identified in the NAPA and other existing action plans, a number of Government-lead activities are underway which focus (fully or partially) on coastal erosion. These include a number of activities led by the Centre for Sustainable Development of Coastal Zones under MICOA, such as: i) a project focused on hard engineering solutions to erosion in Beira (a concept note regarding this project has been sent to JICA); ii) a project in the Limpopo River Basin which started in January 2009, focusing on saline intrusion, erosion and general environmental management; and iii) a project in Govuro District (Inhambane Province) on awareness of climate change, which includes mapping of the coastline, and is due to commence in early 2010. Furthermore, the Oceanography Department at the University of Eduardo Mondlane (UEM) is undertaking a number of technical pilot studies in coastal areas on *inter alia* developing: i) alternative energy sources for the drying and freezing of fish; ii) small-scale water desalinisation plants; and iii) small aquaculture projects. These UEM pilot projects are aimed to provide sustainable solutions, and may be of relevance in the proposed LDCF pilot sites.

Other projects of relevance to climate change adaptation in coastal zones include: i) CC Dare (UNEP-UNDP), which is likely to include a project on erosion in Xai-Xai; ii) a WWF project, which is to be undertaken in 2010 and will focus on increasing community resilience to climate change in conservation areas; iii) a IUCN climate change adaptation pilot project in the coastal areas of central Mozambique and Gaza province involving local communities, community-based organizations (CBOs) and partner NGOs.

There are many other projects of relevance which will need to be investigated and engaged with during the PPG phase; for example the Agulhas and Somali Current Large Marine Ecosystem (ASCLME) project which has collected biophysical information on the Mozambique coast, and the Poverty and Environment Initiative (UNDP-UNEP).

During the PPG phase, the LDCF project will seek to make linkages where appropriate with these projects and processes.

**E. DESCRIBE ADDITIONAL COST REASONING:** In the absence of LDCF intervention, the impacts of: i) SLR; ii) increasing mean sea temperatures; and iii) increasing intensity and frequency of tropical cyclones and storm surges will overwhelm the existing coping capacity of populations within Mozambique. Other climate risk management-related programmes that are currently underway are focused at the planning level, in the in-land areas or at the larger infrastructural level. A dedicated focus on coastal zones is still needed. The proposed LDCF project aims to resolve this niche gap.

The project objective will be achieved through the implementation of three outcomes, described below. Outputs under each Outcome will be refined and finalised through further consultation with relevant stakeholders during the preparatory phase.

### **1. Climate change risks to coastal zones managed at community level as well as sub-national and national government level.**

Baseline: Data and information relevant to improving coastal erosion and climate change risk profiles are currently very limited in extent. Furthermore, data and information that are available are situated within various ministries and institutions and have not yet been comprehensively shared and assembled. At present, lack of data and poor management of physical coastal data presents a barrier to adequate monitoring and forecasting of the impacts of climate change on coastal zones. Without this information, the applied response strategies are reactive rather than anticipatory with little consideration for the long-term effects of climate change. Indeed, present efforts to address climate change in coastal zones are *ad hoc*, limited in extent and predominantly focused on hard engineering structures to protect urban centres. Activities are based on plans that are not guided by rigorous science or multi-sectoral strategic plans.

Technical adaptive capacity is very limited within Mozambique. Climate change adaptation has not been mainstreamed into coastal management and land-use planning.

Adaptation alternative: The proposed LDCF project will develop and strengthen local and national capacity to manage climate change impacts, such as coastal erosion. This will be achieved via: i) collection and collation of required data and information for coastal erosion and climate risk profiles (activities that can involve data collection by communities should be sought in order to develop ownership of this project); ii) strengthening of climate change adaptation capacity of stakeholders in coastal zone management through appropriate mechanisms to be identified during the PPG phase (this may include a range of stakeholders in local and national government as well as in the private sector; in particular this will focus on MICOA and particularly on the Centres for Sustainable Development of Coastal Zones); iii) improved climate risk management through the mainstreaming of climate change adaptation information into economic and land use planning (it is envisioned that this will occur through the SEA process<sup>6</sup>); iv) adjustment of sector budgets to enable effective adaptation in coastal zones (this could be lobbied for via targeted information sharing with ministries of finance and economy, as well as presentation to parliament<sup>7</sup>).<sup>8</sup>

## **2. Adaptive capacity of selected communities improved and coastal zone resilience to climate change enhanced.**

Baseline: More than 60% of the population lives in coastal areas either in urban or rural settings, placing significant pressure on coastal resources and natural capital. Industry, urban expansion, tourism and subsistence activities (including fishing, farming and wood collection) in Mozambique are: i) exacerbating natural coastal erosion processes; and ii) impacting on critical ecosystem services such as mangrove swamps, dune systems and coral reefs all of which provide resilience against SLR and destructive maritime hazards (including tropical cyclones, storm surges and tsunamis).

The combination of the inherent dynamic nature of coastlines, exposure to destructive maritime hazards, SLR, inadequate land-use planning and high population pressure on natural resources in coastal zones renders the Mozambican coastline highly vulnerable to the impacts of climate change, particularly climate change-induced coastal erosion.

Adaptation alternative: The proposed LDCF project will strengthen capacity at the sub-national level through the implementation of demonstration activities in selected localities on the Mozambiquan coast. These outputs will strengthen resilience to climate change impacts in coastal zones. Viable solutions and methods for reducing climate change-induced coastal erosion in Mozambique will be identified, documented and prioritised based on a set of criteria (this may include a range of solutions ranging from ecosystem restoration of dunes, mangroves and coral reefs to hard engineering structures,) during the PPG phase.

## **3. Best practices documented and disseminated.**

Baseline: Currently, few decision- and policy- makers have accurate and up-to-date climate change information at hand on which to base decisions. Collective knowledge on adaptation strategies in coastal zones in Mozambique is limited. Furthermore, general public awareness of climate change impacts is low.

Adaptation alternative: The proposed LDCF project will strengthen local and national knowledge on climate change adaptation in coastal zones, particularly the relevance and importance of land-use planning and development planning in these zones. It will also focus on increasing knowledge amongst government, NGOs and civil society through a public awareness campaign. Lessons learned, best practices and documentation from the entire project will be disseminated via the UNDP's Adaptation Learning Mechanism (ALM), and other appropriate mechanisms<sup>9</sup>. These outputs will contribute towards successful scaling up of adaptation in coastal zones.

Additional cost reasoning will be further refined during the PPG phase.

## **F. INDICATE THE RISK THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MITIGATION MEASURES:**

<b>Identified Risks</b>		<b>Mitigation Measures</b>
Limited human resources in the country may limit project implementation.	M*	The project will focus on strengthening and building technical and adaptive capacity where necessary,

<sup>6</sup> Co-financing.

<sup>7</sup> This will bolt on to AAP activities/Co-financing.

<sup>8</sup> Knowledge shared could be simple (e.g. how to control erosion) or complex (e.g. GIS maps and predicted climate change impacts) depending on the requirements of the target groups.

		twinning local with international capacity where appropriate.
Cultural and social acceptance of ‘new or risky’ adaptation measures may limit pilot project implementation.	M	The pilot projects will be demand-led, with close monitoring of communities preferences and needs for risk reduction. Adaptive management and stakeholder consultation will be central to the project.
Lack of data sharing and knowledge required for baseline data analysis.	M	A stakeholder consultation will be undertaken during the PPG phase to identify and clarify expectations and responsibilities of institutions to participate in knowledge/data sharing.

Risks and mitigation measures identified above are preliminary at this stage and will be further refined during the PPG implementation phase.

**G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:** The Initial National Communications (INC) and the NAPA process have undertaken analyses to prioritise priority adaptation actions. The NAPA process undertook multi-criteria analyses to prioritise actions according to potential for positive effects on economic development, social capital and environmental management. Cost effectiveness was one of the criteria used to measure economic development. Hence, the actions proposed and prioritized by the NAPA are not only the most urgent and most pressing, but have also been cost effective. The main alternative to the community-based activities described in this document would be high investment retrofitting and engineering solutions. This project aims to build on existing baseline programmes of line agencies and donor programmes in order to develop adaptive capacity rather than perform once-off protective functions. Furthermore, the project will be designed with a replication function in order to ensure adaptation options are low-cost, easily adopted by communities throughout the country, and efficient in terms of increasing people’s livelihood resilience.

More detailed cost effectiveness analysis will be undertaken during the PPG project implementation phase. Effectiveness will be assessed according to *inter alia* the extent to which the project i) is financially sustainable; and ii) reduces the vulnerability of communities to climate variability and change.

**H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:**

The project is in line with UNDP’s comparative advantage of capacity development, both in the areas of environment and natural resources sector, as well its work on MDG-based planning. UNDP is able to draw on its adaptation experience in helping a majority of LDC governments prepare NAPAs, LDCF Full Size Projects, AAP project documents and other adaptation initiatives, including in Mozambique. UNDP is also able to draw on the expertise gathered over a decade and more in the GEF focal areas of water and ecosystem-based management.


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

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT:**

(Please attach the [country endorsement letter\(s\)](#) or [regional endorsement letter\(s\)](#) with this template).

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE</b>
Mrs. Telma Manjate	National Director and GEF OFF	<b>MICOA</b>	<b>23/04/10</b>

**B. AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with LDCF policies and procedures and meets the LDCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	Date	Project Contact Person	Telephone	Email Address
John Hough Deputy Executive CoordinatorUNDP/GEF		July 6, 2010	Jessica Troni	+27 12 354 8056	jessica.troni@undp.org