



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

THE LEAST DEVELOPED COUNTRIES FUND FOR CLIMATE CHANGE (LDCF)¹

Submission Date: February 2010

Resubmission date: 30 June 2010

GEFSEC PROJECT ID²:

GEF AGENCY PROJECT ID:

COUNTRY(IES): Afghanistan

PROJECT TITLE: Building adaptive capacity and resilience to climate change in Afghanistan.

GEF AGENCY(IES): UNEP, (select), (select)

OTHER EXECUTING PARTNER(S): NATIONAL ENVIRONMENTAL PROTECTION AGENCY

GEF FOCAL AREA: Climate Change

INDICATIVE CALENDAR (mm/dd/yy)	
Milestones	Expected Dates
Work Program (for FSP)	
CEO Endorsement/Approval	09/01/2011
Agency Approval Date	10/01/2011
Implementation Start	12/01/2011
Mid-term Review (if planned)	12/01/2013
Project Closing	12/01/2015

A. PROJECT FRAMEWORK

Project Objective: To increase resilience and enhance key adaptive capacity to climate change –to – water related risk in Afghanistan								
Project Components	Indicate whether Investment, TA, or STA ^b	Expected Outcomes	Expected Outputs	Indicative LDCF Financing ^a		Indicative Co-Financing ^a		Total (\$) c = a+b
				(\$ a)	%	(\$ b)	%	
1. Climate Change (CC) Risk Assessment, Monitoring and Forecasting and Information	STA/TA	Increased capacity and knowledge base for assessment monitoring and forecasting of CC –to – water related risks in Afghanistan.	1.1 Capacity to assess, monitor, predict and interpret climate change – to-water related risks in Afghanistan. (vulnerability maps produced for planning purposes); 1.2 A functional EWS system for the systematic collection, analysis, and distribution of information on CC –to – water related risks at the national and community levels in place; 1.3 Technical and policy briefs for policy makers on CC –to – water related risks.	900,000	31	2,000,000	69	2,900,000
2. CC adaptation planning and response strategies.	STA/TA	CC risks integrated into relevant policies, plans and programmes	2.1 Tools and methodology for identification, evaluation and mainstreaming of CC adaptation measures in water sector and other water related/ affected sectors; 2.2. Inter-ministerial; coordination mechanism in place for CC risk integration; 2.3 CC risk and adaptation	700,000	22	2,500,000	78	3,500,000

¹ This template is for the use of LDCF Adaptation projects only.

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

			<p>measures integrated into relevant existing sectoral policies and plans (water, agriculture, disaster and conflict prevention);</p> <p>2.4 Capacities to implement the national CC adaptation strategy and climate proofed sectoral plans are developed.</p>					
<p>3. Practices for water resource and watershed management piloted and tested in selected project sites.</p>	STA/TA	<p>Reduction of CC vulnerability in the selected project sites through use of appropriate technologies for improved water use efficiency and increased environmental resilience.</p>	<p>3.1 Introduction and testing efficient water management technologies adapted to intensive and prolonged droughts (including drip irrigation, water storage systems, water canals and their use);</p> <p>3.2 Introduction and testing agriculture management practices to reduce water needs adapted to intensive and prolonged droughts (including drought tolerant varieties, diversified crops, adapted cultivation practices, seed banks);</p> <p>3.3 Introduction and testing watershed management practices adapted to intensive and prolonged droughts and intensive floods (including grazing management, terracing, planting of grass and trees, improvement of water canals);</p> <p>3.4 Creation and institutional strengthening of water management associations including through training of the members on integrated water resources management.</p>	2,100,000	17	10,000,000	83	11,900,000
<p>4. Adaptive learning and dissemination of lessons learned and best practices</p>	TA	<p>Increased knowledge of good practices on increasing resilience to CC –to – water related risks</p>	<p>4.1 Project lessons captured in, and disseminated through a project specific web site and Global Adaptation Network (GAN);</p> <p>4.2 Project knowledge shared with other countries in the region facing similar climate-induced drought and flooding hazards;</p> <p>4.3 Project knowledge incorporated into national flood and drought prevention and public service training programmes</p>	600,000	38	1,000,000	62	1,500,000

			in Afghanistan; 4.4 Raised awareness, using appropriate means, on CC – to – water related risks and adaptation for local communities and key national policymakers. 4.5 Resources mobilized for replication of the project lessons and demonstrations in other locations of Afghanistan.					
5. Monitoring and evaluation				200,000	100			200,000
6. Project management				400,000	45	500,000	55	900,000
Total project costs				4,900,000	23	16,000,000	77	20,900,000

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

^b 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 (Departments Meteorology, Water, Environment, Land, Forestry)	In-kind	550,000
GEF Agency(ies) (UNEP)	In-kind	450,000
Bilateral Aid Agency(ies) (EC, DFID, World Bank)	In-kind	10,000,000
Multilateral Agency(ies) (FAO, UNDP)	In-kind	5,000,000
Total co-financing		16,000,000

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

	Previous Project Preparation Amount (a) ³	Project (b)	Total c = a + b	Agency Fee
LDCF		4,900,000	4,900,000	490,000
Co-financing		16,000,000	16,000,000	
Total	0	20,900,000	20,900,000	490,000

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

PART II: PROJECT JUSTIFICATION

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED ADAPTATION BENEFITS TO BE DELIVERED:

This proposal seeks LDCF funding for a full size project (FSP) in Afghanistan. It aims at increasing resilience and key adaptive capacity to address CC –to – water related risks in Afghanistan. Through the achievement of this objective, the proposal seeks to implement three main priorities identified under the National Adaptation Program of Action (NAPA) of Afghanistan, developed with the support of the UNEP office in Afghanistan, namely: (i) improving Afghanistan’s capacity to integrate climate change risks into relevant sectoral policies and plans (water, agriculture, disaster and conflict prevention, (ii) improving land and watershed management as a climate change adaptation strategy, and (iii) developing national climate change assessment and monitoring systems. In addition, the proposal will contribute to address other NAPA priorities such as (i) strengthening Integrated Water Resource Management (IWRM), (ii) climate proofing of sectoral strategies (disaster and preparedness strategy, etc).

The proposal is designed to follow a programmatic approach. It will address a number of NAPA priorities in an integrated manner across water resources and other sectors affected by water stress through the implementation of a package of interventions that will strengthen the capacity to monitor and predict future changes, develop and implement response strategies to cope with climate change risks while helping local populations to adapt through sustainable management of natural resources.

Afghanistan context

Afghanistan has an arid and semi arid continental climate with cold winters and hot summers. Afghanistan covers slightly over 652,000 km² with an estimated population of about 26⁴ million inhabitants. The dominating feature is the central massif, Hindu Kush, a 1,000 km mountain range that constitutes one of Asia’s greatest freshwater reservoirs. There are eight water basins flowing radially out from the Hindu Kush System. Three join the Indus River in Pakistan while the other five have no outflow and dry up in closed basins either inside or outside the country. The source of most of Afghanistan’s surface water is the snow falling at high elevations. Protection and management of this source and associated ecosystems are crucial adaptation to ensure sustainable water supply despite the predicted climate change variations in the regional hydrological cycle.

Afghanistan receives an average of 316 mm (12.4 in) of rainfall per year, or 26 mm (1.0 in) per month. In average there are 55 days per year with more than 0.1 mm (0.004 in) of rainfall (precipitation) or 5 days with a quantity of rain, sleet, snow etc. per month. The driest period occurs around September with an average of 1 mm (0.0 in) of rainfall (precipitation) across less than in 1 day. The wettest period occurs around March with an average of 91 mm (3.6 in) of rainfall (precipitation) across 10 days.

Afghanistan remains one of the poorest countries in the world. The Human Development Index is only 0.345 which ranks the country 174 out of 178 countries on the global HDI listing. Afghanistan is essentially an agrarian country, with a heavy reliance of population on agricultural production (80 percent of the population are involved in farming or herding, or both. An estimated 12% of the land is suitable for arable farming or horticulture (irrigated and rain –fed). Characterized by a semi-arid and arid climate, the correlation between precipitation and agricultural production is high throughout much of the country. A wide variety of crops are grown throughout Afghanistan. Wheat is grown in all areas. Tree fruits (apricot, almond, walnut, mulberry, etc.) and grapes are also found everywhere. Other major crops include maize and potato. Water is key to maintain agricultural productivity. Irrigation water in particular is an extremely precious resource, especially during the hot, dry summers and years of extended drought. In addition, war-inflicted damage to large and small irrigation systems and the disruption of water supplies have reduced the accessibility of this essential resource. Together with

⁴ The most recent population census carried out in 1971 revealed that Afghanistan population amounts to some 13.1 million inhabitants. The figure of 2005 is an estimated one based on the population growth rate (of 1.9 % per annum).

increasing population density and decreasing water availability, families and communities are increasingly over pumping the groundwater in an attempt to access more.

With one of the highest population growth rates in Asia, coupled with increasing number of returning refugees, extreme poverty levels, ongoing conflict and low human and institutional resource capacities, Afghanistan represents one of the largest development challenges in the world today. Poverty, years of conflict and inadequate policies at local, regional and national levels have resulted in unsustainable natural resource use and severe environmental degradation. Forests are being cut down unsustainably to provide wood for fuel and construction (annual deforestation rate : 5-10%); rangelands are being converted to rain-fed wheat production, exposing vast areas to wind erosion. Thus processes of deforestation combined with overgrazing, conversion, poor agriculture practices, and droughts are increasing soil erosion, watershed degradation, reducing ecosystem services and biodiversity loss, threatening livelihood sources and leading to increased impoverishment of the Afghan people. With up to 80% of population depending upon natural resources for their livelihoods the loss of biodiversity and degradation of natural resources will have widespread effects on Afghan society that will be particularly evident in rural areas.

While there is awareness within the government of some consequences for biodiversity loss and desertification, particularly in the face of ongoing climate change, the pressure for survival at the local level and economic growth at the national level in an insecure country has resulted in little substantive action being taken to address the issue.

Observed and expected climate changes and its impacts in Afghanistan

Afghanistan is facing climate change threats at unprecedented spatial and temporal scales. The NAPA of Afghanistan and modeled scenarios developed by Climate Research Unit (CRU) and Tyndal Centre for Asia highlight (i) increased temperatures and greater temperature amplitudes; (ii) decreased precipitation and changes in rainfall patterns observed over the last 50 years and (iii) increased intensity, duration and frequency of climate hazards (droughts, floods and cold waves). These effects are exacerbating the degradation of Afghanistan's ecosystems, and increasing Afghanistan environmental vulnerability.

During the last 50 years the temperature is increased by approximately 0.8 – 1 °C and precipitation is decreased by approximately 90-100 mm / year. Greater temperature amplitudes are observed during the last 50 years in Afghanistan, with extreme temperatures exceeding by 30% long terms maximum and minimum temperatures.

Droughts are becoming more extreme and intense due to a steady temperature increase and rainfall decrease in the country. A regular drought cycle of 15 years has been observed in Afghanistan during which one would expect 2-3 years of drought conditions. However, since 1960 the country has experienced droughts more often (1963-1964; 1966-1967; 1970-1972 and 1998-2006) with the drought of 1998-2006 marked as the longest and most severe one in Afghanistan's climatic history. Both surface and groundwater resources have been severely affected by the droughts as well as uncoordinated and unmanaged extraction. Available information shows that functional irrigation systems are running at about 25 % efficiency against their potential of 40-60%. This has resulted in observed decreases in the crop and other agricultural production. Climate change predictions for Afghanistan indicate further increases yet in drought frequency and duration over the next 50 years, as well decrease of the overall precipitation patterns particularly in the north (northwest and northeast) Afghanistan. The net effects at horizon 2050 would be (i) decrease in crops productivity (with a predicted 60% loss of overall farm production loss of fertile, pasture and arable land and associated increase in malnutrition in rural communities) (ii) increase in drought-related conflicts (i.e. water access, rights and management); and (iii) migration of farmers towards urban areas.

In Afghanistan, *floods* are caused by unpredicted heavy rainfall and by the increased melting of permanent snow and ice melting from the Hindu-Kush mountain range. Climate change is expected to aggravate flood frequency (up to 3/ year from the current frequency of 1/year) and intensity. Flooding effects in Afghanistan could lead to destruction of agricultural lands, loss of crops and livestock, sedimentation of irrigation systems and springs, and

spread of epidemic diseases.

Climate change is also resulting in erratic and *extreme frost and cold waves* in Afghanistan during the winter and early spring months. These temperature shocks result in negative effects in growing season (i.e. crop survival in early season plantation) including the degradation of economically and nutritionally important crops, and increased mortality among rural communities. These cold waves are forecasted to become more frequent (3-4 time/year) and intense (up to -46 °C - recorded in Chakhckaran). The net effects from this climate hazard would result in crop destruction (fruit crops and vegetables), human and livestock losses.

These effects are exacerbating the degradation of Afghanistan's ecosystems, and increasing Afghanistan's vulnerability to climate change because the vast majority of Afghans are entirely dependent on agriculture, livestock and natural resources available to meet their livelihood and survival needs.

The region of Northern Afghanistan is found to be very vulnerable as reported by NAPA and evidences including from outcomes of 50 years data record and modeled scenarios developed by CRU centre. This area is prone to droughts and floods and because of the high population density and reliance on crops and livestock it is highly affected from climate change and this would continue to be the case unless timely adaptation measures are implemented. An evidence of this are recent floods which occurred in this region in early May 2010 which have highly affected eight districts in the Northern region (Almar, Bilchiragh, Dawlatabad, Ghormach, Gurziwan, Khoja Sabz Posh, Maimana city, and Pashton Kot) with 80 percent of affected districts' roads reported damaged and 19 people killed by floods. 1,800-2,500 families were reported affected in Jawzjan province and 550 families in Fayzabad district have been displaced by rising water to two locations (a bridge and a school). 2,000 families from Balkh province were evacuated because of the massive floods. About 356 households from Baghlan province were affected (185 of which had homes completely destroyed); Yangi Qala province reported 173 affected families in four villages; Flood killed three people, injured 10 people, and damaged 10 houses Badakhshan province.

Climate change is expected to significantly influence temperature and precipitation patterns in Northern Afghanistan. Temperature is expected to increase by 0.03 C/year over 50 years. A decrease of precipitation is also expected over the next 50 years in the region of northeast Afghanistan expected to have a decrease up to 2.0 mm/year, the greatest precipitation change expected all over Afghanistan. Preliminary analysis on key climatic and environmental variable (given the available data) also indicates a significant increase of frequency and intensity of extreme events in this region which will have a clear impact on water resources availability of this region and, in turn, livelihoods security for rural communities and major settlements in the area. Given this, the northern part of Afghanistan is will be the focus of the project with more in depth analysis to be done during the PPG as far as the project site selection is concerned.

Root causes of vulnerability and barriers to implementations

Taking into account the overall context above, the major cause of vulnerability in Afghanistan is *water availability* and *poverty*. However, Afghanistan faces a number of other underlying root causes of vulnerability such as poor watershed management, reliance on agriculture and livestock, high population density, unsustainable use of natural resources (water, forests and land) and associated conflicts over natural resources, compounded by lack in the institutions, policy regime and capacities to cope with those vulnerabilities.

Over generations, farmers have attempted to cope with such rainfall variability by adopting risk-averse approaches that reduce the negative impacts of climate, (such as rotating crops, land restoration,) However, these coping mechanisms have been severely undermined by years of conflict and additional non-climate threats leading to significant losses of agriculture production and land. The inapplicability of these coping mechanisms will be likely exacerbated in the years to come due to the predicted CC risk in Afghanistan. The latest National Risk and Vulnerability Assessment (2009) indicates some unsustainable coping strategies such as sale of production goods and livestock to survive; loans and mortgaging, displacement, and in some extremes cases, sale of children, shifting to opium producing poppy (a drought resistant crop) as a source of income due to failing crops and water scarcity. Shifting to opium-producing poppy leads to organized crime and insurgent networks, increasing

insecurity and further destabilizing the country. Given this, the government of Afghanistan supported by different donors has implemented programs and actions to stop out such a phenomenon (but there is growing understanding that more legitimate and resilient coping mechanisms have to be put in place in order to replace illicit activities).

At national level, the authorities and communities in Afghanistan are faced with a lack of capacity, tools and information to appropriately address climate change risk and build resilience of water and other related sectors in relation to climate change.. For example, climatic data and information for Afghanistan is scanty, sparse and not well documented. The current lack of data and weak data management systems presents a barrier to adequately monitoring and forecasting climate changes at the national and sub-national level, which is an important element to developing appropriate responses as the climate evolves.

In addition, the current policy framework for Afghanistan's economic development lacks the overall mechanism and tools for its climate proofing, particularly regarding the integration of climate change risks into IWRM, land use planning and management, drought preparedness and risk reduction plans. Overall challenges for the government in the management of climate risks include lack of tools and information for climate-proofing development, which if not addressed will increase the vulnerability of the country.

Afghanistan also lacks capacities and expertise to enable identifying vulnerabilities and adaptation measures to promote the use of alternative approaches and technologies to ensure IWRM. Building a reliable CC information system will help developing and adjusting current policies to integrate CC threats, and to mainstream CC issues in different sectors (i.e. health, infrastructure, economy).

In summary, Afghanistan is facing climate change threats caused by increased frequency and intensity of droughts, increased frequency of floods and greater temperature amplitudes and extreme weather events that will exacerbate the degradation of Afghanistan's ecosystems, in particular land and water resources, leading to the increase of vulnerability of local communities. The current knowledge and adaptive capacity as well as policy framework in Afghanistan for adaptation to climate change is not sufficient to cope with climate change. This would continue to be the case unless additional support is given to the country to increase resilience and enhance capacity to climate change to – water –related risks in Afghanistan. Therefore a project, subject of LDCF resources is being proposed to address the vulnerabilities, root causes of vulnerability and barriers to implementation.

Proposed project intervention and justification

The proposed approach is to address climate change to water related threats and risks in Afghanistan by implementing a set of interventions that will strengthen the institutional capacity to monitor and predict future changes in order to support decision making to address climate change while helping local populations to adapt through the promotion of sustainable natural resources management practices and resilient livelihoods. A programmatic approach to address a package of NAPA priorities will be supplemented by an ecosystem management approach to be applied as the framework for addressing the root causes of vulnerability in Afghanistan. Activities to be undertaken under this project are designed to deliver poverty reduction benefits by addressing root causes of vulnerability and by providing resilient productive pathways.

More specifically, the project interventions consist of the following: (i) Increasing capacity and knowledge base on assessment, monitoring and forecasting of CC –to – water related risks in Afghanistan, (ii) Integrating CC risks into relevant policies, plans and programmes (at national and sub-national levels); (iii) Reduction of CC vulnerability in the selected project sites through use of appropriate technologies for improved water use efficiency and increased environmental resilience ; (iv) Increasing knowledge of good practices on increasing resilience to climate change –to – water related risks.

Pilot demonstration will be undertaken in Northern regions of Afghanistan expected climate changes are likely to exacerbate its underlying vulnerability and to have potentially irreversible impacts on communities and ecosystems. The region is also chosen due to its representative potential of the country's overall conditions, relatively good security situation allowing for the demonstration and replication of adaptation options in other

areas, and leveraging country-wide adaptation strategies. Reducing the vulnerability of rural livelihoods in drought affected communities of Northern Afghanistan is crucial for the Government to ensure stability, peace and long-term development. Project sites (provinces within Northern Afghanistan) where adaptation measures will be piloted and tested will be further selected during the PPG phase against some criteria and assessments to be made by relevant stakeholders.

Interventions to be undertaken under this proposal are divided along four interlinked components as follows:

Component 1: Climate Risk Assessment, Forecasting and Information. The objective of this component is to increase the capacity and knowledge base for assessment, monitoring and forecasting of climate change to-water related risks. More specifically, activities under this component will aim at building national-level scientific and technical capacity to assess, monitor and interpret water related climate change impacts and associated risk in Afghanistan, including through the production of vulnerability maps for planning purposes, risk maps for land use planning, as well as future climate scenarios to feed in the water planning process.. Protocols and institutional mechanisms for the dissemination of climate-related information, including Early Warning Systems for floods, droughts and extreme weather temperatures, will be developed and tested. Technical capacity of water-related institutions at national and sub-national level to undertake: water-related assessments (groundwater monitoring, water quality monitoring, and irrigation systems rehabilitation) will also be strengthened under this component.

Component 2: CC adaptation planning and response strategies. The objective of the activities under this component is to integrate climate change risks into key national and sub-national policies, plans and programmes that govern water resources management and mobilization, land use planning, agricultural policies and other water related/affected sectors. Based on the information obtained through the assessments and studies to be undertaken under component 1 as well as the available and relevant knowledge, activities under component 2 will aim at developing tools and methodology for identification and evaluation of climate change adaptation strategies, such as targeted technical policy briefs for decision-makers. This project will benefit from a range of innovative climate-based analytical tools, methodologies, and software such as GIS climate change models, time-series analysis for multi-variables (i.e. precipitation, temperature, cloud cover, etc.) and *ad-hoc* mapping software for Afghanistan.⁵ Based on knowledge acquired, the project will also aim at achieving the revision of existing sectoral strategies (agriculture, disaster and conflict prevention) in order to make them resilient to predicted climate change and to promote sustainable adaptation options. The overall climate risk mainstreaming exercise will be supported by efforts to set up and strengthen an inter-ministerial coordination mechanism for climate change risk assessment and integration. This component will be implemented at national and provincial level with key sectoral ministries.

Component 3: Practices for water resource and watershed management piloted and tested in selected project sites. The objective of the activities under this component is to reduce climate change vulnerability at local level through pilot demonstration and interventions in the project site (to be selected during the PPG phase) as a means for demonstrating the validity of adaptation options and further informing national policy making. This will be achieved through the introduction and testing of innovative water and crop management practices adapted to prolonged droughts and intensive floods such as: efficient water management technologies (including drip irrigation, water storage systems, water canals and their use, as well as water allocation mechanisms); water efficient agriculture practices (including drought tolerant varieties, adapted cultivation practices such as reduced or low-tillage, soil fertility management, anti-erosive measures) and integrated community watershed management systems (including community-based grazing management, terracing, planting of grass and trees, improvement of water canals). In addition, the early warning system designed through component 1 will be tested at local level. Water management associations consisting of community members will be set up and strengthened to facilitate long term water management in the face of climate change. This component will be developed and implemented in conjunction with ongoing projects and activities in the selected region so as to generate added development benefits and to create synergies and economies of scale. This component will be implemented at local level with specific sites to be selected during the PPG implementation phase based on a comprehensive diagnostic of vulnerability and ongoing activities in the region in order to ensure cost-effectiveness of the interventions. .

⁵ *Ad-hoc* mapping software refers to high resolution satellite imagery of Afghanistan coupled with latest Global Climate Models (GCMs) and Local Climate Models (LCMs).

Component 4: Adaptive learning and dissemination of lessons learned and best practices. The objective of the activities under this component is to increase knowledge of good practices to reduce vulnerability of water related/affected sectors to climate change. More specifically, activities under this component will focus on (i) project lessons captured in, and disseminated through a project specific web site to be created as well as the Global Adaptation Network (GAN), (ii) project knowledge shared with other countries in the region facing similar climate-induced drought and flooding hazards to agricultural production, (iii) project knowledge incorporated into national flood and drought prevention and public service training programmes in Afghanistan, and (iv) raised awareness, using appropriate means, on CC, vulnerability and adaptation for local communities and key national policymakers. (v) Resources mobilized for replication of the project lessons and demonstrations in other locations of Afghanistan. This component will be implemented at national level. This component will establish a donor and partner coordination mechanism for water-climate issues in Afghanistan so to better integrate ongoing and planned programs with this project activities in Afghanistan. This component will also– use project outcomes for informing donor policies as well, and also create a link to the interministerial forum so that lessons learned from the project interventions can be relayed back to the national-level decision-making.

Expected Adaptation Benefits.

By addressing priorities identified in the Afghanistan’s NAPA, as well as root causes of climate change vulnerability, through the implementation of the proposed components the proposed project will contribute to achieve a set of adaptation benefits as follows:

- Increased capacity for climate change assessment, analysis and monitoring and improved science-based decisionmaking;
- Increased capacity for early warning and stronger risk management systems at the national and sub-national levels
- Better access to and increased local, regional and national capacity for sustainable use and management of natural resources as a key adaptation strategy for climate change;
- Reduced livelihoods’ losses from extreme climatic events
- Resilient agricultural productivity for local communities and lower exposure to climate shocks
- Policy and budgetary adjustments to address climate risks so that successful pilots are upscaled and catalyzed throughout Afghanistan;
- Adaptation learning generated from the pilot interventions will be used to guide mainstreaming of adaptation in national fiscal, regulatory and development policy, in order to support adaptive practices on a wider scale.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL/REGIONAL PRIORITIES/PLANS:

Environment is both a sector and cross-cutting theme in the Afghanistan National Development Strategy ANDS, which also incorporates and addresses the MDG 7 for environmental sustainability. A national strategy for environment was developed as part of the ANDS, as well as institutional strategies for key environmental institutions. These strategies clearly demonstrate the cross-sectoral perspective of environmental management, and propose specific activities and considerations to meet national targets for MDGs.

Importantly, one of the top ANDS priorities is water management and agriculture, in respect of which natural resource management is regarded as the foundation. A new National Agriculture Development Framework (NADF) has been developed by the Ministry of Agriculture, Irrigation and Livestock MAIL in response to the priority given to the agriculture sector in the ANDS, and at the Paris donor conference that followed the release of the ANDS in July 2008. The framework is based on an agriculture triangle, consisting of natural resource management at the base, followed by agricultural production and productivity, with economic regeneration at the apex. Natural resource management has accordingly been recognized as a key country priority in the implementation of the ANDS. Section V of the ANDS addresses water availability and efficiency which remains an issue for Afghanistan. The LDCF project will specifically address eight of the 17 programmes included within the plan: increase water availability and use efficiency, improved water allocation, rehabilitate irrigation

infrastructure and water storage facilities, establish and strengthen institutions, build capacities, empower communities, improve systems of coordination, and establish emergency measures.

In addition to the water and agriculture sectors, Afghanistan has also been focusing in strengthening environmental management in the country. NEPA was established in 2005 as Afghanistan's policy-making institution, tasked with regulation, coordination, monitoring and enforcement for the Afghanistan's environmental issues. The LDCF project will significantly support the recognized needs by MAIL and NEPA to build institutional capacity for addressing climate change risks into national development agenda of the country.

Finally, the increased recognition of the important role of environment and natural resources in achieving sustainable development and poverty reduction in Afghanistan is also evident in the 2010-2013 United Nations Development Assistance Framework to Afghanistan (One UN Programme is currently under implementation in Afghanistan). This project will establish a donor and partner coordination mechanism, to be revived under this project, specifically for the water-climate issues in Afghanistan so to better integrate ongoing and planned programs with this project activity in Afghanistan.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH LDCF ELIGIBILITY CRITERIA AND PRIORITIES:

The Government of Afghanistan has recently completed its NAPA, in conformity with the guidelines prepared by the Least Developed Countries Groups of Experts (LEG). Afghanistan ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and is currently included in the list of Least Developed Countries (LDCs), as prepared and regularly updated by the United Nations. The country is therefore eligible for funding within the LDCF Adaptation window. In addition, this proposal is consistent with the following eligibility criteria:

- **Country ownership:** Afghanistan has just completed and submitted its NAPA to the UNFCCC. This proposal originated from the NAPA process and was prepared with the full involvement of relevant stakeholders. All provinces were represented in the NAPA validation process. The sectors and the area being targeted by this project are identified as priorities and most vulnerable one in the NAPA. The project is well aligned with the country's main development policy, which contains, among other priorities, the sustainable management of water resources and the reduction of poverty among rural communities.
- **Program and policy conformity:** The proposed project constitutes a response to urgent and immediate adaptation needs (program conformity) for water management in Afghanistan. It is designed to address the additional costs of priority adaptation measures identified in the NAPA (programme design), and it will also create the necessary capacity to continue to do so after project completion (sustainability). The ratio of LDCF funds to co-financing is consistent with the sliding scale.
- **Financing:** The approach taken by this project has sought to build on linkages with government policies and programmes, which is expected to generate multiplied benefits nationally. Cost-effectiveness criteria have been applied as criteria for the selection of NAPA priorities to be implemented through this project. Cost effectiveness will be also applied as criteria for the selection of adaptation measures in the project sites. Financial contributions to the project strike a good balance between technical assistance, and the use of LDCF and other funds.
- **Institutional coordination and support:** The project is designed to complement other ongoing and planned projects and programmes without duplicating them. UNEP will play a pivotal role in project support by co-financing the project, but also by assessing the best national implementation modality, supervising implementation and mitigating project risks. Project implementation will be coordinated through the UN.
- **Monitoring and evaluation:** The project will be monitored in line with the standard UNEP/GEF monitoring and evaluation procedures. Adaptive management will be a key component of the management approach.

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

The project will build on plans and policies developed by the Government of Afghanistan in relevant sectors, as well as on synergies with ongoing and planned projects and programs (Table 1). For example, the project will

build on, initiatives aiming to promote sustainable use of water resources such as FAO Emergency Irrigation Project which aims at increasing of agricultural productivity and farm income and increase food security through introduction of efficient irrigation techniques. Linkages will be established with projects implemented by various partners in the country, including climate proofing of horticulture activities funded by DfID or EC funded project activities on River Basin managements. The project will also benefit from initiatives aiming to promote sustainable livelihoods and food security, such as FAO funded project in support of sustainable livelihood in Afghanistan which aims at improved food security and sustainable livelihoods development through the promotion of participatory forest management practices.

A rapid assessment made during the PIF formulation process shows that the majority of ongoing and relevant projects in Afghanistan by other institutions do not fully (and directly) consider climate change impacts and consequences in their planned activities. The proposed LDCF project will build upon them and play a role of coordination among these interventions to ensure that climate change is considered and appropriately included in these projects' activities.

The Project Preparation Phase will provide a more detailed assessment of baseline activities, as well as an inventory of technologies and best practices already under implementation in the country and potential synergies. A summary of the ongoing relevant efforts in the country, with which this project will be closely coordinated, benefit from and seek co-financing is given as follows:

Table 1: Ongoing relevant projects in Afghanistan

Project Title	Objective / focus	Resp. Agency	Project Duration	Budget (2010) (mln USD)
Capacity Building and Institutional Development Programme for Environmental Management in Afghanistan.	Improved environmental governance (institutions, technical capacity, management tools) and environmental restoration projects on a pilot scale;	UNEP	2008-2011	8
Greening Afghanistan Initiative-Phase II	Mobilize funds and technical expertise for preparing, implementing, monitoring and reporting on multi-sector activities, aiming at "Greening Afghanistan	UNEP, UNOPS, FAO, WFP	2010-2013	To be advised (tba)
Emergency Irrigation Rehabilitation Project.	Provide Afghan farmers with improved, reliable and equitable irrigation water deliveries to increase agricultural productivity and farm income, improve food security and livelihoods and reduce vulnerability to drought	FAO	2004-2012	4.7
Initiating Participatory Forestry in Support of Sustainable Livelihoods in Afghanistan.	Contribute to the attainment of the Millennium Development Goal (MDG) in particular to contribute to improved food security and sustainable livelihoods development through the promotion of participatory forest management practices	FAO	2008-2012	1

Strengthened Approach for the Integration of Sustainable Environmental Management into the ANDS/PRSP.	Environmental issues mainstreamed in national and sub-national policy, planning and investment frameworks; Local management of environmental resources improved and services delivery enhanced.	UNEP, UNDP	2008-2011	1
Climate Proofing of horticulture in Afghanistan	Develop an improved range of horticulture practices and products to adapt to CC threat in Afghanistan.	DfID	2008-2012	tba
River Basin Management	Develop an integrated river based management for sustainable water use	EC	2008-2012	tba
PEACE Project	Reducing the social and economic risks associated with livestock production in Afghanistan through the provision of more timely information on emerging forage conditions, and by increasing the number of cash generating livestock enterprises for pastoralists.	USAID	2006-2012	tba
AgroMet	Support to agro-metrological service to help the increase of agricultural production	USAID	2006-2012	tba
Emergency Irrigation Rehabilitation	Assist the Government of Afghanistan in restoring irrigated agricultural production in its rural areas, through improved and reliable water supply to rehabilitated traditional irrigation schemes. Increased agricultural production and rehabilitation of irrigations schemes are the key outcomes	World Bank	2008-2012	28

E. DESCRIBE ADDITIONAL COST REASONING:

Without the proposed project interventions, the impacts of intensified droughts and floods, associated with other factors such as poverty, reliance on agriculture, high population density, unsustainable use of natural resources as well as lack in the institutions capacities would significantly undermine Afghanistan economic development achievement of MDGs and lead to human and environmental disasters (and associated conflicts).

LDCF financing will be restricted to activities that expand on, and complement, existing baseline programs and projects. The additional interventions required to increase the resilience and enhance adaptive capacity to climate change – to – water related risks will be undertaken through a combination of four interrelated components: science, policy, IWRM and knowledge. The additional cost reasoning is described in more details as follows:

Component 1: Climate Risk Assessment, Forecasting and Information:

Baseline: Basic regional CC information based on regional models has been compiled in the NAPA preparation process for Afghanistan. However, this information is very limited and largely qualitative. CC threats have not yet been comprehensively and quantitatively assessed and analyzed and applied to the water sector as well as other water related sectors in Afghanistan. CC vulnerability information is highly scattered across different public and private sector entities, government departments and development agencies. This information has yet to be comprehensively consolidated and delivered to national stakeholders in a user-friendly and policy-relevant manner. To date, a comprehensive assessment of CC impacts to water resources has not been undertaken and this is mainly because of the lack of data. Historic climatic data has recently been accessed, albeit with a long gap that accompanies the period of war and conflict in Afghanistan. Gaps in baseline data relating to the current

climate and climate change in Afghanistan are significant. Researchers are currently correcting errors in the data, following which modeling will be realized. Currently, the hydro metrological data is being recorded by metrological stations which are under the responsibility of the Ministry of Agriculture, Irrigation and Livestock (MAIL). The majority of the stations are obsolete and old and do record the temperature snowfall and rainfall only four out of 15 stations being complete automatic stations (that can report up to 20 weather parameters). Reliability, quality and documentation of data remain an issue. This has made the level of data and information related to climate change very poor and weak leading to an inability to systematically monitor and predict climate change risk to water and other sectors in Afghanistan. Although some support is provided to the MAIL from USAID (see section D for more information) including through satellite weather monitoring for livestock and agricultural production, it does not factor climate change risk. Training of staff and provision of the additional equipment are urgent to strengthen the MAIL's capacity to collect and analyze data and therefore monitor and predict climate change risk.

Adaptation alternative: In the alternative, LDCF resources will be allocated towards a functional system for CC hazards and vulnerability assessment and information for Afghanistan which will include : (i) an upgrade and autoimmunization of existing metrological stations to accurately record the weather parameters based on a needs assessment to generate data throughout the country; (ii) training of staff capable to asses, monitor and forecast climate change – to - water related risks and translate those impacts into vulnerability maps and propose and evaluate adaptation measures Through this project an Early Warning System including for the collection, analysis and processing of data and delivering information on climate change risks would be delivered at national and district level. The information compiled will serve as basis for the technical and policy briefs for policy makers on climate change impacts on water sector and other water related/ affected sectors (agriculture, food and social aspects etc) which will facilitate the process of climate proofing of water sector such as developing water-use planning in flood- and drought-prone areas based on CC-risk scenarios etc. Without this project the country will continue to rely on ad hoc disaster relief efforts rather than preventing serious losses before they occur. Over the long-term, climate-to-water risks will continue to be addressed into national planning and policy.

Component 2: Climate .change adaptation planning and response strategies.

Baseline: In Afghanistan policies that govern water resources that take into account cliamet change do not exist. Neither,policies for disaster risk reduction and flood and drought prevention in Afghanistan do not presently consider mid- and long-term CC risks. Capacity gaps at the national and provincial level to access, understand, interpret and apply CC risk information for IWRM planning purposes are evident. At the district and village level, farmer cooperatives and water committees lack the financial resources and knowledge to effectively address robust and resilient decision making in the face of CC hazards and risk. Water and agriculture planners as well as disaster management professionals are presently not able to efficiently translate CC risk projections into planning and investment decisions that translate into long-term improved food and income security for local communities. Furthermore there are no institutional, legal and financial provisions to assist and train communities to cope and adapt against climate hazards and risks. The current policy framework for Afghanistan's economic development lacks the overall mechanism and tools for its climate proofing, particularly regarding the integration of climate change risks into IWRM, land use planning and management, drought preparedness and risk reduction plans. There is no mechanism in place for inter-ministerial coordination on climate risk integration. Without the project the ability to address climate change impacts and risks on water and water related sectors would be very weak and the gap between science and policy will widen. This will bring in turn an uncoordinated planning and development of water sector and other sectors affected by water without due attention given to climate vulnerabilities in the country.

Adaptation alternative: Alternatively, this component the project will help with bridging the climate change science and policy. It will help with the integration of main climate hazards and risk into relevant sectoral polices including through the revision and amending of existing polices and legislation including budget allocation for implementation of specific adaptation options. LDCF funds will be used to will build the capacity of sectoral planners in NEPA, MAIL, MEW, Department of Meteorology of the MAIL, and selected Ministries to undertaking the necessary reforms for climate proofing of the water sector and other sectors related to water.

This project will benefit from a range of innovative climate-based analytical tools, methodologies, software have been developed and proven such as WeADAPT⁶ developed by SEI, PRECIS⁷ developed by UK; Met Office, APF⁸ (Adaptation Policy Framework) developed by UNDP, NAPA⁹ Platform developed by UNITAR, ORCHID¹⁰ developed by DFID, CRISTAL¹¹ developed by IISD etc. Capacity building activities will span from national to provincial and local levels, involving agricultural officers, water committees, extension workers, and farmer cooperatives. CC risk projections will be integrated into a comprehensive national information system for flooding and drought-related hazards and vulnerabilities, and national IWRM.

Component 3: Practices for water resources and watershed management piloted and tested

Baseline: In collaboration with international donors and development agencies, the Afghanistan Government has been implementing various water management practices such as the rehabilitation of irrigation systems to reduce the vulnerability of farmers to extreme weather events and, thereby, improve food security. However, existing water management practices do not consider CC related changes in river flows, changing rainfall intensities and prolonged dry spells etc. Water management practices in Afghanistan (management, planning, irrigation, watershed management) have not yet been adapted to account for CC threats. There is a general lack of awareness about community-based approaches to address CC risks. There are no agricultural practices deployed for farmers living in drought-prone areas to cope with climate changes in place. There exist water management projects under implementation which do not address climate risk. They include: (i) Capacity Building and Institutional Development Programme for Environmental Management in Afghanistan (UNEP), (ii) Emergency Irrigation Rehabilitation Project (FAO), (iii) River Basin Management (EC), (iv) AgroMet (USAID), (v) Emergency Irrigation Rehabilitation (World Bank), (vi) Initiating Participatory Forestry in Support of Sustainable Livelihoods in Afghanistan (FAO), (vii) Climate proofing of horticulture in Afghanistan (DfID), (viii) Strengthened Approach for the Integration of Sustainable Environmental Management into the ANDS/PRSP (UNEP/UNDP), and the (ix) PEACE project (USAID). Ensuring synergic linkages between them to avoid duplication, including climate factor into them and promoting lesson sharing must be sought. A framework of best practices needs to be developed and adopted as a comprehensive and ecologically sensitive resilience approach to CC risk. Without the project degradation and unsustainable use of the natural resources will continue as no approaches to cope exist so far. The development assistance will continue to lack the climate factor. The country's vulnerability will be increased in association with deepening of the poverty of the most vulnerable communities.

Adaptation alternative: In close coordination with NEPA, MAIL and MEW, and through a highly participative approach, the project will pilot interventions that would improve resilience to CC for water management in the project selected site which will be identified during the PPG phase. More specifically the project will pilot innovative and diversified efficient water management technologies such as: drip irrigation, water storage systems, water canals and their use; water efficient agriculture practices such as :drought tolerant varieties, adapted cultivation practices and integrated community watershed management systems such as grazing management, terracing, planting of grass and trees, improvement of water canals. The concrete interventions including their cost estimate and specific site selection will be agreed by stakeholders during the PPG implementation phase. The interventions will be designed and built to withstand to the expected impacts of climate change so as to be adaptive compared to the baseline interventions. For example water storage systems and water canals will be properly designed and embedded to resist to episodes of greater temperature amplitudes, droughts and flooding. Or, the crops and tree species to be planted will be selected to tolerate more

⁶ WeADAPT contain a software tool that enables the user to access and use local climate data for assessing climate risks and enables non-expert users to explore the range of plausible climate futures to inform robust adaptation decisions.

⁷ PRECIS can provide detailed climate information (at 25 or 50 km resolution) for any region of the world including on the climate of the recent past (1957-2004)

⁸ APF is a guiding tool to assist countries in mainstreaming climate change into national policy and planning.

⁹ NAPA platform is a guiding tool to assist LDC in preparing the NAPAs.

¹⁰ ORCHID is a systematic climate risk management methodology which assesses the relevance of climate change and disaster risks to an organisation's portfolio of development projects.

¹¹ CRiSTAL is a screening process designed to help project designers and managers integrate risk reduction and climate change adaptation into community-level projects.

intense and frequent climate hazards. Early Warning Systems developed through Component 1 interventions will be tested in this Component. Community members will be heavily involved in the implementation of the interventions of this component. In addition, water management associations consisting of community members will be set up and strengthened to facilitate water management in long term in the face of climate change. The LDCF funds will also be used to train the communities on how to maintain the adaptation infrastructure piloted by this project. When the relevant national plans would be revised the associations will be trained to implement them and apply the set standards by them. The project will also work on raising awareness of communities dealing with reforestation activities on the benefits of reforestation and sustainable harvesting including carbon benefits. This will ensure community ownership of the project interventions. Starting from a piloting in selected sites, the project will generate a series of lessons learned and best practices, the latter of which can be scaled up through adoption and adaptation by NEPA, MAIL and MEW at local and national level for IWRM and policy development. In the absence of this project's interventions, degradation of natural resources in particular water resources will continue leading to food insecurity, extreme poverty and conflicts.

Component 4: Adaptation Learning

Baseline: There is very little knowledge about CC risks in Afghanistan which is not disseminated and shared so the baseline is very weak. This is because of the lack of information generation and systems to disseminate knowledge gathered from other experiences. Adaptation learning is also a fairly new area of expertise where there is not much in terms of good practices to be shared. This significant limitation regarding knowledge management is restricting the capacity of Government (provincial and district authorities) and sector planners to develop appropriate adaptation plans, and scale up successful activities.

Adaptation alternative: The project will develop local and national knowledge on adaptation. Project lessons will be captured in, and disseminated through a project specific web site to be developed and the Global Adaptation Network (GAN). In this manner, project knowledge will be shared with other regions and countries facing similar CC threats for water management. Project-related information will be made accessible to CC adaptation practitioners through all available web-based interface tools, on-line dialogues, and printed material. Through this project resource mobilization will be sought for replication and up-scaling the project lessons and demonstrations in other locations of Afghanistan.

Finally, there is a generally low level of capacity in the country and consequently, very little baseline on which to build with a few bilateral and multilateral donors in the country (see section D). Without this project, the country is unlikely to develop the basic level of adaptive capacity at the national and community level that is already required to adapt to the visible impacts of climate change. This situation would be aggravated by increased predicted impacts.

In order to fully develop the full size project a Project Preparatory Phase Grant (PPG) will be requested to last not more than 12 months. During the PPG phase among other activities comprehensive assessments of ongoing activities in Afghanistan and in the project site will be undertaken so as to achieve synergies.

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

The project strategy is based on the following key assumptions in proposing the LDCF intervention:

- Baseline conditions in the selected areas can be extrapolated with high confidence level to other similar Afghanistan areas, and lessons learnt can be successfully disseminated;
- Increased awareness and capacity will lead to a change in behaviour with respect to climate risk mainstreaming into relevant ‘governance frameworks’, particularly as it relates to water;
- Climate change adaptation measures will gradually become a national priority for different sectors (and in particular the water sector), as knowledge and information is made available.

The project presents risks potentially preventing the accomplishment of the project objectives, in relation to the Afghanistan’s socio-economic and environmental scenarios. A risk assessment based on the below matrix was applied to determine the risks’ impact potentially. Mitigation measures have been also identified in relation to such risks.

BOX 1. RISK ASSESSMENT GUIDING MATRIX						
		Impact				
		CRITICAL	HIGH	MEDIUM	LOW	NEGLIGIBLE
Likelihood	CERTAIN / IMMINENT	Critical	Critical	High	Medium	Low
	VERY LIKELY	Critical	High	High	Medium	Low
	LIKELY	High	High	Medium	Low	Negligible
	MODERATELY LIKELY	Medium	Medium	Low	Low	Negligible
	UNLIKELY	Low	Low	Negligible	Negligible	Considered to pose no determinable risk

TABLE I. PROJECT RISKS ASSESSMENT AND MITIGATION MEASURES

IDENTIFIED RISKS	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
Political resistance to adjust 'governance frameworks' (i.e. policies, plans, strategies, programmes etc.)	HIGH	UNLIKELY	LOW	Stakeholders, in particular decision-makers, the media and advocacy groups will be sensitised by the project. One of the project's first activities will be the full development of the 'national stakeholder involvement plan'. In addition the project will support the establishment of a 'National Climate Change Forum'. Policy matters are expected to be discussed and climate risk information to be widely shared. All of these are measures to counteract political resistance.
The integration of CC risks into water use planning and natural resource strategies will face difficulties due to limited commitment/ understanding of CC issues within relevant stakeholders at national and local levels.	HIGH	MODERATELY UNLIKELY	MEDIUM	This risk will be mitigated through dedicated capacity development outputs and strong linkages to the mandate of the NCCP. Water management committees will also be critical stakeholders at all levels, and will serve to raise practical levels of CC awareness. Strong linkages of the proposed project objective with ongoing capacity building programmes of UNEP (as well as a range of baseline activities implemented by the Afghanistan's government) will minimize this risk, and securing of the necessary co-financing for this project will considerably strengthen the profile of this project.
Lack of coordination between the national policy level and provincial implementation may impact on the project timeline.	HIGH	UNLIKELY	LOW	In order to mitigate against this risk, the project will engage government officials at high levels to formalize a multi-sector Project Board responsible to oversee the project and its deliverables To ensure that project timelines are met, project activities will also establish structural linkages to ongoing government operations in NEPA and MAIL.
Limited technical capacity to implement the project, particularly at the demonstration sites.	HIGH	VERY LIKELY	MEDIUM	The project implementation will be supported by UNEP office in Afghanistan. The project will opt for a regional project office and a CTA posit to provide technical and managerial backstop to the Project Manger. This risk will also be facilitated through in the job training of the staff involved.
Globally-induced recession in the years to follow will impact	LOW	VERY LIKELY	MEDIUM	One of the project's key assumptions is that climate change adaptation

IDENTIFIED RISKS	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
public expenditure negatively affecting the expected allocation for adaptation.				measures will gradually become a national priority as knowledge and information is made available. Growing interest in adaptation interventions in Afghanistan is therefore expected to survive the global crisis. Furthermore, the project has been very positively appraised during the PIF phase and has awakened much interest by top officials in NEPA and MAIL.
Cultural barriers in accepting new techniques can be expected.	MEDIUM	LIKELY	MEDIUM	One of the project's first activities is the full development of the 'local stakeholder involvement plan'. In addition, the project will enter into strategic partnerships at the local level, not just with local government, but in particular with community based organisations. Understanding the local reality and having the project intervention being facilitated by organisations already on the ground will be crucial to overcome cultural barriers. The project's communication and outreach strategy will take this into account. Many of the expected communication products will be locally-adapted, e.g. the planned short-film in Dari on climate risk, vulnerability and sound/climate-proof management of water resources in rural areas.
Water conflicts may be exacerbated by drought, if such event happens during project implementation.	LOW	LIKELY	LOW	One of the project's activities under outcome 2 is the development of a common capacity building and conflict management approach to work with local stakeholders. Furthermore, many of the activities designed under that outcome will have a direct and immediate effect on water availability at site level, which is expected to mitigate the negative effects of drought.
The security situation in Afghanistan could represent a limiting factor for the project's field component.	MEDIUM	LIKELY	MEDIUM	This risk will be mitigated by choosing stable provinces that have experienced calm and good governance. Furthermore, project sites will also be selected in relation to the good working relationships between UNEP and the local administration.

G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The NAPA process identified and considered various alternatives for adaptation in the key sectors of Afghanistan. In this process, cost-benefits ratio was used as one of the criteria to select priority actions. Hence, the actions proposed are not only the most urgent and most pressing, they are also the most cost-effective. Furthermore, during the PPG implementation phase, the proposed outputs under this PIF will be elaborated and their cost-effectiveness thoroughly assessed. When the final proposal is submitted for CEO Endorsement, it will contain all the necessary justifications for cost-effectiveness.

The approach taken for the development of this project has sought to build on linkages with government policies and programmes, which is expected to generate multiplied benefits nationally. In addition, the region chosen for the project present the highest potential level of benefits from the interventions, both in terms of quantity of people reached and in terms of expected qualitative improvements in adaptive capacity and development.

The proposed project is based on the promotion and dissemination of community-based, low-cost CC adaptation options in the water and agricultural sector, focusing on water resilient farming techniques and freshwater conservation. As it is closely aligned to a range of baseline rural development initiatives on the ground, it will aim at a strategy of alignment, demonstration and replication rather than at an extensive technology-push. In line with country needs, the CC adaptation measures proposed through this project (which will be outlined in greater detail in the Project Document) focus on “soft” measures that do not disrupt current rural development frameworks.

Furthermore, throughout the NAPA process, the selection criteria used to identify and prioritize the list of activities in the sectors of agriculture, forestry, water and water resources, included: loss of lives and livelihood security; human health; food security and agriculture; availability of potable water for using and drinking; infrastructure development; cultural, historical and natural heritage; sustainable use and conservation of biodiversity; land use and forest protection; other environmental amenities; and administrative and personnel capacity building. As such, the investments selected for the LDCF are not only the most urgent but also expected to provide mutual benefits. In line with economic rationalization, given current knowledge of CC and socio-economic conditions, the proposed interventions represent the least-cost options for adaptation as more expensive alternatives are postponed.

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:

UNEP's work on climate change adaptation focuses on three main areas: (i) Science and Assessments, (ii) Knowledge and Policy Support, and (iii) Building the Resilience of Ecosystems for Adaptation. UNEP's credibility as a **capacity builder, ecosystem manager and knowledge mobilizer** is built through the implementation of around 80 projects on adaptation at global, regional and national levels, spread worldwide. UNEP has shifted the focus of its adaptation work on Ecosystem-Based Adaptation (EBA) which is known as EBA Flagship Programme of UNEP. This is an approach to work with nature to build resilience of vulnerable ecosystems and use ecosystem services for adaptation and disaster risk reduction. The activities proposed under this proposed project cut across above areas of UNEP's work on climate change adaptation.

The project is consistent with UNEP's comparative advantage as identified through the GEF Council paper on the subject (C.31/5), which delineates UNEP's comparative advantage in providing the GEF with a range of relevant experiences, proof of concept, testing of ideas, and the best available science and knowledge upon which it can base its investments as well GEF Council paper (C.28/18), which delineates UNEP's comparative advantage areas including: (i) strengthening meteorological and climate early warning systems (i.e. addressed through component 1 of this project, which seeks to strengthen the capacity to analyze and predict climate change impacts) and (ii) developing and using climate information to effect changes in relevant sectoral policies based on climate science. This is addressed through components 2 and 3 and 4, which seek provisions of methods and tools to support decision making, addressing barriers to implementation, and testing and demonstrating innovative solutions, as well as building climate resilience through ecosystem based adaptation approach.

The project contributes to the achievement of the three following outcomes of the UNEP's Program of Work for 2010-2011 for Climate Change Adaptation: (a) the generation and mobilization of knowledge for adaptation including through impact and vulnerability assessment, the Global Adaptation Network and a World Research Programme on Impacts, Vulnerability and Adaptation; (b) support for capacity building, policy setting and planning; and (c) support for ecosystem-based adaptation.

The project is also consistent with UNEP's work in the water sector, built on the UNEP Water Policy and Strategy as well as the achievements from the EMINWA (Environmentally-sound Management of Inland Waters) program and other programs falling under the IWRM. Within this focal area, UNEP draws on its expertise in assessment and monitoring, generation and application of knowledge and approaches for the better management of water systems. As UNEP continues to move towards implementing its water mandates as defined by its Governing Council, its activities in this focal area take as reference ecosystem based approaches. This is the approach already being used by many other UNEP's LDCF projects addressing water resources in the following countries: Djibouti, Comoros, the Gambia, Tanzania, Cambodia as well as non-LDCF ones such as Nile River Basin project, lake Fagubine (Mali) project, Sudan IWRM project, GEF SIDS project etc.

The project will benefit the UNEP presence in Afghanistan. The UNEP office in Afghanistan enjoys strong, productive working relationships with the project partners at local and national level in the country. The UNEP office is also implementing community based natural resource management interventions in different Afghan provinces. It has also provided support to the Afghan delegation on its preparation for CoP15. UNEP has been helping the Government of Afghanistan to deliver technical and support services to the poor more effectively. UNEP has provided technical and administrative support to Afghanistan to elaborate its Initial National Communication (INC), the National Adaptation Programme of Action (NAPA), and the National Capacity Self Assessment for Global Environment Management (NCSA) through a synergic approach.

UNEP is working together with national partners to develop the capacity of local government and communities to develop and implement sustainable natural resource management plans in Afghanistan. In the area of disaster preparedness and management, UNEP is currently supporting the elaboration of a regional national disaster management strategy. UNEP has an ongoing environment portfolio managed by a dedicated unit in partnership with national partners and other UN agencies. UNEP's strong relationship with Government's counterpart

provides a unique position to mainstream key issues, such as CC and water management, in national policies, strategies and plans. UNEP's current work to strengthen local governance and service delivery offer other opportunities to promote key issues at provincial and district levels. UNEP will also work closely with international partners in country in the course of project implementation. These partnerships should be clearly defined during the PPG and detailed in the project document.

The Government of Afghanistan has defined sustainable livelihoods as a top priority in ADNS. UNEP has been assisting the country to achieve this goal under the United Nations Development Assistance Framework (UNDAF). The proposed project is aligned with UNEP's comparative advantage, as articulated in the GEF Council Paper C.31.5 "Comparative Advantages of GEF Agencies", in the area of capacity building, providing technical and policy support as well as expertise in project design and implementation. UNEP's strengths come from its mandate to manage environment for sustainable development and to strengthen national capacity for natural resource management.


The proposed project will be linked to these ongoing programmes/projects of UNEP, thereby ensuring that the results of this project will be up-scaled and mainstreamed into national development processes. UNEP is, therefore, best-positioned to implement this adaptation project.

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).

NAME	POSITION	MINISTRY	DATE (Month, day, year)
Mostapha Zaher	Director-General,	National Environmental Protection Agency, Afghanistan	02/11/2010

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 (Month, day, year)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller Director, Division for GEF Coordination UNEP		30 June 2010	Ermira FIDA Task Manager Adaptation Division for GEF Coordination UNEP	+254 20 7623113	,ermira.fida@unep.org