



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
 TYPE OF TRUST FUND: LDCF

PART I: PROJECT INFORMATION

Project Title:	Building resilience of communities living around the Northern Pistachio Belt (NPB) and Eastern Forest Complex (EFC) of Afghanistan through an EbA approach.		
Country(ies):	Afghanistan	GEF Project ID:	5664
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01236
Other Executing Partner(s):	National Environmental Protection Agency	Submission Date:	17/12/2013
		Resubmission Date:	30/01/2014
GEF Focal Area (s):	Climate Change Adaptation	Project Duration(Months)	48 Months
Name of parent programme (if applicable):		Agency Fee (US\$):	655,500

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK:

<i>Focal Area Objectives</i>	<i>Trust Fund</i>	<i>Indicative Grant Financing (\$)</i>	<i>Indicative Co-financing (\$)</i>
CCA-1	LDCF	2,783,000	2,750,000
CCA-2	LDCF	1,773,875	1,625,000
CCA-3	LDCF	2,343,125	2,625,000
Total project costs		6,900,000	7,000,000

B. INDICATIVE PROJECT FRAMEWORK

Project Objective: To build resilience and reduce the vulnerability of local communities living around the Northern Pistachio Belt (NPB) and Eastern Forest Complex (EFC) of Afghanistan to the effects of climate change by improving watershed functioning through Ecosystem-based Adaptation (EbA) approaches.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
1. Strengthening the capacity of national and local government and other stakeholders to address climate change risks through improving watershed functioning by using an EbA approach.	TA	1.1 National and local institutional and technical capacity strengthened to address climate change risks through improving watershed functioning by using an EbA approach in forest ecosystems.	1.1.1 A national committee assembled that: i) facilitates cross-cutting national dialogue on improving watershed functioning through forest restoration as an EbA approach; ii) promotes EbA integration into national strategies and policies; and iii) mobilizes funds for the implementation of large-scale EbA. 1.1.2 A stocktaking exercise undertaken and revisions of existing policies and strategies produced to identify entry points for promoting EbA and up-scaling EbA into relevant national policies and strategies including budget allocations. 1.1.3 Policy briefs and	LDCF	1,677,900	2,000,000

			<p>technical guidelines formulated for policy- and decision-makers and planners on increasing the climate-resilience – through improving watershed functioning by using an EbA approach – of local communities reliant on forest ecosystems.</p> <p>1.1.4 Revisions suggested to relevant policies and strategies to mainstream an EbA approach into watershed and forest management, climate change responses, and development planning.</p> <p>1.1.5 Training modules developed to advance capacity of local authorities, user groups and communities to plan and implement watershed management and EbA in forests in Afghanistan.</p> <p>1.1.6 Modules developed for school and university curricula on EbA in watershed and forest management in Afghanistan.</p>			
2. Community based watershed management using the restoration of degraded forest ecosystems to improve watershed functioning and generate ecosystem goods and services for increased climate-resilience of communities.	INV	2.1 Climate resilience of local communities in the Northern Pistaccio Belt (NPB) and Eastern Forest Complex (EFC) increased through restoration of degraded forests using an EbA approach.	<p>2.1.1 Vulnerability and impact assessments (guided by PROVIA - VIA handbook and toolkit) conducted, key ecosystem services for climate-resilience identified, and protocols developed to guide EbA interventions.</p> <p>2.1.2 Restored, multi-benefit forests established through an EbA approach in degraded watersheds.</p> <p>2.1.3 Alternative livelihoods – including woodlots and kitchen gardens of high nutritional value – developed in selected sites within degraded watersheds.</p> <p>2.1.4 Local authorities, communities and user groups, with a focus on women, trained in adapting community livelihoods to climate change using EbA.</p>	LDCF	3,816,400	3,500,000
3. Up scaling and increasing knowledge of building climate resilience through improving watershed functioning as an EbA approach.	TA	3.1 A knowledge base on forest restoration as an EbA approach in Afghanistan developed.	3.1.1 Scientific knowledge on native forest restoration as an EbA approach – including lessons learned and best practices – collated, reviewed and synthesised to inform policy briefs and technical guidelines developed in Component 1.	LDCF	1,085,700	1,000,000

			3.1.2 Upscaling strategy developed for catalysing EbA through native forest management at a regional and national level in Afghanistan.			
			3.1.3 Public awareness programmes on climate change impacts and forest restoration as an EbA approach designed.			
			3.1.4 Long-term research produced and institutionalised to monitor socio-economic and environmental benefits and costs of forest restoration as an EbA approach.			
Sub-Total					6,580,000	6,500,000
Project management cost (PMC)					320,000	500,000
Total project costs					6,900,000	7,000,000

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National agency	USAID	Grant	3,000,000
Multilateral agency	FAO	Grant	2,000,000
Multilateral agency	UN-Habitat	Grant	1,000,000
Implementing agency	UNEP	Grant (parallel)	1,000,000
Total Co-financing			7,000,000

D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal area	Country Name/Global	Grant amount (\$) (a)	Agency Fee (\$) (b)	Total (\$) (a + b)
NA						
Total Grant Resources						

E. PROJECT PREPARATION GRANT (PPG)

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$)</u>
• No PPG required	_____	_____
• (up to) \$50k for projects up to and including \$1 million	_____	_____
• (up to) \$100k for projects up to and including \$3 million	_____	_____
• (up to) \$150k for projects up to and including \$6 million	_____	_____
• (up to) \$200k for projects up to and including \$10 million	<u>100,000</u>	<u>9,500</u>
• (up to) \$300k for projects above \$10 million	_____	_____

PPG AMOUNT REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY (IES) FOR MFA AND/OR MTF PROJECT ONLY

GEF Agency	Type of Trust Fund	Focal area	Country Name/Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
Total PPG Amount						

PART II: PROJECT JUSTIFICATION

A. PROJECT OVERVIEW

A.1. Project Description

A.1.1. The project problem, root causes and barriers that need to be addressed

Forests in Afghanistan have been severely degraded predominantly by overharvesting and livestock overstocking. Currently, these forest ecosystems, including woodlands, only cover a small proportion (~ 1.5%) of Afghanistan's land area^{1,2,3}. Their ability to provide natural ecosystem services, including providing local communities with livelihoods has been severely compromised. The Northern Pistachio Belt (NPB) and Eastern Forest Complex (EFC) are among the most extensive forest areas remaining in the country. Historically, however, they were much more widespread, particularly the *Pistacia vera* woodlands of the NPB which are found north of the Hindu Kush between 600 m and 1600 m elevation on the loess plain⁴. The NPB is fundamentally important for effective functioning of major watersheds in Afghanistan. This functionality includes the maintenance of water flow and accretion of soils as well as supporting livelihoods of local communities that are heavily dependent on forest resources. The EFC covers a smaller geographic extent than the NPB, but harbours globally significant biodiversity. It comprises two main forest types: Sclerophyllous Oak Forest (SOF)⁵ and Conifer Forest (CF)^{6,7} (see Annex I). This forest complex comprises a mosaic of habitats – including contiguous patches of arid coniferous forest and is: i) a biodiversity hotspot; and ii) under substantial threat from deforestation including illegal logging⁸.

The above-mentioned forests benefit local communities living in or adjacent to them through the provision of a wide range of ecosystem services including: i) provisioning services of goods such as fruits, nuts, fibre, timber, fuel, medicines, honey, bush meat as well as fodder for cattle, goats and sheep; ii) cultural services such as aesthetic enjoyment and education; iii) regulating services such as buffering of extreme weather events, climate regulation, soil retention and water regulation; and iv) supporting services such as soil nutrient cycling and carbon storage^{9,10,11,12,13,14}. Importantly, Afghanistan's intact and functional forests underpin agriculture (including poppy, rice, maize, cotton, sunflower, beans, potato, wheat, barley, sugarcane) and domestic vegetable production by *inter alia* providing pollination services, preventing soil erosion, maintaining soil fertility and maintaining water flow. These forests are also fundamental components of functioning watersheds. Forests promote the infiltration of water into soil profiles because the forest canopy reduces the damage of raindrop impact on soil surface structure and enhances soil carbon stocks in forests which increase the aggregate stability of the soils. The

¹ Groninger, J.W. 2012. Reforestation strategies amid social instability: lessons from Afghanistan. *Environmental Management* 49, 833-845.

² Groninger, J.W. 2006. Forestry and Forestry Education in Afghanistan. *Journal of Forestry* (Dec 2006) 426-430.

³FAO 2010. Global Forest Resources Assessment 2010. Country Reports. Afghanistan. Forestry Department, Food and Agriculture Organization of the United Nations.

⁴ Freitag, H. 1971. Studies in the Natural Vegetation of Afghanistan. Pages 89-106 in P.H. Davis, Harper, and I.C. Hedge, editors. *Plant Life of Southwest Asia*. The Botanical Society of Edinburgh, Edinburgh.

⁵ The SOF is a Himalayan type evergreen forest occurring between 1200 m and 2200 m elevation and dominated by oak, *Quercus baloot*, with an undergrowth of trees including almonds, *Amygdalus kuramica* and *Pistacia khinjuk*.

⁶ The CF is a temperate forest with pine, *Pinus gerardiana* woodland, stands of *Betula* occurring between 2200 m and 2500 m, *Cedrus deodara* forest between 2500 m and 3100 m, *Picea smithiana-Abies webbiana* forest occurring in the upper forest belt to 3300m and *Juniperus seravschanica-J.semiglobosa* woodland in dryer areas.

⁷ Breckle, S.-W. & Rafiqpoor, M.D. 2010. Field Guide Afghanistan: Flora and Vegetation. Scientia Bonnensis, Bonn. also see: http://www.ag-afghanistan.de/files/breckle_flora.pdf and <http://www.ag-afghanistan.de/files/vegetationmap.jpg>

⁸ Delattre, E. & Rahmani, H. A Preliminary Assessment of Forest Cover and Change in the Eastern Forest Complex of Afghanistan. Report to Wildlife Conservation Society, Afghanistan and USAID.

⁹ Sharma, R., Xu, J. & Sharma, G. 2007. Traditional agroforestry in the eastern Himalayan region: land management system supporting ecosystem services. *Tropical Ecology* 48, 1-12

¹⁰ Bonan, G.B. 2008. Forests and climate change: forcings, feedbacks, and the climate benefits of forests. *Science* 320, 1444-1449.

¹¹ Stickler, C.M., Coe, M.T., Costa, M.H., Nepstad, D.C., McGrath, D.G., Dias, L.C.P., Rodrigues, H.O. & Soares-Filho, B.S. 2013. Dependence of hydropower energy generation on forests in the Amazon Basin at local and regional scales. *Proceedings of the National Academy of Sciences* www.pnas.org/cgi/doi/10.1073/pnas.1215331110

¹² Krieger, D.J. 2001. The economic value of forest ecosystem services: a review. The Wilderness Society. Washington, DC.

¹³ Nasi, R., Wunder, S. & Campos, A. 2002. Forest ecosystem services: can they pay our way out of deforestation? CIFOR, Bongor.

¹⁴ Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R.G., Sutton, P. & van den Belt, M. 1997. The value of the world's ecosystem services and natural capital. *Nature* 387, 253-260.

enhanced infiltration under forests results in streams, rivers and underground water reserves being replenished, whilst at the same time preventing soil erosion and reducing the impacts of floods. Furthermore, community-based watershed management – including forest management and afforestation – has been prioritised in Afghanistan’s National Adaptation Programme of Action (NAPA) and Afghanistan’s National Development Priority Programmes.

At present, the NPB and EFC are increasingly overexploited as a result of a rapidly growing population and because of minimal governance^{15,16}. Specific intense threats include: i) firewood collection; ii) timber logging; iii) over-grazing by livestock; iv) felling of trees for construction; v) minimal forest management; vi) insufficient incentives for reforestation; vii) insufficient community involvement and awareness in forest management; viii) clearing for agricultural expansion and urban encroachment; ix) pistachio root excavation for marketing in cities; x) unsustainable nut harvesting; xi) local conflicts and uncertain land tenure rights; xii) soil erosion; and xiii) limited law enforcement^{17,18,19,20,21,22}.

The above threats to the NPB and EFC are further exacerbated by climate changes that have been experienced in recent times and are predicted to intensify in the future. The NPB and EFC are located in areas of the country that are most vulnerable to climate change. Over the last fifty years, Afghanistan has observed: i) an increase in the frequency, intensity and duration of drought; ii) an increase in the mean annual temperature by 0.6°C since 1960; iii) a 6.8% increase in the frequency of hot days and nights; iv) a 0.5 mm per month reduction in rainfall since 1960; and v) an increase in seasonal variation in precipitation at a regional level, reported as extreme snowfall, floods and droughts^{23, 24}. During this time most regions of the country have been affected by many climatic related natural disasters, predominately droughts. There were, for example, repeated droughts in 1963-64, 1966-67, 1970-72, 1998-2006, and 2008-09, which led to significant crop losses. The impacts of the 1998-2006 drought were particularly severe and resulted in a shortage of food for over 2 million rural people as well as losses of 75% of all wheat crops, 85% of rice crops, 85% of maize crops, 50% of potato crops, and 60% of overall farm production. These crop losses severely impacted the growth of the economy over this period. In addition, the impacts of droughts in Afghanistan have included increased malnutrition, incidence of diseases, displacement of people from highly impacted areas, desertification, land degradation, and overharvesting of firewood.

Climatic change is expected to result in further increases in the average temperatures across Afghanistan, reduced overall annual rainfall and increased incidents of excessive rainfall. All of these impacts will lead to an increased occurrence and severity of extreme weather events. These include floods and droughts which will further intensify degradation of the NPB and EFC forests. In addition, the structure and function of forests is expected to change because of alterations in species assemblages as a consequence of climate change²⁵. For example, the EFC is predicted to have greatly reduced biomass production because of increased temperatures and lower mean annual precipitation. This will result in fewer forest resources available for local communities²⁶. Furthermore increases in intense rainfall events in deforested and degraded areas in the NPB and EFC will result in reduced infiltration of rainwater into soil profiles resulting in reduced base flow in rivers during dry periods. An increased intensity of rainfall events will also result in increased soil erosion and reduced soil fertility, thereby reducing agricultural

¹⁵ Adger, N. 2000. Social and ecological resilience: are they related? *Progress in Human Technology* 24, 347-364.

¹⁶ FAO 2010 Forests and Climate Change in the Asia-Pacific Region. Forests and Climate Change Working Paper 7.

¹⁷ FAO 2010. Global Forest Resources Assessment 2010. Country Reports. Afghanistan. Forestry Department, Food and Agriculture Organization of the United Nations

¹⁸ Delattre, E. & Rahmani, H. A Preliminary Assessment of Forest Cover and Change in the Eastern Forest Complex of Afghanistan. Report to Wildlife Conservation Society, Afghanistan and USAID.

¹⁹ Groninger, J.W. 2012. Reforestation strategies amid social instability: lessons from Afghanistan. *Environmental Management* 49, 833-845.

²⁰ Shroder, J. 2012. Afghanistan: rich resource base and existing environmental despoliation. *Environmental Earth Sciences* 67, 1971-1986.

²¹ UNEP (United Nations Environment Programme). 2003. Post-Conflict Environmental Assessment: Afghanistan. Available from:

<http://postconflict.unep.ch/publications/afghanistanpcajanuary2003.pdf>

²² UNEP, 2008. Afghanistan’s environment, 2008. NEPA and UNEP with financial support from the European Commission and the Government of Finland.

²³ McSweeney, C., New, M. & Lizcano, G. 2010. UNDP Climate Change Country Profiles: Afghanistan. Available: <http://country-profiles.geog.ox.ac.uk/> [Accessed 10 May 2013].

²⁴ McSweeney, C., New, M., Lizcano, G. & Lu, X. 2010. The UNDP Climate Change Country Profiles Improving the Accessibility of Observed and Projected Climate Information for Studies of Climate Change in Developing Countries. *Bulletin of the American Meteorological Society*, 91, 157-166

²⁵ Pastor, J. & Post W.M. 1988. Responses of northern forests to CO₂-induced climate change. *Nature* 334, 55-58.

²⁶ FAO 2010 Forests and Climate Change in the Asia-Pacific Region. Forests and Climate Change Working Paper 7.

productivity. Rain-fed agriculture, small-scale irrigation and livestock farming will also be negatively impacted by decreased mean annual rainfall and an increased incidence of drought.

In rural communities in watersheds in the NPB and EFC, women are expected to be more vulnerable to climate change than men. This is because in Afghanistan in general, women tend to be dependent on the male members of the household and have limited autonomy, decision-making capacity or access to economic assets. Men are able to move to other areas in search of employment or alternative income. However, women are more tied to their household locations – particularly in rural areas. In addition, they have fewer alternative livelihood options and are dependent on natural resources that are vulnerable to damage from climate change. For example, as water and fuel wood become less accessible women spend more time collecting these resources²⁷.

The **problem** that this project seeks to address is that the livelihoods of rural communities dependent on the ecosystem goods and services that NPB and EFC forests provide within watersheds of Afghanistan are increasingly threatened by climate change impacts.

The **preferred solution** to the problem is to: i) increase the climate resilience of the local communities living in watersheds within the NPB and EFC forest regions through ecosystem based adaptation (EbA) approaches²⁸; and ii) build the climate resilience of rural infrastructural development in these regions by integrating EbA into the water and agriculture sectors²⁹. The EbA approach will entail restoring and sustainably managing forests under climate change thereby maintaining and where possible enhancing the provision of ecosystem goods and services that are beneficial to local communities living in these watersheds and increase their resilience to the impacts of climate change. These ecosystem goods and services include, *inter alia*: i) increasing the absorption of rainfall and snowmelt; ii) improving soil infiltration rates; iii) providing canopy cover to protect soil from the impact of rainfall; and iv) filtering sediments and agricultural pollutants (in the case of streamside forests). These functions ultimately increase water quality and supply in the watershed. As part of an integrated adaptation approach, EbA has been shown to require comparatively small investments relative to the long-term social, economic and environmental benefits^{30,31}.

The **barriers** that hinder the implementation of the preferred solution include: i) limited national and local institutional and technical capacity to plan, research, legislate for, implement and upscale EbA; ii) insufficient demonstration of the multiple benefits of EbA to influence policy- and decision-making; iii) limited financial resources to cope with climate stress; iv) limited policies and strategies to institute EbA; v) limited community and national to local government understanding of climate change and the benefits of EbA; vi) high dependence of local communities and women in particular on natural resources and; vii) degradation of forests in Afghanistan – which has reduced their potential to provide ecosystem goods and services to local communities, including the buffering against extreme weather events.

A project is proposed to address the above problem, subject of the LDCF resources. The proposed LDCF project will contribute to overcoming the above barriers by: i) developing national and local institutional and technical capacity to plan and implement EbA in watersheds and particularly forests in Afghanistan; ii) restoring degraded NPB and EFC forests in watershed landscapes to yield climate-resilient forests producing a wide range of ecosystem goods and services; and iii) developing and disseminating a knowledge base for catalysing the upscaling of EbA in watersheds in the NPB and EFC forest regions in Afghanistan.

²⁷ FAO, 2003. Gender and Sustainable Development in Drylands: an Analysis of Field Experiences.

²⁸ Jones, H.P., Hole, D.G. & Zavaleta, E.S. 2012. Harnessing nature to help people adapt to climate change. *Nature Climate Change* 2, 504-509.

²⁹ Chasdon, R.L. 2008. Beyond deforestation: restoring forests and ecosystem services on degraded lands. *Science* 320, 1458-1460.

³⁰ Jones, H.P., Hole, D.G. & Zavaleta, E.S. 2012. Harnessing nature to help people adapt to climate change. *Nature Climate Change* 2, 504-509.

³¹ An Ethiopian case study revealed that benefit of watershed rehabilitation was US\$ 73 821 and US\$ 374 008 for the smallest and largest rehabilitated areas, respectively, while the cost was US\$ 17 701 and US\$ 23 620, respectively. Yitbarek, T.W., Satichkumar Belliethathan & Masresha Fetene. 2010. A cost-benefit analysis of watershed rehabilitation: a case study in Farta Woreda, South Gondar, Ethiopia. *Ecological Restoration* 28:1. 46-55.

A.1.2. The baseline scenario and associated baseline projects

This project will focus on forests in watersheds in two main regions – the Northern Pistachio Belt (NPB) and the Eastern Forest Complex (EFC) in Afghanistan identified as most vulnerable to climate change. There are numerous development projects focussed on infrastructure development being implemented in watersheds in the NPB and EFC regions. Several of these projects are agriculture-focussed and include an irrigation component, yet do not directly consider climate change in their project planning and implementation.

The projects below are proposed baseline projects. All three organisations: i) United States Agency of International Development (USAID); ii) Food and Agriculture Organisation of the United Nations (FAO); and iii) United Nations Human Settlements Programme (UN-Habitat) are supportive of the proposed LDCF project and have committed to providing co-financing.

Irrigation and Watershed Management Project (USAID, 2012-2017, US \$ 130,000,000)³²

The Irrigation and Watershed Management Project (IWMP) aims to increase agricultural production through efficient use of water resources. Technical capacity will be built at the national, river basin, community and farm levels. The project will also support the efforts of the Ministry of Agriculture, Irrigation, and Livestock (MAIL) in watershed management, on-farm water management and water governance in line with National Priority Programme 1. The project is to be implemented in Balkh Province from 2013 to 2017 and has a budget of US\$ 130,000,000. The IWMP project will be implemented by two mechanisms: an on-budget activity to be instituted by MAIL, and an off-budget mechanism to be implemented by a USAID contractor and designed to provide capacity building and technical support for the MAIL-led activities. The capacity of MAIL to work across ministries, fulfil its policy and management role under Afghanistan's Water Law and develop and implement water policy will be developed. The main components of the project are: i) governance and enabling environment; ii) water supply management; and iii) water demand management. Water conflicts will also be addressed and Afghanistan's Water Law will be put into practice at both the national and sub-national levels. Irrigation system and watershed management as well as improved water usage will increase the productivity of agricultural land. USAID has a mandate to include climate change in its portfolio. It is not yet fulfilling this mandate in the IWMP and is therefore very supportive of collaborating with and co-financing the proposed LDCF project.

The dominant watersheds in the project area of Balkh province are the Balkhab and Khulm. Samangan province borders Balkh and shares these watersheds (see Annex Ib&c) which fall within the historical distribution of Pistachio (*Pistacia vera*) woodland³³. However, the Pistachio woodlands have been severely degraded here and throughout the NPB. This has reduced the functionality of this ecosystem and its ability to buffer the impacts of extreme weather events.

Climate change poses a threat to the effectiveness of IWMP in the following ways: i) increased temperatures will increase the water demand of agricultural crops; ii) reduced rainfall will reduce water available for irrigation and increase the demand for irrigation; iii) an increased incidence of intense rainfall events will lead to increased flooding events and damage to irrigation infrastructure; and iv) increased flooding will lead to increased soil erosion and reduced soil fertility thereby reducing agricultural productivity. The proposed LDCF project will be implemented on mountain slopes in the upper catchment of where irrigation infrastructure is installed. This intervention will provide protection from climate change impacts to this investment. See Annex II for a detailed description of the impacts of climate change to the baseline project.

The Programme for Improvement of Irrigation Systems in Kabul, Bamyan and Kapisa Provinces of Afghanistan (FAO, May 2013 - Feb 2016; US \$ 25,000,000)

This project is funded by JICA and aims to enhance food security by increasing agricultural productivity. In order to expand irrigation coverage of agricultural lands with a reliable and adequate water supply, irrigation facilities will be improved through: i) water conservation; ii) irrigation infrastructure rehabilitation; iii) community-based

³² http://afghanistan.usaid.gov/en/USAID/Activity/290/Irrigation_and_Watershed_Management_Project

³³ Freitag, H. 1971. Studies in the Natural Vegetation of Afghanistan. Pages 89-106 in P.H. Davis, Harper, and I.C. Hedge, editors. Plant Life of Southwest Asia. The Botanical Society of Edinburgh, Edinburgh.

micro-hydropower schemes; and iv) capacity development. The proposed LDCF project will build on the national capacity building activities of the FAO project as well as the project activities in Kabul and Kapisa Provinces. This will build the climate resilience of the FAO project. Through increasing water infiltration and reducing soil erosion, the proposed LDCF project will increase water available for irrigation and micro-hydropower schemes and will provide protection to irrigation infrastructure under climate change conditions.

Kapisa Province falls within the geographic extent of the EFC, Kabul Province is on the boundary of the EFC and Bamyan is outside the extent the NPB and EFC. Kapisa falls within the Ghorband wa Panjsher watershed and is currently the western most boundary of the EFC (See Annex I). The other dominant watersheds, which the EFC falls within, are the Shamal, Alingar, Kunar and Kabul watersheds (see Annex I).

Climate change poses the same threats to the effectiveness of this project as to the IWMP mentioned above. See Annex II for a detailed description of the impacts of climate change to the baseline project.

National Solidarity Programme Phase 3 (UN-Habitat, Ministry of Rural Rehabilitation and Development; World Bank; US \$19,324,800 and US \$ 1,545,600; March 2012 - April 2015).

The National Solidarity Programme is funded by the International Development Association (IDA) of the World Bank, the Afghanistan Reconstruction Trust Fund (ARTF), the Japanese Social Development Fund (JSDF) and other bilateral donors, and is executed by Afghanistan's Ministry of Rural Rehabilitation and Development (MRRD) with execution support from UN-Habitat. Phase 3 of the National Solidarity Programme will establish and empower up to 1,300 Community Development Councils (CDC) in Kapisa, Nangarhar, Bamyan, Balkh, Parwan, Kandahar, Herat and Farah to operate as effective institutions for local governance and social-economic development through: i) developing capacity for these CDCs to identify, plan, manage and monitor their own development projects and be involved in decision making processes; and ii) assisting and facilitating communities to enhance local governance and management capacity by provision of community block grants to support economic and social development and improving community infrastructure. The main objectives of this project are to: i) re-establish linkages between government and rural communities; ii) provide grants for the reconstruction of physical and social infrastructure; iii) empower communities; and iv) establish community-level governance structures. Training and capacity development will be provided to CDCs to develop their action plans for development. Community-based infrastructure and capacity building projects will be managed, implemented and monitored by community members.

Of the provinces which the proposed LDCF project is implemented in Kapisa, Nangarhar, Takhar, Samangan and Balkh are most relevant to the proposed LDCF project because they have extensive forested landscapes, including NPB and EFC.

Climate change poses a threat to the effectiveness of this project. Infrastructure such as roads and bridges are at risk of damage from flooding. In addition, sanitation and irrigation infrastructure are likely to be damaged by floods and droughts and to become less effective because of reduced water availability. Other sectors such as health will also be impacted. Indeed, climate change-induced flooding is likely to result in water sources being contaminated and the outbreak of water-borne diseases such as cholera, typhoid and hepatitis A. See Annex II for a detailed description of the impacts of climate change to the baseline project.

A.1.3. The proposed alternative scenario, with a brief description of expected outcomes and components of the project

The proposed LDCF project will reduce the vulnerability of communities living in the Balkhab, Khulm, Kabul, Alingar and Ghorband wa Panjsher watersheds in Afghanistan by building institutional and technical capacity to design, implement and upscale EbA in forests. To this end the project will develop a knowledge base for EbA at national and local levels and will integrate EbA into national development planning and legislation. The proposed LDCF project will also reduce the vulnerability of existing infrastructure development initiatives – including irrigation and transportation infrastructure – which currently do not give adequate consideration to climate change impacts. Details on how the project interventions will contribute towards building the resilience of baseline

projects are provided in Annex II. Concrete EbA interventions will be implemented in watersheds in the NPB and EFC forest regions which will result in: i) reduced soil erosion and siltation of surface waters; ii) enhanced infiltration of water into soil profiles; iii) reduced frequency and severity of climate-related hazards such as floods, landslides and drought; and iv) enhanced community livelihoods as a result of increased supply of non-timber forest products (NTFPs), increased availability of fresh water and reduced vulnerability to climate-related hazards. The demonstration of EbA interventions will be complemented by the development and dissemination of policy briefs, technical guidelines and lessons learned which will contribute to the up scaling of EbA approaches at a national and local level. The proposed LDCF project will be implemented through the following three components:

Component 1: Strengthening the capacity of national and local government and other stakeholders to address climate change risks through improving watershed functioning by using an EbA approach.

Component 1 will strengthen the institutional and technical capacity of national and local government and other stakeholders in Afghanistan to design and implement EbA approaches in watersheds in the NPB and EFC forest regions. The activities in this component will coordinate with efforts made in the first UNEP LDCF project to increase capacity of national institutions.³⁴ LDCF resources for this project will be used to establish a national committee to facilitate the coordination, funding and integration of EbA into national strategies and policies. Strategy and policy revisions will be suggested following a review of the existing strategies and policies. Furthermore, policy briefs and technical guidelines will be developed for policy- and decision-makers and planners. These will be accompanied by appropriate training for local authorities, user groups and communities as well as education programmes for schools and universities.

Activities to be funded by LDCF resources will include:

- Developing and distributing policy briefs and technical guidelines for policy- and decision-makers and planners on building the climate-resilience – using an EbA approach – of communities reliant on forest ecosystems.
- Reviewing the existing strategies and policies and identifying the barriers to and opportunities for incorporating EbA into these strategies and policies.
- Revising relevant policies and strategies to mainstream an EbA approach into forest management, climate change and development planning.
- Establishing a national committee that: i) facilitates cross-cutting national dialogue on forest restoration as an EbA approach; ii) promotes EbA integration into national strategies and policies; and iii) mobilizes funds for the implementation of large-scale EbA.
- Developing training modules to build capacity of local authorities, user groups and communities to plan and implement EbA in forests in Afghanistan.
- Developing modules for school and university curricula on using EbA in forest management in Afghanistan.
- Training local communities (including scholars and NGOs) in nursery management, tree propagation, maintenance of restored areas and sustainable forest management.
- Training local authorities, committees and user groups (including women) in the implementation of climate-resilient forest restoration.

Component 2: Community based watershed management using the restoration of degraded forest ecosystems to improve watershed functioning and generate ecosystem goods and services for increased climate-resilience of communities.

Component 2 will reduce the vulnerability of communities living in the Balkhab, Khulm, Kabul, Alingar and Ghorband wa Panjsher watersheds to climate change-related hazards – specifically, increased temperatures, reduced water availability and increased frequency and of high-intensity rainfall events – through the restoration of degraded NPB and EFC forest landscapes using EbA approaches.

³⁴ Building Adaptive Capacity and Resilience to Climate Change in Afghanistan.

Activities to be funded by LDCF resources include:

- Conducting spatial mapping – developed through a multi-stakeholder engagement process – of climate change impacts, vulnerability, adaptation needs, current land use patterns, ecosystem services and EbA options.
- Assessing site-specific climate change impacts, vulnerabilities and adaptation needs and options through a multi-stakeholder engagement process
- Developing protocols for site-specific implementation of EbA in NPB and EFC forests in Afghanistan.
- Restoring forests – that are climate resilient and have multi-benefits – using an EbA approach in degraded NPB and EFC forests in Afghanistan.
- Developing alternative livelihoods – including woodlots and home gardens of high nutritional value – in selected sites within NPB and EFC forests.
- Developing and/or strengthening value chains of Non-Timber Forest Products (NTFPs) and other agricultural goods produced through the EbA interventions.
- Identifying plant species with high nutrition value to provide food security and enhance nutrition of local communities.
- Identifying appropriate tree species to develop woodlots for the provision of firewood e.g. poplar.
- Establishing appropriate water storage and water dissemination systems for watering seedlings under climate change conditions.
- Identifying appropriate plant species for restoring forests that are climate resilient and generate abundant ecosystem goods and services.

Component 3: Upscaling and increasing knowledge of building climate resilience through improving watershed functioning as an EbA approach.

Component 3 will increase the knowledge base and availability of information on EbA in watersheds – and forests in particular – in Afghanistan. This component will generate scientific knowledge on native forest restoration as way to build communities’ resilience to climate change. In addition, it will collate lessons learned and best practice knowledge on EbA. LDCF resources will also be used to develop an upscaling strategy and develop and implement a public awareness campaign.

Activities to be funded by LDCF resources include:

- Collating, reviewing and synthesising scientific knowledge – including lessons learned and best practices – on EbA to inform policy briefs and guidelines developed in Component 1.
- Conducting research to generate evidence on the socio-economic and environmental benefits and costs of restoring forests that are climate-resilient, fully functional in terms of generating ecosystem goods and services, and contributing to the resilience of communities.
- Developing an upscaling strategy to catalyse EbA through forest management and watershed management in Afghanistan.
- Establishing public awareness programmes on climate change impacts and restoration of key ecosystems as an EbA approach.
- Institutionalising long-term research programmes to monitor socio-economic and environmental benefits and costs of forest restoration as an EbA approach.
- Developing and implementing MSc and PhD projects with an EbA focus in collaboration with scientific institutions.
- Publishing – in peer reviewed academic journals – long term research on the impacts of EbA in NPB and EFC forests and communities.

A.1.4. Incremental cost reasoning and expected contributions from the baseline, the GEFTE, the LDCF/SCCF and co-financing

The proposed LDCF project will reduce the vulnerability of local communities in the Balkhab, Khulm, Kabul, Alingar and Ghorband wa Panjsher watersheds by increasing institutional and technical capacity for implementing EbA approaches in watersheds and forests in particular. The restoration of ecosystem functioning in degraded forests will increase the availability and quality of fresh water, increase the availability of NTFPs, sustain soil

structure and fertility and reduce the vulnerability of local communities to climate related hazards such as droughts, floods and landslides. In addition, the proposed LDCF project will reduce damage to infrastructure in the lower catchment areas as a consequence of extreme weather events such as drought, flooding, soil erosion and siltation.

UNEP has secured US\$ 7,000,000 of baseline co-financing for the proposed LDCF project (see Table C). This includes financing from the USAID “Irrigation and Watershed Management Project”, the FAO project “The Programme for Improvement of Irrigation Systems in Kabul, Bamyan and Kapisa Provinces of Afghanistan” and the UN-Habitat “National Solidarity Programme”. The proposed LDCF project will reduce the vulnerability of the aforementioned projects’ investments under climate change conditions. Please see the additional cost reasoning for each component below.

Component 1: Strengthening the capacity of national and local government and other stakeholders to address climate change risks through improving watershed functioning by using an EbA approach.

Business as usual scenario:

In a business as usual scenario, the national and local development process – including strategy and planning processes in agriculture, the water sector and infrastructure development – as well as the baseline projects will continue to be compromised by the current and future impacts of climate change e.g. droughts, floods and intense soil erosion. The four baseline projects are: i) the USAID “Irrigation and Watershed Management Project (IWMP)” that works on strengthening governance, improving water supply and demand management as well as the implementation of Afghanistan’s Water Law; ii) the FAO “Programme for Improvement of Irrigation Systems in Kabul, Bamyan and Kapisa Provinces of Afghanistan” that comprises technical and managerial capacity building focussed on the Ministry of Energy and Water (MEW); iii) the UN-Habitat “National Solidarity Programme (NSP)” aimed at increasing local governance and management capacity of Community Development Councils (CDCs) to plan, manage and monitor development projects e.g. building roads and bridges, as well as the provision of power, sanitation and irrigation. The NSP includes a requirement for safeguards to be incorporated in the development of community development projects by CDCs. None of these baseline projects currently have integrated climate change into their planning thereby placing their investments in infrastructure at risk of damage or reduced effectiveness.

In Afghanistan, government has: i) limited national and local institutional and technical capacity on climate change adaptation; ii) limited knowledge about climate change and EbA; iii) a view of climate change as a low priority; iv) limited financing for data collection and climate change adaptation technologies; v) limited collaboration and data sharing between government ministries; and vi) limited capacity to integrate climate change adaptation knowledge into policies³⁵. Specific to the proposed LDCF project, technical capacity on EbA in forests is severely limited.^{36,37} Consequently, current reforestation strategies and forest management policies do not consider current and future climate changes.

Policies and strategies in Afghanistan are focussed on poverty alleviation, improved security and development. Sustainable development and environmental considerations are, however, also referred to in Afghanistan’s National Development Strategy (ANDS) and the importance of climate change is recognised by Afghanistan’s National Adaptation Plan of Action. In particular, community-based watershed management is a NAPA and Afghanistan National Priority Programme (NPP) priority with the aim to improve livelihoods by addressing the problem of watershed degradation through deforestation. The promotion of the NAPA priority is beneficial to combating the effects of climate change. However, this requires further strengthening to incorporate EbA approaches.

³⁵ GfR. 2012. Afghanistan Initial National Communication to the United Nations Framework Convention on Climate Change. Available from: <http://unfccc.int/resource/docs/natc/afgnc1.pdf>

³⁶ that provide ecosystem services to vulnerable local communities reliant on forest ecosystems and functioning watersheds.

³⁷ GfR. 2009. Afghanistan: National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA). February 2009. Final Joint Report financed by the Global Environmental Facility (GEF) and implemented by the Government of the Islamic Republic of Afghanistan with technical assistance and support from the United Nations Environment Programme (UNEP). Available from: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/nca-afghanistan-fr-ap.pdf>

Alternative scenario:

The proposed LDCF project will be used to build national and local institutional and technical capacity to plan and implement EbA approaches in forest management. This will include the strengthening of existing environmental, agriculture and water policies and strategies to mainstream EbA approaches into planning across these sectors. In addition, technical capacity will be developed as follows: i) local communities will be trained in nursery management, tree propagation, maintenance of restored areas, sustainable land management and efficient water management under climate change conditions; ii) the capacity of local authorities, committees and user groups will be developed for training communities to use these methods; and iii) modules will be developed for inclusion in school and university education programs. Information including best-practice guidelines, lessons learned and analysis of benefits of EbA approaches generated by activities from Component 2 will be used to inform this component. EbA approaches in forest management will also be incorporated into the activities of baseline projects. For example, these approaches will be mainstreamed into water supply and demand management and the safe guards of development projects implemented by the NSP.

The activities under Component 1 will build on baseline activities which are estimated to cost US\$ 2,000,000. The additional cost of activities conducted under this component is US\$ 1,677,900.

Component 2: Community based watershed management using the restoration of degraded forest ecosystems to improve watershed functioning and generate ecosystem goods and services for increased climate-resilience of communities.

Business as usual scenario:

Adaptive capacity is low throughout Afghanistan as a result of high poverty levels, minimal access to service provision, strong reliance on natural resources and low public awareness of climate change impacts. Poverty restricts the capacity of local communities to adapt to extreme weather events as they have no alternative financial or natural resources to rely on. In addition, extreme weather events can result in loss of property and starvation. Local communities obtain fuelwood, fodder for animals as well as wild food sources from forests to increase income and food stores in rural areas in watersheds in the NPB and EFC forest regions. However, because of severe deforestation, the bushes that remain are collected to fuel fires leading to further land degradation. The strong dependence of local communities on their immediate environment means that shifts in the timing and intensity of rainfall as a result of climate change will likely have substantial negative effects on their livelihoods.

The Department of Forestry in the Ministry of Agriculture, Irrigation and Livestock is conducting reforestation initiatives including direct seeding of Pistachio (*Pistacia vera*), Chilghoza pine (*Pinus gerardiana*), and Poplar (*Populus nigra*). However, this programme has seen very low plant survival rates and is compromised by limited water storage and distribution of water to planted trees. Current development projects in watersheds in the NPB and EFC forest regions – including the construction of roads and bridges as well as the installation of irrigation infrastructure – are not designed to take the effects of climate change into account. Climate change impacts such as increased flooding and siltation can lead to the loss of such investments. Comprehensive watershed management including climate-resilient forest restoration is needed to protect infrastructural development. The adoption of this approach, however, is limited in Afghanistan.

The following objectives of the baseline projects in particular are vulnerable to the effects of climate change: i) the improvement of water supply and water demand management by the USAID Irrigation and Watershed Management Project (IWMP); ii) the rehabilitation of irrigation canals, promotion of water conservation and water utilisation by the FAO Programme for Improvement of Irrigation Systems in Kabul, Bamyan and Kapisa Provinces of Afghanistan; iii) the development of projects by CDCs including building roads and bridges, and the provision of power, sanitation and irrigation by the UN-Habitat National Solidarity Programme (NSP). However, despite the investments' risks to the effects of climate change, none of these projects consider climate change in their planning and implementation. The risks include the damage of infrastructure as a consequence of floods, erosion and siltation, and reduced effectiveness of irrigation infrastructure if there is insufficient water available to use for irrigation.

Alternative scenario:

The proposed LDCF project will restore degraded NPB and EFC forests using an EbA approach in areas adjacent to local communities that are particularly vulnerable to climate change impacts in these forests. A participatory vulnerability assessment of the effects of climate change on local communities, infrastructure, forests and land degradation in watersheds in the NPB and EFC regions will be conducted to inform the EbA approaches³⁸ adopted. The EbA interventions applied as part of the proposed LDCF project in upper catchment areas will build climate change resilience within the investments of the baseline projects in lower catchment areas by: i) increasing water infiltration into soils and water flow in rivers; ii) reducing erosion, flooding and siltation; and iii) maintaining soil accretion and therefore soil fertility. The proposed LDCF project will develop practical, locally appropriate guidelines on the use of EbA approaches in the NPB and EFC forests. Information provided will include: i) the selection of appropriate site-specific plant species that are adapted to local conditions (including predicted climatic changes) and are beneficial to local communities; ii) optimal nursery and planting protocols; and iii) guidelines for sustainable forest management under climate change conditions. The climate-resilient forest restoration will include planting species that are indigenous to the particular site and have some of the following uses: i) are drought tolerant³⁹; ii) stabilise soil⁴⁰; iii) act as a wind break⁴¹; iv) are flood tolerant⁴²; v) are fire tolerant⁴³; vi) provide fuelwood⁴⁴; vii) provide charcoal⁴⁵; viii) provide fodder⁴⁶; ix) provide edible fruit⁴⁷; x) provide medicine⁴⁸; xi) can be used for honey production⁴⁹; and xii) can be used for intercropping⁵⁰. Alternative livelihoods that will be developed will include the planting and sustainable management of woodlots and the introduction of home gardens of high nutritional value. Value chains of non-timber products and other agricultural goods will also be developed. In addition, a research protocol will be developed to rigorously and scientifically demonstrate the benefits and costs of restoring the NPB and EFC as an EbA approach. To enable the development of REDD+ and other carbon credit projects, research activities will include the assessment of soil and aboveground carbon stocks. The restoration of forests will be implemented with the participation of local communities, including women⁵¹. Under Output 2.1.2 community-managed nurseries will be complemented with the introduction of small-scale freshwater reservoirs and holding ponds as well as low evaporation/ water loss transmission systems.

The proposed measures under Component 2 will build on baseline activities which are estimated to cost US\$ 3,500,000. The additional cost of activities conducted under this component is US\$ 3,816,400.

Component 3: Upscaling and increasing knowledge of building climate resilience through improving watershed functioning as an EbA approach.

Business as usual scenario:

The national formal education system in Afghanistan has been neglected in recent decades with women in particular largely excluded from education during the Taliban regime. The numbers of students enrolled in education is increasing, including a larger number of females now in school. However, at a tertiary level, there is still a limited number of vocational training and scientific researchers.

Currently, national and local government and local communities in Afghanistan have limited knowledge on climate change generally and adaptation to climate change in particular. Indeed, little scientific studies have been conducted on this topic. Some research has been conducted by MAIL on developing best practices for dryland

³⁸ Kelly, P.M. & Adger, W.N. 2000. Theory and practice in assessing vulnerability to climate change and facilitating adaptation. *Climate Change* 47, 325-352.

³⁹ Drought tolerant: *Pistacia vera*, Pistachio, *Eleagnus angustifolia*, Russian olive and *Tamarix aphylla*, Athel tree

⁴⁰ Stabilise soil: *Dalbergia sissoo*, Bombay blackwood, *Dodonaea angustifolia*, sand olive, *Populus euphratica*, cottonwood, *Parkinsonia aculeata*, Jerusalem thorn and *E. angustifolia*

⁴¹ Wind break: *D. sissoo*, *T. aphylla*, *P. aculeata* and *P. euphratica*, iv) improve soil fertility e.g. *D. sissoo*, *P. aculeata* and *E. angustifolia*

⁴² Flood tolerant: *T. aphylla*

⁴³ Fire tolerant: *T. aphylla*; vii) provide timber e.g. *T. aphylla*, *D. angustifolia*, *P. euphratica*, *P. aculeata* and *D. angustifolia*

⁴⁴ Fuelwood: *D. sissoo*, *T. aphylla*, *P. euphratica*, *P. aculeata* and *D. angustifolia*

⁴⁵ Charcoal: *T. aphylla* and *D. angustifolia*

⁴⁶ Fodder: *T. aphylla*, *P. euphratica*, *P. aculeata* and *D. angustifolia*

⁴⁷ Edible fruit: *P. vera*, *D. angustifolia*, *P. aculeata* and *E. angustifolia*

⁴⁸ Medicine: *P. vera*, *D. angustifolia*, *P. aculeata* and *E. angustifolia*

⁴⁹ Honey: *E. angustifolia*, *D. angustifolia* and *T. aphylla*

⁵⁰ Intercropping: e.g. *P. euphratica*

⁵¹ Women will be involved in nursery work in their own homes

agriculture including promoting high-yield agricultural varieties but that project does not consider climate change. There has not been any investigation of how to enhance the capacity of local communities in Afghanistan to adapt to climate change except for another UNEP implemented LDCF project– “Building adaptive capacity and resilience to climate change in Afghanistan” – which started in May 2013 and which includes a component on dissemination of best practices and lessons learned regarding climate change adaptation. The very limited knowledge on climate change in general restricts the uptake of EbA focused knowledge (which is what this project aims to do). Further, demonstrated evidence of the benefits of using EbA approaches are necessary to assist the mainstreaming of these approaches into national policies and strategies. Some information is available on indigenous tree species in Afghanistan including: i) their uses – timber, fuelwood, charcoal, food, medicine, fodder and bee keeping; and ii) adaptation potential – soil stabilisation, soil fertility and flood tolerance.

Alternative scenario:

Component 3 of the proposed LDCF project will develop and disseminate best-practice information as well as develop an upscaling strategy. Best-practice options for restoring degraded forests in Afghanistan will be generated by collating and synthesising available information and lessons learned and developing EbA approaches for different bio-physical conditions. Evidence obtained from research conducted will be compiled and used to inform further implementation and convince policy- and decision-makers of the utility of using EbA approaches in forest management. This information will also be used to initiate the upscaling of EbA approaches at a national scale and across sectors to which they benefit. The upscaling strategy will ensure that the approaches used enable the sustainability of project interventions after the lifetime of the project. In part, this will be done by using interventions that are affordable and that can be implemented without external support. In addition, the benefits of EbA will be demonstrated to local communities. Public awareness raising will also be conducted on the impacts of climate change and adaptation options.

The activities under Component 3 will build on baseline activities that are estimated to cost US\$ 1,000,000. The additional cost of activities conducted under this component is US\$ 1,085,700.

A.1.5. Adaptation benefits (LDCF/SCCF)

Predicted climate change will reduce the productivity of forests and agriculture in watersheds in the NPB and EFC forest regions unless adaptation measures including innovative EbA approaches are undertaken. The proposed LDCF project addresses the vulnerability of the NPB, EFC and the local communities – living in watersheds – that are reliant on these ecosystems. Numerous adaptation benefits will be realised through increased ecosystem goods and services. For example, greater vegetation cover from planting of climate-resilient trees will increase water infiltration into soil profiles which will lead to reduced soil erosion, reduced siltation, greater availability of water for irrigation and increased topsoil availability for agriculture. Agricultural productivity will be increased in turn and local communities will have more diverse livelihood options and therefore broader ‘safety nets’ in the face of extreme climate events. In addition to benefits to agriculture there will be a reduced likelihood of damage to infrastructure from flooding and siltation. The project will also increase capacity of government and other stakeholders to implement EbA approaches that will benefit both local communities and a wide range of sectors including water, agriculture and construction.

A.1.6. Innovativeness, sustainability and potential for scaling up

Infrastructure and development in the water sector (and various other sectors) of Afghanistan is vulnerable to the effects of climate change and will not be successfully implemented without the consideration of these effects. The sustainability of infrastructure investments can consequently be substantially improved through the use of innovative approaches such as EbA.

The innovativeness of the project is based on the following: i) EbA is an innovative approach that has been proven to be cost effective in providing adaptation benefits⁵²; ii). restoring forests that are climate resilient and provide multiple benefits to communities is novel for the project sites and is innovative in a politically fragile

⁵² Jones, H.P., Hole, D.G. & Zavaleta, E.S. 2012. Harnessing nature to help people adapt to climate change. *Nature Climate Change* 2, 504-509.

country; iii) species will be selected that are indigenous, provide multiple uses to local communities and will survive in the face of predicted climatic changes; iv) EbA enables governments to meet their adaptation needs by reducing the vulnerability of ecosystems, improving the provision of ecosystem services (livelihood provision and climate buffering) and reducing the vulnerability of local communities; v) EbA provides co-benefits including carbon sequestration, biodiversity conservation, alternative livelihoods and poverty reduction opportunities; vi) EbA is aligned with climate change mitigation because of carbon sequestration benefits; vii) research into EbA will provide an evidence base to demonstrate to policy-makers the socio-economic benefits of EbA and to ensure the tailoring of context specific best-practice approaches; and viii) by mainstreaming EbA into policies and strategies across a range of sectors benefits will be wide ranging, including increased water provisioning, improved soil fertility and reduced the intensity of flooding.

The sustainability of the project will be enhanced by: i) revising policies and strategies to mainstream EbA into Afghanistan's development planning; ii) developing EbA measures that are tailored to local conditions; iii) building the technical and institutional capacity of national and local government to assist local communities in the planning and implementation of EbA in forest ecosystems; iv) building the capacity of local communities to implement EbA; v) involving local communities in decision making and implementation to ensure buy-in; vi) demonstrating the benefits of low-cost rangeland EbA interventions to communities; vii) providing a knowledge base and guidelines for designing and implementing EbA; and viii) building public awareness of EbA and the benefits of EbA. In addition an upscaling strategy will be developed and institutionalized. The upscaling strategy will include provisions to sustain: i) the developed capacities; ii) the utilisation and uptake of knowledge; and iii) policy change. The project will also collaborate with relevant stakeholders to avoid redundancy and promote complementarity and cost-effectiveness.

Public awareness of climate change science and practical implications in Afghanistan is very low. The national education and environmental communication structures for sharing information on climate change are still in a developmental stage. Raising awareness of the threats from climate change and adaptation options will be a central component of the LDCF project. This will be undertaken through Component 3, at national level as well as with intensive local strategic climate change communication activities in the field sites. Lessons learned from the LDCF Climate/Forests activities will be distributed in an innovative and exciting campaign involving radio, television and multi-media. The project will work on a holistic approach to integrating climate change and environmental education into national formal and informal education structure. This will include environment and Islam focus, as well as the formal school and university curriculum. A special focus will be made on the 27 vocational agricultural colleges which are found throughout Afghanistan, in particular in the 4 target provinces of this project.

Science and research capacity for climate change adaptation in Afghanistan will be greatly enhanced throughout the project, both in terms of gathering raw data from the field sites, as well as in the design and carryout of national modelling, scenarios and data collection. Afghan faculty and researchers will be preferentially chosen to focus their teaching and research on climate change and forestry, and incentives will be provided to support and encourage Afghan science community to undertake as much of the practical work, with international guidance, as is possible.

A.2. Stakeholders

The proposed project will be undertaken using a participatory approach and will ensure that all relevant stakeholders are involved in selection and validation of project activities. Consultations held at the national level will include government, parliamentarians, research organisations, NGOs, donor partners and the private sector. Local level consultations will include local government departments, community user groups, civil society and other appropriate organisations. Stakeholder consultations on proposed activities will mobilise local communities, initiate discussions and promote buy-in from local communities.

A preliminary list of stakeholders includes: Ministry of Agriculture, Irrigation and Livestock (MAIL), Ministry of Energy and Water (MEW), Ministry of Rural Rehabilitation and Development (MRRD), Kabul University, Kabul Polytechnic University, Jalalabad University, Ministry of Education, Ministry of Women's Affairs, Madera,

Afghanistan Research and Evaluation Unit (AREU), Mercy Corps, Government of UK and Government of Estonia as well as the Panj-Amu River Basin Programme.

The practical action and on-the-ground activities of the proposed project will focus on communities living in and adjacent to forests in the EFC and NPB. These will maintain a strong emphasis on ensuring gender representation in stakeholder consultations and project indicators. Local communities will participate actively in the design, planning and implementation of proposed project activities.

An inception workshop will be held at the start of the PPG implementation phase, during which a project steering committee of relevant stakeholders will be established. The national steering committee will share membership and experiences with already existing LDCF GEF projects ongoing in Afghanistan.

During the PPG phase, thematic workshops will be conducted in which experts from relevant fields (e.g. socio-economic development; forest ecosystem and biodiversity management; hydrology; agronomy; irrigation etc) will assess potential EbA interventions and establish a set of selection criteria to identify appropriate interventions and demonstration pilot sites. Selection criteria will include *inter alia*: security and logistics, vulnerability of local communities to climate change, potential to intergrate with/improve productivity of small scale/traditional practices, enhancing of gender equality and current activities of the baseline projects (see Annex III for provincial level information). The inception and thematic workshops will also be used for: i) collection of baseline information; ii) documentation of ongoing initiatives and potential areas of collaboration; and iii) the initiation of discussions with potential implementing and co-financing partners.

A.3. Risks

There are a number of risks to the successful implementation of the project. See Table 1 below for some of these risks and proposed mitigation measures. These risks will be validated and re-assessed during the PPG phase.

Table 1. Risks to project implementation and potential mitigation measures.

Identified Risks	Rating	Mitigation measures
Deterioration of security situation overall in Afghanistan and at project sites.	Likelihood: M-H Impact: H	<ul style="list-style-type: none"> • Sites will be selected with a preference for stable sites and communities with good working relationships with UNEP and project partners e.g. Madera, UN-Habitat and Mercy Corps. • Strong participatory stakeholder consultations will be undertaken to clarify roles, responsibilities and expectations. • The executing agency will continually engage with local political structures including shuras, community leaders and CDCs to enhance security and community ownership. • Local authorities and communities will be given considerable project responsibility. • There will be a strong dependence on permanent experts, NEPA national staff and UNEP staff as opposed to short-term experts. • Security costs will be incorporated into the budget with consideration of inflated costs.
Insufficient coordination and cooperation between national and provincial departments e.g. between MAIL and DAIL.	Likelihood & Impact: M	<ul style="list-style-type: none"> • Relationships between relevant individuals in national and provincial departments e.g. MAIL and DAIL will be strengthened by involving both provincial and national authorities in capacity building activities in the project.
Extreme weather events could disrupt project activities.	Likelihood: M Impact: H	<ul style="list-style-type: none"> • Coordination with ANDMA. • Use of appropriate climate-resilient species. • Use of appropriate planting approaches with consideration of extreme events and implementation of appropriate protection measures. • Climate variability will be taken into account in the project design.
Local stakeholders not	Likelihood: L-M	<ul style="list-style-type: none"> • Awareness raising about value and importance of project activities.

Identified Risks	Rating	Mitigation measures
supportive of interventions.	Impact: M	<ul style="list-style-type: none"> • Regular Stakeholder consultations. • Community participation. • Institutionalisation of the project with local and national authorities. • Project implementation at sites will consider site-specific socio-economic and ecological assessments to provide appropriate benefits to local communities.
Current administrations not supportive of interventions.	Likelihood: M Impact: M-H	<ul style="list-style-type: none"> • Strong leadership and Afghan first role set aside for involvement of administrations and local communities in project implementation.
High rate of staff turnover in steering committee, project management team and government departments.	Likelihood: M Impact: L-M	<ul style="list-style-type: none"> • Deputies and alternative representation within institutions will be recommended at project inception to ensure sufficient depth of support and continuity. • The project steering committee will make use of established government structures to capitalise on functioning systems. • Selection of key expertise and longevity will be considered in choosing steering committee members.
Poor provincial responses to leadership from NEPA.	Likelihood: L Impact: L-M	<ul style="list-style-type: none"> • Provincial authorities will be consulted from the beginning of and during the PPG phase of the project and will be requested to endorse the project. • Relevant provincial authorities will be engaged throughout the project. • Provincial councils in the relevant provinces will be actively informed and engaged in the projects in order to capitalise on this strongly functioning Afghanistan governance structure.
Lack of political support of project implementation.	Likelihood & Impact: L-M	<ul style="list-style-type: none"> • Strong leadership from national government will be ensured from the beginning of the project through detailed awareness raising and advocacy for the benefits and challenges of the project. • Regional technical advisors with well-established local connections will be assigned to prevent political interference. • Community participation will be maintained throughout the project to build ownership. • On-the-ground coordination will be undertaken in conjunction with local political structures.
Limited technical capacity to implement the project.	Likelihood & Impact: M	<ul style="list-style-type: none"> • Important partners have been identified (e.g. MADERA, FAO, UNEP Technical experts) and will continue to be identified to facilitate project implementation. • Capacity of relevant NEPA district officials will be built to implement and monitor project activities. • Collaborations and exchange will be initiated between local and international institutions. • Regular technical oversight missions will be undertaken by UNEP staff or technical advisors. • On-the-ground training will be provided to the project manager. • An appropriate salary and benefits will be offered to secure an appropriately qualified local manager who will be evaluated against specific goals and targets.
Government doesn't have sufficient funds to sustain the project.	Likelihood: M-H Impact: H	<ul style="list-style-type: none"> • An upscaling strategy will be developed and institutionalised to mainstream implementation measures. • The strategy will include a mechanism to help mobilise funds. • The awareness of decision-makers will be increased in terms of EbA practices and research outcomes will provide evidence of the benefits of project implementation to local communities and socio-economic sectors. • Ministry of Finance of Afghanistan will be closely engaged from start of the project to impress on them the importance of the project for green economic development and long term growth and further budget allocations in future.
Conflict between stakeholders regarding	Likelihood & impact: L-M	<ul style="list-style-type: none"> • A stakeholder engagement plan will be developed during the PPG phase. • Community stakeholders will be engaged with from the PPG phase to

Identified Risks	Rating	Mitigation measures
roles in the project.		ensure their buy-in into the project and will be actively engaged throughout project implementation.
Interventions are not cost effective.	Likelihood: L-M Impact: M-H	<ul style="list-style-type: none"> • Cost-effectiveness will be a core principle of the project. Senior UNEP and partner technical experts will be involved in the team, who have genuine experience in appropriate techniques, technologies and methods. • Detailed information on cost-effectiveness will be collected and made available to all stakeholders in the project.
Capacities developed are not sustained in the long-term	Likelihood: M Impact: M-H	<ul style="list-style-type: none"> • Trainings conducted will require commitment from trainees to: i) utilise their newly developed capacities and ii) pass on their training to colleagues. • An upscaling strategy will be developed and institutionalised to mainstream implementation measures. • The upscaling strategy will include the adoption of training and mentoring in government ministries. • The demonstration of the benefits of the approach will encourage continuation of uptake and utilisation of approaches.
Generated knowledge is not widely used or taken up	Likelihood: M-L Impact: M-H	<ul style="list-style-type: none"> • The demonstration of the benefits of the approach will encourage continuation of uptake and utilisation of approaches. • The upscaling strategy will include provisions to ensure the uptake of generated knowledge.
Policy change is not sustained in the water resources and forestry sectors	Likelihood: M Impact: M	<ul style="list-style-type: none"> • The upscaling strategy will include a plan for continuity in policy effectiveness.

L, Likelihood; I, Impact; L, Low; M, Medium; H, High.

A.4. Coordination

The project will build on and coordinate with the following organisations and on-going projects.

Building Environmental Resilience in Afghanistan (UNEP, 2013-2016)

UNEP's overarching programme for Afghanistan – Building Environmental Resilience in Afghanistan (BERA) – aims to build a sustainable foundation for environmental management and sustainability in Afghanistan by: i) strengthening institutions for coordinating and supporting environmental sustainability; ii) building technical capacity to enhance resilience and environmental planning across economic sector and geographic scales; and iii) providing an evidence-base to enhance Afghanistan's environmental disaster management capacity⁵³. The project has US\$ 10,390,241 funding for 2013-2016, **of which US\$ 1 million is being sought as UNEP co-financing towards this project**. This project is implemented by Post-Conflict and Disaster Management Branch (PCDMB) of UNEP's Division of Environmental Policy Implementation (DEPI). This project is being implemented in three main focal areas: i) Bamyan and Daikundi provinces in Central Highlands region – mountainous, very high poverty and low agricultural production – plain with irrigated agriculture; ii) Balkh province in the northern region; and iii) Badakshan province in the northeast region – high mountains. In addition, government led activities will be conducted in Herat, Jalalabad, Kabul and Panjshir. The outputs of this project include: i) Institutional development support provided to Afghanistan's environmental and natural resource management institutions at national and provincial levels; ii) Support provided to develop and implement environmental law and policy frameworks, and ensure alignment with MEAs; iii) Community resilience and ecosystem-based approaches to disaster risk reduction and environmental sustainability mainstreamed into national budget plans; iv) Landscape-based ecosystem restoration, protection and management programmes are mobilized; v) Climate change adaptation projects implemented and institutional capacity of the Government strengthened to address climate change impacts and related issues; vi) Understanding of conflict-NRM linkages enhanced and reflected

⁵³ Building Environmental Resilience in Afghanistan (BERA 2013-2016). Project Document. UNEP.

within national government peacebuilding and development planning; and vii) Support provided for research into challenging environment and natural resource management issues.

Kunduz Integrated Water Initiative-2 (KIWI-2) (European Union and Mercy Corps; €1.6 million) improves water distribution, provides infrastructure and improves water management practices and institutions in Kunduz and Baghlan. The project provides training to farmers and government officials from MAIL and MEW on improved water efficiency and management and has established 35 water user groups and 11 water user associations and rehabilitated 10 irrigation canals. Baghlan falls within the NPB and the Kunduz watershed. Mercy Corps supports the proposed LDCF project.

The **Panj-Amu River Basin Programme (P-ARBP)** includes upper catchment water management projects managed by Mercy Corps (Kunduz, Takhar and Baghlan), Aga Khan Foundation (Takhar, Baghlan and Bamyan), Concern (Takhar), AfghanAid (Badakhshan) and Solidarités International (Bamyan and Baghlan). Activities include: i) forming CBNRM organisations; ii) implementing practical approaches and new technologies; iii) training communities in improved water catchment management. This Programme is supportive of the proposed LDCF project.

MADERA has more than twenty years of experience working in the forestry sector in the Eastern EFC. Madera has a nursery in Kunar that produces fruit trees and conducts training. The organisation has about 400 staff in Afghanistan including 10 expatriates and one Afghan technical advisor with 20 years of experience. Madera has bases in Nangarhar, Kunar, Laghman, Wardak, Ghor and Kabul. Madera is a key partner for implementing forest restoration. Madera supports the proposed LDCF project and is well placed to advise on the implementation of reforestation in Afghanistan.

Estonia (Embassy of Estonia in Afghanistan) supports diplomatic training in Afghanistan⁵⁴. There is a Memorandum of Understanding between Talin University and Kabul University and Estonia is supportive of funding students from Afghanistan in Environmental Leadership for the proposed LDCF project.

The **International Centre for Integrated Mountain Development (ICIMOD)** is a regional intergovernmental learning and knowledge sharing centre serving eight regional member countries in the Hindu Kush Himalayas, including Afghanistan. ICIMOD has previously run a scholarship programme including 50 masters' degrees for Afghan scholars studying in Asia. ICIMOD has Memorandums of Understanding with Kabul University and various Asian Universities. ICIMOD also has experience in training ministry staff in different regions and has an office in the Forestry Department in the MAIL.

The **Department for International Development (DFID)** has various initiatives that could be coordinated with the LDCF project, notably: i) the Tawanmandi Programme; and ii) Strengthening the Agriculture Sector in Afghanistan (SASA). The Tawanmandi Programme includes a focus on strengthening women's participation in public dialogue in Afghanistan through building capacity of women in politics, leadership training and support of female politicians. SASA (2012-2015) has a budget of £12,930,000 and aims to increase agricultural productivity through the following activities: i) providing technical support to the agricultural sector; ii) supporting improved management in the MAIL; iii) providing support to provincial Departments of Agriculture, Irrigation and Livestock; and iv) building an evidence base of best agricultural practice to increase household incomes. SASA is a priority initiative for this project to build on, but baseline co-financing support was not available at the time of stakeholder consultation. DFID is supportive of this project and would like to collaborate further. UNEP and DFID already have a Memorandum of Understanding regarding the joint implementation of the project "Eco-agriculture, community resilience and environmental management in central highlands and northern Afghanistan" (2013-2016).

⁵⁴ <http://www.vm.ee/?q=en/node/4080>

The **Afghanistan Research and Evaluation Unit (AREU)** is an independent research institute based in Kabul. AREU aims to inform and influence policy and practice in Afghanistan by conducting and disseminating research that is of a high-quality and policy relevant⁵⁵.

The **Department of Forestry in the Ministry of Agriculture, Irrigation and Livestock (MAIL)** is implementing reforestation programs, including implementing direct seeding of Pistachio, (*Pistacia vera*), Chilgoza pine, (*Pinus gerardiana*), and Poplar, (*Populus negra*) through 200 community nurseries. The project has an annual budget of US\$ 6,000,000 for the 34 provinces of the country. The department is also conducting workshops to raise awareness of the importance of forest ecosystems. The department previously had centres for seed collection, packing and storage in Herat, Bamyan, Zabul, Nuristan, Razni, Takor and Guzakor for capacity building, training and research that are no longer fully operational. The reforestation activities of the Department of Forestry are limited by insufficient check dams for water storage and limited infrastructure for the distribution of water for irrigation. Activities of the department are also not optimal because of damage to the research centre.

The **Building Adaptive Capacity and Resilience to Climate Change in Afghanistan** project⁵⁶ (UNEP, 2013-2017) is a GEF LDCF project aimed at strengthening the institutional capacity to facilitate effective adaptation planning and protection of communities, ecosystems and development against climate change. Concrete, on-the-ground EbA interventions at pilot sites focus on improving water availability and water flow under changing climatic conditions. There are various outcomes of the project with which the proposed LDCF project can coordinate and build on. These include i) the increased capacity to monitor and forecast climate change-induced risks to water in Afghanistan; ii) the integration of climate change risks into policies, plans and programmes; iii) increased capacities within government bodies; and iv) best-practise information and lessons learned on practices for watershed management in Afghanistan.

The LDCF project will also coordinate with the following ongoing projects:

- Building Environmental Resilience in Afghanistan project (UNEP, 2013-2016);
- National Area-Based Development Programme Phase III (UNDP, 2009-2014);
- National Priority Programme 1: National Water and Natural Resource Development;
- Strengthening the resilience of rural livelihood options for Afghan communities in Panjshir, Balkh, Uruzgan and Herat Provinces to manage climate change-induced disaster risks (UNDP, 2013-2017)⁵⁷; and
- Reducing GHG emissions by promoting community forestry, removing barriers to sustainable biomass energy, and laying the groundwork for Afghanistan to access REDD+/CDM markets (FAO, 2012-2014).

For details on these projects and other projects please refer to Annex IV.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAs, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc:

The proposed LDCF project is consistent with the second of two priority projects identified in **Afghanistan's National Adaptation Programme of Action (NAPA)**: "Community based watershed management"⁵⁸. The proposed LDCF project aims to improve livelihoods by addressing the problem of degradation of watersheds as a result of deforestation, overgrazing and trampling. The impacts of watershed degradation are widespread and are

⁵⁵ <http://www.areu.org.af>

⁵⁶ LDCF. Project Document. GEF ID: 4227. Available from: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/9-13-12%20ID4227%20Council%20Letter%20.pdf>

⁵⁷ LDCF. Project Identification Form. GEF Agency Project ID: 5098 Available from: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/1-15-13%20ID5202%20Council%20Letter..pdf>

⁵⁸ p82 in Afghanistan: National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA). February 2009. Final Joint Report financed by the Global Environmental Facility (GEF) and implemented by the Government of the Islamic Republic of Afghanistan with technical assistance and support from the United Nations Environment Programme (UNEP). Available from: <http://www.thegef.org/gef/sites/thegef.org/files/documents/document/nca-afghanistan-fr-ap.pdf>

likely to include decreased water infiltration and groundwater recharge as well as increased soil erosion and resultant siltation of surface waters. As a result, availability and quality of fresh water is compromised and soil fertility is decreased.

The proposed LDCF project is also consistent with the **National Priority Programme 1 (NPP1): “National Water and Natural Resource Development”**⁵⁹. This programme has two components: i) Water Resources and Irrigation Development; and ii) Environmental Management and Rural Energy. On 12 February 2013, the Joint Coordination and Monitoring Board (JCMB) endorsed this programme for funding⁶⁰. The goal of NPP1 is “to ensure effective utilisation, together with proper management, of existing water and other natural resources to accelerate agricultural productivity and provide safe drinking water and a hygienic environment, with viable rural energy options for rural prosperity”⁶¹.

The proposed LDCF project is consistent with pillar 3: Infrastructure & natural resources” and pillar 8: “Agriculture & rural development” of **Afghanistan’s National Development Strategy (ANDS)**⁶². Pillar 3 includes energy and water resource management. ANDS aims to ensure sustainable development and environmental sustainability while reducing poverty, strengthening democratic processes and improving security. ANDS advocates CBNRM and the restoration and sustainable use of forests

The proposed LDCF project will reduce deforestation, poverty and food insecurity and therefore is well aligned with **Afghanistan’s Millennium Development Goals** 1: eradicate extreme poverty and hunger and 7: ensure environmental sustainability⁶³.

The proposed LDCF project is consistent with Objective 2 of the **National Forest Management Plan (NFMP)**⁶⁴ for Afghanistan, namely “Implement practical environmental conservation and management interventions designed and implemented on the basis of Community Based Natural Resource Management (CBNRM) approaches”. This includes the review and identification of most appropriate approaches based on global best-practice, institutionalisation of policies and the establishment of forestry management associations. The NFMP is consistent with ANDS which advocates CBNRM and the restoration and sustainable use of forests. The National Forest Management Plan includes a number of activities relevant to this project including the identification of the most appropriate approaches to CBNRM, developing policies, strategies and national implementation plans and establishing forestry management associations (FMAs). Furthermore, **Afghanistan’s Forest Law**⁶⁵ refers once to the mitigation of climate change as an objective of the law.

Afghanistan’s **Agricultural Development Framework** includes a Natural Resource Management Programme⁶⁶ which includes “evidence-based policy formulation and establishment of regulatory frameworks for natural resources management and conflict resolution” under sub-program A and “forest rehabilitation, protection and conservation” under sub-program B.

B.2. GEF Focal area and/or fund(s) strategies, eligibility criteria and priorities:

The proposed LDCF project meets the requirements of the Least Developed Countries Fund (LDCF). In line with

⁵⁹ See <http://mof.gov.af/en/page/3976> and Agriculture and Rural Development Cluster: National Priority Program 1. National Water and Natural Resources Development. http://www.thekabulprocess.gov.af/images/JCMBdocs/19th/ARD_NPP_1_Water%20and%20Natural%20Resources_Final_Draft.pdf

⁶⁰ <http://www.thekabulprocess.gov.af/images/press%20release/19th-JCMB/JCMB%20Press%20release.pdf>

⁶¹ http://www.thekabulprocess.gov.af/images/JCMBdocs/19th/ARD_NPP_1_Water%20and%20Natural%20Resources_Final_Draft.pdf

⁶² Afghanistan National Development Strategy. Islamic Republic of Afghanistan. Available from:

http://www.embassyofafghanistan.org/sites/default/files/publications/Afghanistan_National_Development_Strategy_eng.pdf

⁶³ http://www.undp.org.af/undp/index.php?option=com_content&view=article&id=62&Itemid=68;

Islamic Republic of Afghanistan. 2010. Afghanistan Millennium Development Goals Report 2010. Available from:

<http://www.undp.org/content/dam/undp/library/MDG/english/MDG%20Country%20Reports/Afghanistan/MDG-2010-Report-Final-Draft-25Nov2010.pdf>

⁶⁴ Available from: http://www.uco.es/idaf/index.php?option=com_docman&task=doc_download&gid=875&Itemid=13&lang=pt

⁶⁵ Islamic Republic of Afghanistan. 2009. Forest Law. Draft approved by Council of Ministers.

⁶⁶ <http://mail.gov.af/Content/Media/Documents/NRMPProgrammeDocumentReviewed1April200923920121529516553325325.pdf>

the LDCF eligibility criteria⁶⁷: Afghanistan is a LDC and has completed its NAPA. In addition the proposed LDCF project; i) is endorsed by the operational focal point; ii) has been developed to be consistent with country priorities identified in the NAPA – specifically “community based watershed management”; iii) is directly aligned with the LDCF’s strategic objectives to “reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level” and “increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level”⁶⁸; iv) has a proposal designed with stakeholder consultations; vi) includes adaptation and baseline costs; and vii) delivers adaptation benefits – specifically improved livelihoods, improved soil accretion, increased water infiltration, improved water availability and reduced impacts of flooding.

B.3. The GEF Agency’s comparative advantage for implementing this project:

The proposed LDCF project will benefit from UNEP’s substantial experience in Afghanistan. Working here since 2002, UNEP has led the environmental sector with government support and initiatives related to community-based natural resource management and climate change adaptation projects. UNEP’s unique advantage includes staff and activities that have nurtured best practices in the country. UNEP already has a strong working relationship with the National Environmental Protection Agency (NEPA) and has offices in the NEPA building to maintain strong links with government.

The proposed LDCF project is consistent with UNEP’s comparative advantage by: i) being anchored on a science based approach to planning and action; ii) using the best available knowledge; iii) providing evidence upon which investments can be based; iv) supporting policy and planning and; v) building the resilience of ecosystems for adaptation. Furthermore the project is in line with UNEP’s focus on ecosystem management. UNEP has already implemented more than 90 GEF and non-GEF adaptation projects at national, regional and global scales. This project builds on UNEP’s institutional experience in applying innovative approaches to assist local communities and national governments to adapt to climate change while considering the environment.

UNEP’s Flagship Programme: Ecosystem-based Adaptation represents a ground-breaking shift in focus in the realm of climate change adaptation, which has been commended by the Conference of the Parties to the UNFCCC (CoP). The EbA approach is multidisciplinary in nature, and involves managing ecosystems to build their resilience, and use ecosystem services to promote climate change adaptation and disaster risk management. This approach has been endorsed by IUCN and the EC, and provides a platform for engaging a broad range of stakeholders and sectors in the adaptation process. This approach, furthermore, has recently been endorsed by GEF through the Operational Guidelines on “Ecosystem-Based Approaches to Adaptation” GEF/LDCF.SCCF.13/Inf.06 October 16, 2012.

UNEP currently has country presence through the Post Conflict and Disaster Management Branch (PCDMB) with offices in Kabul and other parts of Afghanistan. The overarching programme of UNEP PCDMB in Afghanistan is the BERA programme which includes a focus on i) institutional development; ii) policy strengthening; iii) ecosystem-based approaches to disaster risk reduction; iv) landscape restoration and management; and iv) climate change adaptation. In addition, UNEP PCDMB is providing execution support for the first LDCF project in Afghanistan.

UNEP is an appropriate agency to implement this project owing to the Programme’s extensive experience and hands on experience in providing technical advice on climate change and ecosystem management, including enhancing water supplies, increasing agricultural productivity and improving livelihoods.

⁶⁷ Updated Operational Guidelines for the Least Developed Countries Fund. GEF/LDCF.SCCF.13/04. Available from: <http://www.thegef.org/gef/sites/thegef.org/files/documents/Updated%20Operational%20Guidelines%20LDCF%20Oct.16.pdf>

⁶⁸ GEF 2010. Updated results-based management framework for the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) and adaptation monitoring and assessment tool. GEF/LDCF.SCCF.9/Inf.4 Available from: <http://www.thegef.org/gef/sites/thegef.org/files/documents/LDCFSCCF-RBM-UpdateFramework-Oct%202010%20final.pdf>


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

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

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mostapha Zaher	Director General, GEF Operational Focal Point for Afghanistan.	NATIONAL ENVIRONMENTAL PROTECTION AGENCY	

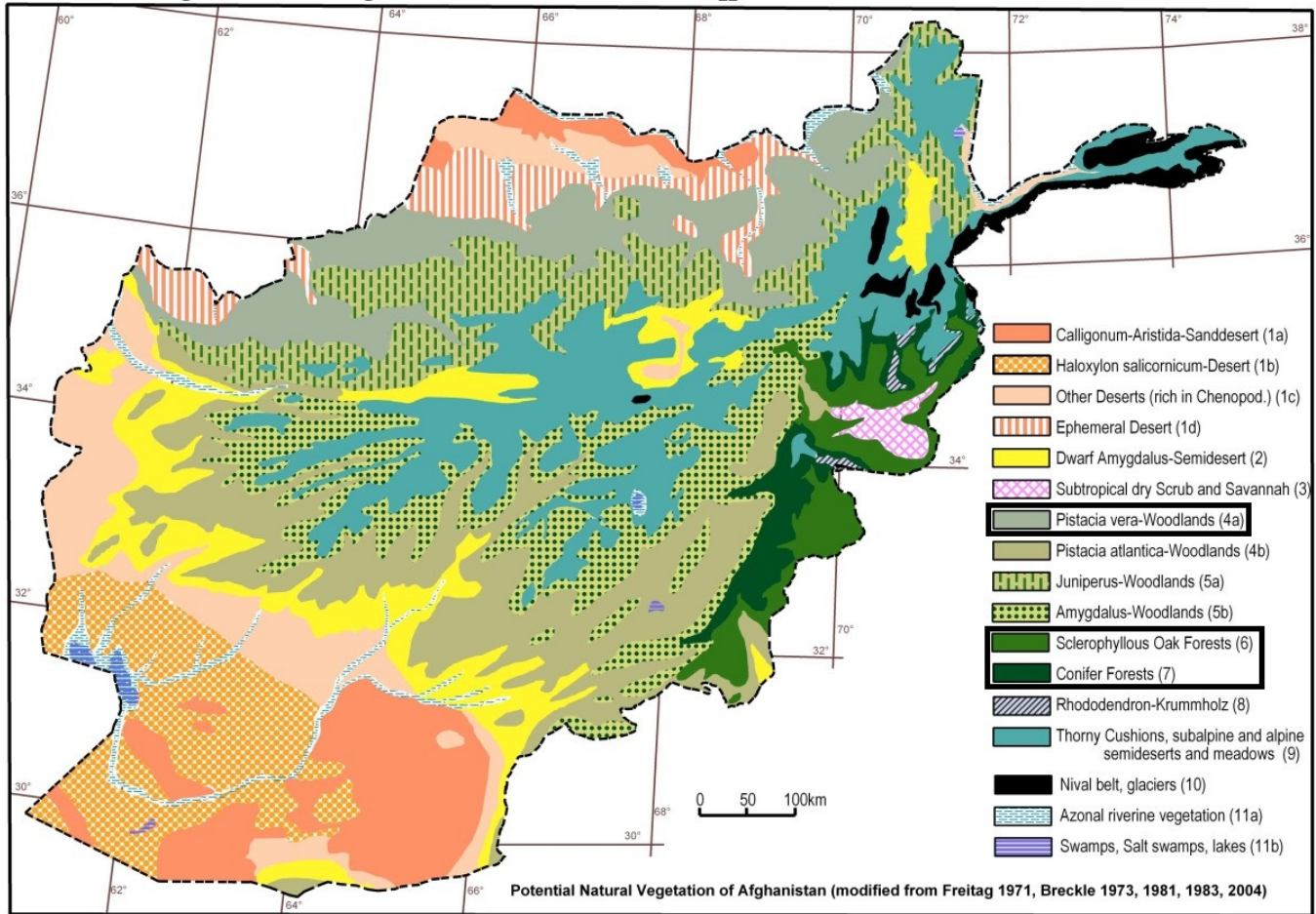
B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.

Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller, Director, GEF Coordination Office, UNEP		February 03, 2014	Ermira Fida Task Manager	254-20- 762-23113	Ermira.Fida@unep.org

Annex I.

a. Natural Vegetation of Afghanistan (Breckle & Rafiqpoor 2010)⁶⁹



b. Watersheds of Afghanistan⁷⁰



c. Provinces of Afghanistan⁷¹



⁶⁹ Breckle, S.-W. & Rafiqpoor, M.D. 2010. Field Guide Afghanistan: Flora and Vegetation. Scientia Bonnensis, Bonn. also see: http://www.ag-afghanistan.de/files/breckle_flora.pdf and <http://www.ag-afghanistan.de/files/vegetationmap.jpg>

⁷⁰ Watersheds mentioned in this document and relevant to the project.

⁷¹ Provinces mentioned in this document and relevant to the project.

Annex II.

Climate change vulnerabilities of the baseline projects versus the adaptation alternative of the LDCF project in Afghanistan.

Baseline projects • Goals and activities	Climate change hazards affecting the baseline projects	Impacts to the baseline projects and targeted populations as a result of climate change	Ecosystem services targeted by the LDCF project	Adaptation measures supported by the LDCF project	Expected LDCF project benefits
<p>Project targeted vulnerable sites and communities: Local communities living in upper catchment areas of the Eastern Forest Complex and Northern Pistachio Belt of Afghanistan that are vulnerable to increased temperatures, reduced rainfall and an increased incidence of extreme weather events as a consequence of climate change.</p>					
<p>Irrigation and Watershed Management Project (IWMP) in Balkh province; Balkhab watershed.</p> <p>Increased agricultural productivity through:</p> <ul style="list-style-type: none"> strengthening governance and enabling environment; improved water supply management; and improved water demand management. 	<p>Increased intensity and frequency of flooding as a result of heavy rains.</p> <p>More frequent and severe droughts.</p>	<ul style="list-style-type: none"> Increased temperature and water stress on crops. Increased demand for irrigation water. Reduced water available for irrigation. Reduced soil accretion. Damage to irrigation infrastructure. Reduced agricultural productivity. 	<ul style="list-style-type: none"> Infiltration of water into topsoil. Soil accretion. Maintenance of water flow. Buffering against extreme weather events. Maintenance of soil fertility. 	<ul style="list-style-type: none"> Strengthening policies and strategies that promote the restoration of forests using an EbA approach that maintain ecosystem services including water flow, soil fertility and buffering against extreme weather events. Tailoring the restoration of forests using an EbA approach that effectively generate ecosystem services thereby increasing available water, maintaining soil fertility and buffering against extreme weather events. Building technical capacity to plan and implement restoration of forests using an EbA approach that effectively maintain ecosystem services including water flow and soil fertility. Increasing the evidence base for the restoration of forests using an EbA approach that maintain ecosystem services including water flow and soil fertility. 	<ul style="list-style-type: none"> Local stakeholders aware of climate change risks and their impacts to water resources. Climate change risks incorporated into water supply and demand planning and management. Reduced damage to irrigation infrastructure as a result of increased canopy cover, enhanced water infiltration and reduced impacts of flooding. Increased availability of water as a consequence of increased water infiltration. Increased agricultural productivity as a consequence of reduced soil erosion and increased topsoil available for agriculture. Climate change integrated into water management policy. Best-practice information available for maximising benefits of forest restoration using an EbA approach for water supply and agricultural productivity.
<p>The Programme for Improvement of Irrigation Systems in Kabul, Bamyan and Kapisa Provinces of Afghanistan</p> <p>Increased</p>	<p>Increased intensity and frequency of flooding as a result of heavy rains.</p> <p>More frequent and severe droughts.</p>	<ul style="list-style-type: none"> Increased temperature and water stress on crops. Increased demand for irrigation water. Reduced water 	<ul style="list-style-type: none"> Infiltration of water into topsoil. Soil accretion. Maintenance of water flow. Buffering against extreme 	<ul style="list-style-type: none"> Strengthening policies and strategies that promote the restoration of forests using an EbA approach that maintain ecosystem services including water flow and soil fertility. Tailoring the restoration of forests 	<ul style="list-style-type: none"> Local stakeholders aware of climate change risks and their impacts to water resources. Climate change risks incorporated into water supply

Baseline projects • Goals and activities	Climate change hazards affecting the baseline projects	Impacts to the baseline projects and targeted populations as a result of climate change	Ecosystem services targeted by the LDCF project	Adaptation measures supported by the LDCF project	Expected LDCF project benefits
<p>agricultural productivity through</p> <ul style="list-style-type: none"> • irrigation canal rehabilitation; • water conservation and utilisation structures, and • technical and managerial capacity building for Ministry of Energy and Water and project staff. 		<p>available for irrigation.</p> <ul style="list-style-type: none"> • Reduced soil accretion. • Damage to irrigation infrastructure. • Reduced agricultural productivity. 	<p>weather events.</p> <ul style="list-style-type: none"> • Maintenance of soil fertility. 	<p>using an EbA approach that effectively generate ecosystem services thereby increasing available water and maintaining soil fertility.</p> <ul style="list-style-type: none"> • Building technical capacity to plan and implement restoration of forests using an EbA approach that effectively maintain ecosystem services including water flow and soil fertility. • Increasing the evidence base for the restoration of forests using an EbA approach that maintain ecosystem services including water flow and soil fertility. 	<p>and demand planning and management.</p> <ul style="list-style-type: none"> • Reduced damage to irrigation infrastructure . • Increased availability of water. • Increased agricultural productivity as a consequence of reduced soil erosion and increased topsoil available for agriculture. • Climate change considered in water management policy. • Best-practice information available for maximising benefits of forest restoration using an EbA approach for water supply and agricultural productivity.
<p>National Solidarity Programme</p> <ul style="list-style-type: none"> • Increasing local governance and management capacity of Community Development Councils to plan, manage and monitor development projects e.g. building roads and bridges, and the provision of power, sanitation and irrigation. 	<p>Increased intensity and frequency of flooding as a result of heavy rains.</p> <p>More frequent and severe droughts.</p>	<ul style="list-style-type: none"> • Damage to infrastructure such as roads, bridges and irrigation infrastructure reducing the sustainability of development projects. • Reduced water available for hydro-electric power generation, domestic use and sanitation. 	<ul style="list-style-type: none"> • Infiltration of water into topsoil. • Maintenance of water flow. • Buffering against extreme weather events. 	<ul style="list-style-type: none"> • Considering climate change in safeguard processes when planning development projects. • Strengthening policies and strategies that promote the restoration of forests using an EbA approach that maintain ecosystem services including regulating water flow and buffering against extreme weather events. • Tailoring the restoration of forests using an EbA approach that effectively generate ecosystem services thereby increasing available water and buffering against extreme weather events. • Building technical capacity to plan and implement restoration of forests using an EbA approach that effectively maintain ecosystem services including regulating water flow and buffering against extreme weather events. • Increasing the evidence base for the restoration of forests using an EbA approach that maintain ecosystem services including regulating water flow and buffering against extreme weather events. 	<ul style="list-style-type: none"> • Local stakeholders aware of climate change risks and their impacts to infrastructure including roads, bridges, irrigation and sanitation, • Climate change risks incorporated planning of development projects especially in safeguard processes. • Reduced damage to infrastructure as a result of reduced impacts of flooding. • Increased availability of water for domestic use, sanitation and irrigation. • Best-practice information available for maximising benefits of forest restoration using an EbA approach to build climate resilient infrastructure development.

Annex III.

Vulnerability of provinces in Afghanistan to climate change and security threats⁷².

Provinces	Flood threat	Drought threat	Poverty	Security threat
Badakhshan	High	Medium	Medium	Low
Badghis	Medium	High	Medium	Medium
Baghlan	Medium	Medium	Medium	Medium
Balkh	High	High	Medium	Medium
Bamyan	Medium	High	High	Low
Daykundi	High	High	High	Low
Farah	Medium	High	Medium	High
Faryab	High	High	Medium	Medium
Ghazni	High	Medium	High	High
Ghor	High	High	High	High
Helmand	Medium	High	Low	High
Herat	High	High	Medium	Medium
Jawzjan	High	High	Medium	Low
Kabul	Low	High	Low	Low
Kandahar	Medium	High	Low	High
Kapisa	Low	Medium	Low	Medium
Khost	Medium	High	High	High
Kunar	Medium	Medium	High	High
Kunduz	High	Medium	Medium	Medium
Laghman	Medium	Medium	High	High
Logar	Low	Medium	Low	High
Nangarhar	Medium	Medium	High	High
Nimroz	Medium	High	Low	High
Nuristan	Low	High	High	High
Paktika	Medium	Medium	High	High
Paktiya	Medium	High	High	High
Panjshir	Low	Medium	Low	Low
Parwan	Low	Medium	Low	Low
Samangan	High	Medium	Medium	Low
Sar-e Pul	Medium	High	Medium	Medium
Takhar	Medium	Medium	Medium	Medium
Urozgan	High	High	Low	High
Wardak	Medium	Medium	Low	High
Zabul	Medium	High	Low	High

⁷² More detailed information is available:

Flood risk:

<http://reliefweb.int/sites/reliefweb.int/files/resources/Afghanistan%20Flood%20risk%20est%20for%20the%20period%202023032013%20to%2029032013.pdf>

Drought: <http://afg.humanitarianresponse.info/sites/default/files/Drought%20Overview%20%28Crop%20Failure%202011%20-%20Drought%20Impact%20Classification%29.pdf>

Annex IV.

Additional projects to coordinate with:

National Area-Based Development Programme Phase III (UNDP, 2009-2014)

The National Area-Based Development Programme (NABDP) was initiated in 2002 in collaboration with the Ministry of Rural Rehabilitation and Development (MRRD). The third phase of NABDP focuses on i) local institutional building; ii) developing rural infrastructure; iii) natural resource management; iv) rural energy development; and v) rural economic development⁷³. The natural resource management component of the project focuses on community-based resource management to strengthen livelihoods and the rural energy component focuses on renewable energy including micro-hydro power and biogas.

National Priority Programme 1: National Water and Natural Resource Development

The project is relevant to National Priority Programme 1 (NPP1): “National Water and Natural Resource Development”⁷⁴. This programme has two components: i) Water Resources and Irrigation Development; and ii) Environmental Management and Rural Energy. On 12 February 2013, the Joint Coordination and Monitoring Board (JCMB) endorsed this programme for funding⁷⁵. The goal of NPP1 is “to ensure effective utilisation, together with proper management, of existing water and other natural resources to accelerate agricultural productivity and provide safe drinking water and a hygienic environment, with viable rural energy options for rural prosperity”⁷⁶.

Strengthening the resilience of rural livelihood options for Afghan communities in Panjshir, Balkh, Uruzgan and Herat Provinces to manage climate change-induced disaster risks (UNDP, 2013-2017)⁷⁷

The outputs of this project include: i) Climate change risk and variability integrated into local planning and budgeting processes; ii) Rural income and livelihood opportunities for vulnerable communities enhanced and diversified; and iii) Productive infrastructure improvements. This project has US\$ 9 million grant funding and US\$ 30.5 million co-financing.

Reducing GHG emissions by promoting community forestry, removing barriers to sustainable biomass energy, and laying the groundwork for Afghanistan to access REDD+/CDM markets (FAO, 2012-2014)

The outcomes of this project are: i) Community resilience increased and current biomass resources supplemented; ii) National knowledge and capacity enhanced for implementing community-based natural resource management and sustainable biomass energy systems; iii) Local sustainable biomass energy system technologies piloted and rolled out in target areas; and iv) Community-based natural resource management, sustainable biomass energy systems included in national policy, and frameworks established for accessing CDM/REDD+ funding.

⁷³ <http://www.undp.org.af/Projects/NABDP/NABDPIIIProDoc.pdf> and <http://www.undp.org.af/Projects/Report2011/nabdp/Project-NABDP-May2011-factsheet.pdf>

⁷⁴ See <http://mof.gov.af/en/page/3976> and Agriculture and Rural Development Cluster: National Priority Program 1. National Water and Natural Resources Development. http://www.thekabulprocess.gov.af/images/JCMBdocs/19th/ARD_NPP_1_Water%20and%20Natural%20Resources_Final_Draft.pdf

⁷⁵ <http://www.thekabulprocess.gov.af/images/press%20release/19th-JCMB/JCMB%20Press%20release.pdf>

⁷⁶ http://www.thekabulprocess.gov.af/images/JCMBdocs/19th/ARD_NPP_1_Water%20and%20Natural%20Resources_Final_Draft.pdf

⁷⁷ LDCF. Project Identification Form. GEF Agency Project ID: 5098 Available from:

<http://www.thegef.org/gef/sites/thegef.org/files/documents/document/1-15-13%20ID5202%20Council%20Letter..pdf>