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BASELINE COUNTRY CONTEXT – AFGHANISTAN

Global Environment Facility (GEF)

Small Grant Program (SGP)

Operation Phase Five (OP5)

Country overview document

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Table of Contents

1. <i>Geography</i>	5
2. <i>Socio-Economic Context</i>	5
3. <i>Poverty Status in Afghanistan</i>	6
4. <i>Environmental Context</i>	6
4.1. <i>Agriculture</i>	7
4.2. <i>Forests</i>	7
4.3. <i>Rangelands</i>	7
4.4. <i>Protected areas</i>	8
4.5. <i>Wildlife</i>	8
4.6. <i>Water and Wetlands</i>	8
4.7. <i>Urban Wastelands</i>	8
4.8. <i>Industrial Poisons</i>	8
5. <i>Country Baseline by GEF-6 Focal Areas:</i>	9
5.1. <i>SGP OP6 Component 1: Community Landscape / Seascape Conservation</i>	9
5.1.1. <i>Biodiversity</i>	9
5.1.2. <i>Ecosystems</i>	11
5.1.3. <i>Protected Areas</i>	11
5.1.4. <i>Afghanistan’s River Basins</i>	13
5.2. <i>SGP-OP6 Component 2: Climate Smart Innovative Agro-ecology</i>	14
5.2.1. <i>Agriculture</i>	14
5.2.2. <i>Rangelands</i>	15
5.2.3. <i>Forests</i>	16
5.3. <i>Component 3: Low Carbon Energy Access Co-benefits</i>	17
5.3.1. <i>Climate Change</i>	17
5.3.2. <i>Climate Smart Technologies</i>	18
5.4. <i>SGP OP6 Component 4: Local to Global Chemical Management Coalitions</i>	20
5.4.1. <i>Harmful Chemicals and POPs</i>	20
5.5. <i>Component 5: CSO-Government Policy and Planning Dialogue plate forms</i>	21
5.6. <i>Component 6: Promote Social Inclusion</i>	22
5.6.1. <i>Gender</i>	22
5.6.2. <i>Indigenous people</i>	23
5.6.3. <i>Youth</i>	23
5.6.4. <i>Other Vulnerable Groups</i>	24
5.7. <i>Component 7: Global reach for Citizen Practice Based Knowledge program</i>	25

ACRONYMS:

AIMS	Afghanistan Information Management System
ANDS	Afghanistan National Development Strategy
ANREP	Afghanistan National Renewable Energy Policy
AWEC	Afghanistan Wildlife Executive Committee
CEC	Committee for Environmental Coordination
CITES	Convention on International Trade in Endangered Species
COP	Conference of Parties
CSO	Central Statistics Organization
CTCN	Climate Technology Centre and Network
ERDA	Energy for Rural Development Afghanistan
GDP	Gross Domestic Products
GEF	Global Environmental Fund
GHG	Green House Gases
GIROA	Government Islamic Republic of Afghanistan
IUCN	International Union for Conservation of Nature
LDCF	Least Developed Countries Fund
MAIL	Ministry of Agriculture, Irrigation and Livestock
MRRD	Ministry of Rural Rehabilitation and Development
NBSAP	National Biodiversity Strategy and Action Plan
NADF	National Agricultural Development Framework
NCSA	National Capacity Needs Self-Assessment
NEAP	National Environmental Action Plan
NEAC	National Environmental Advisory Council
NEPA	National Environmental Protection Agency
NSP	National Solidarity Program
RCP	Recent Climate Projections
SHP	Smaller Hydropower Plants
SNAP	Strategic National Action Plan for Disaster Risk Reduction
UNEPWCMC	UNEP World Conservation Monitoring Centre
UNCBD	United Nations Convention on Biological Diversity
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund for Nature

National Steering Committee's (NSC's) Approval:

This Baseline Country Context-Afghanistan document comprises countrywide baseline information and foundation for future activities under the SGP program. The report covers, country level socio-economic context, various environmental challenges in agriculture, forest, rangelands, protected areas, wildlife, waters and wetlands sector. As a base for 4 strategic initiatives, under SGP-OP6, the countrywide biodiversity, ecosystem, protected areas and Afghanistan river basin have been explained comprehensively. The document explain the current agriculture context, rangelands and forestry, and climate change condition. The report also comprises nationwide information on cross cutting issues of social inclusion, gender, indigenous people and youths and other vulnerable groups mostly exposed to the environmental threats. The current environmental capacity and institutional development information have been incorporated into the report. A copy of this report disseminated to the NSC members on 2nd February 2016, and received their approval.

BASELINE COUNTRY CONTEXT- AFGHANISTAN

1. Geography

Afghanistan is a hauntingly beautiful land of stark contrasts, majestic mountains, and punishing deserts. It is a challenge to cross today, just as it was thousands of years ago. Completely landlocked, Afghanistan lies about 482 kilometers (300 mi) north of the Arabian Sea, which abuts Pakistan. Shaped like an irregular leaf with the Wakhan Corridor as its stem, Afghanistan is about 652,290 square kilometers. It extends about 1300 kilometers from southwest to northeast, and about 600 kilometers from northwest to southeast. Afghanistan is bordered to the west by Iran, to the north by Turkmenistan, Uzbekistan and Tajikistan, to the east by China, and to the southeast by Pakistan¹. Relationships with neighbors and the broader global community largely determine the current and future use of national and trans-boundary natural resources, as well as the effectiveness of any response to common environmental challenges and hazards.

Mountains dominate the geography of Afghanistan. The Hindu Kush sweeps down from the northeast through the central regions of the country and flattens out into the deserts of the southwest plateau. On either side of these mountains, to the North, and to the East, the land is more fertile, and it is in these areas that most agricultural activity takes place. This mountain range has also divided Afghanistan in three very different geographic regions known as (a) the Central Highlands, (b) the Northern Plains, and (c) the Southwestern Plateau. The altitude, climate, and soil condition in Afghanistan varies greatly.

The identification and delimitation of agro-ecological zones in Afghanistan is rather difficult. The country has a very varied geography, with thousands of microclimates and micro-watersheds, and frequently conditions change from one valley to the next, within a fairly short distance. Land atlas shows that out of 652,290 square kilometers total land cover of the country 5.53% is irrigated agriculture land, 5.58% rain-fed agricultural land, 0.53% fruit and vineyards, 46.84% is rangeland, 27.16% barren land, 7.4% sand cover and 3% is water body, marshland and permanent snow.²

Afghanistan has a dry, continental climate. The amplitude of temperature between day and night is very large. The variety of terrain elevation results in different climatic types. Areas, such as northeastern and central Afghanistan, lying over 2400 m above sea level, have long winters (over six months). At an altitude of 1300 – 2400 meter above sea level the climate is temperate, four seasons are clearly marked, and annual precipitation up to 400 millimeter. Hot summers and annual precipitation below 200 millimeter characterize areas at an altitude between 900 and 1300 meter. In areas at an altitude below 900 meter annual precipitation is less than 100 millimeter and the climate is dry and hot. Some small portions in Easter part of the country are influenced by southeastern monsoons and the climate is sub-tropical.³

2. Socio-Economic Context

Afghanistan is one of the poorest countries in the world. A third of the population lives on less than 60penny per day. Aid has supported much of its economic progress since 2001 and the Afghan Government remains heavily aid dependent. The Afghan economy is largely dependent on agriculture and rural trade; around 85 percent of the population is entirely reliant on income from agriculture and livestock. This is despite the fact that only 12 percent of the country's land is arable and only half of that is currently under cultivation.

Afghanistan's per capita gross domestic product (GDP) in 2002 was US\$190 for a then population of about 22 million. Despite some economic improvements since 2002, Afghanistan remains one of the poorest countries in the world, with about 70 percent of the population living in extreme poverty. Current

¹ Nancy Hatch Dupree and Thomas E. Gouttierre, "Chapter 2: The Society and Environment," in *Afghanistan: A Country Study*, ed. Peter R. Blood (Washington, DC: GPO for the Library of Congress, 1997), <http://lcweb2.loc.gov/frd/cs/aftoc.html>

² Land Cover Atlas of the Islamic Republic of Afghanistan is the latest document that is prepared by FAO 2012

³ AIMS (Afghanistan Information Management System)

GDP stands at US\$7.5 billion, rising 12 percent from US\$6.9 billion in 2006. This past year, over 50 percent of GDP was derived from opium production. High unemployment, shortages of water, and lack of healthcare, electricity, and housing are a few of the challenges faced by Afghan people. About 75 percent of the population lacks access to safe drinking water. Additionally, access to electricity is only available to 10 percent of the population.⁴

Farming is the economic backbone of Afghan society, and 40 percent of the labor force is engaged in farming. Around 38 percent of all households own any irrigated farmland and the corresponding figures for households owning rain-fed land and garden plots are, respectively, 17 and 13 percent. Some 34.4 percent of the urban population is food-insecure, compared to 29.1 percent of the rural population and 25.6 percent of the Kuchi population.⁵ Civil society has been traditionally weak, but has experienced enormous growth since the fall of the Taliban.

3. Poverty Status in Afghanistan

According to the latest Afghanistan Poverty Status Update Report, which was jointly produced by the Government of Afghanistan's Ministry of Economy and the World Bank and uses the National Risk and Vulnerability Assessment (NRVA) data, 36 percent of Afghans remained poor in 2007 and in 2012, meaning that more than one in three Afghans did not have enough money to buy food or cover their basic needs. This is despite an annual GDP growth rate of 6.9 percent during that same period. The report, which analyzes the factors behind Afghanistan's poverty rate and provides a roadmap for poverty reduction, also finds that patterns of growth in Afghanistan widened the gap between the rich and the poor. The poorest 20 percent of the population experienced a 2 percent decline in real per capita expenditure while the richest 20 percent saw a 9 percent increase. Widening inequalities were further reflected in an increase of the Gini index, which moved from 29.7 percent in 2007 to 31.6 percent in 2011.

Additional findings include that poverty in Afghanistan is concentrated in rural areas. Four out of five poor people live in rural areas. The East, Northeast, and West-Central regions—where almost half of the inhabitants are poor have the lowest per capita consumption and highest likelihood of poverty. Lack of education, livelihoods and access to basic services contribute to Afghan poverty. 75.6 percent of poor people are illiterate. Poor people face higher unemployment (8%) and underemployment (41%) and are more likely to work in agriculture (43.6%) or in the informal sector (84.3%). Poor people are also less likely to have access to electricity (63.8 %), safe drinking water (40.3%), and sanitation (2.8%).

Poor people are more vulnerable but less equipped to cope with natural and manmade shocks. 84 percent of Afghan households experienced at least one economic shock in 2011-12 and 53 percent suffered from three or more shocks.

International spending helped grow the economy, but it hasn't equally benefited all sectors or the poorest. International spending created jobs in the public, health and education services sectors and benefited high-conflict areas the most. It didn't raise productivity in the agriculture sector, which employs most of Afghanistan's poor people. International aid-supported public investment helped improve human development outcomes. Youth literacy improved by 8 percent, primary school enrolment grew by 6 percent and access to electricity, improved sanitation and safe drinking water grew by approximately 14 percent. To reduce poverty, Afghanistan must focus on strengthening agriculture, investing in human development and managing and mitigating risks that increase poor people vulnerability.⁶

4. Environmental Context⁷

⁴ Child Labor in Afghanistan A Four-Province Study in Kabul, Kandahar, Nangarhar, and Balkh, US Department of Labor, Bureau of International Labor Affairs, Office of Child Labor, Force Labor and Human Trafficking

⁵ National Risk and Vulnerability Assessment 2011 – 2012 (Afghanistan Living Conditions Survey), Central Statistic Organization (CSO)

⁶ The World Bank & Ministry of Economy of Islamic Republic of Afghanistan, Oct. 2015, (Afghanistan Poverty Status Update)

⁷ UNEP in Afghanistan – 2009, Laying the Foundation for Sustainable Development, January 2009

Today, mostly as a result of the last 30 years of political chaos and conflict, Afghanistan is in a state of severe environmental crisis. Even though some improvements and regulatory advances have been made after the fall of the Taliban such as the creation of the National Environmental Agency (NEPA) in 2005, and the passing of Afghanistan's first Environmental Law in 2007, a lot more needs to be done. The major environmental issues today for Afghanistan are as follows:

- 4.1. **Agriculture:** Three million hectares of farmland are irrigated. An addition 3.5 million hectares are dependent on rainfall. More than half a million farmers are involved in horticultural production with a total export value of USD 127 million. In the mid-1970s, Afghanistan was almost self-sufficient in its food supply. At that time, nearly 3.3 million hectares were cultivated using various methods of irrigation, representing approximately 85 percent of the country's total crop production. The cultivated area dropped to approximately two million hectares, due to conflict, drought, floods, and decrepit irrigation systems. The total area under irrigation is increasing again, but remains vulnerable to water shortages. Nevertheless, agriculture still accounts for over half of the country's GDP, with more than 80 percent of the population engaged in this sector, including livestock raising. According to the International Monetary Fund, however, the 'informal' agricultural sector – devoted to opium production – earns about 40-50 percent of GDP, although as an illegal activity it does not register in official economic calculations.
- 4.2. **Forests:** For most of the region's history, deciduous and evergreen forests covered five percent of Afghanistan's current land area, including one million hectares of oak and two million hectares of pine and cedar growing mostly in the eastern part of the country. Open woodland dominated by pistachios, almonds and junipers occupied a full third of the country. Today most of the original forests have disappeared, destroyed during the decades of conflict. Forests now occupy less than 1.0-1.3 million hectares, or just 2% of the county's area, adding to the burden on the large portion of the Afghan population that depends on timber for construction and fuel for cooking and heating, and on the general economy which has lost a potential resource. For example, in the 1970s, the Badghis and Takhar provinces of northern Afghanistan were covered with productive pistachio forests and earned substantial revenue from the sale of nuts. These forests were almost completely lost in just three decades, owing to the breakdown of the community forest warden scheme, stockpiling of fuel wood during uncertain political conditions, and the conflict itself. In addition to providing for basic cooking, heating and construction needs, forests today are depleted by illegal logging. As many as 200 timber trucks a day – representing the loss of up to 200 hectares of forest – have been observed on the main road in Kunar. Much of this is illegally exported to neighboring country (Pakistan). Local communities have lost control of their resources in these eastern provinces, where warlords, 'timber barons' and foreign traders control illegal and highly lucrative logging operations. Poor forest management, lack of incentives for reforestation, lack of community involvement and awareness, and agricultural and urban encroachments on forestland also contribute to the severe decline of forest cover in Afghanistan. If deforestation continues at its present rate, all forest will have disappeared in another three decades. The data indicates that Conifer forests in the provinces of Nangarhar, Kunar and Nuristan were reduced by over a half between 1978 and 2002; and it is estimated that 50% of the juniper cover in the Subzac pass has been lost in the last 30 years.
- 4.3. **Rangelands:** The rangelands of Afghanistan occupy about 30 million hectares, representing roughly 45% of the country's territory. The rangelands of Afghanistan provide habitat and forage for nearly 35 million livestock as well as wild animals, contributing to the economy through the production of livestock products such as meat, carpets, wool, and medicinal plants. Over the last few decades, significant changes in vegetation cover and productivity have occurred, matching recent changes in climatic patterns and the length of the vegetative season. This has forced farmers to shift grazing from traditional to higher ranges, increasing pressure on alpine ecosystems. With farmers competing for the use of the most productive areas, vast expanses of Afghanistan's once highly productive grasslands have been converted into grazing-resistant cushion shrub lands. Soil erosion has increased, degraded ecosystems have multiplied,

- 4.4. **Protected areas:** Several areas in the east-center of Afghanistan have great potential as protected areas, offering habitat for wildlife and sanctuaries for migratory and breeding birds. They could also provide future tourist revenue, although security concerns and the sheer isolation of the sites have delayed their formal recognition.
- 4.5. **Wildlife:** Afghanistan's wildlife heritage is under threat. Habitats for animals and plants are disappearing, and hunting pressure – though reduced – still takes a toll. Flamingos are no longer breeding successfully, and Siberian cranes have not been seen for twenty years. The Caspian tiger is considered extinct, and cheetahs have not been seen here for decades. Other mammals such as the goat-like markhor are considered endemic and live only in Afghanistan and adjacent west Himalayan territories. The prospects for the wildlife of the remote Wakhan Corridor are more encouraging. The area escaped much of the recent conflict and is free of land mines. It is grazed by the yurt-dwelling Kyrgyz and Wakhi herders, and the local Wakhi have responded positively to recent calls by the Afghan Government to hand in arms and stop hunting. Moreover, the area borders Tajikistan, Pakistan and China, giving additional opportunity to migrate and find refuge to the region's snow leopards, Marco Polo sheep, wolves, brown bear and Asian ibex.
- 4.6. **Water and Wetlands:** Afghanistan is naturally arid, dominated by desert or semi-desert. Virtually the entire supply of water for irrigation, drinking, and maintenance of wetland ecosystems is carried by rivers. Some 85-90% of the country's water is taken from surface sources, and 10-15% from below the ground. Most of these are fed by rainfall and the seasonal melting of snow and permanent ice fields in Afghanistan's 'water towers', the Hindu Kush Mountains. More than 80% of Afghanistan's water resources originate in the Hindu Kush Mountains at altitudes above 2,000 meter. In the past 50 years, drought and rising air temperatures have shrunk the larger glaciers in the Pamir and Hindu Kush by 30%, while some smaller ones have vanished altogether. The supply is intermittent, however, leaving Afghans in a perpetual state of water insecurity. A series of recent droughts have lowered water tables and dried up rivers and wetlands. Presently over 2.5 million people in Afghanistan are affected by drought and water shortage. Poor water management has threatened supplies for households, for agriculture. Poor sanitation and waste management also threaten Afghanistan's water supplies. Kabul's dumpsite is poorly isolated from groundwater, which poses significant risks for contamination of vital aquifers. The dumpsites of several large urban centers – such as Kandahar and Herat – are located in areas prone to natural disasters, places where rainfall or flash flooding could easily. Approximately 75% of Afghanistan is vulnerable to desertification.
- 4.7. **Urban Wastelands:** In 2002, the quality of life in urban centers was on a downward spiral. War and the poverty and displacement it caused drove many people from the countryside into the cities. Others who had left the country as refugees began returning. This explosive growth of urban populations strained the already inadequate solid waste disposal facilities, while unregulated vehicle traffic and industrial development increased pollution of both water and air in cities. Medical wastes from hospitals were another serious health threat. In some cases, even human organs and syringes were discarded in accessible places, risking the spread of viral and bacterial diseases. Today there are still no proper landfills in many cities, and none of the dumpsites are designed to prevent groundwater contamination or toxic air pollution from burning waste. Many dumpsites are located upstream of the cities, where heavy rains could wash the wastes back into populated areas. One such dumpsite is close to a well field used to draw drinking water for Kabul.
- 4.8. **Industrial Poisons** There was virtually no management of hazardous chemicals in Afghanistan following the conflict. Nor was there any monitoring of pesticide residues in humans or in the environment. Today water resources are still being polluted due to poor storage of these chemicals as well as indiscriminate disposal of untreated industrial effluents. In some aquifers the concentration of hazardous chemicals exceeds hygienic standards, and in parts of Kabul city

pollutants make the water unsafe for consumption. Pesticides such as DDT and benzene hex chloride were used intensively for locust control in the northern agricultural regions of the country for several decades. Lack of proper management of these persistent organic chemicals represents a potential threat to the health of humans and wildlife in these regions.

5. Country Baseline by GEF-6 Focal Areas:

5.1. SGP OP6 Component 1: Community Landscape / Seascape Conservation

GEF-6: corporate results by focal area: Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society. SGP project will improve conservations and sustainable use and management of important terrestrial ecosystems through implementation of community based landscape/seascape approaches.

5.1.1. Biodiversity: Biodiversity has been termed “the wealth of the poor” (World Resources Institute 2005) because the poor tend to be rural people living close to the land and dependent on it for the goods and services provided by biodiversity. The primary value of biodiversity in Afghanistan lies in the tangible goods and services that biodiversity provides to people through functioning ecosystems. The most obvious of these are the direct uses of the components of biodiversity such as traditional crops, fruits, grazing, fuel, timber, harvesting, fishing, and hunting. Less obvious are the indirect “ecosystem services” provided by biodiversity. These include soil fertility, erosion control, crop pollination, and climatic stability, to name a few.⁸

Afghanistan is not a global biodiversity “hotspot,” Groombridge and Jenkins (1994) calculated a comparative index of biodiversity for all countries over 5,000 km² based on the number of mammals, birds, reptiles, amphibians, vascular plants and endemic species. The index is scaled to account for the different sizes of countries. A score of “0” is the median with half the countries having a higher biodiversity index and half a lower one. Afghanistan’s index is -0.296, indicating its biodiversity index is lower than the median. Indices of neighboring Pakistan (-0.121) and Iran (-0.194) are higher, but still below the median. Please refer to Table-1.

Table -1: Number of Common Species Known to Exist in Afghanistan

Species	Known Species	Uncertain Species	Total Species	Estimate
Mammals	137	13	150	
Birds	428	87	515	
Reptiles	92	20	112	
Amphibians	6	2	8	
Fish	101	38	139	
Insects				10s of 1,000s
Vascular Plants				3,500 – 4,000
Lichens	208	?		
Fungi		1982		
Cereal Crops				
Grapes	72-76			
Sheep	9			
Cattles	8			
Goats	7			
Horses	6			

Source: UNDP-NEPA (2009)

Analysis of species records in UNEP-NEPA (2009) indicates 137-150 species of mammals, 428-515 birds (including migratory species), 92-112 reptiles, 6-8 amphibians, 101-139 fish, 245 butterflies, and 3,500-4,000 vascular plant species native to Afghanistan. The range in numbers results from uncertainty in taxonomy and the validity of some records. Only seven vertebrate species (mammals, none; birds, Afghan Snow Finch (*Montifringilla Theresa*); reptiles, Leviton’s Gecko (*Asiocolotes Levitoni*), *Cyrtopodion Voraginosus*, *Eremias Aria*, Point-snouted Racerunner (*Eremias Afghanistanica*); Amphibians, Paghman Mountain Salamander (*Batrachuperus Mustersi*); Fish,

⁸ GIROA, Fifth National Report 6to the United Nations Convention on Biological Diversity, by (NEPA), March 2014

Triplophysa Farwelli) are known to be endemic to Afghanistan, but estimates for endemic plant species range as high as 30%.⁹

The Argali or Marco Polo sheep (*Ovis Ammon Poli*) is a vulnerable species (IUCN 2013) threatened by hunters for their highly prized horns and habitat loss. Siberian Ibex (*Capra Sibirica*) populations in the Ajar valley have declined from approximately 5,000 animals in the late 1970s to less than 250 today. Nine local breeds of sheep are found in Afghanistan, along with eight breeds of cattle, and seven of goats.

Mention should also be made of Afghanistan's globally significant genetic resources. Almost 5,000 years ago common, or bread, wheat (*Triticum Aestivum*) was first cultivated on the territory of contemporary Afghanistan. Moreover, experts believe that Afghanistan harbors more native varieties of wheat than anywhere else in the world. Unfortunately many varieties of cultivated species were lost during the period of conflict and the seed collections of many wild ancestors, that might have been resistant to pests and drought extremes, were destroyed.

Biodiversity appears to be declining at an accelerating rate throughout Afghanistan. Faced with poverty and a lack of alternatives to the use of natural resources, unsustainable exploitation of biodiversity will continue. This will lead to conflict among resource users, degradation of habitats, unsustainable hunting practices, and illegal trade. Unless this issue is more effectively and more rapidly addressed, biodiversity in Afghanistan faces a challenging future. Hunting, trapping, and habitat destruction are the greatest threats to many large mammals and birds in Afghanistan. In the past, waterfowl hunting was widely practiced, while large mammal hunting was undertaken for sport by some irresponsible individuals in some places or opportunistically by some of the local people.

Satellite image analysis and assessment of commercial wood volumes show that forests are rapidly disappearing, while overgrazing and shrub collection for fuel is markedly reducing plant biomass and altering plant communities. For instance, deforestation continues today and it has been estimated that firewood harvest for the Kabul market alone results in the destruction of 10,000 hectare of oak forest and 15,000 ha of juniper forest each year in Paktia and Khost Provinces.

Much as for the rangelands and forests, a great deal of Afghanistan's wildlife heritage is under threat. Flamingos have not bred successfully in Afghanistan for about eight years; Siberian cranes have not been observed for 20 years. Several mammalian species – such as the Caspian tiger (*Panthera Tigris Virgata*) or cheetah (*Acinonyx jubatus ventucus*) – are on the verge of global extinction and have not been seen in Afghanistan for decades. Others – such as markhor (*Capra Falconeri*) – are considered endemic and live only in Afghanistan and adjacent territories. The important feature of biodiversity is its high dynamism, and cross-border and seasonal migration, which helps to maintain animal populations in adequate numbers.¹⁰

In total, 39 species and eight subspecies are listed as being globally threatened. Sixteen of the listed species are mammals and 19 are birds. All listed subspecies are mammals. One Afghan taxon (i.e. species or subspecies) is considered globally Extinct (the Caspian tiger), seven are Critically Endangered, eight are endangered, and 31 are Vulnerable. Sixteen of Afghanistan's mammal species are listed on the IUCN Red List as being globally at threat. Most of these species are carnivores and

Afghanistan became signatory to the UNCBD and NBSAP in September 2002. The CITES Convention on International Trade of Endangered Species of Wild Fauna and Flora ratified on January 1986, while Cartagena Protocol on Biosafety and CMS Convention on the Conservation of Migratory Species of Wild animals ratified in January and May, 2013.

⁹ GIROA, Fifth National Report to the United Nations Convention on Biological Diversity, by National Environmental Protection Agency (NEPA), March 2014.

¹⁰ Afghanistan environment 2008, by the United Nations Environment Program (UNEP) and National Environmental Protection Agency (NEPA) of the Islamic Republic of Afghanistan

artiodactyls. Twelve Afghan mammal species are on CITES. Five species of Afghan birds are on the IUCN Red List as globally Critically Endangered. Two are listed as Endangered and 14 as Vulnerable while Nine species are listed on CITES. Only one Afghan reptile species the Afghan Tortoise (*Testudo horsfieldii*) is on the IUCN Red List as being globally at risk. The Afghan Mountain Salamander (*Batrachuperus mustersi*) is Afghanistan's only endemic amphibian. Only one plant species (*Ulmus wallichiana* (the Himalayan elm) is on the IUCN Red List and eight plant species are listed on CITES.¹¹

The main threats to Afghanistan's biodiversity are conversion of land for agriculture and housing, illegal hunting, deforestation, over-grazing, shrub collection, dry-land farming, water diversion, and climate change. These threats have become more serious during the last three decades.

The impacts of pollution on biodiversity in Afghanistan are spatially fragmented and very limited, with the exception of use and poor storage of pesticides such as DDT and benzene hexachloride – persistent organic pollutants – especially for locust control in the northern agricultural regions of the country. These chemicals were used intensively for several decades and may have accumulated in the ecosystem with possible impacts on biodiversity, water resources and the food chain. Further assessment is required to fill data gaps.

5.1.2. *Ecosystems:* Afghanistan has a wide range of ecosystems, including glaciers and high-alpine vegetation (particularly in the extreme northeast, including the Wakhan Corridor), montane coniferous and mixed forest, open dry woodland with juniper, pistachio or almond, semi-desert scrub, sand and stony deserts, rivers, lakes and marshland. The more closed types of mixed and coniferous forests occur mainly in the east, along the border with Pakistan, where precipitation tends to be more regular and abundant. Areas of open woodland remain mainly on the northern slopes of the Hindu Kush.

There are three eco-regions in Afghanistan, all of which are in the mountainous regions of the northeast. Of these eco-regions, 38% of Afghanistan's land areas are endangered while 61% are classified as vulnerable, and only 1% as stable. The eco-regions which are most threatened are located in or around the country's mountain areas and consist of both open and closed woodlands covering approximately 49,124 km² or 8% of the country. Closed forest is now only represented by 3% of its original forest cover representing 0.25% of the country's area. The World Wide Fund for Nature (WWF) classifies 70% of this biome as globally endangered, 26% as vulnerable, and 4% as stable. Closed forest is now only represented by 3% of its original forest cover representing 0.25% of the country's area. Recent satellite imagery has only been able to detect open woodland in two provinces, suggesting that open woodlands may now be on the verge of being seriously threatened as a viable ecosystem throughout much of the country.

However, in recent years the rule of law and enforcement capacity of the national government has gradually improved. Afghanistan has very recently formed the Afghanistan Wildlife Executive Committee (AWEC), an independent scientific authority in NEPA, to assess risk of species at the national scale using IUCN regional criteria. To date, AWEC has produced three Protected Species Lists, with the fourth list due in April 2014. The UNEP World Conservation Monitoring Centre (UNEPWCMC 2009) provides a list of species in Afghanistan of "conservation concern," but the list is so broad and the criteria for inclusion so uncertain that it is not particularly valuable for prioritization purposes. A list of the 16 potential areas for protection is recently produced by NEPA with the following detail.

5.1.3. *Protected Areas*¹²: According to Afghanistan Central Statistics Office the national protected areas of Afghanistan are estimated to 2.2 thousand square kilometer in 2008-2009, to 3.3 thousand square kilometer in 2009-2010 and 3.3 thousand square kilometer in 2010-2011. This means that a

¹¹ Biodiversity Profile of Afghanistan/An output of the National Capacity Needs Self-Assessment for Global Environment Management (NCSA) for Afghanistan, 2009 by United Nations Environment Program (UNEP)

¹² (a) National Environmental Status report, NEPA-2012, (b) Biodiversity profile of Afghanistan, UNEP-2006; and (c) Data collection from National Heritage Protection Department of NEPA

national protected area in percentage of the country total areas was 0.34% in 2008-2009 and 0.5% from 2009 – 2011. Afghanistan is as a member country of the United Nations Convention on Biological Diversity (UNCBD), Afghanistan is making every efforts to contribute to the ratified MEA, by promoting the current condition of national protected areas. The country level, national goals will try to protect 10% of the total country area as national protected areas. Protecting 10% of the national ecosystem or the total country area (652,000 km²) is one of the national priority, to be achieved till 2030. In order to improve the current condition and manage the extension process of national protected areas, the NEPA prepared a national level program and action plan to be implemented in Afghanistan's protected areas (Table-2).

The World Database of Protected Areas (UNEP- WCMC 2006) lists 15 protected areas in Afghanistan. Seven were provided with some level of recognition by the Government of Afghanistan in the 1970s and are recognized by IUCN (one Category-II national park and six Category-IV wildlife or Waterfowl reserves). However, none has ever been given full legal status or official or otherwise recognized boundaries. They are not managed as protected areas.

Table-2: UNDP-WCMC's World Database on Afghanistan's Protected Areas

#	Name	Designation	IUCN Category	Location	Elevation (m) (Min-Max)	Area (ha)	Designation Date
1	Band-i-Amir	National Park	II	Bamiyan	2900 - 3832	41,000	Jan. 1973
2	Ajar Valley	National Park	-	Bamiyan	2000 - 3800	40,000	Jan. 1973
3	Ab-i-Estada	National Park	-	Ghazni	1950 – 2100	40,000	Proposed
4	Noristan	National Park	-	Noristan, Kunar & Laghman	4878 – 6293	-	Proposed
5	Ab-i-Estada	Waterfowl Sanctuary	IV	Ghazni	1950 – 2100	27,000	Jan. 1977
6	Dasht-i-Nawar	Waterfowl Sanctuary	IV	Ghazni	3200 – 3210	7,500	Dec. 1977
7	Hamun-e-Puzak	Waterfowl Sanctuary	IV	Nimroz (Seistan))	1620 – 1731	35,000	Jan. 1973
8	Kol-i-Hashmat Khan	Waterfowl Sanctuary	IV	Kabul	1792 – 1974	191	Jan. 1973
9	Ajar Valley	Wildlife Reserve	IV	Bamiyan	2000 - 3800	40,000	Jan. 1973
10	Big Pamir (Wakhan)	Wildlife Reserve	IV	Badakhshan	3250 – 6103	67,938	Jan. 1978
11	Darqad	Wildlife Managed Reserve	-	Takhar	2000 – 4000	-	Jan. 1978
12	Imam Sahib	Wildlife Managed Reserve	-	Kuduz	1900 – 2095	-	Proposed
13	Northwest Afghanistan	Wildlife Managed Reserve	-	Turkmenistan & Iran Border	1200 – 2000	-	Proposed
14	Registan Desert	Wildlife Managed Reserve	-	Kandahar & Helmand	800 – 1200	-	Proposed
15	Zadran	National Reserve	-	Paktiya	-	-	Proposed
16	Bamiyan National Heritage	Protected Area	-	Bamiyan	-	-	Proposed
17	Khulm Landmark	Protected Area	-	Samagan	-	-	Proposed

Source: *Biodiversity Profile of Afghanistan, UNEP-2009*

The World Database of Protected Areas lists two Afghanistan's protected areas twice. The Ajar Valley and Ab-i-Estada are listed as a Wildlife Reserve and a Waterfowl Reserve (Category IV) respectively and are also listed as proposed national parks (Category II). Darqad Imam Sahib North-western Afghanistan and Registan Desert were all proposed as unspecified protected areas in 1981. No further efforts have been made to designate these as protected areas.

The World database of Protected Areas also lists Zadran, Bamiyan National Heritage, and Khulm Landmark as protected areas based on a letter from Afghanistan in 1990. No justification was provided in the letter. Bamiyan and Khum are likely of more cultural interest than environmental. Two areas (Small Pamir and Waghjir Valley) have been proposed as protected areas by the Wildlife Conservation Society but do not appear in the World Database of Protected Areas.

The IUCN recognizes six categories of protected areas:

- o Category Ia: Strict nature reserve / wilderness protection area managed mainly for science or wilderness protection.
- o Category Ib: Wilderness area: protected area managed mainly for wilderness protection.
- o Category II: National park: protected area managed mainly for ecosystem protection and recreation.
- o Category III: Natural monument: protected area managed mainly for conservation of specific natural features.
- o Category IV: Habitat / Species Management Area: protected area managed mainly for conservation through management intervention.
- o Category V: Protected Landscape/Seascape: protected area managed mainly for land- scape/seascape conservation or

Figure.1. Map of Afghanistan's Protected Areas



Source: Biodiversity Profile of Afghanistan-, UNEP-2009

5.1.4. Afghanistan's River Basins: River basin is defined as the area which contributes hydrological (including both surface- and groundwater) to a first order stream, which, in turn, is defined by its outlet to the ocean or to a terminal (closed) lake or inland sea. There are five rivers basins defined in Afghanistan.

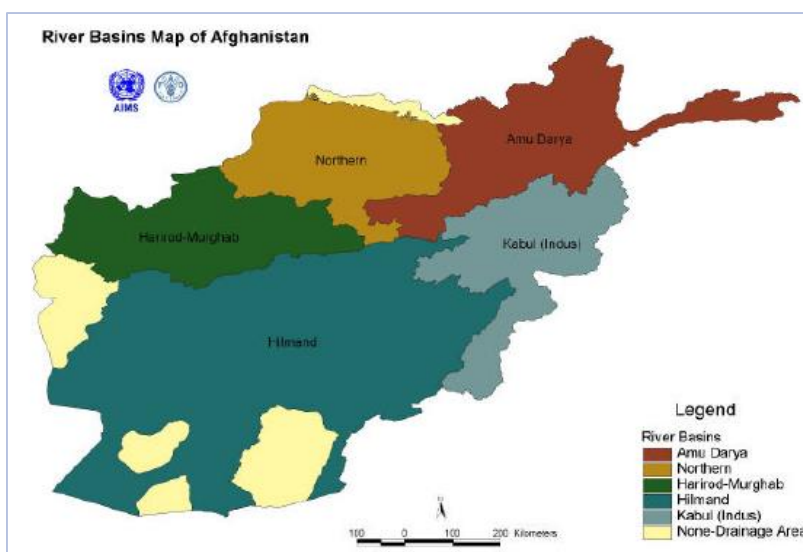
- (i) *Kabul River Basin*—the Kabul River arises in the Paghman Mountains west of Kabul and joins the Indus at Attock 350 km downstream. Major tributaries are the Panjshir, Laghman, Logar and Kunar rivers.
- (ii) *Chamkani (Kurram) River Basin* —the Chamkani River arises in the Safed Koh south of Jalalabad and flows southeast for 320 km before reaching the Indus in Pakistan.
- (iii) *Zhob-Gomal Basin*—the Gomal River arises in Paktika Province and flows south-southeast into Pakistan where it joins the Zhob River and flows into the Indus.
- (iv) *Pishin Lora Basin*— the Pishin Lora arises in Pakistan in the TOBA Kakar Range and flows southwest for about 400 km through Afghanistan before re-entering Pakistan and flowing into the Hamun-i-Lora.
- (v) *Helmand-Siestan Basin*—the Helmand River arises in the Koh-i-Baba Range not far from the source of the Kabul River. It flows southwest for 1300 km before turning north and emptying into marshes and salt flats of the Hamuni-Helmand mostly in Iran. Helmand is Afghanistan's largest basin and drains about 40% of the country's area.
- (vi) *Hari Rud Basin*—the Hari Rud arises in Bamiyan Province and flows west for 490 km passing Herat before turning north to form the Afghanistan-Iran border.
- (vii) *Murgab Basin*—the Murghab River arises in the northwestern Hindu Kush and flows west then north into Turkmenistan where it dries up near Merv. Amu Darya Basin—the Amu Darya (Oxus) river arises in the Pamirs near the Chinese border as the Pamir and Wakhan rivers. The Amu Darya forms the northern border of Afghanistan for 1300 km before it flows into Turkmenistan at one time it flowed into the Aral Sea, but it now dries up in the delta. Numerous rivers flow north into the Amu Darya from the northern Hindu Kush.¹³

¹³ Biodiversity Profile of Afghanistan/An output of the National Capacity Needs Self-Assessment for Global Environment Management (NCSA) for Afghanistan, 2009 by United Nations Environment Program (UNEP)

The five river basins together cover 90% of the land area of Afghanistan. The Helmand river basin is the largest of these five basins, covering 43% of the national territory. The other four basins have similar sizes and cover 10-14% of the country. In addition to these river basins, there are four non-drainage areas: Namaksar, Registan-i Sedi, Registan and Dasth-i Shortepa.¹⁴

Figure -3: Review Basin Map of Afghanistan

Afghanistan's reluctance to engage in regional dialogues on water has to be attributed, among other concerns, to the country's limited hydro-meteorological capacity, the lack of adequately skilled human resources (with solid knowledge of international law and the ability to negotiate in international forums), and a knowledge gap of about thirty years of hydrological data due to war. Many in Afghanistan therefore fear that they might lose in bilateral forums, never mind regional cooperation agreements on water.



Good policies certainly require good facts and figures and a skilled handling of well-defined national interest. The lack of proper hydro-meteorological information for the past thirty years no doubt constitutes an obstacle to identifying interests and formulating policies at the national level, let alone policies with a regional perspective. Ultimately the collection and maintenance of such data has to be left to Afghans and therefore requires sufficient Afghan capacity. The development of such capacity and assistance with data collection (in particular its trans-boundary aspects) should be a priority for the donor community and Afghanistan's neighbors alike.

Since Afghanistan does not have sea therefore SGP-OP6 program will considerate only on landscape conservation.

5.2. SGP-OP6 Component 2: Climate Smart Innovative Agro-ecology

GEF-6 Corporate Results by This Focal Area: Sustainable land management in production systems (agriculture, rangeland and forest landscape). Agro-ecology practices incorporating measures to reduce CO2 emissions and enhancing resilience to climate change tried and tested in protected area buffer zones and forest corridors and disseminated widely in at least 30 priority countries.

5.2.1. Agriculture: More than 85% of Population of the country is dependent on agriculture and related activities for livelihood. About 12% of the country's total land is arable, 3% is under forest cover, 46% is under permanent pastures, and the remaining 39% is mountainous and habitable. In the light of the rising population and the possibility of severe droughts, impacting on the nation's agricultural productivity, land is of paramount importance. Given highly variable rainfall and concomitant variations in production from the rain fed sector, the irrigated sector traditionally provided 85% of all crops. However, since 1978, the irrigable area has declined by about 60% turning a country that was approaching self-sufficiency in crop production into a major importer of food grains, fruit and vegetables. Wheat is the staple crop, accounting for about 83% of total cereal consumption in Afghanistan.¹⁵

¹⁴ Making the Most of Afghanistan's River Basins Opportunities for Regional Cooperation By Matthew King and Benjamin Sturtewagen

¹⁵ Afghanistan statistical year book 2009-2010

Other grains include rice, maize, barley, and pulses, Potatoes, onions, and several fruit crops including melons, watermelons, apricots, pomegranates and grapes are also produced both for domestic consumption and exports. Exports of dried fruits and nuts, mainly apricots and almonds, are still a significant source of foreign exchange but they are nowhere near the levels of the 1980s when Afghan dried fruits accounted for almost 60% of the world market share. Against this background, barren land (deserts, cliffs, etc.) occupies a third of the total land area, whereas the amount of agricultural land under cultivation and pasture has dropped in the last two or three decades either through abandonment (due to lack of water availability and damage to irrigation systems) or degradation (due to soil erosion, salinization, reduced soil fertility). Arable land per capita stood at 0.55 hectares in 1980, and only 0.25 hectares in 2007. The succession of dry years in 1999–2004 and the severe drought of 1999–2001 substantially reduced the cultivated area and also put great pressure on grazing land and the Kuchi nomadic people. The shortcomings of agriculture resulted in mass migration of population to urban centers.¹⁶ Agricultural production in Afghanistan is limited by very high dependence on water from melting snow and ice and rainfall. As a result, crop harvests vary dramatically from year to year depending on the weather. Even in good years however, Afghanistan is not agriculturally self-sufficient and must rely on food aid.

5.2.2. *Rangelands:* At present the rangelands of Afghanistan occupy about 30 million hectares, representing roughly 45% of the country's territory. However large areas that are considered 'barren land' or 'waste land' are also used for grazing, particularly in winter. The total graze area is therefore much larger, estimated at 70–85% of the total land area, providing habitat and forage for nearly 35 million livestock as well as numerous wild animals. Indirectly rangelands have significant export potential and generate income for the rural population by supplying more than 75% of the small livestock coming to market in Afghanistan, are almost entirely dependent on the rangeland resource for their livelihoods – and it follows that the related meat, wool, carpet, and leather sectors, products from which account for more than 50% of Afghanistan's export revenue. Regrettably the country's many rangelands are in poor condition, with overgrazing a common problem, while competition between farmers for the use of scarce productive rangelands is increasing. In the mountains overgrazing is the main factor in increased soil erosion and forest degradation, hampering forest regeneration. During the last few decades, the number of livestock, in particular sheep and camels, has Rangelands, forests and biodiversity. History shows that environmental degradation is often a contributing factor to the collapse of states and vibrant societies. Rich and healthy ecosystems are fundamental for securing the livelihoods of the majority of Afghanistan's population. Stringent efforts are required to reverse on-going depletion and deterioration of these resources and restore their productivity. This is key to achieving peace, stability and prosperity in Afghanistan. But degraded rangelands remain the fact of everyday life. According to farmers' observations, changes in vegetation and its productivity (as well as changes in climatic patterns such as rain, snow and the length of the vegetative season) have forced them to shift grazing from traditional to higher ranges. This in turn increases pressure on the alpine ecosystems, where vast areas of vegetation – formerly highly productive grasslands – have been converted into grazing-resistant cushion shrub lands.¹⁷

Additional socio-economic functions of Afghanistan's rangelands include a range of natural products from fire-fuel and building materials, to fruit and nuts, bush meat and medicinal plants, as well as the cultural significance of some rangeland areas. The biophysical functions of Afghanistan's rangelands include its critical role as a watershed (and related regulatory effect on irrigation), in providing a natural soil erosion control mechanism, flood control and disaster risk reduction, and as a habitat for wildlife.¹⁸

However, considering their vitally important role there has in recent times been a comparative lack of attention paid to maintaining the health of the rangelands, which has led to their abuse and deterioration. Whilst the problem of rangeland degradation has existed since the first half of the 20th

¹⁶ Afghanistan environment 2008, by UNEP and NEPA

¹⁷ Afghanistan environment 2008, by UNEP and NEPA

¹⁸ Rangelands National Plan, Version 10/12/2011, NEPA

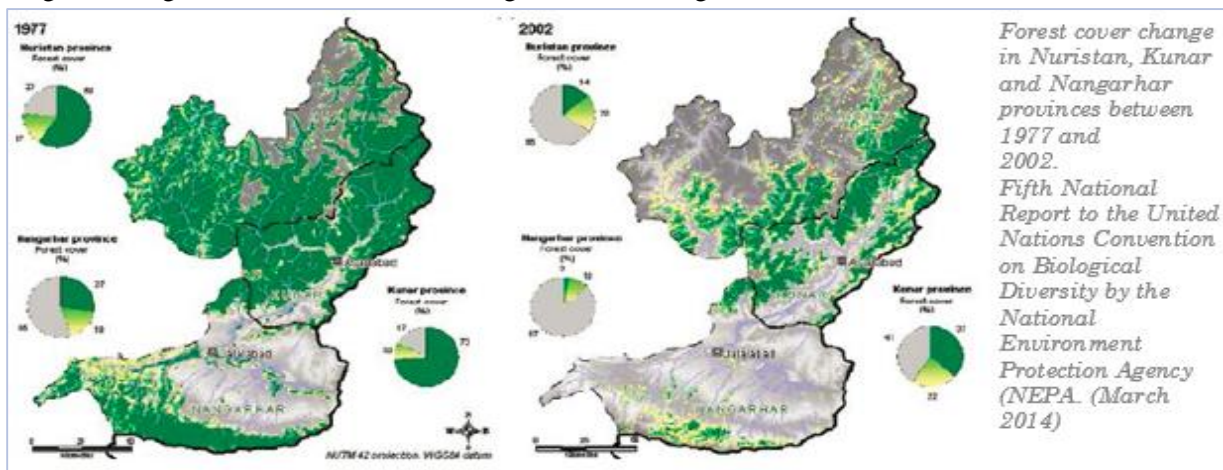
Century, it was ignored during decades of war, has been exacerbated in recent post-war years (mainly as a result of population pressure), and now threatens the agro-ecosystems of Afghanistan with possible dire consequences for the country's economy.

In particular the Kuchi, who are the major suppliers of meat for the domestic economy in Afghanistan supplying more than 75% of the small livestock coming to market in Afghanistan, are almost entirely dependent on the rangeland resource for their livelihoods – and it follows that the related meat, wool, carpet, and leather sectors, products from which account for more than 50% of Afghanistan's export revenue are also therefore dependent on Afghanistan's rangelands.¹⁹

5.2.3. Forests: All the remaining forests in Afghanistan serve as important grazing areas. This prevents their regeneration and increases vulnerability. Nowadays, however, illegal logging is the main factor in the decline and disappearance of forests. If deforestation continues at its present rate, all forest will have disappeared in three decades. This is a dramatic situation. A few centuries ago deciduous and evergreen forests covered 5% of Afghanistan's current land area, including one million hectares of oak and two million hectares of pine and cedar growing mostly in the eastern part of the country. Open woodland dominated by pistachios, almonds and junipers occupied a third of the land area. Today most of the original forests have gone. By the middle of the 20th century, the total forest cover of Afghanistan was estimated at 3.1–3.4 million hectares. Forest now occupies less than 1.0–1.3 million hectares (2% of county's total area), with just 0.5 million hectares of forests with 10% crown density, including 0.05 million hectares with 50% crown density. The forest area declined at the rate of three per cent a year from 2000 to 2005 (equal to annual removal and conversion of 30 000 hectares of forestland).²⁰

The largest areas of forest are located in the eastern provinces of Nuristan, Kunar and Nangarhar. Remote sensing (satellite image analysis) of these provinces in 1978 and 2002 revealed that forest cover there has been reduced by more than 50%. Several factors are driving the rapid decline and degradation of forests. One of them is demand for timber for trading in Afghanistan and abroad, especially neighboring Pakistan. Recently (in 1992–2002, including the Taliban's use of the forest trade as a source of revenue), massive logging and smuggling significantly contributed to forest reduction (50–200 timber truckloads a day or 150,000–500,000 cubic meters of wood annually) in the eastern provinces of Afghanistan. Local communities have lost control over the resources on which they depend for their survival, and forest resources are now largely used for immediate profit by organized crime syndicates and traders. War has also inflicted damage on forest ecosystems.²¹

Figure.2. Afghanistan Forest Cover Change in Eastern Afghanistan between 1977 and 2002



Source: NEPA Report to UNCBBDD – 2014

¹⁹ Rangelands National Plan, NEPA, Version 10/12/2011

²⁰ Afghanistan environment 2008, by the UNEP and NEPA

²¹ Afghanistan environment 2008, by the UNEP and NEPA

During the 1980s many pistachio trees were uprooted or depleted by Soviet military forces, while intense fighting led to an increase in the risk of forest fires. Other causes of the current deforestation include non-sustainable practices such as tree felling for energy and construction (including increasing urbanization needs); poor forest management; feeble incentives for reforestation; lack of community involvement and awareness; and agricultural and urban encroachments on forest land.

The loss of forest cover does not only have environmental impacts, but also leads to economic losses. In the 1970s Badghis and Takhar provinces of northern Afghanistan were covered with productive pistachio forests and earned substantial revenue from their nuts. These forests almost totally disappeared in just three decades and with them the associated revenue and ecological benefits. It is difficult to calculate the indirect economic losses from the reduction in key forest functions – such as erosion and flood control, soil fertility and biodiversity benefits – but clearly these costs are high. Finally, since the productivity of the country’s rangelands and forests is declining, people have been forced to move from rural to urban areas in search of alternative livelihoods, increasing the growth of urbanization.

Afghanistan became signatory of the UN Convention to Combat Desertification (UNCCD) in Sep. 2002.

5.3. Component 3: Low Carbon Energy Access Co-benefits

GEF-6 Corporate results by focal area: Support to transformational shifts towards a low-emission and resilient development path. Low carbon community energy access solutions successfully deployed in 50 countries with alignment and integration of these approaches within larger frameworks such as SE4ALL, initiated in at least 12 Countries.

5.3.1. Climate Change: Afghanistan is a mountainous and very dry country and has an arid and semi-arid continental climate with cold winters and hot summers. The lowland plains in the south of Afghanistan experience extreme seasonal variations in temperature, with average summer temperatures exceeding 33°C and mean winter (DJF) temperatures of around 10°C. Much of the country is at very high altitude and experiences much lower temperatures all year round, with average summer temperature not exceeding 15°C, and winter temperatures below zero in the highest regions. Afghanistan is ranked among the most vulnerable countries in the world to the adverse impacts of climate change²². Afghanistan’s INC report has documented an increase of 0.6°C in the country’s means annual temperature since 1960. Based upon recent climate observations, precipitation patterns have decreased during springtime (March-May) by approximately 40.5mm; however, the total annual precipitation has only slightly decreased by approximately 30mm since there is a slight increase in precipitation from June until November. This implies that Afghanistan is already beginning to experience the initial adverse impacts of climate change.

Recent climate projections indicate that Afghanistan will face an overall strong increase in mean annual temperature, considerably higher than global mean projections, when compared to a baseline period of 1986-2006. More specifically, under the “optimistic” scenario (RCP4.5), the mean of the model ensembles projects a warming of approximately 1.5°C until 2050 and of approximately 2.5°C until 2100. For the “pessimistic” scenario (RCP8.5), the models project an extreme warming of approximately 3°C until 2050, with further warming up to 7°C by 2100. Under both scenarios there are regional differences, with a higher temperature increases at higher altitudes compared to the lowlands.²³ Afghanistan is currently suffering the most severe drought in living memory. The country is characterized by large areas with little to no precipitation; that which does occur falls mostly as snow on high mountains from winter storms (of Mediterranean origin) between November and April with peaks in February/March. The snow season varies considerably with elevation. The Asian summer monsoon system helps to keep rainfall low over Afghanistan. Dust storms are a significant part of the climate system associated with northerly winds in warm months.

²² DARA Climate Vulnerability Monitor (2012); German Watch Global Climate Risk Index (2013); and Notre Dame Global Adaptation Index (2014).

²³ Position paper to COP 21, by NEPA, September 21, 2015

Despite the absence of good long term climatic records, available data and trends from neighboring countries indicate that mean annual temperature has increased by 0.6°C since 1960, at an average rate of around 0.13°C per decade. Increases have been most pronounced during the autumn (SON), with increases at an average rate of 0.29°C per decade and a significant increase in the number of exceptionally hot days and nights. Changes in precipitation regimes tend to vary more between regions than temperature. Mean rainfall over Afghanistan has decreased slightly (at an average rate of 0.5mm per month (or 2 percent per decade) since 1960. This is mainly due to decreases of around 2.7mm per month (6.6 percent per decade) in spring (MAM) rainfall. The proportion of rainfall that occurs in heavy events has not changed with any consistent trend since 1960.

The following is the climate projections in Afghanistan:

- *Changes in Temperature:* Current models indicate significant warming across all regions of Afghanistan with average predicted increases in temperature of between 2C and 6.2C by 2090s dependent on global emissions scenarios. Warming is most rapid in spring/summer with this trend being marked in the north and the central plains of Afghanistan. These increases are also consistent with the broad regional observed temperature trends in Central Asia. All projections indicate substantial increases in the frequency of days and nights that are considered ‘hot’ in current climate, especially during summer months. Up to 2030s, the amount of warming is not sensitive to global emission scenarios. The mean annual temperature is projected to increase by 1.4 to 4.0°C by the 2060s, compared to 1970-1999 averages. By 2090, the range of projections by the 2090s under any one emissions scenario is around 1.5 to 2.5°C. Global emission scenarios noticeably influence the range of potential annual temperature increases.
- *Changes in Precipitation:* In the short term, average rainfall is projected to show a small increase, although by little more than about 10-20mm. Mean annual rainfall changes in the 2090s show conditions are generally drier (-40 mm high, -20 mm medium, -10 mm low) over much of Afghanistan. Much of the drying is due to decreases in spring rainfall (MAM). Winters are expected to be significantly drier in the South. Projections of mean annual rainfall from different models are broadly consistent in indicating decreases.²⁴

5.3.2. Climate Smart Technologies: Estimates indicate that in Afghanistan solar radiation averages 6.5 KWh per square meter per day and the skies are sunny about 300 days a year. Consequently, the potential for solar energy is high, especially for solar water heaters. For example standard home modules could provide 140–180 liters of hot water a day at temperature of 60–75°C. Herat is a city known for its 120 days of very high wind. In fact the windy days here are regular and provide good potential for wind power generation. Wind pumps have already been successfully installed in selected villages where access to water was problematic. Biogas is another alternative and could be used in several agricultural areas. Finally, geothermal sources in the mountains of Afghanistan could be used for energy co-generation.

At present the majority (70–75%) of Afghanistan’s energy needs are met by traditional energy sources such as animal dung, fuel wood and crop residues. Annual biomass energy use in Afghanistan is equivalent to 2.5 million tons of oil. The remaining requirements are met by commercial energy sources mainly petroleum products, but also natural gas, coal and hydropower. Fuel wood constitutes the basic source of energy for cooking and heating in rural areas, and for decades it has been available in unrestricted quantities. In recent years, a commercial market for it has also developed in rapidly expanding urban areas. But natural regeneration has not been able to sustain forests due to indiscriminate cutting of trees for fuel, thus creating serious environmental risks. In the areas of Jalalabad, Laghman, Kabul and Herat, firewood scarcity is already acute. However the urban centers consume a great deal of energy, mostly supplied by the country’s provinces still rich in biomass resources. Such energy demand and consumption patterns affect the environment in both the immediate vicinity of population centers and far away. It also poses health hazards due to high rates of

24 Socio-Economic Impacts of Climate Change in Afghanistan, A Report to the Department of International Development by Matthew Savage and Dr. Bill Dougherty, Stockholm Environment Institute (SEI)

emissions of particulate matter and other pollutants. Deforestation not only contributes to the changes in the hydrological properties of soils, drainage of river basins and microclimate; it also has connections to the global climate change. The initial GHG inventory of Afghanistan shows that deforestation plays a very significant role in the country's total GHG emissions compared to fossil fuel combustion (gasoline, coal, etc.). At the same time, soils and remaining forests absorb large amounts of carbon dioxide annually, thereby compensating GHG emissions. The current balance between emissions and removals of carbon dioxide in land use and forestry sector is fragile, but positive. Therefore further efforts should be given to maintaining this balance and other forms of climate change mitigation.²⁵

Table -3: Green House Gas Emissions of Co2 and N2O in Afghanistan in 2005-2030*

GHG Emission Sector	Cos Equivalent, Gg				2020	2025	2030
	CO2	CH2	N2O	Aggregated	Co2-eq, Gg	Co2-eq, Gg	Co2-eq, Gg
Energy	2,910.04	736.00	129.83	3,775.87	9,745.46	10,849.02	12,087.00
Industry	312.15	-	-	312.15	791.57	878.25	974.42
Agriculture	-	9,296.49	5,812.5	15,108.99	24,665.30**	29,578.77**	35,471.04**
Land use change and forestry	9,341.13	80.64	9.30	9,431.07	10,949.18	11,507.70	12,094.71
Water	-	130.41	-	130.41**	330.70**	366.91**	407.09**
Total GHG emission incl. LULUCF	12,563.32	10,243.54	5,951.63	28,758.49	46,482.20	53,180.64	61,034.25
Total GHG émission exclu. LULUCF	3,222.19	10,162.90	5,942.53	19,327.42	35,533.02	41,672.95	48,939.54

* Information used from ADB – Afghanistan Greenhouse Gas Inventory Report and Projection for 2020-2030 using GACMO model

**CH4 (CH4 emission x 21) and N2O (N2O emission x 310) counted as Co2-eq.

Different donor agencies, the World Bank, USAID, GIZ, and UN agencies are providing technical and financial support for the development of micro-hydro and solar systems, and biogas plants. Some INGOs are promoting improved cooking stoves in villages to reduce the pressure on fuel wood consumption and for better indoor air quality. National and sectoral policies have the objective to promote cleaner and environmental sound technologies. In order to promote renewable energy, the Ministry of energy and water is working on a Renewable Energy Policy. Current projects and programs such as the National Solidarity Program (NSP) the Energy for Rural Development Afghanistan (ERDA) under the Ministry Rural Rehabilitation Development (MRRD) and the Afghanistan Clean Energy Project has introduced micro-hydro and solar energy systems, wind energy and biogas plants.²⁶

The NEPA requests technical assistance from the CTCN for assessing the country's needs for climate-smart technologies that could be further used to help the water and agricultural sector adapt to climate change effects, as well as to reduce greenhouse emissions through developing renewable energies as a source of energy. This assistance will help Afghanistan in identifying the technologies that are the most adequate to the country's vulnerability and potential, and will provide a basis for the government to support concrete actions in the concerned sectors.

The identification of technologies will inform and guide the work of the government in the energy, water and agricultural sectors, and will enable the transfer of appropriate technologies that will contribute to a sustainable and low-carbon development of Afghanistan. The assessment will provide the government with appropriate knowledge to implement actions in its priority sectors, including agriculture and rural development, infrastructure and natural resources, social protection, health and nutrition, energy, transportation and water resources. These priorities are a keystone of the Afghanistan

Afghanistan is member of UNFCCC since 2002 and has signed the Kyoto Protocol in 2013. A National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and a National Adaptation Program of Action for Climate Change was developed in 2009 and is being implemented by different related Ministries. An Initial National Communication Report for Afghanistan has been submitted to UNFCCC in 2013. In draft stage are currently a National Climate Change Strategy and a concept for National Designated Authorities for CDM Projects.¹ The Vienna Convention for the protection of Ozone Layer and Montreal protocol on Substances that deplete Ozone Layer were signed in June 2004. The Kyoto protocol ratified on 3rd December 2012, while Minamata Convention on Mercury is under process

²⁵ Afghanistan National Status Report - 2008

²⁶ <https://www.ctc-n.org/technical-assistance/requests/technical-support-and-advise-identification-technology-needs>

National Development Strategy (ANDS). The request has been developed by the NEPA of the Government of the Islamic Republic of Afghanistan as the policy making and coordination governmental body in the field of environmental protection.²⁷

Afghanistan has a good potential for generating renewable energies, such as hydropower, solar and wind energy to contribute to reduce climate change and pave the way for a low-carbon development. The government is thus challenged to find the appropriate technologies to disseminate in the country to mitigate and adapt to the changing climate.

Afghanistan has initiated a number of steps to promote the country's sustainable development. In term of national development policies, plans, and legal frameworks, considerable effort has been placed on addressing environmental challenges, disaster risk reduction, food security, water security, protection of forest and rangelands, and biodiversity conservation, all of which have clear relevance to climate change adaptation. Some noteworthy examples of such policies and plans that have successfully and explicitly integrated climate change are mentioned in include:

- Afghanistan National Renewable Energy Policy (ANREP)
- National Water and Natural Resource Management Priority Program
- Strategic National Action Plan for Disaster Risk Reduction
- National Environmental Action Plan
- National Comprehensive Agriculture Production and Market Development Program
- Energy for Rural Development
- National Biodiversity Strategy and Action Plan

Additional national development policies, strategies, and plans that currently do not mention climate change but have entry points for the further mainstreaming of climate change include:

- National Agricultural Development Framework
- National Environment Strategy
- Energy Sector Strategy
- National Forestry Management Plan
- Rangeland Management Plan
- Strategic Policy Framework for the Water Sector

In term of programs and projects, support provided by the international community and multilateral agencies have laid the groundwork for building Afghanistan's adaptive capacity and resilience to climate change. Major contributors include the Tokyo Framework bilateral partners, GEF, which has provided support through enabling activities, mid-size projects, and full-size climate change adaptation projects funded by the Least Developed Countries Fund (LDCF), as well as bilateral donors, non-governmental organizations, and the United Nations. With the scale and urgency of Afghanistan's adaptation needs, additional financial and other resources are strongly needed in order to effectively build the adaptive capacity and resilience of the country and its people before more severe impacts of climate change begin to be felt.

5.4. SGP OP6 Component 4: Local to Global Chemical Management Coalitions

GEF-6 result for this focal area: increase in phase-out disposal and redirection of releases of POPs, ODS, mercury and other chemicals of global concern. Innovative community-based tools and approaches demonstrated, deployed and transferred, with support from newly organized or existing coalitions in at least 20 countries for managing harmful chemicals and waste in a sound manners.

5.4.1. Harmful Chemicals and POPs: The 'Chemicals Revolution' has indeed contributed greatly to human well-being. Chemicals have raised farming yields by killing crop pests, and have made possible and endless array of useful products. But once released, some chemicals causes toxic reactions, persist in the environment for years, travel thousands of kilometers from where they were used and threaten long-term health and ecological consequences that were never anticipated or intended.

²⁷ <https://www.ctc-n.org/technical-assistance/requests/technical-support-and-advise-identification-technology-needs>

Persistent organic pollutants (POPs) are toxic chemicals that adversely affect human health and the environment around the world. Because they can be transported by wind and water, most POPs generated in one country can and do affect people and wildlife far from where they are used and released. Studies have linked POPs exposures to declines, diseases, or abnormalities in a number of wildlife species, including certain kinds of fish, birds, and mammals.

Dramatic growth in chemicals importing and trade in Afghanistan during 21st Century had highlighted the potential risks posed by hazardous chemicals and pesticides. The Country lacking adequate infrastructure and vulnerable to monitor the import and usage of such substances. The chemicals slated for elimination under the Stockholm Convention are the pesticides aldrin, chlordane, dieldrin, endrin, heptachlor, hexachlorobenzene (HCB), mirex and toxaphene, as well as the industrial chemical polychlorinated biphenyls (PCBs).

Lack of proper waste management in urban areas is also a critical problem, where a huge amount of dangerous chemicals, and substances are covering by soil inside earth, which can cause more critical environmental hazardous in the near future. Burning plastics, Coal and Wood as domestic fuel by adapting traditional technologies and importing the second hand old automobiles and engines, has raised the air pollution level to a dangerous extent. Threat to various vascular plants and wild life species are other key areas need more focus of the government and international community, where we recently lost several species of wild animals and plants.

There was virtually no management of hazardous chemicals in Afghanistan following the conflict. Nor was there any monitoring of pesticide residues in humans or in the environment. Today water resources are still being polluted due to poor storage of these chemicals as well as indiscriminate disposal of untreated industrial effluents. In some aquifers the concentration of hazardous chemicals exceeds hygienic standards, and in parts of Kabul city pollutants make the water unsafe for consumption. Pesticides such as DDT and benzene hex chloride were used intensively for locust control in the northern agricultural regions of the country for several decades. Lack of proper management of these persistent organic chemicals represents a potential threat to the health of humans and wildlife in these regions.²⁸

Afghanistan has ratified Stockholm Convention on Persistent Organic Pollutants (POP) and Rotterdam Convention on the Prior Informed Consent on January 07, 2013. While, the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal on June 2013.

5.5. Component 5: CSO-Government Policy and Planning Dialogue plate forms

GEF – 6 corporate results for this focal area: Enhance capacity of civil society to contribute to implementation of MEAs (multilateral environmental agreements) and national and sub-national policy, planning and legal frameworks. SGP supports establishment of “CO2 Government Policy and Planning Dialogue Platforms” leveraging existing and potential partnerships, in at least 50 countries.

Afghanistan has been signing 13 MEAs (refer to Table - 4) in relation of various environmental issues, but environmental laws and regulations in Afghanistan are still evolving and not yet adequate. The NC and NSC will produce a capacity building program for CSOs to be trained and mentors the implementing partner staff and also provide them with technical assistance and advices in the fields of environmental coordination, environmental law and policy, environmental education and awareness, and multilateral environmental agreements. The program will develop and strengthening the relationship and networking of implementing partners to contribute in advocacy and implementation of MEAs, national policies, planning and legal framework (please refer to Table – 5). SGP through its implementation in SGP OP5 has funded three media organizations that produced many videos and also broadcasted interviews and discussions on environmental issues. This support and approaches will continue throughout SGP OP6.

²⁸ Afghanistan National Environment Status report-2008

Table - 4: List of MEAs signed by Government of Afghanistan

Rio Conventions + national planning frameworks	Date of ratification / Completion
CITES Convention on International Trade in Endangered Species of wild Fauna and Flora	28 th Jan. 1986
UN Convention on Biological Diversity (CBD)	19 th Sep. 2002
CBD National Biodiversity Strategy and Action Plan (NBSAP)	01 st Sep. 2002, Update is Ongoing
UN Framework Convention on Climate Change (UNFCCC)	19 th Sep. 2002
UN Convention to Combat Desertification (UNCCD)	19 th Sep. 2002
Kyoto Protocol	03 rd Dec. 2012
Stockholm Convention on Persistent Organic Pollutants (POPs)	07 th Jan. 2013
Rotterdam Convention on the Prior Informed consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	07 th Jan. 2013
Cartagena Protocol on Biosafety	07 th Jan. 2013
CMS Convention on the Conservation of Migratory Species of Wild animals	13 th May. 2013
Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal	33 rd Jun. 2013
Vienna Convention for the Protection of the Ozone Layer	17 th Jun, 2004
Montreal Protocol on Substances that Deplete the Ozone Layer	17 th Jun. 2004
UNFCCC INDC	21 st Sep. 2015
SAARC South Asian Association for Regional Cooperation	25 th Nov. 2015
Poverty Reduction Strategy Paper, Millennium Development Goals	March 2004
UNFCCC Nationally Appropriate Mitigation Actions	Finalized
UNFCCC National Adaptation Plans of Action	Finalized
SC National Implementation Plan	Ongoing
Afghanistan Environment Data Centre	Ongoing
MEAs Cross Cutting Project	Ongoing
GEF National Capacity Self-Assessment	Submitted
Minamata Convention on Mercury	Under process
Nagoya Protocol on Access and Benefit-Sharing	Under process
UNFCCC National Communications (1 st , 2 nd , 3 rd)	INC (prepared 2012), SNC (ongoing)

Source: NEPA (Deputy Director General – Mr. Modaqiq)

5.6. Component 6: Promote Social Inclusion

GEF – 6 corporate results for this focal area: GEF Gender Mainstreaming Policy and Gender Equality Action Plan and GEF Principles for Engagement with Indigenous Peoples. Gender mainstreaming considerations applied by all SGP country programs:

- Gender training utilized by SGP staff grantees, NSC members, and partners.
- IP Fellowship program awards at least 12 fellowships to build capacity of IPs.
- Involvement of youth and disabled is further supported to SGP projects and guidelines and best practices are widely shared with countries.

5.6.1. Gender: Worldwide a strong, well-documented relationship exists between gender and environment: through hardly any significant work has been conducted in Afghanistan on aspects such as (a) compilation of statistics of gender-disaggregated environmental goods and services, (b) Targeted interventions to address the environmental issues that impact women more adversely such as indoor air pollution, lack of access to drinking water, promotion of health and sanitation within the family etc.: (c) Recognition of women’s specific contribution to sustainable environmental management.²⁹ The government has developed national action plan (2007 – 2017) for the women of Afghanistan Women constitute about 49% of Afghanistan population. The development of women’s human capital is strongly articulated in principle # five of the Afghanistan Compact and highlighted as one of the three goals of gender equity in the Afghanistan National Development Strategy. This vision captures the three main themes of the United Nations Decade for Women - peace, development, and equality. Since the International Women’s Year of 1975, these themes have

²⁹ Environmental Strategy 2007/08/2012/13, AND, Afghanistan government

underlined the development of international policy instruments on women, including the Convention on the Elimination of all forms of Discrimination against Women and the Beijing Platform for Action. The themes are inextricably interlinked and are meant to be pursuing in a holistic way. Inarguably, peace and equality are preconditions for development; and without equality, development and peace would not be sustainable.

In rural areas men and women have distinct roles and agricultural responsibilities. According to the World Bank (2004), surveys focusing on Laghman, Ghazni, Badakhshan, Bamiyan, Paktia, Helmand, Faryab and Saripul provinces showed that women and girls in these villages were involved in an array of farm-based activities ranging from seed bed preparation, weeding, horticulture and fruit cultivation to a number of post-harvest crop processing activities such as cleaning and drying vegetables, fruits and nuts for domestic use and for marketing. Another survey by Actionaid (2001) shows that women and men in Ishkashim, Warduj and Argu districts contributed similar time to agriculture activities with men focusing on land preparation, planting/sowing and fertilizer application while women were involved more in activities like weeding, seed planting and harvesting.³⁰

5.6.2. Indigenous people: Indigenous peoples and local communities are defined by their relationship with and dependence on natural resources, including land and water resources. The local community reliance upon local resources that has resulted in the accumulation of local and traditional knowledge that contains insights, innovations and useful practices that relate to the sustainable management and development of these areas. The CBD now recognizes these communities collectively as “Indigenous Peoples’ and Community Conserved Territories and Areas” (ICCAs). Local communities and indigenous peoples make substantial contributions to global conservation efforts and sustainable development. While these communities are often the primary ‘resource stewards’ who rely on ecosystems to meet food security, livelihood and health needs The significance of community-based action for biodiversity, ecosystems and sustainable livelihoods is captured in the Aichi 2020 targets under the Convention on Biological Diversity (CBD), including in Aichi Target 11 (Protected Areas, including “other effective area-based forms of conservation”), Target 14 (Ecosystem Services), and Target 18 (Traditional Knowledge). In consideration of UN Declaration on the right of indigenous people, the SGP-OP5 has funded the local institutions of indigenous people in Bamiyan and Badakhshan and these financial and technical supports will continue during the course of SGP OP6 implementation.

The local Afghan farmers, experienced horticulturists, nurseries owners, and the farmers with the extensive experiences in ecosystem management practices are the indigenous most vulnerable individuals in axis of environmental threats. In rural areas some of the farmers, agriculturist and natural resources users paly a demonstrative role and most of the local populations are copying the model and experience he/she owned at local level. These individuals can play vital and leadership role in introducing new technological and academic practices by using very limited resources, to be helped.

5.6.3. Youth: Based on the Central Statistics Organization’s (CSO) 2014 estimates, 63 percent of Afghanistan’s 27.5 million people are under the age of 25 and those between 15 and 24 years of age comprise 17% of the population. Examples from other countries have shown that with a commitment to making youth the focus of development and poverty reduction, a sizable youth population can be turned into a demographic dividend. Afghanistan has developed National Youth Policy in 2014. The key policy issue of this policy is to (a) to strengthen youth-led organizations and networks at national and sub-national levels, (b) promote and support youth volunteerism towards preserving vital national interests, (c) encourage dialogue among youth, government and CSOs at the national and sub-national levels. The Youth National Policy emphasize that all stakeholders should promote and support the active participation of youth in preserving and rebuilding Afghanistan’s environment through the

³⁰ Women and Natural Resources in Afghanistan, United Nations Environment Programme (UNEP), 2009

following measures:

- Promote awareness on environmental issues and practices amongst youth through curricula in schools, religious seminaries and universities.
- Support youth organizations to work for environmental sustainability and appreciate youth who work hard to protect the environment.
- Involve the media in disseminating information on environmental issues and best practices for environmental preservation.
- Work with the growing Afghan youth movement on nature and outdoor programs in mountains, practical action, environmental restoration and rehabilitation.
- Support youth to participate in national and global days for forests, soil, water, environment, peacemaking, climate and biodiversity.
- Create a high level committee on environmental preservation between government and CSOs.
- Support disaster risk reduction and preparedness amongst communities at risk of natural disasters.
- Enable Afghan youth to take on climate action and climate justice concepts and strategies as part of the Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) and the Afghanistan National Adaptation Plan of Action (NAPA).³¹

SGP Afghanistan has made good progress in achieving SGP OP5 global objectives on improving vulnerable groups through increasing local benefits generated from environmental resources, and mainstreaming gender consideration in community based environmental initiatives. SGP OP5 have funded nine women led projects, five youth led projects. In-addition, three projects directly supported indigenous groups, two project supported disabled and displaced families. This support will continue throughout SGP OP6 implementation.

The youth generation, involved with the agriculture activities in rural areas, are mainly responsible for provision of livelihood to their families. About 50% of the human resource involved with the agriculture are comprising youths and children involved alongside their elders in agriculture sector to produce agriculture products for sale and families usage purposes. The weeding, ploughing, watering and harvesting of the crops are main areas of youth's involvement in agriculture sector. In most of the areas, children and youths are involved with the livestock rearing and foddering activities.

5.6.4. Other Vulnerable Groups: In Afghanistan there is little reliable data on disability issues including the number of those with impairments. Estimates indicate 4% of the population to be disabled that means that there are approximately 800,000 people who are disabled in Afghanistan. Many believe, however that the number of disabled people is much higher than that considering the long years of war and continued active mine fields in the country.³²

The Ministry of Refugees and Returnees Affairs (MoRR) puts the total number of IDPs at 828,000 IDPs in Afghanistan – both conflict and natural disaster-induced (end December 2014). Beyond the exact numbers, the trends matter: over 166,000 IDPs in 2014 have been displaced by conflict, with a peak in displacement during the summer, and vulnerabilities heightened during the winter. Yearly displacement trends show a sharp increase in numbers. Internal Displacement in Afghanistan includes conflict- induced, natural disaster-induced, protracted displacement and rural to urban displacement. In order to cope with displaced people problems the government has developed national policy on IDPs in Afghanistan.

³¹ Afghanistan national Youth Policy, Ministry of Information and Culture - 2014

³² The comprehensive national Disability Policy in Afghanistan – 2003, Ministry of Martyrs and Disabled

The IDPs and Kochis are the front line population towards the threat of desertification. The Kochis are nomad people moving around the country on seasonal basis. They shift their location on the basis of availability of fodder facilities for their livestock. Kochi's comprises an important part of agri-economy but the severe drought years during 2,000 mostly effected the Kochis and IDPs population. The widespread desertification greatly reduced the grazing areas and effected the rangelands which were hotspots for Kochis as grazing areas for their sheep's and herds. The scarcity of drinking and irrigation water extremely reduced Kochis ability during drought years in watering and feeding their cattle and to find proper fodder facilities. During those years of drought, about 70% of the country's livestock wiped out due to lack of watering and fodder facilities.

5.7. Component 7: Global reach for Citizen Practice Based Knowledge program

GEF -6 corporate results for this focal area: Contribution to GEF KM efforts.

- *Digital library of community innovations is established and provides access to information to communities in at least 50 countries.*
- *South-South Community Innovation Exchange Platform promotes south-south exchanges on global environment issues in at least 20 countries.*

South-South Cooperation is a term historically used by policymakers and academics to describe the exchange of resources, technology, and knowledge between governments, organizations and individuals. "According to ANDS, there are several environmental issues in Afghanistan that require a trans-boundary approach to management. Example includes water sharing the Amu Darya and Helmand basins, forest management in the Eastern provinces and protected areas in the Wakhan corridor and Sistan basin wetlands."³³

According to SGP –OP6 the south-to-south relationship aims to stimulate and promote South-South cooperation on issues related to climate change, renewable energy and energy efficiency, biotechnology, rural energy access, sustainable habitats, clean energy, natural resource management, integrated water demand management, trade and sustainable development. The SGP National Coordinator in UNDP – Afghanistan has already initiated south-to-south relationship by facilitating SGP projects visit in India by Afghan CSOs that are recorded as implementing agencies of SGP OP5 in Afghanistan. It is worthy to mention here that SGP-OP5 has introduced various types of Indian and China made renewable energy technologies in rural Afghanistan. During the SGP-OP6 the Afghan CSOs will try to learn the social tourism concept from Nepal, and discuss with China and India to select more appropriate renewable technologies and train Afghans on their installation and repairing.

Appendix

- Identification of stakeholders for Multi-Consultation Process from CSOs, based on literature review FGA had for preparation of this environmental context baseline report.

³³ Environmental Strategy (2007/08- 2012/13) of AND, Government of Afghanistan

Table-5: Legal and Regulatory Framework of Environmental Conservations - Afghanistan

Thematic Area	Biodiversity Conservation	Climate Change	Prevention of Land Degradation / Sustainable Forest Management	Elimination of Harmful Chemicals/POPs	Others/Cross Cutting
Conventions Ratified/ Signed	<ul style="list-style-type: none"> UN Convention on Biological Diversity (UNCBD), September 19, 2002 CITES Convention on International Trade in Endangered Species of wild Fauna and Flora, January 28, 1986 CMS Convention on the Conservation of Migratory Species of Wild animals, May 13, 2013 Cartagena Protocol on Biosafety, January 07, 2013 	<ul style="list-style-type: none"> UN Framework Convention on Climate Change (UNFCCC), September 19, 2002 Vienna Convention for the Protection of the Ozone Layer, June 17, 2004 Montreal Protocol on Substances that Deplete the Ozone Layer, June 17, 2004 UNFCCC INDC, September 21, 2015 Kyoto Protocol, December 03, 2012 UNFCCC National Communications (1st, 2nd, 3rd), INC (prepared 2012), SNC (ongoing) UNFCCC Nationally Appropriate Mitigation Actions (NAMA), finalized Minamata Convention on Mercury, Under process 	<ul style="list-style-type: none"> UN Convention to Combat Desertification (UNCCD), September 19, 2002 	<ul style="list-style-type: none"> Stockholm Convention on Persistent Organic Pollutants (POPs), January 07, 2013 Rotterdam Convention on the Prior Informed consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, January 07, 2013 Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal, June 23, 2013 	<ul style="list-style-type: none"> SAARC South Asian Association for Regional Cooperation, November 2015 Nagoya Protocol on Access and Benefit-Sharing (ABS), Under process
National Laws and Bylaw	<ul style="list-style-type: none"> Environment Law, 2007 (NEPA) Wild Life Management Law, 2011 (NEPA) Plant Quarantine Law, 2010 (MAIL) Medicinal Plants Protection and Management Law, 2010 (MAIL) Water Law, 2009 (MOEW, MAIL) Plant Protection Law, 2010 (MAIL) 		<ul style="list-style-type: none"> Rangeland Law, 2007 (NEPA, MAIL) Forestry Management Law, 2010 (MAIL) 	<ul style="list-style-type: none"> Pesticides and Insecticides Law, 2010 (MAIL) 	
National Policies / Strategies/ Rules and Regulations	<ul style="list-style-type: none"> National Biodiversity Strategy and Action Plan (NBSAP), September 1, 2002 Strategic Policy Framework for the Water Sector 	<ul style="list-style-type: none"> Environmental Impact Assessment Policy, 2009 (NEPA) Environment Strategy, 2008-2013 (NEPA) Air-Pollution Control Strategy (National) Kabul Air-Pollution Control Strategy (NEPA) A Afghanistan National Renewable Energy Policy (ANREP) 			<ul style="list-style-type: none"> Awareness, Communication and Information Strategy (NEPA)
Action Plans/ programs	<ul style="list-style-type: none"> Biodiversity Action Plan (NEPA) National Protected Areas Action Plan (NEPA) Biodiversity hotspots management Action Plan Ecosystem Rehabilitation Action Plan (NEPA) 	<ul style="list-style-type: none"> Environmental Action Plan (NEPA) UNFCCC National Adaptation Plans of Action (NAPA), finalized Natural Resource Management (NRM) Action Plan 	<ul style="list-style-type: none"> Rangeland Management Plan, 2011 (NEPA, MAIL) Sustainable Land Usage Action Plan National Water and NRM Priority Program National Forestry Management Plan Rangeland Management Plan 	<ul style="list-style-type: none"> SC National Implementation Plan (NIP), Ongoing 	<ul style="list-style-type: none"> MEAs Cross Cutting Projects, Ongoing Afghanistan Environment Data Centre (AEDC), Ongoing GEF National Capacity Self-Assessment (NCSA), Submitted Strategic National Action Plan for Disaster Risk Reduction

Note: Afghanistan has been developing three National Environmental Status reports in 2005, 2008 and 2011

Annex-1: Identification of Stakeholders for Consultation of 6th phase of CPS of SGP-GEF

Government	Non-Governmental	SGP-OP5	Others
<p><u>MAIL</u></p> <ul style="list-style-type: none"> • Director of NRM (Mohd. Rafi Qazizada) • Director of Forestry (Aman Amanyar) • Director of Range management (Arif Hussani) • Director of Protected areas and Wild Life • Technical Deputy Minister of Mail (contact person for UNCCD convention) <p><u>NEPA</u></p> <ul style="list-style-type: none"> • Deputy Director (Policy & Inter. Affairs) • Deputy Director (Technical) • Director of Natural Heritage • Director of Planning and Policy • Director of Public Affairs • GEF Coordinator in NEPA (Mojiburahman) • CSOs Manager • Provincial Directorate – Bamiyan (Sharif Kazimi) • Provincial Directorate – Nangarhar <p><u>MRRD</u></p> <ul style="list-style-type: none"> • Deputy Minister (Shahr Yar) • Head of rural technology park at AIRD <p><u>Others</u></p> <ul style="list-style-type: none"> • State Minister / Head of AMDA (Barmak) • MoWE (Deputy Minister) • MoWA • MoE (NGOs Directorates) 	<p><u>Academia</u></p> <ul style="list-style-type: none"> • Faculty of Agriculture- Kabul (Khohistani, Nasiri)- establish Center for Environmental protection. • Faculty of Environment-Kabul (Akhonzada) – Dept. of EP and NRM • SHARQ Higher Education-Kabul (Lotfullah safi) • Bamiyan University (Ali Seerat) <p><u>Professional Institutions</u></p> <ul style="list-style-type: none"> • ICIMOD (Yi and Karima) • GIZ (Heinrich-Böll-Stiftung, Afghanistan Ph.: 799890909) • MADERA (NGO) • WCS (NGO) in Kabul and Bamiyan • AKDN (NGO) • FOCUS (NGO) • World Bank (Rasolui) • ADB (Mohibi) • ICARDA <p><u>United Nations</u></p> <ul style="list-style-type: none"> • UNDP – as member of SC & as funder) • UNEP (for obtaining data) • UNIDO (for-co-financing) • FAO (for co-financing) • ICARDA (for obtaining technical inputs) 	<p><u>A. NSC</u></p> <ol style="list-style-type: none"> 1. H.E Mustafa Zahir 2. Aman Amanyar 3. Lutfullah Safi 4. Aziz Rafi 5. Ms. Haseena Safi 6. Dr. Mohd. Naim Eqrar 7. Ms. Najiya Kharoti 8. Jocelyn Mason 9. Abdul Muqtader Nasary <p><u>B. TAG</u></p> <ol style="list-style-type: none"> 1. Ghulam Malikyar 2. Prof. Lutfullah Safi 3. Ms. Najiya Kharoti 4. Eng. Ezatuallh Sediqi 5. Nooruallh Malang 6. Aimal Khaurin <p><u>C. Partners (35 NGOs/CBOs)</u></p> <ol style="list-style-type: none"> 1. Badakshan = 10 2. Bamiyan = 7 3. Kabul = 16 4. Nangarhar = 6 5. Other province = 4 <p><u>D. SGP's Co-funders</u></p> <ul style="list-style-type: none"> • WFP, NCA, AKF, OBDA 	<p><u>Parliament</u></p> <ul style="list-style-type: none"> • Upper house (Commission for Health and Environment) • Lower house (Commission of Environment and NRM – Zakaria Sawda- (070 7100 900i)) <p><u>Local Institutions</u></p> <ul style="list-style-type: none"> • Environmental Protection Unions • Local Environmental Protection Consultations Council <p><u>CSOs</u></p> <ul style="list-style-type: none"> • Environmental Watch • Rageen Kaman • Other NGOs/CSOs from NEPA Data base • ENRMN (have 18 members) • SEA • Green Club • University Youth Initiative. • Sabaz Andeshan • Green Paten <p><u>Coordination Body</u></p> <ul style="list-style-type: none"> • ACBAR (NGOs Coordination Body) • ANCB