

## 1.0 Afghanistan

ADB	Asian Development Bank
BMZ	German Federal Ministry for Economic Cooperation and Development
DFID	Department for International Development (United Kingdom)
FAO	Food and Agriculture Organization
GIRA	Government of the Islamic Republic of Afghanistan
ICIMOD	International Centre for Integrated Mountain Development
LDCF	Least Developed Country Fund
NAPA	National Adaptation Programme of Action
NCSA	National Capacity Needs Self-Assessment
NEPA	National Environmental Protection Agency
UNEP	United Nations Environment Program
USDS	United States Department of State

Afghanistan is a landlocked country located along historic trade routes leading from Central Asia into South Asia. A turbulent history has impeded development within the country, and the international community is engaged in efforts to secure Afghanistan's borders and improve governance capacity. Although there are some indications of improvements within the areas of health and education, Afghanistan continues to have one of the highest child mortality rates in the world; life expectancy hovers around 44 years for men and women (USDS, 2010). Agriculture contributes an estimated 31 per cent to the country's Gross Domestic Product, and approximately 85 per cent of Afghans depend on primarily rain-fed agriculture and agribusiness for their livelihoods (USDS, 2010). Additional industries include natural gas, coal and copper, as well as small-scale production of textiles, furniture, and cement.

### A. Adaptation Needs and Priorities

Afghanistan's climate is arid and semi-arid—falling within the Desert or Desert Steppe climate classification—but varies considerably from one region to another given its diverse topography (GISA, 2009). The country experiences cool winters and hot summers. A wet season runs from winter to early spring and seasonal snows fall from October to April in the mountains. Although climate data is sparse, key climatic hazards that Afghans face include periodic drought, floods due to untimely and heavy rainfall, floods due to thawing of snow and ice, increasing temperatures, frost and cold spells, hail storms and 120-day winds (GISA, 2009). Among these, prolonged



droughts, floods due to untimely and heavy rainfall, and rising temperatures present the greatest hazards to ecosystem services and livelihood security in Afghanistan (GIRA, 2009).<sup>48</sup>

Afghanistan's National Adaptation Programme of Action (NAPA), which was jointly developed with its National Capacity Needs Self-Assessment (NCSA), notes the difficulty in projecting the future impacts of climate change in the region given inaccessibility of baseline data, scarce resources, and lack of capacity (GIRA, 2009). Nonetheless, the NAPA identifies a number of climate hazards that may worsen with climate change: periodic drought, floods due to untimely and heavy rainfall, flooding due to thawing of snow and ice, rise in temperatures, frost and cold spells, monsoon and 120-day winds. The NAPA identifies the following sectors as most vulnerable to climate change: water resources, forestry and rangelands, and agriculture.

## **B. National Level Policies and Strategic Documents**

Due to years of political conflict, wars, insecurity and lack of in-country capacity, Afghanistan has not been able to keep pace with other South Asian countries in terms of preparing for climate change and implementing necessary measures. The recently completed joint NCSA and NAPA is the main policy document of Afghanistan to deal with climate change. The three high-level objectives in Afghanistan's NCSA/NAPA are to:

- (i) identify priority projects and activities that can help communities adapt to the adverse effects of climate change;
- (ii) seek synergies with existing multi-lateral environmental agreements and development activities with an emphasis on both mitigating and adapting to the adverse effects of climate change; and,
- (iii) integrate climate change considerations into the national planning processes.

At the national and regional levels, the National Environmental Protection Agency (NEPA) may lead the implementation of the action plan, in collaboration with other actors.

## **C. Current Adaptation Action**

Table 1 below lists the climate change projects in Afghanistan which are on-going or are in the process of being developed. The main priority sector being addressed through current projects is the water sector, with additional areas of focus including meteorology, agriculture, forestry, land, infrastructure, as well as energy and food security. Funders include the Asian Development Bank (ADB),

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<sup>48</sup> During the last 50 years, average temperatures in Afghanistan has increased by approximately 0.8 to 1°C, while average precipitation has decreased by 90 to 100 millimeters per year. Temperature variability has also amplified, with extreme temperatures exceeding long term maximum and minimum temperatures by 30 percent, according to the Climate Research Unit of the University of East Anglia.

European Commission, the Food and Agriculture Organization (FAO), German Federal Ministry for Economic Cooperation and Development (BMZ), the Least Developed Countries Fund (LDCF) and the United Kingdom, with implementing agencies including: the Ministry of Agriculture, Irrigation and Livestock; Ministry of Energy and Water; NEPA; the Organization of the Islamic Conference; and the United Nations Environment Programme (UNEP).

In addition to the projects listed below, Afghanistan is addressing transboundary related water issues through the Central Asia Regional Economic Cooperation Program.<sup>49</sup> This program is looking at incorporation of climate change into the development of participating countries economic and transport corridors (ADB, 2010), but this far has not been strongly engaged in climate change adaptation issues.

**Table 1: Current Adaptation Projects and Programs active in Afghanistan**

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
<b>National Action</b>							
1.	Climate Proofing of Horticulture in Afghanistan	The objective of this project is to develop an improved range of horticulture practices and products to adapt to the climate change threat.	UK	Ministry of Agriculture, Irrigation and Livestock	Capacity building; Research	2008 – 2012	Agriculture
2.	Building Adaptive Capacity and Resilience to Climate Change in Afghanistan	The objective of this project is to increase capacity and the knowledge base for assessment, monitoring and forecasting of climate change to water related risks in Afghanistan.	LDCF, co-financing  <i>Budget:</i> US\$20.9 million	UNEP, NEPA	Capacity building; Research	2011 - 2015	Freshwater supply
<b>Participation in Regional and Global Projects</b>							
3.	Glacial Melt and Downstream Impacts on Indus-dependent Water Resources and Energy <sup>50</sup>	Glacier-fed river basins are a major source of irrigation and hydropower in Himalayan countries, with the Indus river basin of major importance for the economy of several countries in South Asia. This project will develop climate adaptive measures to	ADB Small Grant for Adaptation Project  <i>Budget:</i>	ICIMOD, UNEP-GA, CICERO	Community based adaptation; Policy formation and integration	2007 – 2009	Freshwater supply; Energy  Regional: Pakistan, Central and East Afghanistan, North India

<sup>49</sup> This program involves Afghanistan, Azerbaijan, China, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan and Uzbekistan.

<sup>50</sup> ADB, <http://www.adb.org/climate-change/afg-ind-downstream.asp>

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
	reduce some of the adverse climate impacts on environmental degradation, building a level of climate resilience at the target watersheds. The project will support the mainstreaming of climate adaptation activities into ADBs projects and programs in the water and hydro-energy sector in these countries.	US\$200,000					
In Afghanistan: Further information required.							
4.	Protection of Sustainable Policy Initiatives in the Management of Natural Resources in the Hindu Kush Himalayas <sup>51</sup>	BMZ	GIZ, ICIMOD	Capacity building	2008 – 2012	Government	Asia Region: Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Pakistan
In Afghanistan: Further information required.							
5.	South Asia Water Initiative <sup>52</sup>	DFID, Australia, Norway  Budget: US\$9.6 million	World Bank (lead); regional and national bodies	Capacity building; Policy formation and integration	2009 – 2013	Freshwater supply	Regional: Afghanistan, Bangladesh, Bhutan, India, Nepal and Pakistan

<sup>51</sup> GIZ, <http://www.gtz.de/en/weltweit/asien-pazifik/33473.htm>

<sup>52</sup> UN, [http://www.un.org/climatechange/projectsearch/proj\\_details.asp?projID=182&cck=aVmFG453KHSJI81](http://www.un.org/climatechange/projectsearch/proj_details.asp?projID=182&cck=aVmFG453KHSJI81)

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
		<i>In Afghanistan: Further information required.</i>					
6.	Water and Adaptation Intervention in Central and West Asia <sup>53</sup>	Asian Development Bank  Budget: US\$1.0 million	Asian Development Bank	Research; Policy formation and integration; Knowledge communication; Capacity building	2010 – ?	Watershed management; Disaster risk management; Agriculture; Climate information services	<i>Amu Darya and Syr Darya River Basins:</i> Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
		<i>In Afghanistan: Further information required.</i>					
7.	Support to Policy Consultation and Actions to boost Sustainable Use of Water and Energy Resources for Agricultural Production and Livelihood Improvement in the Near East and North Africa Region in the context of Climate Change <sup>54</sup>	FAO  Budget: US\$436,000	FAO; Organisation of the Islamic Conference	Capacity building; Policy formation and integration; Research	2010 – 2011	Freshwater supply; Energy; Agriculture	<i>Global:</i> 30 countries including: Afghanistan, Algeria, Djibouti, Egypt, Kazakhstan, Kyrgyzstan, Libya, Mauritania, Morocco, Pakistan, Somalia, Sudan,

<sup>53</sup> ADB, <http://pid.adb.org/pid/TaView.htm?projNo=44066&seqNo=01&typeCd=2>

<sup>54</sup> FAO, <https://extranet.fao.org/fpmis/FPMISReportServlet.jsp?div=&type=countryprofileopen&language=EN&countryId=SD> and SESRIC, <http://www.sesric.org/activities-oicfao.php>

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
	<ul style="list-style-type: none"> <li>Address food and energy security in the Near East and North Africa region through a convergent approach which integrates four critical resource factors - water, energy, technology, and knowledge under the stress of climate change.</li> <li>Carry out studies on the use of water resources, on the management strategies and on the investment needs at national level.</li> <li>Capacity-building of governments and civil societies for optimal natural resource management.</li> </ul>						Tajikistan, Tunisia, Turkmenistan, Uzbekistan, and Yemen
<i>In Afghanistan: Further information required.</i>							

#### D. Proposed Adaptation Action

During the NAPA process, the working groups identified a total of 51 potential activity options for adapting to climate change. Through a series of evaluation exercises, two adaptation options were shortlisted and developed into summary project proposals:

- Improved Water Management and Use Efficiency; and,
- Land and Water Management at the Watershed Level.

The first step towards implementing these projects is to build necessary technical, institutional and community capacity. The recently approved capacity building project funded through the Least Development Country Fund (LDCF) should contribute to addressing this issue.

**Table 2: Priority Proposed Adaptation Projects and Programs in Afghanistan’s NAPA**

Name	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)
1. Improved Water Management and Use Efficiency	The overall objective is to reduce livelihood vulnerability in drought-affected communities through improved water management and use efficiency. The project would involve mainstreaming climate change and water management issues at the national level, introducing water saving irrigation methods, water distribution technologies, and the	Policy formation and integration; Community based adaptation; Capacity building	Freshwater supply	
<b>Notes:</b>				

Name	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)
	creation of community water resource management associations.			
2. Community Based Watershed Management	Degradation of watersheds in Afghanistan is widespread. This project will focus on realizing holistic intervention in specific watersheds, with activities addressing deforestation and destruction of land cover, soil erosion, flooding, and uncoordinated natural resource management decisions. The project would focus on mainstreaming watershed management issues at the national level, establish watershed management committees, and raise awareness around natural resource use.	Capacity building; Knowledge communication; Community based adaptation	Watershed management	
		<b>Notes:</b> This project's objectives are being partially addressed through the regional project "Support to Policy Consultation and Actions to boost Sustainable Use of Water and Energy Resources."		

### E. Assessment

Afghanistan's current economic development policy framework does not appear to integrate climate considerations into its decision-making, particularly regarding the integration of climate change risks into integrated water resources management, land use planning and management, drought preparedness and risk reduction plans. Afghanistan also lacks the capacity and expertise needed to identify vulnerabilities and adaptation measures that could help adjust current policies in order to integrate climate change threats and mainstream climate change adaptation in all impacted sectors—not just water resources and agriculture (i.e. in health, infrastructure, energy). This latter concern could be at least partially addressed through the planned capacity building project supported by the LDCF. Overall, however, ongoing adaptation projects are in line with the priorities identified in Afghanistan's NAPA, including the current focus on water and agriculture.

In Afghanistan, the overarching barriers to adaptation such as conflict, weak policy and legal frameworks, and low capacity and awareness are likely to remain challenging for many years to come. However, Afghanistan may benefit from a sustained transition that would provide opportunities for integrating climate change considerations into policy reforms.

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