

**GREEN
CLIMATE
FUND**

Meeting of the Board
27 February - 1 March 2018
Songdo, Incheon, Republic of Korea
Provisional agenda item 15

GCF/B.19/22/Add.09

6 February 2018

Consideration of funding proposals – Addendum IX

Funding proposal package for FP067

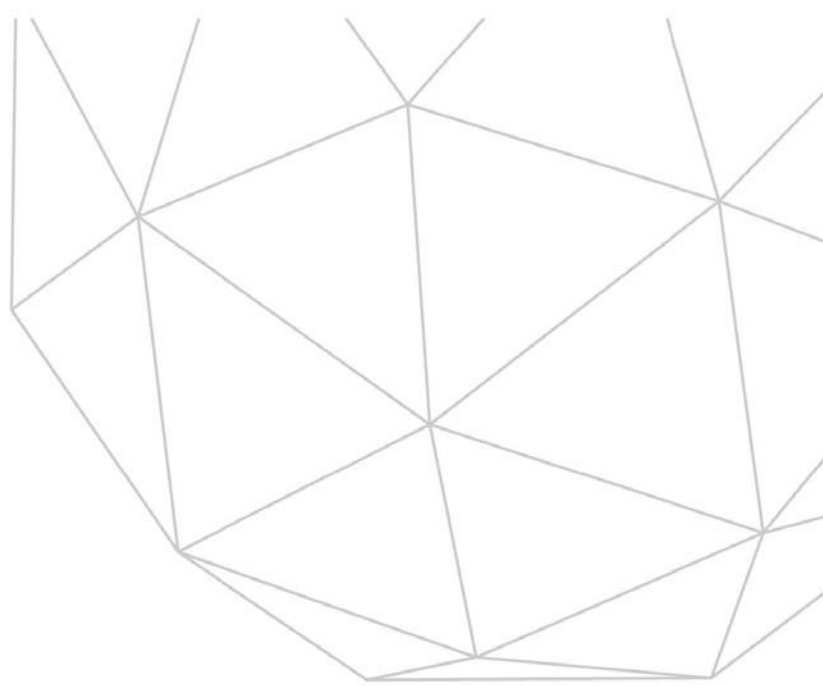
Summary

This addendum contains the following three parts:

- a) A funding proposal summary titled “Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan”;
- b) No-objection letters issued by the national designated authority(ies) or focal point(s); and
- c) Environmental and social report(s) disclosure;



GREEN
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Funding Proposal

Version 1.1

The Green Climate Fund (GCF) is seeking high-quality funding proposals.

Accredited entities are expected to develop their funding proposals, in close consultation with the relevant national designated authority, with due consideration of the GCF's Investment Framework and Results Management Framework. The funding proposals should demonstrate how the proposed projects or programmes will perform against the investment criteria and achieve part or all of the strategic impact results.

Project/Programme Title: Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan.

Country/Region: Republic of Tajikistan

Accredited Entity: United Nations World Food Programme

Date of Submission: 02 June, 2017

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Note to accredited entities on the use of the funding proposal template

- Sections **A, B, D, E** and **H** of the funding proposal require detailed inputs from the accredited entity. For all other sections, including the Appraisal Summary in section F, accredited entities have discretion in how they wish to present the information. Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other project documents such as project appraisal document.
- The total number of pages for the funding proposal (excluding annexes) is expected not to exceed 50.

Please submit the completed form to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“[FP]-[WFP]-[02062017]-[Serial Number]”

A.1. Brief Project / Programme Information		
A.1.1. Project / programme title	Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan.	
A.1.2. Project or programme	Project	
A.1.3. Country (ies) / region	Republic of Tajikistan	
A.1.4. National designated authority (ies)	Khayrullo Ibodzoda Chairman Committee on Environmental Protection Under the Government of the Republic of Tajikistan	
A.1.5. Accredited entity	UN World Food Programme	
A.1.5.a. Access modality	<input type="checkbox"/> Direct <input checked="" type="checkbox"/> International	
A.1.6. Executing entity / beneficiary	Executing Entity: Committee of Environmental Protection Co-Executing Entity: WFP Beneficiaries: Climate vulnerable, poor and food insecure communities in rural Tajikistan <ul style="list-style-type: none"> • 50,000 direct beneficiaries • Up to 70,000 indirect beneficiaries 	
A.1.7. Project size category (Total investment, million USD)	<input checked="" type="checkbox"/> Micro (≤ 10) <input type="checkbox"/> Small ($10 < x \leq 50$) <input type="checkbox"/> Medium ($50 < x \leq 250$) <input type="checkbox"/> Large (> 250)	
A.1.8. Mitigation / adaptation focus	<input type="checkbox"/> Mitigation <input checked="" type="checkbox"/> Adaptation <input type="checkbox"/> Cross-cutting	
A.1.9. Date of submission	02 June, 2017	
A.1.10. Project contact details	Contact person, position	Paolo Mattei Representative and Country Director
	Organization	WFP Tajikistan Country Office
	Email address	paolo.mattei@wfp.org
	Telephone number	+992-44-6252000
	Mailing address	7 Tolstoy Street, Dushanbe Tajikistan 734003

A.1.11. Results areas <i>(mark all that apply)</i>	
Reduced emissions from:	
<input type="checkbox"/>	Energy access and power generation (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)
<input type="checkbox"/>	Low emission transport (E.g. high-speed rail, rapid bus system, etc.)
<input type="checkbox"/>	Buildings, cities and industries and appliances (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)
<input type="checkbox"/>	Forestry and land use (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)
Increased resilience of:	
<input checked="" type="checkbox"/>	Most vulnerable people and communities (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)

- Health and well-being, and food and water security
(E.g. climate-resilient crops, efficient irrigation systems, etc.)
- Infrastructure and built environment
(E.g. sea walls, resilient road networks, etc.)
- Ecosystem and ecosystem services
(E.g. ecosystem conservation and management, ecotourism, etc.)

A.2. Project / Programme Executive Summary (max 300 words)

The project “Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan” will increase the adaptive capacities of the most vulnerable and food insecure communities residing in Rasht valley, Khatlon and Gorno-Badakhshan Autonomous Region (GBAO) regions. Due to their location, these communities are vulnerable to the negative impacts of climate change, particularly from rainfall variability resulting in adverse livelihood impacts, increasing temperatures with glacial melting and sudden onset extreme events causing loss and damage, in addition to high levels of malnutrition and poverty (See Annex 1.3). The proposed project intervention takes a transformative approach to ensure food security and support communities to adapt to climate change through two key components:

- i. Capacity strengthening and awareness raising of food insecure climate vulnerable communities and national actors for enhanced rural resilience and food security, and;
- ii. Resilience building at household and community level through diversification of livelihoods and improved market access.

A key element of this approach will be addressing institutional capacity needs at both national and sub-national levels to better understand needs and support vulnerable communities develop effective responses to prepare for and manage climate risks. Interventions of the project will reach 50,000 direct beneficiaries among the estimated 270,000 vulnerable individuals residing in climate vulnerable areas, and up to 70,000 indirect beneficiaries, who live in the proposed project locations. The proposed project contributes to climate-resilient development pathways in Tajikistan through the sustained impact of project measures that have high potential for replicability and scale. Overall, many of these measures can be scaled to reach 100% of national coverage. The project stimulates a demand-based model for climate information and use of ICT/mobile platforms to enable public and private sector participation, innovation, and market development. It contributes to key policies in the country and supports efforts to mainstream gender-responsive climate change adaptation into development plans. It institutionalizes knowledge generation and learning through the incorporation of climate change and food security in national and district level planning processes. At the community level, the project introduces new technologies such as renewables, rehabilitates dilapidated assets that take into account the diverse needs and capacities of women and men and that strengthens community resilience through tailored social and behavioral change interventions.

A.3. Project/Programme Milestone

Expected approval from accredited entity's Board (if applicable)	N/A
Expected financial close (if applicable)	31/05/2022
Estimated implementation start and end date	Start: <u>01/07/2018</u> End: <u>30/06/2022</u>

Project/programme lifespan	4 years 0 months
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B.1. Description of Financial Elements of the Project / Programme

The proposed project will address a number of Tajikistan’s structural, institutional and financial barriers that make it particularly vulnerable to climate change and in turn affect local economies that are climate sensitive and have high emigration rates. A breakdown of cost estimates by sub-component in local and foreign currency is provided in Annex 4.1.

2 a breakdown of cost/budget by expenditure type (project staff and consultants, travel, goods, works, services, etc.) and disbursement schedule in project/programme confirmation (term sheet) as included in section I, Annexes.

Expected Disbursement (in million USD)

Component	Output	GCF Funding	Co-financing	Total (USD)	Total in local currency (TJS)
PMC		280,589		280,589	2,476,341
Component 1: Capacity strengthening and awareness raising of food insecure climate vulnerable communities and national actors for enhanced rural resilience and food security	Output 1.1	200,594	58,284	258,878	2,284,727
	Output 1.2	659,069	58,284	717,352	6,330,994
	Output 1.3	351,376	58,284	409,660	3,615,453
	Output 1.4	171,024	58,284	229,308	2,023,758
	Output 1.5	386,000	58,284	444,284	3,921,026
	Output 1.6	96,297	58,284	154,581	1,364,253
	Monitoring & Equipment	257,291		257,291	2,270,718
Sub-total Component 1		2,121,651	349,702	2,471,353	21,810,929
Component 2: Resilience building at household and community level through diversification of livelihoods and establishment of value chains for market access	Output 2.1	2,128,080	87,426	2,215,505	19,552,940
	Output 2.2	2,095,142	87,426	2,182,568	19,262,253
	Output 2.3	1,937,912	87,426	2,025,338	17,874,618
	Output 2.4	233,775	87,426	321,200	2,834,751
	Monitoring & Equipment	476,436		476,436	4,204,789
Sub-total Component 2		6,871,345	349,702	7,221,047	63,729,352
TOTALS		9,273,586	699,404	9,972,990	88,016,623
Official UN rate for TJS		8.8255			

B.2. Project Financing Information

	Financial Instrument	Amount	Currency	Tenor	Pricing
(a) Total project financing	(a) = (b) + (c)	9,973	<u>million USD</u> (\$)		

(b) GCF financing to recipient	(i) Senior Loans	.....	<u>Options</u>	() years	() %		
	(ii) Subordinated Loans	.....	<u>Options</u>	() years	() %		
	(iii) Equity	.....	<u>Options</u>		() % IRR		
	(iv) Guarantees	.....	<u>Options</u>				
	(v) Reimbursable grants *	.....	<u>Options</u>				
	(vi) Grants *	9,273	<u>million USD</u> (\$)				
* Please provide economic and financial justification in section F.1 for the concessionality that GCF is expected to provide, particularly in the case of grants. Please specify difference in tenor and price between GCF financing and that of accredited entities. Please note that the level of concessionality should correspond to the level of the project/programme's expected performance against the investment criteria indicated in section E .							
Total requested (i+ii+iii+iv+v+vi)		9,273	<u>million USD</u> (\$)				
(c) Co-financing to recipient	Financial Instrument	Amount	Currency	Name of Institution	Tenor	Pricing	Seniority
	<u>Grant</u>	.....0.353	<u>million USD</u> (\$)	Government (in kind)	() years	() %	<u>Options</u>
	<u>Grant</u>	.....0.345	<u>million USD</u> (\$)	WFP	() years	() %	<u>Options</u>
	<u>Options</u>	.....	<u>Options</u>	.....	( ) years	() % IRR	<u>Options</u>
	<u>Options</u>	.....	<u>Options</u>	.....			<u>Options</u>
Lead financing institution: ...Government of Tajikistan, WFP.....							
Informal, parallel co-financing has been offered by the communities participating to the project in the form of construction materials and tools (pipes, gabions, diesel, renting tractors etc), for an estimated amount of USD 250,000.							
* Please provide a confirmation letter or a letter of commitment in section I issued by the co-financing institution.							
(d) Financial terms between GCF and AE (if applicable)	In cases where the accredited entity (AE) deploys the GCF financing directly to the recipient, (i.e. the GCF financing passes directly from the GCF to the recipient through the AE) or if the AE is the recipient itself, in the proposed financial instrument and terms as described in part (b), this subsection can be skipped.						
	If there is a financial arrangement between the GCF and the AE, which entails a financial instrument and/or financial terms separate from the ones described in part (b), please fill out the table below to specify the proposed instrument and terms between the GCF and the AE.						
	Financial instrument	Amount	Currency	Tenor	Pricing		
Grants		<u>million USD (\$)</u>	(4) years	() %			

	<p><i>Please provide a justification for the difference in the financial instrument and/or terms between what is provided by the AE to the recipient and what is requested from the GCF to the AE.</i></p>
<p>B.3. Financial Markets Overview (if applicable)</p>	
<p><i>Not applicable</i></p>	

Please fill out applicable sub-sections and provide additional information if necessary, as these requirements may vary depending on the nature of the project / programme.

C.1. Strategic Context

Tajikistan is a food-deficit country and the poorest in the Commonwealth of Independent States. Poverty headcount ratio at national level was recorded at the rate of 31.3 % in 2015¹. According to WFP's Food Security Monitoring System (FSMS), the severity of food insecurity in the country had been alleviated since its independence from the Soviet Union, but the recent economic contraction in the Russian Federation has hit the economy of Tajikistan, as it heavily relies on remittances.

Economic context –Tajikistan is a low income country with USD 2,567 per capita GDP purchasing power parity (PPP) and a population of 8.3 million in 2014². Its economy grew strongly and the poverty level substantially fell from about 80% of poverty rate in 1997 to 31.3% in 2014.³ Agriculture is the largest sector of the economy, which accounts for 20% of the country's GDP and 53% of domestic employment. While the economic growth slowed down to 4.2% in 2015 due largely to the economic downturn in the Russian Federation and weak global demand, the government has maintained the ambitious goals for the growth for the next few years (i.e. to double GDP, to reduce poverty to 20% and to expand the middle class by 2020) ⁴. Gender inequalities and discriminatory social norms, resulting mainly in disadvantages for women and girls, remaining a significant impediment to social and economic development [Tajikistan ranks 69 out of 155 in 2014⁵ in terms of gender inclusion].

Despite the progress made in the economic growth, Tajikistan is still among the poorest countries in the Eastern Europe, Caucasus and Central Asia (EECCA) region. It is estimated that the cost of environmental degradation can be 10% of Tajikistan's GDP⁶. A study by the United Nations Economic Commission for Europe (UNECE) shows that a changing climate has already being negatively affecting the economy, society and ecosystems of the country, including faster erosion of forest soil from extreme weather events, deteriorating water quality from melting glaciers and loss of biodiversity, amongst others⁷. Remittances, predominantly from migrants working in Russia, account for approximately 43 % of Tajikistan's Gross Domestic Product (GDP)⁸.

Geographic context - Mountains occupy about 93% of the terrain, whereas glaciers make up 6% of the total country area. Of the 7% available arable land, 97% is threatened by soil degradation⁹. In addition, there remains high levels of poverty throughout the country, Tajikistan has the lowest GDP per capita of the countries in the Central Asia region with an estimated 47 % of the population living on less than US\$1.33 a day and 17 % subsisting on less than US\$0.85 a day.¹⁰ In 2015, Tajikistan ranked 129th out of 188 countries on the Human Development Index.

Extreme weather events (such as floods, droughts, avalanches, landslides) recurrently destroy land, crops, infrastructures, and livelihoods. In 2010, annual losses from climate-induced extreme weather events was

¹ World Bank, The World Bank in Tajikistan: Country Snapshot, 2016

² World Development Indicators, the World Bank Group (WB), <http://data.worldbank.org/datacatalog/world-development-indicators>

³ Tajikistan Partnership program snapshot, October 2015, the World Bank Group (WB), <http://pubdocs.worldbank.org/pubdocs/publicdoc/2015/10/645741444794465533/TajikistanSnapshot.pdf>

⁴ Ibid

⁵ UN Women 2015-2020 global report

⁶ Intended Nationally Determined Contribution (INDC) towards the achievement of the global goal of the UN Framework Convention on Climate Change (UNFCCC), Government of the Tajikistan (GoT),

<http://www4.unfccc.int/submissions/INDC/Published%20Documents/Tajikistan/1/INDCTJK%20final%20ENG.pdf>

⁷ Tajikistan Environmental Performance Reviews, The United Nations Economic Commission for Europe (UNECE),

www.unece.org/fileadmin/DAM/env/epr/epr_studies/TajikistanI.pdf

⁸ WFP VAM Bulletin June 2016 Issue 17 <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp286828.pdf>

⁹ UNDP-UNEP Poverty-Environment Initiative

¹⁰ Central Asia. Business and Economy. Economic Cooperation Organisation (ECO) <http://en.reingex.com/Central-Asia-Business-Economy.asp>

estimated at \$600 million, or 4.8% of Tajikistan's gross domestic product (GDP).¹¹ More recent global assessments conducted by German Watch in 2017 cites annual losses to be at 7.4% of GDP, ranking Tajikistan 9th globally in terms of losses, indicating the need for immediate adaptation activities. The most common impacts are those of land degradation and erosion of fertile top soil, impact on infrastructure due to mudflows, as highlighted by World Bank (2010) and the Third National Communication (UNFCCC 2014).¹²

Climate-induced losses will increase with rising temperature and precipitation levels.¹³ The relatively low level of socio-economic development in Tajikistan, inadequate infrastructure, and high dependency on climate-sensitive sectors make the country extremely vulnerable to climate change and climate-induced extreme weather events. Lack of human and institutional capacity necessary to effectively reduce and manage climate change risks and impacts makes it extremely difficult to reduce climate change vulnerability and build the resilience levels necessary to overcome impending climate-related problems.

Food security context - Food production in Tajikistan is limited by insufficient availability of arable land. Climate change is likely to compound these issues and impact rural livelihoods that are highly climate sensitive and dependent on the agricultural economy. Nutrition indicators for Tajikistan are the worst in Central Asia and among all former Soviet republics. The 2015 Global Hunger Index (GHI) estimates that 33.2 % of Tajikistan's population is undernourished. Twenty-six percent of children under 5 are stunted and 10 % are wasted¹⁴. One major contributing factor to poor nutrition is poor infant and young children feeding practices (IYCF) with only 20 % of children receiving adequate food diversity and frequency. Micronutrient deficiencies are also high. Twenty-five % of women of reproductive age are anemic, as are 30 % of children under 5.¹⁵ The alarming nutritional status in Tajikistan is subject to high seasonal variations and undermines the resilience and capacities of individuals, households and communities to effectively adapt to a changing climate.

Policies – Tajikistan is an active member of the United Nations Framework Convention on Climate Change and has the lowest level of absolute and per capita emissions in Central Asia¹⁶. It has so far submitted three national communications and has ratified the Paris Agreement. It has also developed its Nationally Determined Contributions and is in the process of finalizing its new National Climate Change Adaptation Strategy (NCCAS) in 2017. At the national level, the following regulations have embedded climate change within them¹⁷:

- i. The National Action Plan of RT on Climate Change (adopted in 2003) - To be updated;
- ii. National Action Plan of RT on Environmental protection (adopted in 2006);
- iii. State ecological programme and State programme of environmental education until 2020;
- iv. The National strategy on disaster risk management (2010);
- v. The Law of RT on the power industry (2000);
- vi. The Law of RT on transport (2000);
- vii. The Law of RT on ecological expertise (2012);
- viii. The Law of RT on environmental protection (2011);
- ix. The Law of RT on environmental education (2010);
- x. The Law of RT on the use of renewable energy sources (2010)
- xi. The Law of RT on environmental information (2011);
- xii. The Law of RT on energy saving and energy efficiency (2013)
- xiii. The National Strategy for Enhancing the Role of Women in the Republic of Tajikistan (2010)

¹¹ IMF, 2010, *Republic of Tajikistan, Poverty Reduction Strategy Paper*, Washington: International Monetary Fund.

¹² German Watch. 2017, *Global Climate Risk Index 2017*

¹³ UNDP. 2012. *Tajikistan: Poverty in the Context of Climate Change, National Human Development*. Dushanbe: United Nations Development Programme.

¹⁴ Acute malnutrition, or wasting, develops as a result of recent rapid weight loss or a failure to gain weight. In children, it is assessed by low weight-for-height compared to the WHO international growth reference or mid upper arm circumference (MUAC).

¹⁵ Micronutrient status survey, UNICEF, 2009.

¹⁶ Third National Communication to the UNFCCC, 2014

¹⁷ Ibid

- xiv. The Agriculture Reform Programme of the Republic of Tajikistan for 2012-2020 (endorsed by Resolution 383 of the GoT).

C.2. Project / Programme Objective against Baseline

Tajikistan has been identified as one of the countries that are highly vulnerable to the adverse impacts of global climate change, particularly susceptible to low agricultural productivity, water stress and high losses from disasters¹⁸. With 73% of the population living in rural areas¹⁹, and depending on land for their livelihood and food, climate has always been an important factor determining the incomes and lives of the rural population. Variation in precipitation patterns, glacial and permafrost degradation, forest fires, outbreaks of pests and diseases and increased occurrence of extreme weather events are key phenomena that could be exacerbated by climate change²⁰. Recurrent natural disasters including droughts and floods are already impacting low-income rural households, slowly eroding their capacities to cope with and recover from each event.

During the period of 1940-2012, *temperature rise* was recorded at an average rate of 0.1-0.2 °C per decade, *annual precipitation* rose by 5-10%, *degradation of glacier cover* was estimated at 20%. *Droughts* over the period also affected the large parts of the country. Current climate change projections appear to have followed that trend²¹. These changes in the climate are likely to pose numerous threats to the livelihoods of people and exacerbate food security status of households.

By 2030, the average temperature is projected to increase by 2.3°C. Average rainfall is likely to increase by 8% in the territories up to 2500 m above sea level and decrease by 3% in the mountainous areas.²² Climate change could affect Tajikistan through impacts on a number of different social, cultural, economic, and natural resources. The country is likely to experience considerable additional economic losses, humanitarian stress and environmental degradation if robust measures to reduce vulnerability and enhance adaptation are not put in place. More frequent climate-induced extreme weather events may adversely impact the function and stability of both human and natural systems and further exacerbate climate-induced losses and damages.

The distributional effects are more likely to fall upon those involved in subsistence agriculture or pastoralism.²³ Vast swaths of agricultural land are being affected by wide-spread deforestation, soil erosion and droughts, which effectively decreases water availability for agriculture. Overall, land degradation, soil erosion and loss of biodiversity and ecosystems are driven primarily by inadequate environmental management, dilapidated agricultural infrastructure including obsolete irrigation and deranged drainage systems, as well as lack of education and awareness of the impacts of land degradation.²⁴

Looking towards the future, three main direct channels exist through which adverse climate conditions can affect people's livelihoods from agriculture: (i) decline in agricultural productivity (yields); (ii) reduction in agricultural wages; and (iii) increase in relative food prices (World Bank, 2009). Simulations based on household data show that a 20 % decline in agricultural productivity due to climate change could increase the national poverty rate by 13 % and poverty gap by 24 % respectively. A similar increase of relative food prices can lead to a rise in poverty rate by 16 % and poverty gap by 25 %.

In terms of projections, climatic models (CCSM3, ECHAM5 and CSIRO) used for the preparation of the Third National Communication under UNFCCC (2014), highlight that the amount of precipitation in Tajikistan is likely

¹⁸ [World Bank 2009](#), [World Bank 2012](#)

¹⁹ Grantham Research Institute on Climate Change and the Environment
²⁰ Ibid

²¹ [Government of the Republic of Tajikistan 2014](#), [World Bank 2012](#)

²² Makhmadaliev, B., Kayumov, A., Novikov, V., Mustaeva, N., & Rajabov, I. 2008. *The Second National Communication of the Republic of Tajikistan under the United Nations Framework Convention on Climate Change*. Dushanbe. p. 89.

²³ Tajikistan: Agriculture Sector Risk Assessment World Bank Group Report Number 103077-TJ

²⁴ UNDP-UNEP Poverty-Environment Initiative in Tajikistan: The Economics of Land Degradation for the Agriculture Sector in Tajikistan (2012) http://www.unpei.org/sites/default/files/dmdocuments/TJ_Economy%20of%20land%20degradation_ENG.pdf

to increase during summer and winter and may reduce in spring and autumn. It is expected that the nature of precipitation will change with the amount of rainfall increasing and snowfall decreasing. There will be more intensive precipitation events of the type that usually occur only once in fifty years, especially in Pamir. Geographically, the annual amount of precipitation is likely to decrease in southern Tajikistan and neighboring areas and is likely to increase in mountainous parts of the country. The models do not show significant change in precipitation in Vakhsh and Pyanj river basins, however an increased variation in maximum and minimum precipitation will be observed.

An increase in temperature will be observed in all districts of the country. Winter and summer temperatures in the Pamir and Gindukush mountains will possibly increase at a faster rate than in plain and arid districts. By the end of 21st century warming may have become especially significant, exceeding 5°C in southern districts of the country as well as in mountains of central Tajikistan and western Pamir. Diurnal temperature ranges will increase as will the number of heat waves, especially in the lowland districts of southern Tajikistan. The risk of drought will increase due to an increase in total evaporation and earlier snowmelt. Given the impact of climate warming, the glacier losses in 21st century will reach 2 km³ per year on average. An increase in air temperature and heat-waves will affect livelihoods. Insufficient winter precipitation (snow), especially in the mountainous glacier zone, may change river flow regimes. This, coupled with insufficient precipitation in spring will negatively affect agriculture and food security.

Historically, a number of extreme climate events have been observed with direct consequences for agricultural based livelihoods. For example, in 2015, high temperatures led to melting of glacier in the mountains leading to flooding of agricultural lands affecting 57 hectares of agricultural land and leading to displacement. In 2007, the longest drought which stretched the coping capacities of most households was experienced. The drought was followed by the worst winter in early 2008 with temperatures falling to -20°C. The cold weather damaged agricultural assets (crops, orchards and livestock) resulting into 40% decline in agricultural yields. Accelerated deforestation was one of the ecological impacts of the severe winter since the shortage of electricity, gas and other energy supplies forced people to cut trees in the mountain forests.

Other potential impacts of climate change on agricultural sector in Tajikistan include possible reduction in arable land due to inundation of agricultural land by floods from melting of glacier. Annual melting of glaciers brings in 10 – 20% of water into rivers but during dry and hot years, it can be up to 70%. In 2002, a whole village in Rasht region was completely destroyed by glacial lake outbursts killing 25 people and displacing 450 families.

The effect of climate on the country's water supply is also of considerable concern given the importance of glaciers in replenishment of country's waterways. 60% of water in Central Asia (CA) originates from Tajikistan and therefore intervention on water resources will benefit the other CA countries. Based on climate projections, by 2030 there will be challenges of drinking and irrigation water as most of the glaciers (currently the source of river flows) will have melted.²⁵

There are several socio-economic factors relevant to Tajikistan, which derive from the legacy of the Soviet era. The removal of the technical and financial support of the centrally planned economy has resulted in crumbling infrastructure and limited institutional capacity. This has also been responsible for significant migration of the male working population to find paid employment abroad. All of these factors have eroded the ability of communities to cope with climate-related risks, and their ability to maintain and develop social and technical systems to reduce them. Also, the increase in female-led households in those communities, which were impacted by the economic pressures resulting in the migration of many men of working age, has led to a significant change

²⁵ The second National Communication of the Republic of Tajikistan under the United Nations Framework Convention on Climate Change (2008). Dushanbe. State Agency for Hydrometeorology of the Committee of Environmental Protection.

in the traditional gender balance within these communities. In particular, this has increased the responsibilities of women in poverty-stricken families and communities.²⁶

The activities under this proposal involve partnerships with various agencies and build upon already accomplished works (in addition to PPCR) in the following projects:

Environmental Land Management and Rural Livelihoods Project (World Bank using GEF/CIF funds, 2013-2018, \$19.80mi): Focuses on rural production and land resource management investment, knowledge management and institutional support and project management and coordination.

Tajikistan second public employment for sustainable agriculture and water resources management project (IBRD/IDA funds, 2012-2020, \$45.90 mi): Aims at providing employment to food-insecure people through the rehabilitation of irrigation and drainage infrastructure, increase crop production and support the development of improved policies and institutions for water resource management.

Climate Adaptation and Mitigation Program for the Aral Sea Basin (CAMP4ASB) (World Bank using GCF funds, 2016 -2022, \$68.78 mi): Aims to enhance regionally coordinated access to improved climate change knowledge services for key stakeholders (e.g., policy makers, communities, and civil society) in participating Central Asian countries, as well as to increase investments and capacity building that, combined, will address climate challenges.

KEY BARRIERS ADDRESSED THROUGH PROJECT OUTCOMES

Rural communities who rely on agriculture for their income have been facing losses from natural disasters such as floods, droughts, and mudslides (Annex 1.3). While floods occur relatively frequently and devastate the communities they hit, the resultant loss of crops and livestock is limited in comparison to total land cultivated and total livestock numbers. This is also true for mudslides, avalanches, earthquakes, and severe storms²⁷. Localized disasters such as these can be managed effectively by *better preparation and better allocation of household and community resources*. Without effective and efficient adaptation measures, rural communities face a *potential loss of forage production* due to higher temperatures, higher soil evaporation, changing precipitation patterns and increased overgrazing. *Reduced income opportunities from farming* would result in higher labor migration and investment of remittances in small ruminants (cattle, sheep etc). In addition, *loss of glaciers will lead to a loss of watering points on both high altitude pastures and various lowland pastures*, as many watering points are fed by glacier water. Tajikistan's Third National Communication to the UNFCCC pointed out that the country's hydropower plants depend on river basins with glacial melt water and snowmelt, which makes them highly vulnerable to climate change. Most climate models predict big changes in the dynamics of 7 Tajik glaciers, snowmelt and precipitation due to warming temperature ²⁸. Rural areas of the country, in specific, are characterized by the following:

Lack of access to and awareness of the use of climate services by vulnerable populations for adaptation planning: Access to weather/climate information is limited for vulnerable communities as "last mile" dissemination channels are inadequate. At present a range of dissemination methods are used, including radio, television, print, and websites. However, most of this information never reaches beneficiaries on time. There is limited understanding of the effectiveness of these methods and uptake of this information by vulnerable communities, in particular women. This is partly because information, particularly scientific information is transmitted as non-actionable data without any instruction on integrating it with local knowledge and socio-cultural and gender-differentiated contexts. While the reach of mobile networks is extensive, use of ICT/mobile platforms for climate services is vastly underutilized and faces challenges of technology adoption and cost effectiveness without scale.

²⁶ <https://www.adb.org/sites/default/files/linked-documents/45354-002-taj-oth-03.pdf>

²⁷ Tajikistan: Agriculture Sector Risk Assessment World Bank Group Report Number 103077-TJ

²⁸ Third National Communications http://unfccc.int/resource/docs/natc/tjknc3_eng.pdf

Limited awareness of climate change and its impacts on livelihoods and on nutrition: During the community consultations, most village heads mentioned that although the impacts of climate change are very much felt, the phenomenon itself has not been understood by most villagers. Communities mostly rely on traditional practices for forecasting weather without having an understanding of long term impact of the change. This also leads them to making inaccurate decisions regarding allocation and use of natural resources at their disposal. Communities also tend to construct their houses in hazard prone areas and end up losing their livelihoods and assets when hit by natural calamities like floods or avalanches. Community representatives stressed the need to get youth involved in practical adaptation activities backed up by awareness raising workshops.

Limited adaptive capacities of communities: Communities in rural Tajikistan often face hardships due to the impact of climate change and variability. Recurrent droughts in the past decade have led to youth (mostly men) to migrate to neighbouring countries like Russia and Kazakhstan in search of work. This leaves abandoned women and families who have no other source of income other than remittances and donations (from charities). During the community consultations, it was also found that poor households tend to sell-off their productive assets (livestock) when there is a shortage of rain. Another coping mechanism is to completely relocate to another area only to lose it all due to lack of planning and awareness.

Limited knowledge and capacities at government levels: Despite investments done in the recent years to upgrade its equipment at the national level, lack of awareness with regards to climate change especially at the regional and district levels is high. Whilst the government has submitted three national communications and is currently drafting its National Climate Change Adaptation Strategy, there are no adaptation plans at the District Development Committee levels. These committees are responsible for making short-medium term development plans for the districts. In addition, there is a lack of skill and capacity at the national level to forecast weather based on available information and data. Lack of inter-ministerial communication is another key challenge facing the country.

Reliance on climate sensitive sources of income: The population of rural Tajikistan mostly relies on agriculture-based livelihoods, and even though it is an underdeveloped sector in the country, it forms a significant part of the economy of Tajikistan. However, insufficient employment opportunities have created untenable economic prospects for many people, driving significant levels of external labour migration (mainly to Russia) leaving behind children and women, who face multiple constraints in their roles as sole household heads.

Increased loss and damage due to weak community and household assets: Rural communities often lack climate proof storages to protect their harvest from disasters like floods and extreme temperature. In addition, those communities that do, have some form of storage from the Soviet era which tends to be weak and dilapidated. Climate change impact is expected to intensify in the coming years. Ageing infrastructure and inefficient water and land management practices are only some of the obstacles that make rural Tajikistan less resilient to climate change. The risks and costs of inaction - demonstrated by the economic and social impacts from climate change in the absence of significant adaptation efforts - are particularly significant in rural areas of the country.

Loss of income due to absence of market information and linkages: During community consultations, it was noted that farmers often lack the time and skills to market and sell their produce. In addition, due to lack of storages as pointed out above, they try to sell their produce as early as possible and get exploited by middlemen. They also do not know the real market demand or prices and often bear losses on their sale to the middlemen.

Lack of strong user associations at community levels to manage common assets: Farmers in communities often plan to produce crops based on what fetches them the highest price from the middlemen. This creates fluctuations in the market as demand for a commodity rises and falls during harvest seasons, further exacerbating the losses borne by farmers during the production process. In addition, due to disparate sales made by individual

farmers, the middlemen tend to hold significant bargaining power over the prices of commodities. Community assets such as storages, where they exist, are often unused due to lack of trust and organization.

This proposed project aims to address the above barriers and improve on the baseline scenario. The project will:

- i. Enable the **use of weather and climate information** by men and women living in vulnerable communities by introducing climate services. The project will support development and dissemination of tailored information relevant for the most vulnerable mountainous communities in Tajikistan. It will catalyze 'last mile' access for weather and climate information by vulnerable communities through use of ICT/mobile platforms and community outreach channels. Private sector will also be involved through engagement of service providers such as telecom companies to stimulate demand or specialized information to enhance market scope for use of climate information. At the national level, the project will result in enhanced capacity of hydromet staff to generate climate-related data and forecast extreme weather and climate change; development and dissemination of tailored climate information/products for agrarian livelihoods and strengthened capacities of women and men in vulnerable communities
- ii. Invest in communication, outreach, and knowledge sharing to enable increased awareness and **adoption of best practices and sharing of lessons learnt** through the implementation of this project.
- iii. Provide opportunities for **livelihood and income diversification** for selected group of people focusing mainly on women. This will involve participatory processes that engage partners, beneficiaries, national institutions and municipalities so that interventions address the particular needs, priorities, roles and workloads of women and men. Mixed orchards and solar greenhouses, temperature controlled storage facilities, cleaned irrigation canals, drip irrigation systems and water supply points will be established. Conditional transfers will be used to enable the poorest and most vulnerable populations, whose chronic food insecurity usually exclude them from this type of activity, to engage in climate change adaptation activities.
- iv. **Renewable energy** in the form of solar panels, solar fruit dryers, wind pumps, and bio-digesters will be installed in suitable locations to strengthen the efficiency of the above mentioned assets. Solar panels will ensure electricity supply during power cuts which are very common during cold winter months. Solar fruit driers will be installed in the villages where orchards and greenhouses are established, while wind pumps will be used to raise water into the water supply systems. Bio-digesters will provide organic fertilizers to the orchards and solar greenhouses, and biogas will be used to maintain temperature during the cold months in the food storage facilities.
- v. **Improving storages** will enable farmers to store surplus and sell commodities for profit thereby avoiding overlaps of "new" and "old" potatoes in the market given the fact that before exhausting old stock, markets are loaded with newly produced potatoes, due to the lack of storage facilities. Better postharvest processing and storage methods are an important strategy for reducing potential crop losses due to increased weather extremes as well as increasing the bargaining power of the smallholder producers and ultimately their climate resilience during the times of climatic shocks. The progress of these villages will be carefully monitored and lessons learnt will be documented for future replication.
- vi. Use a **participatory approach** including sensitization through awareness raising workshops, co-creation of information and products, use and evaluation of the products and invest in capacities of institutions and end-users to assure adoption and use of adaptation solutions by communities and authorities alike.
- vii. **Strengthen the adaptive capacity** and reduce exposure to climate risks of vulnerable populations drawing on enhanced generation and use of early warnings and climate information as well as adopting the Ecosystem based Adaptation approach. Vulnerable areas like slopes and riverbanks will be strengthened through tree planting.

C.3. Project / Programme Description

Proposed components, outputs and outcomes:

The project intervention proposes an integrated approach to ensure food security and support communities to adapt and is articulated in 2 components. It will provide skills, productive assets and increase tangible capacities

of the most food insecure and vulnerable communities of Tajikistan who are most at risk from climate change. A key component of this approach will be building institutional capacity at both national and sub-national levels to better understand needs and support vulnerable communities develop effective and equitable responses to prepare for and manage climate risks. In addition, the proposed project aims to contribute to the capacity of the Government of Tajikistan by focusing on its line ministries²⁹, and importantly local authorities in order to support them with planning for, assess and implement climate change adaptation programmes and improve food and nutrition security in the country. Gender considerations will be integrated in all capacity strengthening aspects of the project.

The integrative approach of the project is achieved by these components building mutually reinforcing and by building and linking to each other. As such, Component 1 focuses on climate information services as well as awareness raising and capacity strengthening which will be crucial in preparing the ground and accompanying local communities for Component 2 activities related to climate adaptation and livelihood diversification. Furthermore, climate services will provide essential information about planting, irrigation requirements and provide hazard warning that allow for preparedness measures to be put in place in case of climatic shocks, thereby reducing harvest and crop losses.

Component 1: Capacity strengthening and awareness raising of food insecure climate vulnerable communities and national actors for enhanced rural resilience and food security (*See Annexes 2 & 3 for community needs assessments and hydromet capacity assessment*).

This component will support vulnerable communities in accessing reliable, timely and tailored climate information through the provision of improved climate services specifically tailored to the needs of communities in the Rasht Valley, Khatlon and GBAO regions, through a user-driven and participatory approach facilitated by WFP. This will include building capacity of knowledge intermediaries to access and translate climate information and provide location specific climate, crop, livestock and livelihood information and options to vulnerable communities. It will also entail the use of a series of ICTs (i.e. radio, sms, web platforms, tv, etc) that will be chosen on the basis of coverage and the preferences of men and women in target areas in order to ensure that all members of the community have access to relevant information, with particular attention given to ensuring women will be able to also easily access this information.

Output 1.1: Climate and weather products improved and tailored to the needs of vulnerable food insecure communities through increased capacity of hydromet

Data Rescue: The Hydromet operates and maintains a climatological data bank where various types of field weather observational data are stored and archived. This data and related information are essential for climate impact assessment, crop-weather relationship studies, and climate analysis. There are however data interruptions in the climate data as there is no real-time data quality control system in place; and most of the existing data are in paper cards at risk of being lost due to deterioration and are not computer compatible and therefore not easily accessible. While there is on-going data rescue (digitization) of the climate data (from 1996/97 onwards) within the PPCR project framework, it was reported that only 15% of the data is targeted. This exercise needs to be extended to complete the remaining 85%. This output will aim to complete the data rescue gap that exists in the current scenario. This activity will be done in consultation with the WMO's Expert Team on Data Rescue³⁰ (ET-DARE).

Risk mapping: the information on areas prone to impacts of climate extremes exists but is not mapped. The information needs to be updated and mapped to make it user friendly and enable ease of reference. The Hydromet agency will be trained in mapping climate and weather information to visualize their climate information

²⁹ Committee of Environmental Protection, Agency for Forestry under the Government of Republic of Tajikistan, Agency for Land Management and Irrigation under the Government of Republic of Tajikistan, Ministry of Agriculture, Ministry of Energy and Water Resources, Ministry of Health and Social Protection.

³⁰ The WMO ET-DARE have coordinated a number of data rescue projects in Met Services and Regional Climate Centers and therefore can be consulted for recommendation of experts in data rescue

products. This will also include training and capacity building in GIS mapping tools to monitor crops and pasture conditions based on indices derived from satellite data to enhance provision of agro-meteorological advisories.

Develop capacity to generate monthly and seasonal climate forecasts: currently the Hydromet does not generate long-range (30 days ahead) forecasts and seasonal climate outlooks which are requisite inputs into monthly to seasonal decision support tools for integration into crops, livestock and livelihood climate-risk management practices. The inability to generate monthly and seasonal forecasts is attributed to high spatial variability of weather and climate over the country due to the mountainous nature of the terrain and lack of human expertise to use climate models for forecasting. Under this output, the capacity building of the Hydromet to generate monthly and seasonal climate forecasts will be supported through facilitating attachment of staff to advanced Climate Center for hand-on training on monthly to seasonal climate forecasting.

Output 1.2: Locally relevant delivery mechanisms for the provision of tailored climate and weather information through relevant ICTs identified and piloted.

In addition to TV and Radio, there are several ways in which relevant climate information could be shared locally. Examples include women's groups, religious centers, information boards in the schools and public places where community members gather to socialize. However, what clearly emerged is the need to establish an integrated approach for direct delivery of the information to target users, to ensure that all different members of the community will be able to access information that includes a feedback loop from users. Community consultations in the target districts showed that mobile phones ownership is high and that the majority of people in the targeted districts are members of TCELL and MegaFon wireless telephone providers. SMS-based information delivery system was therefore indicated as one additional channel for delivery of information that the programme will pursue in the 35 Jamoats included in the project, with a specific focus on engagement with the private sector to ensure a financially viable partnership for long-term delivery of information (beyond project duration). In addition, focus will also be on piloting alternative ICTs to support an integrated approach to information sharing that will be based on multiple channels. This will include strengthening capacities of intermediaries to access and communicate information through mobile apps, exploring the use of local radios for the broadcasting of interactive radio programmes where farmers will be able to call in for free. Considering that SMS based information is space limited, for the advisories, WFP and TCELL will pilot services and information provision through an Interactive Voice Response Tree – a voice menu with pre-recorded voice prompts. It can consist of different layers, levels. This system has been tested in Tajikistan in the framework of a USAID funded M-Health project. The proposed system is simple and convenient for users as they will have free access to desired information (climate advisory, market/price information) 24/7. It can be multi-language, and include different dialects (relevant for GBAO in particular). The system is highly user friendly as users simply dial toll free number, selects language and from a pre-defined menu, selects and listens to desired information which will be updated on regular basis. Users can also be notified through SMSes about the updates. Considering that the system should be accessible for the most vulnerable and poorest farmers, a 3-year trial period will be free of charges for project participants. When the project is ending, authorities will have responsibility of the SMS and IVR Tree information delivery systems. After the trial period, subscribing farmers will be charged a symbolic fee to maintain the system up and running. Here as well, long-term sustainability of services will be addressed from the beginning by promoting governmental support and private sector engagement with a view to support a local market for climate services provisions.

Output 1.3: Decision making in vulnerable households enhanced through improved capacities to interpret and act on tailored climate advisories

Agro-meteorological services helps minimize the adverse effects of extreme climate events to agricultural operations while taking full advantage of favorable weather conditions at different stages of crop growth in order to increase yield. At present, farm weather services in terms of seasonal forecasts, farm weather forecasts and advisories are not provided to vulnerable communities whose livelihoods are predominantly based on farming and pastoralism.

The Hydromet only provides agro-met information in the dekadal bulletin, which is not sufficient to inform decision making and often does not reach the farmers at the community level, partly due to absence of agricultural extension services/local agricultural technicians in the Ministry of Agriculture. During the stakeholder consultations that was undertaken in November/December 2016, it also became clear that there is lack of knowledge on climate variability and change, including how to make risk management decisions based on the available information at the local level.

The proposed intervention aims to address this gap through an integrated approach that in addition to sharing of information through ICTs will focus on strengthening capacities of intermediaries to enable them to access, understand and communicate relevant climate information together with context specific advisories to support decision making at community level. In addition, trained intermediaries will also strengthen capacities of community members to make climate compatible decisions based on the advisories, including sensitization on climate change and its expected impacts on livelihoods.

This output will build capacity of communities to interpret climate advisories and working with intermediaries to develop locally relevant weather and climate information to support daily on-farm decisions. This will include training the communities to make better decisions on natural resource management, crops selection, and how to prepare for and act during extreme climate events such as floods, droughts, mudslides, snow etc. Such trainings will be provided at district and jamoat levels and will ensure participation of women.

The trainings for intermediaries will be conducted in the form of Training of Trainers (ToTs) and one of the approaches that will be piloted in Tajikistan is the Participatory Integrated Climate Services for Agriculture (PISCA) developed by the University of Reading (Annex 10) which has been successfully implemented in several countries. This approach provides extension workers/intermediaries (and then farmers) with weather and climate data (historical and forecasts), the skills to interpret it, and practical methods to identify livelihood, crop and livestock options that best fit their local needs. It facilitates the use of participatory decision making tools by smallholder farmers, in order to enhance farm and field-level decision making for resilience and food security. The approach would be tailored to the Tajikistan context and would also pilot a component tailored specifically to pastoralists.

In terms of intermediaries, the ToTs will build capacities of NGOs already working with the local communities in the project areas and District-level government officers from the Committee of Emergency Situations (COES) and Community members. This approach will be used during the project to train at least 50 district level officers from local authorities as well as NGOs and up to 200 key community members (village heads, farmer association members).

This output will directly complement capacity building exercises under Output 1.1: Through engaging communities and hydromet office through a participatory approach, improving information flow and feedback mechanisms. Information include early warning on weather events (for e.g. rain, snow) temperature (for e.g. normal, extreme temperatures) as well as food security related information (for e.g. best times for sowing, harvesting, storing) will be generated to ensure that losses are minimized and preventative action is taken to avoid resource use in uncertain periods.

Output 1.4: Improved community capacities and awareness on climate change impacts on health and nutrition

Lack of dietary diversity, poor infant and child feeding practices and overall lack of awareness on proper nutrition and balanced diet has been discussed at the community consultation meetings (See Annex 2). A report³¹ by the World Bank and UNICEF identifies several reasons for malnutrition including lack of access to adequate food and clean water, overall food insecurity, hygiene, cultural feeding behaviors (bread only) are a major determinant of nutritional status. Climate change further threatens health and nutrition due to its impact on water availability

³¹ Situational Analysis: Improving economic outcomes by expanding nutrition programming in Tajikistan.

and quality, sanitation systems, food safety (including through more frequent heat waves and warmer temperatures) and on waterborne, vector-borne and other infectious diseases.³² Thus, raising awareness and supporting behavior change for improved feeding practices, more balanced diets, and the importance of hygiene represent an opportunity to reduce the impact of expected climate change while also contributing to secondary objectives related to nutrition, food security and health. Through this output, awareness raising and behavioral change will be introduced within communities with a special focus on women who are uniquely positioned to address these challenges in Tajikistan. This output will also act as a complement to the use of climate services as communities will understand the reasons and impacts of climate change and the need to adapt.

Specific activities will include:

- Local theatres to raise awareness of climate change and food security and its impact on livelihoods (agriculture, nutrition, health of children etc)
- Awareness raising on use of climate advisories
- Women's workshops to address the importance of nutrition diversity and the link to climate change

Output 1.5: Publications of lessons learnt and best practices compiled and disseminated.

During the implementation of this project, addressing climate change impacts on food security and livelihoods through adaptation will need participation and a coordinated response of multiple stakeholders starting from the communities right up to national level authorities. Given the complexity of these actions and the technical requirements associated with evaluating their effectiveness and impacts, it will be vital to generate knowledge through participatory approaches and identification and sharing of lessons learnt for government authorities. This will support the long-term process of understanding solutions that are effective and those that are not. Throughout the implementation of this project, this output will aim at periodic stock taking of lessons learnt and record good practices, gaps and identify needs through regular monitoring and evaluation. Bi-annual reports will be produced in a policy document format and will be shared with national authorities.

Specific activities under this output include:

- Media campaign targeting both print and electronic media (and also regional media in local languages) generating at least 20 media reports on the project
- 1 National level workshop to inform policy development based on lessons learnt during the project
- 25 exchange visits from adjacent communities to promote replication potential and bring the adaptation focus in to local development planning processes, especially village development plans

Output 1.6: Adaptation plans integrated at District Development Committees (DDC) with full participation of community members and local authorities

This output will support detailed, gendered analysis of food security in relation to climate change risks in each target district; detail the context specific vulnerabilities related to climatic uncertainty and variability; and provide the district level authorities with planning tools to design and integrate adaptation actions into the district development plans. It is expected that trained social mobilisers and DDP-level facilitators will support the planning processes; which will include several seminars and village level consultative workshops and meetings. A participatory approach that engages both men and women will ensure plans reflect the urgent and immediate needs and the capacities of the most vulnerable and food insecure households.

The project will also produce aggregated adaptation plans on a watershed scale covering one or more DDPs. This takes in to consideration that certain livelihood assets (forests and water primarily) do not confine to village or settlement boundaries; and that their conservation has to be considered through a broader lens. In this regard,

spatial analysis of land (forests, agricultural land, homesteads etc.) and water resources will be conducted to complement the social analysis of vulnerability and the economic analysis of prioritized adaptive actions.

This output will integrate gender-responsive adaptation planning in addition to embedding adaptation options in DDPs, identify the most vulnerable jamoats, communities and households in target districts and agree on priority actions and target groups with a long-term adaptation lens. At the end of the project 11 districts will have developed adaptation plans and prioritized actions for the most vulnerable jamoat, villages and households.

The target audience of communication, outreach and knowledge sharing is specific to activities proposed in the proposal. For climate services, a key target group will be local communities, particularly those whose livelihoods are climate sensitive, but also other stakeholders at national and district level such as ministries and local authorities. For best practices and lessons learned, these will be documented to facilitate annual stock taking exercises with key ministries relevant to the project and that have a role in setting national policies and actions plans related to climate change more broadly. These include Agency on Statistics under President of the Republic of Tajikistan; Center for Strategic Research under President of Republic of Tajikistan; Forestry Agency; Committee of Environmental Protection; National Agency for Hydrometeorology; Ministry of Agriculture, Agrarian University; Academy of Agriculture; Hukumats in all 11 targeted districts, multilateral organizations, UN agencies and NGOs.

Component 2: Resilience building at household and community level through diversification of livelihoods and market access.

During stakeholder consultations, it was noted that the biggest challenge for target communities was low adaptive capacity³³ while ensuring adequate food and nutrition throughout the year. This historical problem is compounded by changing climate and irregularity of rain and snow.

The activities outlined in the outputs 2.1- 2.4 have been identified in close consultation with community members and local authorities. To support the development of this proposal, WFP Tajikistan organized stakeholder consultation workshops in all three regions targeted by the GCF project during November- December, 2016. Representatives (men and women) of the 11 districts³⁴ participated in the meetings (See Annex 2 & 8). Throughout the consultations, WFP also identified priority areas within targeted departments where people have been most affected by climate events and assessed their adaptive capacity. It was observed that local populations have developed a combination of short-term adaptive mechanisms and negative coping strategies based on seasonal climate variability in the past. However, whilst these mechanisms may help from extreme poverty in the short run, communities have eventually relied on outmigration of male family members or foreign aid when disasters strike or during prolonged periods of climate extremes. Such extremes are poised to be more common with increasing temperatures, water shortages, and rainfall variability triggering disasters.

This component is directly linked with the activities of component 1. With climate information, awareness raising and training programs, communities will embark on concrete adaptation interventions at local level as summarized in the following section:

Output 2.1: Climate change adaptation supported through diversification of livelihoods

To avoid land degradation and further the stress on livelihoods, tree plantation using locally adapted and drought resistant cultivars was identified³⁵ as an activity that could help local ecosystems by stabilizing denuded slopes (thereby preventing floods, mudslides, landslides and avalanches) as well as generating incomes for the rural communities. Planting trees and cultivars adapted to local conditions have been proposed at community

³³ According to the IPCC, adaptive capacity is the ability or potential of a system to respond successfully to climate variability and change, and includes adjustments in both behaviour and in resources and technologies.

³⁴ Regional and district level authorities from committee of environmental protection, committee of emergency situations, ministry of agriculture, hydromet, agency of forestry, representatives of women associations, dehqan farms, livestock producers, community members, local NGOs, public sector etc...

³⁵ This has been discussed during the community workshops and was supported by community members and local authorities as a feasible intervention.

consultation workshops to enhance adaptive capacity of populations in targeted areas. Type of activities will vary from region to region considering local specificities and beneficiary needs. Communities in GBAO proposed planting trees and shrubs along the banks of the rivers to reduce flooding, erosion and slow runoff water. While stronger winds were recorded over last years, they cause significant damage in Faizobod, which is the windiest area of Tajikistan. Consequently, wind protection trees were proposed at the community consultation meeting as an adaptation activity. The villages chosen lie in the 11 targeted districts i.e. Khovaling, Muminobod, Faizobod, Nurobod, Rasht, Tojikobod, Jirgatal, Rushon, Shugnon, Roshtqala, Ishkoshim.

Specific activities include:

- Establishment of 400 Ha of orchards (using drought and flood resistant seeds and saplings) in 120 villages. This will be preceded by training on tree selection suited to local ecosystems, planting, and application of compost.
- Agroforestry in 65 villages covering 200 hectares.
- Creation of women's groups to receive trainings on drying fruits from the orchards, vegetables and herbs, processing, preservation and marketing skills.

Capacity building interventions in this output will be carried out by the Agency of Forestry under the Government of Tajikistan.

Output 2.2: Improved water management for drinking water and small-scale irrigation

Water is predicted to be the main channel through which climate change impacts will be felt by people, ecosystems and economies.³⁶ Lack of access to drinking water was largely discussed at the community consultations. 70 village identified for drinking water systems have no access to clean and safe water. This causes significant increase of illnesses linked to water and sanitation (See Annex 2 & 8). In Tajikistan, approximately 16% of mortality in children under five years of age is caused by diarrheal diseases (Liu et al., 2014).

This output will have the following specific activities:

- Replacement of obsolete pipeline, installation of new as well as cleaning and rehabilitation of water tanks and installation of wind water pumps³⁷ in up to 70 villages³⁸.
- Cleaning of 200 km of irrigation canals across all target districts. Wherever appropriate, canal cleaning will be coupled with tree planting and erosion control works to reduce the risk that the canals will continue to be silted again;
- Installation of drip irrigation systems in villages facing water scarcity during hot summer months. Up to 300 Ha of land will be irrigated using drip method.

Implementation of planned activities will provide access to clean water to more than 38,000 people in up to 75 villages. Water supply projects that bring water access closer to people's homes with the aim of reducing the household workloads for women in particular, while improving household hygiene towards reductions in diarrheal disease, and possibly improved nutrition outcomes.

Wherever appropriate, the irrigation canal cleaning and drip irrigation activities will be coupled with orchard plantation projects to complement each other. In addition, water will be used for other income generation activities for example brick making. Cleaned and rehabilitated canals and drainage systems will provide access to water for more than 2000 hectares of agricultural land and improved management of water resources will enhance agricultural production.

Increasing irrigation water supply will significantly increase food production while improving the incomes of poor rural households. Sustainability of the assets will be characterized by the community ownership and asset

³⁶ Bates et al, 2008

³⁷ Solar energy will be used for pumping water in the locations not yet connected to the grid.

³⁸ Villages selected based on level of drinking water availability

maintenance strategy, which will be discussed and agreed upon with men and women in each targeted communities. From the inception of the project, engagement of community leadership, Beneficiary Groups and district authorities will guarantee to ensure the quality, maintenance and access of very poor to the created/rehabilitated assets. Therefore, situation will be assessed case by case basis beneficiaries will be organized into various Beneficiary Groups including water user associations, women's groups, etc. For this specific output, Water User Associations will be established among the communities to ensure maintenance of rehabilitated assets and equal access to water resources.

In addition to manual works related to canal rehabilitation and cleaning, the programme will also be working with water user associations and community members (both men and women) on training and capacity development opportunities. These will include trainings on effective natural resource management technics, soil and water conservation practices, and canal (infrastructure) and asset maintenance. Tailored trainings will be delivered to both men and women in close coordination with the Ministry of Agriculture and Committee of Environmental Protection.

Output 2.3: Provision of and training to utilize green houses, renewables and climate proof post-harvest storage facilities established to withstand long-term climate change.

This output will enable community members to generate income and increase household adaptive capacity during the harsh winter weathers. Following the climate vulnerability and project selection logic of the proposal, activities in this output will be further selected on the basis where communities have the ability to co-finance assets which will further reinforce ownership and sustainability. Farmers, especially women, will be supported in the production and storage of food beyond traditional growing season through installation of low-cost solar greenhouses³⁹ and food storage facilities. The activity will focus on women who lead the household after outmigration of men but often lack sources of incomes. Household size bio-digesters will be introduced to produce bio-fertilizers and provide bio-gas for heating and cooking purposes. In addition, small rooftop solar panels will be used to generate renewable energy for vulnerable households residing in the villages completely disconnected from grid. Such facilities are currently missing in the target areas and in little pockets where such interventions have been tried, they have failed due to lack of collective ownership and concentration of social power structures to a few. During community consultations, caution was expressed regarding commonly managed assets, especially community owned greenhouses and storages facilities. Experience showed that there is high risk that these structures will become the property of local authorities. Possible risks of theft also prevents villagers for using common facilities for producing and storing. In some locations, there exists an atmosphere of mistrust. Keeping this constraint in mind, the implementation of this output will be piloted using combination of greenhouses, storage and renewable energy at household level and at community levels. Collective ownership will be encouraged through formation of beneficiary groups keeping in mind the social construct of the community. Successful groups will be used as examples for scaling up the practice. "Women's groups" will be established in all selected villages to create collective ownership and promote intra-community collaboration amongst women. The group composed by 7-8 households will benefit from large size greenhouses, storage facility and bio-digester. Up to 5,000 people could generate incomes from proposed interventions.

Specific activities under this output will include:

- Building 232 solar/and rehabilitating underground greenhouses. These energy-efficient greenhouses will use solar energy as the source of light and heat for extending growing seasons of crops such as tomato and cucumber. This activity will be implemented in 64 villages reaching up to 4,800 direct beneficiaries.
- Developing (rehabilitating where possible and building new ones where needed) up to 232 storage facilities for the same 4,800 people benefiting from greenhouses and installation of solar panels to ensure electricity supply during power cuts which are very common during cold winter months.

³⁹A UNDP-UNEP initiative for women proved that over a six month period, each greenhouse generated up to US\$3600, an essential income source for them and their families. The project taught women cooperatives how to tend crops, make organic compost and run the greenhouses as successful microenterprises. - See more at: <http://www.unpei.org/our-stories/tajikistan-overhauls-its-whole-planning-process-with-the%E2%80%98triple-bottom-line>

- Bio-digesters will be provided to produce bio-fertilizers and provide bio-gas to be used for cooking and heating;
- A service center will be established in each village and members of the communities will be organized into “Beneficiary Groups” to install and maintain these renewable sources.

Output 2.4: Household resilience and adaptive capacity of climate vulnerable poor in target areas improved.

This output is designed to increase sustainability of the proposed interventions by complementing with activities that allows better access to markets and the private sector. Activities will focus on enabling vulnerable smallholder farmers to better link their local production with market and supply chains. This will include capacity strengthening efforts such as increasing the negotiating capacities of farmers with traders and other middle men, thereby increasing their net incomes and savings, which contributes to resilience to climatic shocks and helps avoid negative coping when disaster strikes. Other outputs of this project (including rehabilitated storage facilities to avoid “dumping” produce at low prices, climate services - to manage resources better and prevent damages) will be supplemented by provision of market information including market locations, demand for commodities, prices etc – for informed decision making.

Considering differentiated needs of women and men, community members will be organized as Dehkan Farms (collective farming) to work in tandem in planning resources and producing in sync with market demands as well as increased bargaining power and incomes.

Farmers will also be linked with schools to supply food to existing school feeding programmes thereby establishing a guaranteed minimum purchase. By introducing these interventions, farmers will be linked to value chains and markets, thereby fully capitalizing on adaptation benefits Specific activities include:

- Formation of Dehkan Farms or strengthening the capacity of existing ones in 120 communities comprising 500 farmers across selected project sites. Equal inclusion of women will be ensured through awareness-raising and sensitization sessions for men and community leaders.
- Establishing a system whereby local market prices will be assimilated and disseminated to farmers through an SMS service. These prices will be institutionalized through district authorities.
- Linking demand from local school meals programmes and planning domestic production of commodities accordingly. In the framework of ongoing Country Programme (2016-2020) WFP implements school feeding programmes in more than 2000 schools across Tajikistan feeding with daily hot meals more than 360,000 children in rural areas. These programmes will eventually be handed over to and managed by the Government of Tajikistan and hence will complement the sustainability of this output in creating a sustainable demand for commodities produced by smallholders.

The specific community level activities have been identified and discussed during the community consultations as the ones expected to be appropriate for the context, feasible, and able to increase climate change adaptability capacity of the communities. Activities proposed have also been reviewed by the CEP and endorsed as responding to the priorities identified in the national processes climate change adaptation. In summary, the benefit to each adaptation activity includes:

- Mixed orchard: a variety of adapted orchard will ensure diversification of income generating activities towards climate adapted livelihoods, while helping local ecosystems by stabilizing denuded slopes (thereby preventing floods, mudslides, landslides and avalanches made more frequent and intense by climate change).
- Solar driers: this is a sustainability element of the mixed orchards activity, as it allows to put subsistence farmers on a path of sustainable, profitable livelihoods.

- Agroforestry: cultivars adapted to local conditions will regenerate degraded land, support stabilization of slopes, and prevent floods and landslides (in Faizobod they will also prevent damage from strongwinds).
- Installation of drinking water points: this activity addresses the increasing water scarcity due to climate impacts (droughts, glacier melting) reducing the incidence of water-borne diseases and ensuring people's health (and particularly children's) is less affected by climate induced water shortage.
- Canal cleaning and drip irrigation: the old infrastructure is not appropriate for the current climate patterns (more frequent and intense rains, floods due to glaciers melting, droughts). Cleaning irrigation canals and protecting them from erosion, while providing drought prone areas with drip irrigation will ensure irrigation water is consistently available for agriculture reducing the impact of the recent changes in weather patterns. This activity is complementary to the one on mixed orchards.
- Storing facilities: this activity will be able to protect produce from climate shocks such as sudden changes in temperatures, floods and mudflows.
- Greenhouses: this activity will be able to stabilize agricultural production by addressing the changing temperature and rainfall patterns. It will also complement other activities by diversifying farmers' livelihoods portfolio.
- Bio-digesters: by producing bio-gas and fertilizers this activity will complement the ones above, capitalizing on the increase of productivity and making farmers' livelihoods sustainable in the long term.

It should be noted that these activities are not the usual activities WFP has been doing in the country so far. Rather, this is a specific *climate change adaptation* intervention as opposed to mostly *food security* interventions conducted by WFP so far. However, some lessons can be inferred from WFP's experience on assets creation. For example, regarding maintenance of small scale infrastructure, WFP has been implementing similar activities since early 2000 and there are many evidences that assets were maintained after completion of the activities. Recently, WFP Tajikistan assessed the impact of its asset building programs through satellite imagery. Satellite observation of rehabilitated irrigation canals shows the positive evolution of vegetation coverage (measured through the Normalized Difference Vegetation Index - NDVI) and highlights improvements in terms of new cultivated areas appearing following the rehabilitation of irrigation canals. In summer 2015 and 2016, new crops were detected along the rehabilitated canal, where there were not before. Furthermore, 2011 and 2016 were two comparable years in terms of climatic conditions, yet, these assets retained functionality in spite of a number of shock years

after WFP's intervention.

The impact of these activities is also summarized in the table below, the total villages benefitting will be 348 with a total of 50,000 direct beneficiaries and 70,000 indirect beneficiaries:

	Activity	Unit	Quantity	Land tenure	Beneficiaries	Villages	Management
1.1.1	mixed orchards	HA	400	Community	12,550	120	Dehkan farmers associations
1.1.1	solar driers	units	400	Community	12,550	120	Dehkan farmers associations
1.1.2	agroforestry	HA	200	Community	11,900	65	Dehkan farmers associations
1.2.1	drinking water points	units	69	Community	37,750	70	WUA
1.2.2	cleaning irrigation canals & drip irrigation	HA	2,310	Community	1,300	75	WUA/Dehkan farmers associations
1.3.1	building/rehabilitating storage facilities (HH)	units	112	HH	560	4	HH
1.3.1	building/rehabilitating storage facilities (community)	units	120	Community	4,250	60	Dehkan farmers associations
1.3.2	building/rehabilitating greenhouses (HH)	units	112	HH	560	4	HH
1.3.2	building/rehabilitating greenhouses (community)	units	120	Community	4,250	60	Dehkan farmers associations
1.3.3	bio-digesters	units	75	Community	4,800	60	Dehkan farmers associations

Approach and targeting

In order to enable highly vulnerable and poor communities to engage in assets creation under Component 2, farmers receive a vital *conditional* cash transfer from WFP. The transfer is conditional to the completion (building or rehabilitation) of the community level adaptation assets identified during community consultations. **In the short-term, transfers support communities during the lean season, when the food gap is most severe** (low yields, low stocks, and high prices) and helps them meet immediate food needs. **In the long-term, assets increase community adaptation against climate-related shocks and improve land productivity.**

In the context of this project, transfers are a crucial element to for the most vulnerable populations to engage in climate adaptation activities, based on the following elements:

- a. Compared to many other organizations, WFP targets the most vulnerable rural households – both farmers and pastoralists, who fail to meet their daily food needs. These people are the ones who are most vulnerable to the impacts of climate change. Transfers are therefore a necessary enabling condition for these populations to participate in the creation of adaptation assets, as they immediately cover the food and nutrition needs of people otherwise unable to feed themselves. In practical terms, without conditional transfers, the most vulnerable people would need to use their time and efforts to provide food for their families to meet their *current* needs, rather than participating in the creation of adaptation assets to address climate variability and shocks in the *future*. This means that without the enabling element of an initial transfer, those who are in greatest need of adaptation services would be excluded from the opportunity to restore land and create their own climate change adaptation assets. This, in turn, would undermine the sustainability of the project.
- b. By enabling the most vulnerable households to participate in the creation of adaptation assets, transfers associated with asset creation contributes to transformational change. As it brings some of the most vulnerable people from a subsistence to a sustainable livelihoods level by, (1) reducing pressure on landscapes and the natural environment (e.g. avoiding negative coping strategies such as deforestation); (2) gradually increasing adaptive capacity through training, creation and management of climate adaptation assets and (3) by improving productivity and building economic protection from shocks, thereby preventing relapse into poverty.

c. In terms of sustainability, participants are gradually phased out of the conditional transfer, once the identified community adaptation assets are completed. Based on several other experiences with this type of intervention, rural populations are able to maintain and replicate the assets created thanks to the establishment of community level structures.

All the participating communities of the project have already been identified. Each beneficiary will receive a total transfer of \$31 over the 4 years.

Process detail: Over the past five years, WFP's use of cash and vouchers has grown rapidly, across crisis, geographical areas, affected populations and economies. General information about this modality can be found [here](#). The modality used by WFP in Tajikistan is the cash transfer. More information on Cash and Vouchers can be found [here](#).

Assets creation interventions are designed, and assets are chosen, through Community-based Participatory Planning⁴⁰ (CBPP) sessions facilitated by WFP's experts and a pool of local trainers (technical services staff) previously trained by WFP, which combine community's current priorities with a long term vision into the potential impacts of climate change. The implementation of the activities is designed to be respectful of the calendar of activities of women and men and their work and social schedules are taken into consideration when planning the asset creation so as to not disrupt their activities.

Targeting: Selection of communities and beneficiaries for project activities will be completed through i) geographic, ii) operational and iii) household targeting.

- i) Project targets 11 mountainous districts classified as i) highly vulnerable to climate change and with ii) highest food insecurity profiles. The district selection process lies solely on the review of two studies as complementary tools: i) Climate Risks and Food Security in Tajikistan and ii) 2015 Integrated Context Analysis. Below map illustrates targeted districts and selection process is detailed in the concept note.
- ii) Within 11 selected districts, activities will be carried out in the communities classified as highly vulnerable to climate change, with highest level of food insecurity and, where potential exists to achieve desired outcome taking into the consideration programme budget, WFP mandate and its accreditation to GCF project category. Additional efforts might be needed to ensure community ownership and sustainability. A precondition for selecting communities would include participation in training programs, willingness to adopt new livelihood practices and formation of user groups for maintenance of assets will be given highest consideration. There are up to 400 villages in the targeted areas, out of which 217 villages have been identified for implementation of this project by WFP sub offices in consultation with local authorities.

WFP targets the poorest and most vulnerable populations. Therefore, beneficiary targeting mechanism will be aligned with World Bank supported Targeted Social Assistance programme⁴¹. Consequently, project beneficiaries will be identified from the TSA lists. Priority will be given to those who will agree to participate in the capacity building activities and contribute time and resources that will be used to maintain the assets in case needed. Beneficiary targeting process will be documented in the Household Targeting Report and signed by the project management committee members⁴². Representatives of WFP, Hukumat and EE will supervise the process.

Maintenance of the assets: As outlined in section D, under the proposed project there are going to be both household and community level assets. For the community assets, two concurrent sustainability paths will be implemented. (1) At the beneficiary level, WFP typically devotes a significant amount of resources to the

⁴⁰http://documents.wfp.org/stellent/groups/public/documents/communications/wfp264473.pdf?_ga=1.150016630.1731526006.1426599547

⁴¹ World Bank supported TSA program uses Proxy Means Testing (PMT) to identify potential beneficiaries for social assistance programmes.

⁴² Project management committees will be established in targeted villages. Their roles and responsibilities are described in the following chapters

development of community-level management committees. In the case of Tajikistan, these will come in several forms from water users associations, to women's associations, to Dehkan farmers associations depending on specific asset and its location. Each one of this entity is trained and becomes responsible for the maintenance of the assets after project completion. Both in Tajikistan and other countries where WFP operates, such entities have been showing positive results in ensuring that assets built or rehabilitated are appropriately maintained over time, replicated and access is ensured to every member of the community. (2) At the institutional level, as pointed out in Output 1.6 , adaptation plans (including the assets creation interventions under Component 2 and their maintenance) will be integrated into District Development Plans whereby District Development Committees will legally commit to ensure maintenance of the assets after project completion (through community-level management committees under point 1 above). Such commitment will be part of the Memorandum of Understanding that WFP will sign with the Government to kick start project implementation, however a letter of commitment will be provided in annex.

In terms of monitoring, in Tajikistan, satellite monitoring of the assets built under previous programs revealed assets were still functional and had been beneficial to the communities even after significant time from project completion. Recently, WFP Tajikistan assessed the impact of its asset building programs through satellite imagery. Satellite observation of rehabilitated irrigation canals shows the positive evolution of vegetation coverage (measured through the Normalized Difference Vegetation Index – NDVI) and highlights improvements in terms of new cultivated areas appearing following the rehabilitation of irrigation canals. In summer 2015 and 2016, new crops were detected along the rehabilitated canal, where there were not before. Furthermore, 2011 and 2016 were two comparable years in terms of climatic conditions, yet, these assets retained functionality in spite of a number of shock years after WFP's intervention.

C.4. Background Information on Project / Programme Sponsor (Executing Entity)

Committee on Environmental Protection under the Government of the Republic of Tajikistan

The Committee for Environmental Protection (CEP), established in 2008, is a specialized agency overseeing the use of natural resources and environmental protection. The State Administration for Hydrometeorology is an institution under the CEP that co-ordinates the implementation of the UNFCCC, compiles national GHG inventories, assesses vulnerability to climate change, distributes information on UNFCCC implementations in Tajikistan and co-operates internationally with the UNFCCC Secretariat, IPCC and other relevant organizations. The Committee on Environmental Protection is the central government authority of the Republic that is involved in implementation of the public policy in the area of environmental conservation, hydrometeorology, and rational nature use and ensures state control over environmental protection and use of natural resources. CEP also houses the National Designated Authority for the GCF. The CEP has established an 'Implementation Group' to coordinate climate adaptation and environmental protection projects funded by the multilateral donor organizations. For instance, the Implementation Group, composed by qualified professionals are currently executing Environmental Land Management and Rural Livelihoods project financed by the World Bank. Furthermore, the State Administration for Hydrometeorology, is also currently executing Modernization of Hydrometeorology Services financed by the World Bank. The Project cost 13 Million USD, and another Implementation Group is established under Hydromet to execute the project. WFP's proposed GCF project component 1 will build upon this project to disseminate climate information to farmers. There are a number of other projects coordinated by various CEP institutes or through CEP itself. However, the ELMARL and CAMP4ASB are the only projects executed by CEP directly through its Implementation Group. The CEP has an annual budget of 20,000,000 Somoni (approx. USD 2.26mi - Exchange rate as of November 18, 2017: 1 USD 8.8214 TJS -source National Bank of Tajikistan). from Primary State budget including incomes for environmental services. In addition, it receives approximately USD 6 mi from donor resources (ELMARL and CAM4ASB) annually. The CEP has established a system where the capacity of the Implementation Group can be strengthened based on the scale and number of the projects to be implemented. They work close with multilateral institutions like the ADB, GIZ, EBRD etc.

As the Executing Entity (EE), the Committee for Environment Protection under the Government of the Republic of Tajikistan will jointly be responsible for the day-to-day execution and technical supervision of the project activities. Through its Implementation Group, the EE will oversee and coordinate the execution, monitoring and evaluation of the program; execute agreements with the local government units. It will also lead project procurement activities including management of the supply and service contracts of various suppliers. The EE will submit quarterly progress reports as well as details on expenditures to WFP in order to release the next tranche of funding.

WFP will also act as co-Executing Entity for specific project activities. More background information about its work in the country is available in section E.5.2.

C.5. Market Overview (if applicable)

N/A

C.6. Regulation, Taxation and Insurance (if applicable)

WFP operates in Tajikistan in the framework of the United Nations Development Assistance Framework for 2016-2020 signed 10th of December 2015 between the Government of Tajikistan and UN agencies in Tajikistan; No special license or permit is required to implement proposed project. Financial Market Overview is not applicable in this case. However, for activities related to procurement of services including training by WFP staff, Section 7 of UN Privileges and immunities state that the UN agencies are exempt from all direct taxes. If services are procured by government, national regulations on taxation may apply.

C.7. Institutional / Implementation Arrangements

WFP will be the Accredited Entity (AE) as well as the co-Executing Entity (co-EE) for specific portions of the project, while the Committee for Environmental Protection under the Government of the Republic of Tajikistan (CEP) will be the Executing Entity. CEP is accountable to WFP for managing the project, including the monitoring and validation of project interventions, achieving project outcomes, and for the effective use of resources. WFP will develop the project document in consultation with the CEP and other stakeholders involved. WFP will sign the Grant Agreement with the GCF and a Memorandum of Understanding/Standard Operating Procedures will be prepared and signed between WFP and CEP. WFP will manage the funds from GCF, and will disburse quarterly in advance against agreed work plans, to a project account managed by the EE. WFP will ensure the quality of the project deliverables, fiduciary risk management, progress monitoring, results monitoring, value for money analysis and reporting to GCF.

The project structure is depicted below:

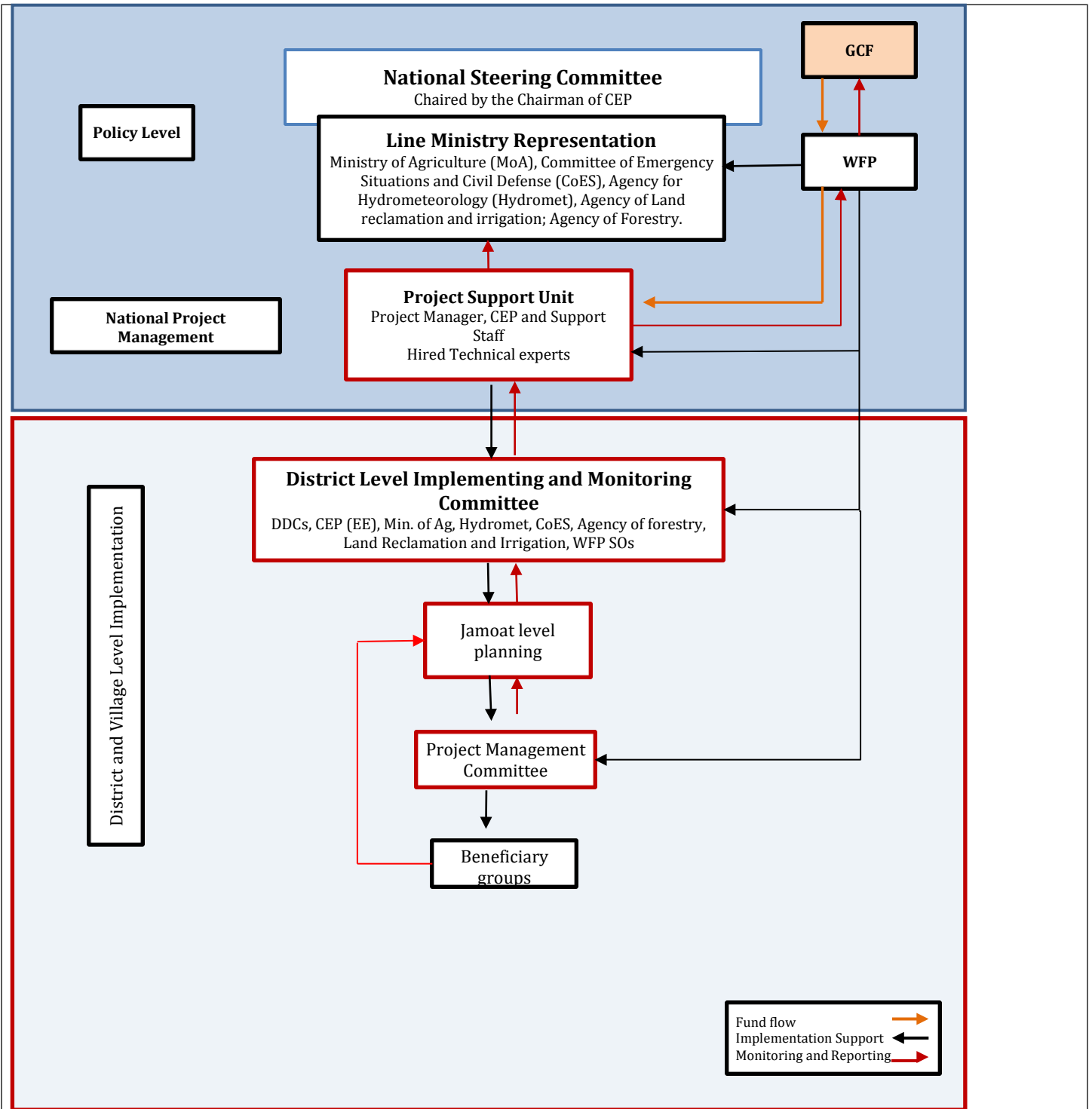


Figure 1: Project Management structure

*The project support unit represents the EE (CEP).

The roles and responsibilities of the accredited entity and executing entity can be divided as follows:

As the Accredited Entity, WFP Tajikistan Country Office and Sub-Offices, Regional Bureau (RB) and Headquarter (HQ), is responsible and accountable to provide oversight and quality assurance of the project, including ensuring

effective use of project funds according to agreements made with the GCF, oversight and reporting (annual reporting, mid-term and final evaluations, and audit), achieving project objectives and coordinate the involved actors to implement the project components and ensure Government handover.

The RB and HQ is a second layer of oversight which will ensure: (i) project preparation oversight; (ii) project implementation oversight and supervision, including financial management; and (iii) project completion and evaluation oversight. It also includes oversight roles in relation to monitoring, reporting and knowledge-management. Thus, the role of RB/HQ serves as an internal control mechanism to ensure transparency and segregation of duties by:

- Reviewing quarterly reports before CO disburses funds for the next tranche of activities;
- Reviewing APRs and Financial reports before submission to the GCF
- Conducting site visits for monitoring project activities as appropriate and keep track of annual work plan;
- Reviewing evaluation reports as well as project audit reports

In addition, WFP Climate and DRR unit (OSZIR), in cooperation with the CO will:

- Provide a central point of contact, coordination and reporting to service the needs of the donor as required;
- Provide specialized technical support to the CO upon request;
- Identify and document best practices and lessons learned to promote knowledge transfer and cross-fertilization of experience and success stories;
- All communication with the GCF will be done via HQ (OSZIR).

Furthermore, the 'project assurance' function of WFP is to support the National Steering Committee by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. A WFP Programme Policy Officer will hold the Project Assurance role on behalf of WFP. The role of WFP in the PSU is to represent the interests of the donor and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing).

The National Steering Committee (NSC) will be comprised of the following organizations: The Chairman of CEP will chair the NSC. The NSC advisory body will comprise the Hydromet agency under the CEP, the Committee of Emergency Services and Civil Defence (CoES), the Agency of Land Reclamation and Irrigation and the Agency of Forestry. Furthermore, as the accredited entity, WFP will also be part of the NSC and provide quality assurance for the project to ensure adherence to the GCF guidelines. The NSC is responsible for making, by consensus, management decisions when guidance is required by the Project Manager. NSC decisions will be made in accordance with standards that shall ensure management for development results, best value money, equity, integrity, transparency and effective international competition. In case a consensus cannot be reached within the NSC, final decision shall rest with WFP. The NSC will meet three times a year.

Project Support Unit (PSU) will be established within CEP's Implementation Group will be responsible for project management and planning at the national level. It will comprise of the project manager, CEP and support staff including technical experts. **The Project Manager** will run the project on a day-to-day basis on behalf of CEP within the constraints laid down by the NSC. The Project Manager function will end when the final project terminal evaluation report and other documentation required by the GCF and WFP has been completed and submitted to WFP. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

Both the NSC and PSU will be set up before the project inception workshop. There are no known pre-requisites.

District Level Implementing and Monitoring Committee: District level coordination of project activities will be done under the chairmanship of Head of District. The head of district will be the overall coordinator of the project at the district level. District level planning is further informed by decentralized structures such as the Jamoats.

Project Management Committee: The Project Management Committee (PMC) is to be set up in every Jamoat/village and composed of up to 6 members, including Head of Committee. 50% of committee members will be women. The members will not be related to each other and/or to the Head of Village/Jamoat. The PMC will be set by the Jamoat authorities at the village assembly. Whenever possible, these processes will be supervised by the representatives of WFP and Executive Entity. The representatives of Executive Entity will train committee members on their roles and responsibilities, and will also share the Project Management Committee selection report with the relevant WFP Sub Office. The role of the committee is to ensure that proposed activities are implemented according to plan. It must also ensure that project targets the most vulnerable food insecure families.

Beneficiary groups: WFP's climate change adaptation activities are oriented towards the creation of sustainable productive assets useful to the food insecure beneficiaries (both men and women) and the community. Sustainability of the assets is characterized by the community ownership and asset maintenance strategy, which will be discussed and agreed upon with men and women in each targeted communities. From the inception of the project, engagement of community leadership, Beneficiary Groups and district authorities will guarantee the quality, maintenance and access of very poor to the created/rehabilitated assets. On a case by case basis, beneficiaries will be organized into various Beneficiary Groups including water user associations, women's groups, etc. The role of the Beneficiary Groups will be to ensure sustainable asset management practices. This includes maintenance of orchards, irrigation and drinking water supplies as well as community level greenhouses and food storage facilities. Group members include beneficiary households who can benefit from the project. These are ordinary cultivators, individual members of lease-holding farms, owners of private and dehkan farms, owners of home garden plots, etc. Their roles and responsibilities are detailed in the Operation and Management plan (Annex 5). Overall, they will be responsible for managing and pooling financial, material, technical and human resources for the operation and maintenance of the asset within their jurisdiction for the benefit of all the members.

D.1. Value Added for GCF Involvement

Gaps in food security related adaptation interventions: While climate change adaptation at the national levels has been a priority under the recent climate change related projects, many gaps still exist in introducing adaptation from the lens of food security and nutrition at the community level. Agriculture comprises 25 % of GDP and 53 % of employment across the country. A majority of the population is engaged in smallholder, rain-fed agriculture. The impacts of climate-related hazards in Tajikistan have already severely disrupted food production, led to the displacement of communities, loss of life and assets, and caused an overall reduction of community resilience, outmigration - especially affecting women, who are the most vulnerable to climate change impacts. Since the target locations include the extreme poor, it is less lucrative for the private sector to invest in developing services. To add to that, private sector investment is limited due to the insolvency of banks to provide loans. Since this is an adaptation project aimed building resilience of the most poor and vulnerable communities in rural Tajikistan, it is not expected to generate a revenue or profit for the government and beneficiaries involved. The project, however, will enable the beneficiaries to diversify their livelihoods, build community and household resilience, prevent losses to property and make informed decisions on the use of available natural resources.

High vulnerability: Climate change presents significant threats to sustainable poverty reduction in Tajikistan. The country has been ranked the most vulnerable of twenty-eight countries in the World Bank's Europe and Central Asia (ECA) region.⁴³ Sensitivity to the impacts of increased exposure to climatic risks is high, especially for the rural poor. Climate change threatens livelihoods in Tajikistan, mostly because of low adaptive capacity. Vulnerability to climate change stems from inadequate productive structures, high income vulnerability, and numerous institutional constraints, especially in the agricultural sector. At the local level, the relevant civil society organizations continue to employ traditional approaches focusing primarily on increasing production, improving water resource management or responding to emergency situations often triggered by climate variability.

Creating new enabling environments: Uptake of climate services by communities could potentially create conditions for investments by public and private sector actors to package and use this information to serve specialized needs across sectors and businesses. The project will enable producers and users of climate information thereby eliminating barriers including those related to adoption to new technologies and practices such as ICT/mobile technologies weather advisories. The project will provide the private sector (small-scale farmer enterprises, agri-businesses) with the weather and climate information that is required to make informed decisions to increase productivity and make medium and longterm investments.

A GCF funding will enable Tajikistan to expand its executing capacity to meet its targets. In addition, through partnerships with other ministries at the district level, the project will be able to further enhance capacities in the areas of agriculture, land management, social protection, and responding to natural disasters in the country. Without the proposed project, the government of Tajikistan cannot mobilize development of the national and regional systems to reduce mortality for its vulnerable populations and decreasing risks on climate sensitive livelihoods.

D.2. Exit Strategy

Main principles

WFP has 20 years of successful experience in Tajikistan implementing water management, tree plantation, greenhouses and other community asset building projects. The sustainability of these projects depends on several factors such as i) relevance of the intervention with community needs and ii) the community engagement in the planning, implementation and maintenance process. For the proposal supported by GCF, the

implementation of activities will follow a logical sequencing and for some activities a gradual phasing out, which particularly applies to asset creation and related transfer activities.

Activities under this proposal have been identified in consultation with communities and authorities of the targeted districts. Furthermore, the selection of target villages and communities builds on community contributions to project implementation and the maintenance of assets. Both factors ensure community ownership and support longer-term sustainability of interventions.

WFP's internal procedures to approve interventions at community level will further ensure that the proposed projects are sustainable. Each project is reviewed by the Project Appraisal Committee (PAC). Approval of an activity by the PAC depends on its sustainability over the longer term as part of locally relevant exit strategies. Furthermore, mandatory endorsement letters from the Hukumat and/or Jamoat guarantees land tenure and institutional anchoring and approval of activities.

Based on above, the exit strategy of the proposed project is based on consultations with each involved community and tailored to each local situation on a case by case basis. For example, projects related to water management are expected to be handed over to the Water User Associations. In communities targeted for tree planting, beneficiary groups will be established which remain the institutions tasked with the management of the orchards after the project has ended.

Since the Government can only provide limited support to each vulnerable community, vulnerable villages rely on their own efforts to maintain the assets on which their livelihood depends. As specified in the Operational and Maintenance plan, each community will receive training on the effective use of natural resources and their capacity for maintenance of the "assets" will be enhanced throughout the project implementation period. As these communities have the proven capacity to maintain these assets after completion, the gains and benefits generated by the project will not be jeopardized once project resources are no longer available.

The proposed project has been designed through extensive consultations and involvement of government, communities, public sector, private sector, NGOs, and Civil Society Organizations to ensure ownership of the interventions and effectiveness of their impact. Relevant government departments (national and sub-national level), as well as local communities, have been involved in the proposed design and will be leading on implementation of project interventions. This proposal requests a grant that will neither generate profits for the donor nor the implementer. It will, however, create an enabling environment whereby men and women in poor communities will be able to take ownership of assets (including repairs and maintenance), generate sustained, more resilient incomes and use newly learned skills over a long period after the project closure. The project ensures that the investments as well as the results are sustained beyond the project duration and for the long-term through the following:

Institutional sustainability will be promoted in the project by strengthening and expanding the current capabilities of the key institutions that are directly responsible for the execution and management of the project activities. The project aims to generate awareness and train regional level officials on climate change adaptation. Training local and provincial government officials in supporting these processes will also ensure stakeholders have the tools to continue their work towards the vision of climate resilience beyond the duration of this project. Climate change adaptation plans will be incorporated in the district development plans. Lessons learnt from the project implementation will be submitted to national ministries as policy and strategy papers to add to their

⁴³World Bank 2009a

institutional memory. This will add the food security lens to national policy formulation – something that is currently lacking.

Socio-economic sustainability at the community level will be promoted by ensuring that actions are community-driven to increase ownership and commitment. Assets created under the project are prioritized and decided through a participatory approach that engages both men and women so that it is in the community's interest to maintain, repair and replace them with their localized knowledge, skills, and resources after the project closes. Community members (especially youth) will be trained to maintain assets and will be involved in maintenance activities from the onset (See Annex 5 for O&M plan for assets created under component 2). The project will ensure that women are prioritized in income generating and skills development activities.

Financial sustainability of the climate services in component 1 will be maintained by partnering with service providers who have been collaborating with the government so that an initially subsidized mechanism can gradually become paid service (where free services like radio, TV or information centres are deemed less effective).

Sustainability of outcomes and behavioral change will be embedded from various perspectives in the project.

- **Informed decision making:** The use of climate information for decision making, understanding the need to diversify from staples – both as income sources as well as dietary practices will be key.
- **Nutrition education:** Understanding the need to empower women and for women to understand the importance of nutrition for their children will be enhanced. Climate change affects nutrition by influencing people's food security, disease levels and patterns, water and sanitation environments, and choices about how to allocate time to their livelihoods and to caregiving. In turn, people's nutrition status and diet choices affect their capacity to adapt to climate change. For the poorest groups, the seasonal cycles of food availability, infection, and time use remain a significant challenge to nutrition security and provide a stark indicator of the vulnerability of populations to climate risk.⁴⁴
- **Empowering the smallholder:** For small holders, it will be important to learn that the middleman is not always right and to be able to negotiate better deals and improve incomes through availability of local market prices. Opportunities for sustainable income sources through linkages with public and private sector (including national school meal programs) will be fostered. Communities as a whole will incorporate an understanding of climate information in their everyday lives. The impact of climate change on future generations, land, natural resources as well as steps to adapt and change the way of life will be key knowledge imparted through the implementation of this project.
- **Community ownership and maintenance of assets:** Community members will see concrete benefits in a variety of ways, for example through better allocation of resources, increased productivity, and better access to markets. Local government will also have the capacity to better support community-driven and owned processes. Local residents will see value in services (trainings etc.) provided by their peers and will be willing to pay for those services. Communities will be organized into beneficiary groups for maintenance and management of the assets created from the start to ensure ownership and sustainability. Using traditional means and exercises, community members will be made aware of the importance of collaboration and mutual trust.
- In addition to the climate vulnerability lens that supports the overall geographical targeting of the project, communities are selected on the basis of their engagement in project implementation including willingness

⁴⁴ Thomson, Madeleine; Fanzo, Jessica. 2015. Climate change and nutrition. In Global Nutrition Report 2015: Actions and accountability to advance nutrition and sustainable development. Chapter 6. Pp. 74-84. Washington, DC: International Food Policy Research Institute (IFPRI).

to co-finance and asset maintenance capacity. The proposed activities are identified through a participatory process based on community priorities. Authorities and community members are involved in the project from the earliest design stages. Poorest communities are willing to contribute significant amount of their own resources, and it is in their interest to put in place sustainable asset management strategies as their livelihood will fully depend on those community assets.

In practical terms:

Component 1: In relation to climate services an institutional agreement will be explored with the Ministry of Agriculture (MoA) to ensure long-term sustainability and management of the resources (equipment, internet access, etc), including the training component derived from PICSA (ToTs). A further partnership between the MoA and organizations such as the Agricultural Research Institute and the Agricultural Academy will also be promoted to ensure capacitated extension services in the long-term. Agrarian research centers and universities shall also be involved in the process of co-production of CS, promoting the transfer of PICSA principles, with the aim of ensuring long-term.

SMS, and IVR Tree information delivery systems will be provided for free for a 3 years trial period through TCELL or Megaphone as almost all populations have mobile phones and large majority of people in the targeted districts are members of those wireless telephone providers. After the trial period, the alert system will be handed over to local stakeholders (CEP, the Hydromet and the Committee of Emergency Situations). During consultations, farmers were open to paying a small fee for these services (annex 2), depending on their usefulness to be tested during the trial period. The IVR Tree information has already been tested in the country by a USAID project (M-Health).

Other ICT channels are also being explored e.g. ad hoc radio programs with a strong component of weather/climate advisory to be prepared by Hydromet/public extension office. Some of the radio programs are already active and run by NGOs – the added value of WFP would rely on the dissemination of tailored and locally derived weather/climate info, and on live interaction with end-users. WFP will act as enabler between Hydromet, extension service and radio program managers.

Should some targeted communities – especially the ones located in very remote areas - experience difficulties in using both the SMS/ IVR Tree information delivery systems and radio programs, WFP will also consider collaboration with women groups, religious centers, district level information centers to act as catalyst of weather/climate information for the whole community.

Component 2: In relation with assets maintenance, under the proposed project there are going to be both household and community level assets. For the community assets, two concurrent sustainability paths will be implemented. (1) At the beneficiary level, WFP typically devotes a significant amount of resources to the development of community-level management committees. In the case of Tajikistan, these will come in several forms from water users associations, to women’s associations, to Dehkan farmers associations depending on specific asset and its location. Each one of this entity is trained and becomes responsible for the maintenance of the assets after project completion. Both in Tajikistan and other countries where WFP operates, such entities have been showing positive results in ensuring that assets built or rehabilitated are appropriately maintained over time, replicated and access is ensured to every member of the community. (2) At the institutional level, as pointed out in Output 1.6 , adaptation plans (including the assets creation interventions under Component 2 and their maintenance) will be integrated into District Development Plans whereby District Development Committees will legally commit to ensure maintenance of the assets after project completion (through community-level management committees under point 1 above). Such commitment will be part of the

Memorandum of Understanding that WFP will sign with the Government to kick start project implementation, however a letter of commitment will be provided in annex.

In terms of monitoring, in Tajikistan, satellite monitoring of the assets built under previous programs revealed assets were still functional and had been beneficial to the communities even after significant time from project completion. Recently, WFP Tajikistan assessed the impact of its asset building programs through satellite imagery. Satellite observation of rehabilitated irrigation canals shows the positive evolution of vegetation coverage (measured through the Normalized Difference Vegetation Index – NDVI) and highlights improvements in terms of new cultivated areas appearing following the rehabilitation of irrigation canals. In summer 2015 and 2016, new crops were detected along the rehabilitated canal, where there were not before. Furthermore, 2011 and 2016 were two comparable years in terms of climatic conditions, yet, these assets retained functionality in spite of a number of shock years after WFP’s intervention.

Combined, all components of the project will create a virtuous cycle where good policy, improved capacity and concrete adaptation actions empower communities to adapt to the effects of climate change and to reverse environmental damage, which, if unchecked, would further increase vulnerability. The knowledge and lessons learnt delivered by the project will be captured through regular monitoring and validation workshops, documented in accessible reports, shared and discussed with all relevant stakeholders, thus promoting the application and replication of valuable lessons in a wider scope (including national plans, projects and policies) beyond the project itself.

E.1. Impact Potential

Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas

E.1.1. Mitigation / adaptation impact potential

The project directly contributes to the GCF's strategic results areas for adaptation, namely: increased resilience of health, water and food security to the impact of climate change and; increased climate resilience of livelihoods of people, strengthening of institutional and regulatory systems for climate-responsive planning and development, increase in generation and use of climate information in decision making as well as strengthening of awareness regarding climate risks adaptive capacity and reduced exposure to climate threats.

Interventions of the project will reach 50,000 individuals (direct beneficiaries) among the estimated 230,000 individuals residing in areas considered vulnerable to the negative impacts of climate change, and up to 70,000 indirect beneficiaries, who live in proposed project locations and would therefore have access to climate services (Annex 1.3). The number of direct beneficiaries (50,000) is a preliminary approximation of the number of individuals that will be engaged, among which 50,000 will be a preliminary target number who will be engaged in adaptation and asset creation activities while their families will rely on transfers to fill the immediate household food gaps. These individuals are selected from the total population in the shortlisted districts classified as vulnerable to climate change with High food insecurity trends ⁴⁵. The number of indirect beneficiaries (70,000) pertains to the total population of the target districts (not extreme poor) that would benefit indirectly from the activities of the project (e.g. climate services in the area may still be accessed by households not involved in agriculture). From the total direct and indirect beneficiaries, 50% will be women. At the end of the project, it will reach up to 1.5% of the total population⁴⁶ of the country with a potential for scale up and replication up to 17.25% ⁴⁷ across the country. The Project will also enhance capacity for Tajikistan's long-term adaptation strategy through the lens of food security by putting in place systems and skills which will ensure longevity of the investments after the project. In addition, small assets introduced by the project will ensure that livelihoods are less vulnerable and have increased levels of climate resilience. The Project will support the systematic assessment and region-wide sharing of lessons from implementing Project-supported investments to address common climate challenges. These experiences, offering concrete insights on climate-smart technologies and practices, including their costs and results on the ground, can result in significant cost-savings from learning-by-doing and centralization of this experience for government agencies overseeing climate-sensitive sectors, academia, civil society, farmers and communities.

E.1.2. Key impact potential indicator

GCF core indicators	<i>Expected tonnes of carbon dioxide equivalent (t CO₂ eq) to be reduced or avoided (Mitigation only)</i>	<i>Annual</i>	N/A
		<i>Lifetime</i>	N/A
	<ul style="list-style-type: none"> <i>Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);</i> <i>Number of beneficiaries relative to total population, disaggregated by gender (adaptation only)</i> 	<i>Total</i>	120,000 (Direct 50,000; Indirect 70,000) 52% Women – 62,400 women 48% Men - 57,600 men
		<i>Percentage (%)</i>	1.5% of the total population (0.78% women, 0.72% men)

⁴⁵ Review of Climate Risks and Food Security in Tajikistan: National Profile and Adaptation Priorities, 2016, WFP

⁴⁶ According to the World Bank, the total population of Tajikistan as of 2013 was 8.208 million people

⁴⁷ Total rural vulnerable population of Tajikistan is 1,416,000.

<i>Other relevant indicators</i>	<ul style="list-style-type: none"> • % Increase of climate information products/services in decision-making in climate-sensitive sectors • # of government staff proficient in climate services, disaggregate by sex • # farmers and women’s groups with better understanding and knowledge regarding climate change and how to use it for planning and decision making ; • # of community-based institutions and women association trained. • % of targeted people disaggregated by sex receiving key messages related to health and nutrition risks resulting from climate change • # greenhouses, storage facilities and renewable energy based systems established supporting women-led enterprises • # natural and physical livelihood assets created and improved for increased community and household resilience
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Describe the detailed methodology used for calculating the indicators above.

- Data will be gathered at least on a monthly basis by WFP’s partners as well as by WFP, with regular monitoring and verification. When partners are responsible for data collection, reporting intervals and formats will be included in all field-level agreements, memoranda of understanding and other partnership agreements.
- The target for this indicator is 100 % of planned WFP beneficiaries.
- All data will be aggregated for WFP global statistics, including over time (month, year) and geographic location (village, county, district, state).
- Participant numbers will be disaggregated by gender: in all types of training, separate figures will be provided for women and men.

E.2. Paradigm Shift Potential

Degree to which the proposed activity can catalyze impact beyond a one-off project/programme investment

E.2.1. Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

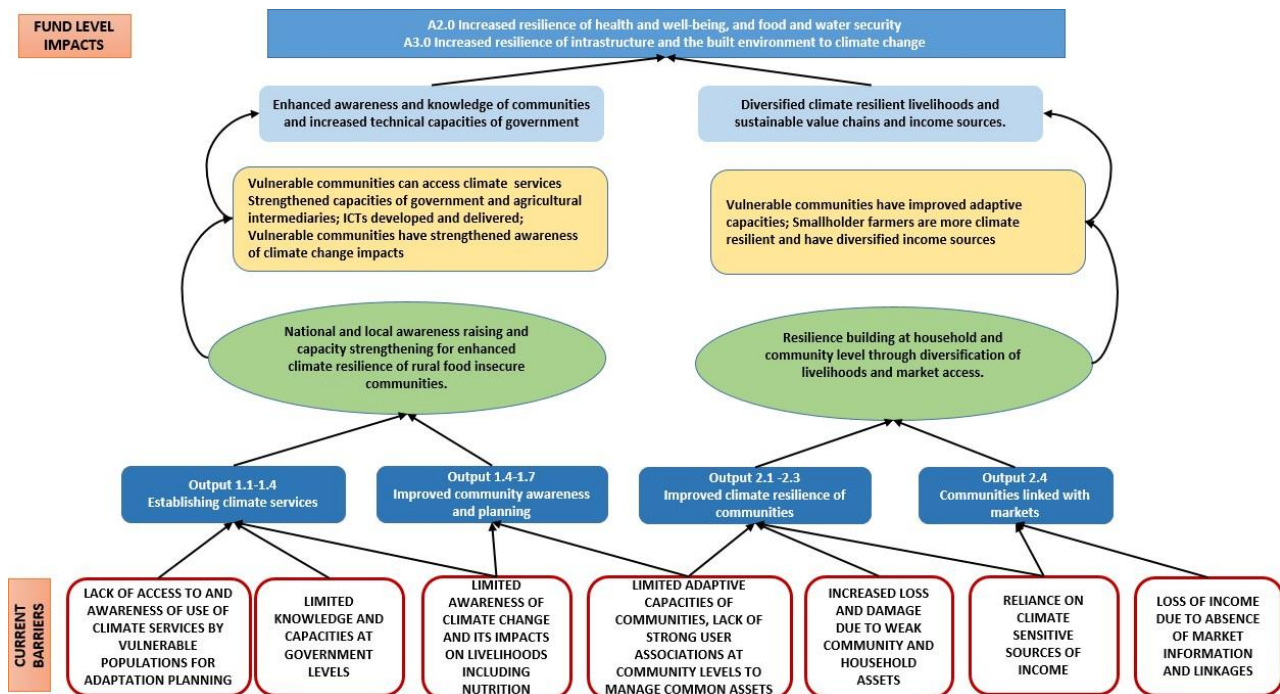


Figure 2: Theory of change

The theory of change depicted in Figure 2 illustrates how each of the two components of the proposed project contribute to the long-term objective and how the resulting project impacts can be sustained, replicated and scaled to contribute to climate-resilient development in Tajikistan. Through integration of the specific elements

described in the Exit Strategy into the project design and implementation, conditions are created that lead to sustained impacts and potential for scale-up of approximately three times the initial impact. Figure 2 shows that each of the outputs is made up of a series of activities responding to the identified barriers. Each output leads to intermediary outcomes, the longer-term project outcome and ultimately the impact expected from the project. Additionally, the project will promote a changing livelihood activities to adapt to future climate impact will contribute to changing the behavior of communities comprising farmers (men, women and youth), and institutions beyond the lifetime of the project.

In addition to the above, rationale for scale-up includes the project's cost effectiveness, its alignment with national policies (including the forthcoming National Adaptation Strategy 2016-2030) as well as its inclusion of communities throughout the project implementation. The proposed intervention has selected communities in the most vulnerable mountainous districts of Tajikistan. The selection criteria for the project sites include climate vulnerability especially focusing on areas with high levels of food insecurity and malnutrition (See Annex 1.3). Lessons learnt from project implementation will be documented and regular meetings for monitoring and validation will be undertaken to revise the implementation strategy if required. There is high replication value of the project within Tajikistan and success stories and lessons learnt could be replicated to the districts in the western part of the country near the borders with Afghanistan, Uzbekistan and Kyrgyzstan. The areas of possible future expansion may be the ones identified as vulnerable according to the two studies; (1) Review of Climate Risks and Food Security in Tajikistan, and (2) 2015 Integrated Context Analysis, possibly the districts classified with medium or high food insecurity profile and low or medium or high level of climate change vulnerability under the Review, and also classified as Integrated Context Analysis Category 2 and 3. The total rural population of the areas above is **4,253,000**, and the estimated number of the vulnerable is **1,416,000**.

This project will reach 120,000 people (directly 50,000 and indirectly 70,000) in the primarily selected areas, and up to a maximum of 230,000 vulnerable people in the rural areas where the project will be implemented. Moreover, the trainings, lessons learnt and climate services capacities incorporated at the national level could be replicated across the country, reaching up to **5.2** times the current number of the vulnerable. Furthermore, as most districts have a unique set of conditions, these will be taken into consideration in systems design, so that an adapted approach is offered by the project to meet district-specific circumstances. Such an approach could also serve as a model for neighboring countries, since the regional geography is similar.

E.2.2. Potential for knowledge and learning

Potential for knowledge and learning

Knowledge generation and sharing is an important part of the project. Lessons that emanate both from the adaptation planning process and its actual field implementation will be evaluated, discussed, shared and scaled-up throughout the project outputs. The interest in evaluating impact - in physical changes, social and economic improvement of the target community is obvious; however of equal importance is the process and system through which planning, implementation and monitoring is achieved- as this is the model that would be/can be replicated in other districts. Constant knowledge sharing between the center, the district, the jamoats (village clusters) and the communities will ensure feedback to policy and technical information flow to the community. Innovative approaches like participatory videos could help share knowledge generated through project implementation.

For the CEP, the project will provide a necessary test of the advocated development and adaptation planning process. Where relevant, knowledge generated through the implementation of the project will be fed into other line ministries (such as Ministry of Agriculture, Committee of Environmental Protection under the Government of the Republic of Tajikistan, Agency for Forestry, Agency of Land Management and Irrigation under the Government of Tajikistan and the Agency on Hydrometeorology under the Committee for Environment Protection) as studies and policy papers in order to enable learning at the policy level. The project will also aim at including success stories in newspapers for reaching a wider audience. At community level, various modes of knowledge dissemination will be used including SMS (for climate services and market prices), radio (for climate services, awareness raising on climate change), exchange visits to communities (for influencing change in traditional mindset), community field workshops (for livelihood diversification), women's training (for nutrition), and participatory videos amongst others. At national level the output will enable CEP to measure progress against National Climate Change Adaptation Strategy (and future NAP process) and the commitments made in the Nationally Determined Contributions (including long/short term goals) through production of case studies based on implementation modality, lessons and successes in adaptation practices and in understanding linkages between food security and improved water, land and forestry management.

Lessons and case studies will be disseminated within and beyond the project intervention through:

- Existing information sharing (regional) networks and forums (for e.g. PPCR, CAREC, UNDP and World Bank platforms)
- Exchange workshops and communication of outcomes and experiences to relevant institutions across high mountains in Asia (e.g. ICIMOD, and UN agencies).
- Public media articles in both national print and electronic media;
- Local media news in local language;
- Exchange visits from adjacent communities and government decision makers to promote replication of best practices and to bring an adaptation focus into local development planning processes, especially village development plans;
- Awareness raising programs, and trainings on climate change for local communities, NGOs, CBOs, and local government officers

The project is closely aligned with the SDGs through its focus on building adaptive capacity and resilience—as well as integrating climate change considerations into national policies, strategies, and planning. By supporting the national government in building climate resilient livelihoods, the project will help address Goal 2, "End Hunger, Achieve Food Security and Improved Nutrition", as well as Goal 13, "Taking Urgent Action to Fight Climate Change." Beyond these explicit food security and climate-focused links, however, supporting the project also helps address Goal 5 on "Gender Equality and Women's Empowerment" as well as Goal 17 and related targets on "Strengthening the means of implementation and revitalizing the global partnership for sustainable development."

The proposed project takes a multi-pronged approach to creating enabling conditions for continuous investments into the development of climate resilient livelihoods. The project's proposed intervention aims at (1) strengthening the potential of local communities in the face of climate change and; (2) addressing capacity deficits by improving skills and developing value chains aimed at revitalizing local economies. This will create a long lasting enabling environment where local and regional market demand will be met by the targeted communities.

During initial stakeholder meetings with government agencies and NGOs (Annex 1.6), it was observed that as communities rely on a single climate-sensitive source of income (i.e. agriculture), they are not only vulnerable to losses arising from climate change, but are also vulnerable to exploitation by middlemen and lack of market information. Remittances from men migrating to Russia have, until recent time, added some resilience to the families back in Tajikistan. However, the recent reduction in volume and frequency of remittances, due to reduced migration and changing labour regulations in Russia, is negatively impacting household food security, whereby 80 % of remittances are used by Tajik households to purchase food.⁴⁸

Fostering local markets: The project will aim at exploring new markets, creating farmer groups to increase volumes and link with them with buyers in local markets (such as the national school meal programs). This will help create a stable and sustainable demand for commodities produced by these communities. Improved climate services will provide timely and actionable information to help rural communities manage their resources in a proactive manner and to help mitigate losses (harvests, assets and livestock) caused by climate extremes. The project will create a conducive environment for private sector actors such as telecom and radio services to reach out to the masses by creating utility.

Boosting existing adaptation efforts: In the process of disseminating information on climate change, livelihood adaptation as well as disaster preparedness, nongovernmental and community-based organizations will benefit from strengthened communication and outreach capabilities, which will be crucial to the successful and sustainable implementation not only of this project, but also broader climate change adaptation initiatives. The project strategy also takes into account the physical and economic vulnerability of families. This project will give a particularly strong focus on the development of rural livelihoods, targeting the most disadvantaged and vulnerable communities. Outputs from this project will create climate resilient assets. Activities will include management of drainage channels, tree planting, recovery of degraded land, and building light structures like greenhouses and storage facilities, which help build adaptive capacity of communities. The project will also seek to build adaptive capacity of vulnerable groups (through usage of solar panels, wind mills and solar water heaters) in remote mountain areas, and to develop alternative livelihoods for women (using solar kilns for drying fruits) as part of broader government efforts to address the underlying drivers of extreme poverty, food insecurity & malnutrition and climate change.

⁴⁸ WFP VAM Bulletin June 2016 Issue 17 <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp286828.pdf>

E.2.4. Contribution to regulatory framework and policies

At the **policy** level, the project will provide an enabling environment for the integration of climate change adaptation and risk management considerations from a food security lens through regular policy briefs and updates to the Ministry of Agriculture, as well as the CEP– something which is currently lacking. The interface between the policy level and local level institutions will be enhanced, in order to ensure evidence-based policy making that is informed by community needs. Involvement of communities and other stakeholders throughout the planning and design to the implementation and monitoring stages of the project will further enhance the economic and social benefits of the project, and ensure that communities are empowered to be in charge of their own protection from climate induced risks. Lessons learnt and best practices from the project will be captured and shared with relevant government ministries for adoption. The project will also complement the Nationally Determined Contributions and the forthcoming National Climate Change Adaptation Strategy 2017-2030.

The project also incorporates many priorities in climate change adaptation listed in the country's Third National Communication to the UNFCCC. In particular, the recommendations in the National Communications to improve water and food security, nutrition, forest improvement activities, awareness raising, diversification and increasing use of renewable energy are included in both components of the project.

International experience has demonstrated that early engagement of a wide-range of men and women stakeholders (from the community through to government authorities) leads to local acceptance, ownership, and ultimately successful adaptation interventions. Overall synchronization of the stakeholder engagement and capacity building activities in this project will be achieved under component 1. Such capacity building at multiple levels will ensure that the country is well equipped and motivated to maintain long-term, sustainable adaptation strategies implemented under this project.

The proposed project intervention will bring about a shift in the planning for and adaptation to climate risks faced by poor rural communities in Tajikistan. Actionable information, training and concrete adaptation activities will enable farmers to avoid the damage caused by the inefficient use and wastage of resources, and in turn, save national resources for use in response to the negative impacts of climate change such as droughts and variable rainfall.

The proposed project will use a combination of approaches such as provision of extended weather forecasts directly to rural communities, livelihood diversification and improving market access, and a more systematic approach to training and documentation of lessons learnt. Trainings will also aim at developing implementation capacity of Tajikistan at national and sub-national levels. Lessons learnt will be documented through the lens of national development policies and strategies. These policy documents will enable the government to better plan rural development interventions, keeping in mind the impact of climate change on the most vulnerable populations. The impact from the project in terms of raising awareness amongst communities, policy makers, local authorities and user associations is expected to have a catalytic effect on the incorporation of approaches to climate change into future planning.

A more informed national apparatus will enable better planning and prioritization of resources and investments in climate change adaptation and food security. At the community level, more resilient livelihoods with diversified income sources will result in a decrease in the impact of climate shocks and improved accessibility, availability, utilization and stability of food. This will also create appropriate conditions for the development of sustainable value chains to take advantage of regional and international market demands.

The project will also complement the national social protection strategy by investing in building light physical and natural assets that promote farm productivity and therefore contribute to food and income security for target households.

E.3. Sustainable Development Potential

Wider benefits and priorities

E.3.1. Environmental, social and economic co-benefits, including gender-sensitive development impact

The UN has acknowledged the vast threat posed by climate change to food security and nutrition.⁴⁹ Very often, it is the most marginalized and vulnerable members of societies who live in the most exposed locations. Hence, targeted measures implemented in this project that aim to increase societal resilience, reduce vulnerability, and thereby minimize losses to future climate threats. The project will also bring indirect economic and societal benefits as a result of strengthened capacities, awareness, and engagement in CCA.

The project is closely aligned with the SDGs through its focus on building adaptive capacity and resilience—as well as integrating climate change considerations into national policies, strategies, and planning. By supporting the national government in building climate resilient livelihoods, the project will help address Goal 2, "End Hunger, Achieve Food Security and Improved Nutrition", as well as Goal 13, "Taking Urgent Action to Fight Climate Change." Beyond these explicit food security and climate-focused links, however, supporting the project also helps address Goal 5 on "Gender Equality and Women's Empowerment" as well as Goal 17 and related targets on "Strengthening the means of implementation and revitalizing the global partnership for sustainable development."

The project will deliver both 'soft' support in terms of awareness, planning capacity and technology transfer and "concrete" adaptation actions that are expected to transform lives of communities at risk. The project will engage vulnerable communities in assets creation and asset rehabilitation work and follow a cash/food voucher transfer model in-line with WFP's corporate guidelines on cash-based transfers. The cash/food voucher transfer will meet the immediate food needs of the targeted food insecure households. This will, in turn, enable them to participate in creation of assets that will contribute to longer term climate resilience. Activities implemented through such community participation will help building their climate resilience through increased availability of livelihood resources and increased production and storage, ensuring income and food security in the longer term.

In the process of disseminating information on climate change, livelihood adaptation as well as disaster preparedness, nongovernmental and community-based organizations will benefit from strengthened communication and outreach capabilities, which will be crucial to the successful and sustainable implementation not only of this project, but also broader climate change adaptation initiatives. The project strategy also takes into account the physical and economic vulnerability of families. This project will give a particularly strong focus on the development of rural livelihoods, targeting the most disadvantaged and vulnerable communities. Outputs from this project will create climate resilient assets. Activities will include management of drainage channels, tree planting⁵⁰, recovery of degraded land, and building light structures like greenhouses and storage facilities, which help build adaptive capacity of communities. The project will also seek to build adaptive capacity of vulnerable groups (through usage of solar panels, solar water heaters and fuel efficient cook stoves) in remote mountain areas, and to develop alternative livelihoods for women (using solar kilns for drying fruits) as part of broader government efforts to address the underlying drivers of extreme poverty, food insecurity & malnutrition and climate change.

Gender inequality in rural areas of Tajikistan also mean that women are particularly disadvantaged. They have less access to information, training, and credit, and women-headed households lack sufficient labour power (UNICEF, 2011). The 2014 gender inequality index ranks Tajikistan 69th of 155 countries.⁵¹ A poor domestic economy has seen nearly one in five Tajik citizens – 1.5 million – work abroad, roughly 90 per cent of them in

⁴⁹ <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?LangID=E&NewsID=16702>

⁵⁰ WFP has signed MoU with the Agency for Forestry under the government of the Republic of Tajikistan for the implementation of tree planting projects. Between 2010-2015 WFP has regenerated more than 2500 Ha of degraded land through tree planting activities.

⁵¹ http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/TJK.pdf

Russia. From January to June 2016, more than 308,600 labour migrants have reportedly left to work in the Russian Federation (over 99 % of the total migrants), Kazakhstan, Kyrgyzstan and Uzbekistan. Their remittances are the country's main source of income, and made up 43 per cent of GDP⁵². Most of the emigrants are male. Their left-behind or abandoned wives become de-facto heads of households, solely responsible for generating family income – despite limited access to education, resources, micro-credit, social protection and employment, particularly in rural settings. On the other hand, women carry out a large portion of the farm work, care for their children, and provide household food supplies from vegetable gardens. The growing number and severity of disasters triggered by climate change will further increase the burden on women and communities that are already vulnerable at present. A study by ADB showed that despite gender inequalities in agriculture, women have great potential as agents of change. Rural women are quick to “grasp the holistic nature of farming and offer examples and solutions that they are already engaging in to adapt to climate change.” Rural women can also be potential agents for climate change adaptation, as demonstrated by several strategic projects that have successfully involved them⁵³.

The implementation of activities under Component 1&2, will result in additional **economic benefits**, namely:

- a. **Sustainable income generation:** In the short-term, skills will be developed (practical and activity based) for diversification of livelihood activities and awareness raising on impacts of climate on livelihoods. Increased incomes for men and women will result from alternative livelihoods through cultivation of high value crops, reforestation/afforestation, herbs and medicinal plants, poultry farms, bee keeping. In the medium-term, new value chains will create demand for the commodities produced by rural commodities as well as create post-production employment opportunities, such as packaging, storage and processing.
- b. **Reduced losses and wastage:** Through this project, rural communities will be empowered to make better decisions related to their existing livelihoods, and as a result, will be able to use their inputs (including labour allocation) more efficiently. Climate services will enable farmers to make informed decisions, better manage risk, take advantage of favourable weather conditions, and adapt to change. Improved storage facilities will minimize post-harvest losses arising due to extreme weather and temperatures. In addition, there will be improved resource allocation for items such as seeds, livestock, and human labour.
- c. **Market access** – The project will be designed to create market demand and expand market access. Market information provision (Component 2) will help understand market prices, demands and ensure that demand driven activities are undertaken and farmer associations are strengthened to enable long term sustainability of incomes at the right market prices. Market access will be expanded by connecting farmers to public and private buyers (for e.g. the national school meal programme)
- d. **Government resources:** The conclusions of the updated vulnerability assessment under the Third National Communications to the UNFCCC show that the impact of the climate change on natural resources, economy and the population is likely to be significant and negative in case of extreme scenarios. According to the assessment of WB (2008), Tajikistan tops the list of 28 countries of Central and Eastern Europe, Caucasus and Central Asia on the Climate Risk Index being a sensitive country with low adaptation potential. Most of the climate risks are faced by rural vulnerable populations due to the lack of accurate information and early warning. If rural populations are able to avoid losses, it would enable the government administration to shift investments from risk recovery to preparedness and development.
- e. **Building social cohesion:** During all community consultations, caution was expressed by community members regarding common community assets especially community owned greenhouses and storages facilities. In past projects, an absence of local structures to manage and maintain common assets have led to cases where these structures were taken over by the wealthy few including village leaders or local

⁵²WFP VAM Food Security Monitoring Bulletin June 2016 Issue 17
<http://documents.wfp.org/stellent/groups/public/documents/ena/wfp286828.pdf>

⁵³Tajikistan country gender assessment: Asian Development Bank, 2016.

authorities. Such experiences have led to an atmosphere of mistrust that prevents villagers from reaping the benefits of common facilities that are cost efficient at large scale. This also prevents donors from investing in such assets as they will never be used. Through this project, communities will be grouped and made responsible for managing and maintaining assets. Social cohesiveness will be ensured through group exercises and awareness campaigns to highlight the common nature of the problems faced. Common greenhouses provided under component 2 will pilot this new approach of trust building and cohesive planning which can then be replicated in future interventions.

E.4. Needs of the Recipient
Vulnerability and financing needs of the beneficiary country and population

E.4.1. Vulnerability of country and beneficiary groups (Adaptation only)

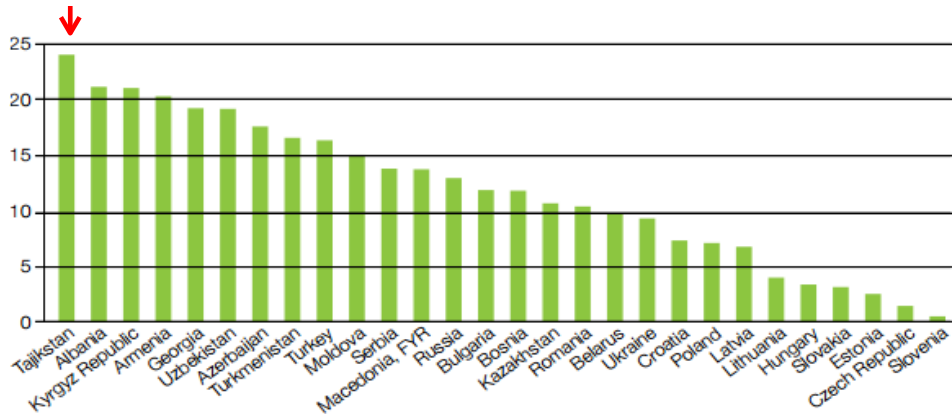
Describe the scale and intensity of vulnerability of the country and beneficiary groups, and elaborate how the project/programme addresses the issue (e.g. the level of exposure to climate risks for beneficiary country and groups, overall income level, etc).

Vulnerability: Tajikistan is considered to be one of the most vulnerable countries to climate change due to a range of factors. For instance, the agriculture sector relies highly on rainfall during the irrigation season, while high levels of environmental degradation, land erosion, deforestation and deteriorating social infrastructure are also occurring (UNDP, 2012). Tajikistan is judged to be highly vulnerable to risk, including food insecurity risks and climate change risks. According to Fay and Patel (2008), Tajikistan is the most vulnerable to climate risks among all 28 countries in Europe and Central Asia (Figure 3.). (See Annex 1.1)

Climate change vulnerability in Tajikistan is a product of many common risk drivers. These include the remoteness of rural populations, which suffer from high rates of poverty and food insecurity, as well as low levels of connectivity by infrastructure and service provision. Health outcomes are poor, further increasing the sensitivity of affected populations to the health risks present in the aftermath of a natural hazard. Agriculture, an underdeveloped sector in the country, forms a significant part of the economy of Tajikistan. However, insufficient employment opportunities have created untenable economic prospects for many people, driving significant levels of external labour migration (mainly to Russia) leaving behind inherently vulnerable population cohorts such as women and children.

Vulnerability of target population:

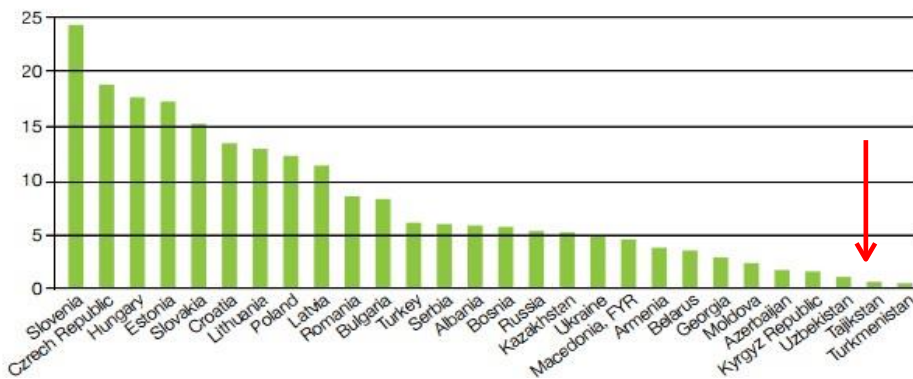
Figure 3. Vulnerability to Climate Change



Source: Fay and Patel (2008). Taken from World Bank, June 2009, Adapting to Climate Change in Europe and Central Asia

Adaptive Capacity: Even more than exposure and sensitivity, Tajikistan’s vulnerability is compounded by its very low adaptive capacity. Vulnerability to climate change stems from inadequate productive structures, high poverty levels and income vulnerability, and numerous institutional constraints, especially in the agricultural sector.⁵⁴ With respect to climate change adaptive capacity, Tajikistan fares poorly (Figure 4.) in the region (only second to last in the list of Europe and Central Asian countries). See Annex 2 & 8 for coping strategies resorted to by vulnerable communities.

Figure 4. Adaptive Capacity to Climate change



Source: Fay and Patel (2008). Taken from World Bank, June 2009, Adapting to Climate Change in Europe and Central Asia

Exposure to natural disasters: Natural disasters pose significant threats to the wellbeing and livelihoods of rural populations in Tajikistan. The country has already been impacted by recurrent climate variability. Natural disasters that occurred from 1997 to 2009 led to the loss of 933 lives with damages amounting to 1.15 billion somoni.⁵⁵ Natural disasters related to climate change and variability are increasing in numbers and magnitude. For the period of January – August 2016, at least 45 natural disaster occurred, resulting in 18 human losses and total economic damages of around 135 million Tajik Somonis. Projected climate change and extreme events, such as glaciers retreats, floods, droughts and mudslides, pose real threats to food security, water security, energy security, human health and the achievement of development goals in the country. A description of Tajikistan’s climate vulnerability is provided in Annex 1.

Natural disasters are the most obvious manifestations of biodiversity loss and environmental degradation impacts. Because of its geography, Tajikistan is particularly prone to water-related disasters. Steep mountain slopes and unstable soil cover contribute to some 50,000 landslides per year. Along with climatic factors, these poor and unstable conditions make lands more sensitive to human-induced damage. Deforestation, cultivation on and overgrazing of slopes, strip mining and road construction exacerbate the instability of mountain areas. The spread of natural disasters causing accidents among the population living in the risk zone is continuously increasing in recent years. Therefore, environmentally and climate change-induced migration becomes a major problem.⁵⁶

SENSITIVITY

⁵⁴ World Bank 2014: Report No. 85597-TJ Tajikistan: Autonomous adaptation to climate change: economic opportunities and institutional constraints for farming households

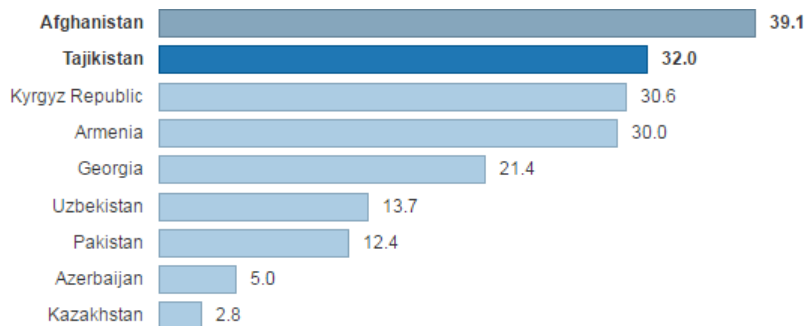
⁵⁵ National Disaster Risk Management Strategy For 2010 – 2015 Republic of Tajikistan

⁵⁶ Ecological migration - <http://www.osce.org/ru/eea/34464>

Poverty: Tajikistan is the poorest of the Central Asian countries. In 2015, remittances constituted over 40 % of the country's GDP.⁵⁷ Poverty rates dropped from 73 % in 2003 to 47 in 2009 using the national poverty line⁵⁸ but this is still amongst the highest in the region. Poverty also disproportionately affects rural populations, young persons and women, increasing the vulnerability of these groups.

The prevalence of poverty also impacts **educational** attainment and national skill levels, as a large proportion of young people in poverty do not complete secondary schooling. A considerable **gender** gap is also present in Tajikistan, with women experiencing greater barriers to accessing capital than men. Female workers also have lower skills than male workers as well, as measured by education level. In particular, only 10 % of female workers had tertiary education in 2009, while for men this ratio was twice as high in the same year.⁵⁹

Figure 5. Share of population below national poverty line in Central Asia



Source: Asian Development Bank

Food insecurity: The latest Tajikistan National Health Survey of 2012 showed 10 % of children aged under five years are affected by acute malnutrition (wasting) and 26 % suffer from chronic malnutrition (stunting). WFP's Food Security Monitoring System (FSMS) showed that despite improvement in food security in recent years, only 24 % of Tajikistan's rural population is food secure, with the remaining 50 % marginally food secure, 22 % moderately insecure and 5 % severely food insecure.

Poor land management practices and the environmental legacy of the Soviet central planning, combined with a multitude of problems such as crumbling infrastructure, onerous external debt, and limited institutional capacity, threaten the sustainability of Tajikistan's economic, social and human development. Climate variability and change are likely to pose additional and significant risks to the country's economic drivers, human welfare and the environment.

The adverse effects of climate change will be felt most acutely by those parts of the population that are already vulnerable owing to gender, youth, age and disability. The poor are most vulnerable to the effects of climate change in Tajikistan. A large proportion of the population live just above the poverty line in Tajikistan and climatic shocks have the potential to tip a large percentage of population into poverty. Climate change is likely to compound existing food security issues and impact heavily upon those dependent on the agricultural economy. The distributional effects are more likely to fall upon those involved in subsistence agriculture or pastoralism.

Vulnerable groups: Outmigration of men for income opportunities puts the household burden on women. Women and children are particularly vulnerable to the effects of climate change, constituting a majority of the

⁵⁷ IOM Global Migration Trends Factsheet 2015

⁵⁸ 2009 is the last year for official poverty estimates based on microdata. The World Bank currently works closely with the Statistical Agency of Tajikistan (TajStat) and the Ministry of Economic Development and Trade to update the poverty numbers using Household Budget Survey collected and administered by TajStat

⁵⁹ Poverty Reduction and Shared Prosperity in Tajikistan World Bank Policy Research Working Paper 6923
<http://documents.worldbank.org/curated/en/599901468119377471/pdf/WPS6923.pdf>

country's poor. They are often charged with the responsibility to secure water, food and fuel for cooking and heating in Tajikistan's rural areas and are dependent for their livelihood on natural resources that are also threatened by climate change. Despite women's responsibilities in households and communities and their expertise positions them well to contribute to livelihood strategies adapted to changing climatic conditions, they face social, economic and political barriers that limit their coping capacity.

Geography: In Tajikistan, increased water stress due to climate change will be the main influencing factor for the agricultural sector. According to the World Bank, yields could drop by up to 30 % by 2100 in some parts of the country.⁶⁰ Reduction in water availability is projected to occur along with a 30 % increase in irrigation demand (driven by higher temperatures that push up evapotranspiration). Combined with increased heat extremes that negatively affect crop productivity, substantial risks for irrigated and rainfed agricultural systems can be expected. Agricultural yields could drop by as much as 30 % in some parts of Tajikistan by the turn of the century. At the same time, given the mountainous nature of the terrain in Tajikistan (93 % of the country is covered by mountains), climate change will increase risk of glacier lake outbursts, mudflows and landslides caused by intense rainfall, snowmelt during spring, and extreme floods of meltwater during spells of hot weather in the country. All 11 districts targeted by the project are considered highly vulnerable to climate change impact according to the Third National Communication of the Government of Tajikistan to the UNFCCC (TNC). Through climate analysis, the TNC has identified vulnerability of households and assets to risks associated with climate change. The vulnerability index considered in the TNC comprises adaptation constraints, exposure and sensitivity. These areas are also considered to have high levels of food insecurity according to WFP's food security analysis.

E.4.2. Financial, economic, social and institutional needs

Financial needs: In the period between 2013 and 2014, the climate-related development finance of USD 286 million per year was committed to Tajikistan. While the majority of finance has been committed to mitigation projects (61%), a significant size of commitments has been made to multi-focal projects (both mitigation and adaptation). The amount of finance for multi-focal projects however is largely attributed to two largescale activities: a project on climate-resilient hydropower rehabilitation, supported by the European Bank for Reconstruction and Development (EBRD), and the "Rural Development Programme I", supported by the European Union (EU), which together account for 95% of total finance for multi-focal segment.⁶¹

Tajikistan's macro-economic environment is significantly challenged. According to the World Bank ⁶², the economic slowdown in Russia had a major impact on Tajikistan's economy in 2014 through the decline in remittances. The U.S. dollar value of remittances decreased by 8.3 % in 2014 from a year earlier, largely due to the strong depreciation of the Russian ruble. This lowered domestic demand and slowed the growth in services, the major contributors to economic growth in the past decade. However, with remittances equal to 42.7 % of GDP, Tajikistan remains the most remittance-dependent country in the world. Over 90 % of remittances originate in Russia, making the decline in remittances the most important channel through which Russia's slowdown affects Tajikistan. A further reduction in remittances is likely because of the recession in Russia. In addition, the marked weakening of the Russian currency exerted pressure on the somoni. After two years of nominal stability, the somoni depreciated by 11 % in 2014 and another 5.2 % in the first 2.5 months of 2015. Given the slowdown in foreign exchange inflows from remittances, the major source of foreign exchange and the principle source of financing of the current account deficit, the trend is likely to continue. Low international reserves, equivalent to about one month of import of goods and services, limit the room for National Bank of Tajikistan (NBT) interventions in the foreign exchange market during sharp exchange rate movements.

According to the ADB's Economic Outlook 2016, Growth decelerated to 6.0% in 2015 from 6.7% a year earlier as recession in the Russian Federation and a plunge in the ruble caused remittances, Tajikistan's main source of

⁶⁰ World Bank (2014). Turn Down the Heat: Confronting the New Climate Normal. Washington, DC: World Bank.

⁶¹ OECD, 2016. Financing Climate Action in Tajikistan: Country Study

https://www.oecd.org/environment/outreach/Tajikistan_Financing_Climate_Action_Nov2016.pdf

⁶² World Bank Tajikistan Snapshot 2015 <http://www.worldbank.org/content/dam/Worldbank/document/Tajikistan-Snapshot.pdf>

income, to fall by a third. About 135,000 Tajik migrant workers returned home as a result of tightened immigration control in the Russian Federation. These returning male migrants go back into the agricultural sector which makes their income more volatile as compared to wages in Russia. Other constraints on growth were lower prices for primary Tajik exports aluminum and cotton, weak private investment, and the depreciation of the Tajik somoni by nearly a third.⁶³

Social needs: Although less than seven % of its land is arable, around two thirds of the population of Tajikistan depends on agriculture for a livelihood – cotton, wheat, nuts, fruit and vegetables. People in Tajikistan are resilient when faced with difficulties and adept at taking advantage of good weather, as the 2009-cropping season showed (and WFPs community consultations showed). But challenges posed by climate change already strain their capacity to cope and may overwhelm it if temperatures continue to rise. Tajikistan, according to a recent World Bank report⁶⁴, is the most vulnerable country in the region to climate change and has the least capacity to adapt. Almost two thirds of agricultural production is irrigated but many farmers still have to make a precarious living from rain-fed land – which is considerably more vulnerable to the impacts of drought and climate change. Droughts in 2000 and 2001 cost Tajikistan 5 % of its GDP.⁶⁵ Continued drought in the spring and summer of 2007, as well as a locust invasion further stretched the capacities of households to successfully cope. Against the backdrop of increased food insecurity, in early 2008 Tajikistan experienced the worst winter in decades with temperatures falling to minus 20 degrees C. The exceptionally cold weather damaged or destroyed agricultural assets (crops, orchards and livestock), the aging energy infrastructure collapsed under the demand for electrical power to heat urban centres and the cold damaged rural and urban water supply systems due to frozen pipes and other structural problems - exacerbating lack of access to safe drinking water. There was a 40 % decline in agricultural yields following the harsh winter and drought.⁶⁶

Floods, mudflows and avalanches may increase with climate change (for example sudden and rapid glacial melts) as they already occur regularly around the spring melt. There was a particularly severe and unprecedented flood in Hamadoni district in Khatlon in 2005 caused by heavy winter snowfall followed by very warm weather in June and July, causing excessive snowmelt. Over 11,000 people were evacuated. Lack of maintenance of flood defenses and canals were also culpable. Climate shocks compound cycles of poverty. When drought, floods or extreme weather conditions destroy crops and livelihoods, communities are thrown further into poverty – as a result, many move away to seek work. Migration to Russia is key to Tajikistan’s economy and remittances constitute the most important income for many households in Tajikistan. As populations on the margin seek work or are forced from their homes by extreme events, the pressure to migrate to Russia is likely to increase. As a result of male migration, there are a significant proportion of female-headed households. Increasing burdens will be placed on women as many have to work in the cotton fields as well as collect water and firewood, grow food and manage the household. More women work in the lowest paid sectors such as agriculture. With the closure of state-run kindergartens and the increasing reliance on the consumption of home produced foodstuffs, the burden of unpaid work in the home has increased rather than diminished as a result of this transition.²⁴ Tajikistan, like other countries in Central Asia, already suffers from serious challenges to the health of its environment. Soil fertility management and nutrient conservation are poor, pesticide and fertilizer use pollutes many waterways. . Floods are being exacerbated by rampant deforestation. The nation’s forest reserves have dwindled from 1.3 metres cubed per person in 1990 to 0.9 metres cubed per person in 2003. Deforestation has been put down to cutting trees, stock grazing and an increase in the number of insect pests. The increase in pests is associated with increased temperatures. Acceleration in deforestation was linked to the severe winter of 2007/2008 and shortages of electricity, gas and other energy supplies, forcing people to cut trees in the mountain forests.²⁵

⁶³ Asian development outlook 2016. Asia’s potential growth.

⁶⁴ World Bank, 2009, Adapting to Climate Change in Europe and Central Asia.

⁶⁵ World Bank, 2009, Adapting to Climate Change in Europe and Central Asia

⁶⁶ Eurasia Insight, July 08, Tajikistan: Almost one-third of the population is in danger of going hungry this winter
www.eurasianet.org/departments/insight/articles/eav100708.shtml

Institutional needs: While a lot has been done to address the challenge of climate change, more needs to be done. The national apparatus has been caught in a shock-recovery-shock cycle leaving little resources to be invested in preparation. As climate induced variability in precipitation and temperature will affect climate-sensitive livelihoods, a focused approach toward adaptation is much needed. The Tajik government has indicated its commitment to climate change adaptation, with policy frameworks implemented at the national level of government. However, implementation is weak at the provincial and district levels. The government has faced significant challenges in engaging adequately with civil society groups and other key sectoral organizations, as well as vulnerable groups such as women. The over reliance of livelihoods on remittance also creates additional volatility.⁶⁷ In addition, whilst there are shortcomings in the content of national policies, the most significant gap is that of implementation. Even the National Development Strategy acknowledges that “Despite an advanced legislative framework for environmental protection, compliance with these legal norms is unsatisfactory due to inadequate implementation mechanisms and insufficient inter-agency coordination. As a result, the goal of promoting environmentally sound activities in various sectors of the economy is not being met”.⁶⁸ As a result, local authorities still do not have adequate knowledge or resources to participate in climate change adaptation planning activities. The proposed project will address some of Tajikistan’s structural, institutional and financial barriers that make it particularly vulnerable to climate change and in turn affect the local economies that are climate sensitive and have high emigration rates. Through improved climate services, rural livelihoods dependent on agriculture will be made more resilient. Through income diversification, market access and value chain development, the agriculture sector will become more sustainable, informed and resilient. By building its knowledge base, the national as well as regional administration will be well-informed, coordinated and better prepared to respond to climate shocks and plan adaptation activities for the future.

E.5. Country Ownership

Beneficiary country (ies) ownership of, and capacity to implement, a funded project or programme

E.5.1. Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs

Climate change is a well-recognized challenge in Tajikistan and the proposed Project will support and strengthen the implementation of a number of national strategies and programs, especially those targeting cross-cutting concerns of the food security, water, and agriculture sectors. For the present GCF funding proposal, such strategic frameworks include the National Climate Change Adaptation Strategy⁶⁹ 2017-2030, priorities listed under the Third National Communication of the Government of Tajikistan to the UNFCCC as well as the targets mentioned in the Nationally Determined Contributions of the country.

The country’s recent **Third National Communication** outlines some resilience measures that the project proposes to support. ⁷⁰ Table A demonstrates the project alignment with priorities mentioned in the third national communications of Tajikistan.

Table A: Aligning project outputs with elements of the Third National Communication:

Priorities for community level adaptation according to the third national communications.	Project outputs in alignment with national priorities
Protection of crops from natural hydrometeorological events, as well as from pests and diseases;	Output 1.1, 1.2, 1.3, 1.6, 2.3
Increased energy-efficiency of stoves and insulation of houses to reduce the negative impact of sudden cold periods, as well as a reduction of energy consumption and GHG emissions;	Output 2.3
Improved water collection and storage for household needs and for irrigation;	Output 2.2

⁶⁷ A major portion of remittances originate from Russia as most men emigrate for unskilled labour work

⁶⁸ NDS 2006: 42

⁶⁹ WFP received a draft of the National Climate Change Adaptation Strategy 2017-2030 during the formulation of the proposal.

⁷⁰ See http://unfccc.int/resource/docs/natc/tjknc3_eng.pdf

Increase the level and scale of the use of solar energy (introduction of solar dryers, greenhouses, photovoltaic panels);	Output 2.3
Enhance opportunities for organic farming;	Output 2.1, 2.3
Protection of agro-biodiversity and genetic resources (local cultivars and wild congeners);	Output 2.1, 2.3
Agroforestry, measures for the control of soil erosion and improvement of soil fertility;	Output 2.1, 2.3

This GCF proposal has been officially endorsed by the National Designated Authority of Tajikistan, as evidenced by the No-objection letter signed by Mr. Khayrullo Ibodzoda, Chairman of the Committee on Environmental Protection. The NDA and his technical advisors have been closely involved in every stage of this project development and are in full agreement about the proposed outputs.

The proposal is also in alignment with the **Nationally Determined Contribution**⁷¹ of Tajikistan as follows:

Table B: Aligning project outputs with the scope of Adaptation actions as defined by the NDC of the Republic of Tajikistan (conditional on international support)

Targets	Priority Sectors	Measures of implementation	Project outputs in alignment with NDC
The reduction of vulnerability to the impacts of climate change by means of full scale integration of climate resilience and adaptation measures into the planning and development of the green infrastructure	<ul style="list-style-type: none"> • Agriculture irrigation and water systems • Transport and housing infrastructures • Resilience to the hydrometeorological hazards • Disaster risk reduction • Biodiversity and ecosystem protection • Glaciers and water resources management • Public health including maternity and childhood protection in the context of climate warming 	<ul style="list-style-type: none"> • New methods and planning for water resources management; • Ensuring food security and improving wellbeing of the population; • Active role of women and civil society on the issues of climate change and disaster risk reduction; • Dissemination of knowledge and experience on climate change at various levels. 	<ul style="list-style-type: none"> • Output 1.6 and 2.2 • Output 1.3, 1.4, 1.6, 2.1, 2.2, 2.3, 2.4 • Output 1.4, 2.1, 2.2, 2.3 • Output 1.1, 1.4, 1.5, 2.4

Sources: GoT (2015) *Intended Nationally Determined Contribution (INDC) towards the achievement of the global goal of the UN Framework Convention on Climate Change (UNFCCC) by the Republic of Tajikistan.*

E.5.2. Capacity of accredited entities and executing entities to deliver

Executing entity and working partners

The project will be executed by the Committee for Environmental Protection under the Government of the Republic of Tajikistan (CEP). The national executing entity has deep understanding of climate change issues and of the context in which climate investments will be implemented (e.g., relevant sector development strategies, constraints, stakeholders, etc.). In addition the CEP has solid operational experience with regards to the implementation of internationally-funded projects, which they have been managing for several years (including day to day administration, fiduciary oversight, safeguards management, and reporting). Institutional assessments have been conducted, with findings and recommendations helping to ensure that readiness requirements for implementation be met in a timely manner (e.g., skills, systems, and reporting mechanisms are in place to comply with WFP's requirements in a timely manner). Working partners for this project will include the Ministry of Agriculture (MoA), Committee of Emergency Situations and Civil Defense (CoES), Agency for Hydrometeorology (Hydromet), Agency of Land reclamation and irrigation and the Agency of Forestry.

The CEP has established an 'Implementation Group' to coordinate implementation of the climate adaptation and environmental protection projects funded by the multilateral donor organizations. For instance, The Group, composed by qualified professionals are currently executing Environmental Land Management and Rural

⁷¹ <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Tajikistan/1/INDC-TJK%20final%20ENG.pdf>

Livelihoods project financed by the World Bank. Furthermore, the State Administration for Hydrometeorology, is also currently implementing Modernization of Hydrometeorology Services financed by the World Bank. The Project cost 13 Million USD, and another Implementation Group is established under Hydromet to execute the project. WFP's proposed GCF project component 1 will build upon this project to disseminate climate information to farmers. There are a number of other projects coordinated by various CEP institutes or through CEP itself. However the ELMARL and CAMP4ASB are the only projects executed by CEP directly through its Implementation Group. The CEP has established the system where the capacity of the Implementation Group can be strengthened based on the scale and number of the projects to be implemented. They work close with multilateral institutions like the ADB, GIZ, EBRD etc.

The **State Administration on Hydrometeorology** of the Committee for Environmental Protection under the government of the Republic of Tajikistan is the national institution responsible for dealing with climate change issues in Tajikistan. Its director is the national focal point of the UNFCCC. Hydromet leads the preparation of the national communications to the UNFCCC, in coordination with key ministries and agencies, and also houses the Climate Change Center, which handles climate-related research and reporting related to adaptation and mitigation.

The **Committee of Emergency Situations and Civil Defense** under the government of the Republic of Tajikistan is directly authorized and responsible for management of emergency situations due to natural and technogenic disasters.

The **Agency for Forestry** under the government of the Republic of Tajikistan (FA) is responsible for management and protection of forests in Tajikistan. FA oversees compliancy with Forest Legislation in Tajikistan, as well as development and implementation of scientific and technical policies in the field of forestry. The FA has the capacity to deploy forestry experts throughout the country to support project implementation activities where needed. The FA will also guide the community for selection of the most appropriate locations for activities, advice on the tree species to be planted considering local environment and changing climate and will train beneficiaries to develop effective techniques on planting and maintaining the trees. In addition, the FA will provide long-term leasing of land for newly created forests/orchards to the selected beneficiaries.

The **Ministry of Agriculture** is the central executive authority, which is responsible for elaboration and implementation of the common national agricultural policy. The Ministry fulfills the following tasks: i) elaborates and implements the common national agricultural policy, including in the area of crop growing, livestock breeding and other sectors of agricultural production; ii) develops programs and forecasts of production to ensure effective use of the national agricultural capacities; iii) organizes monitoring of production and profitability of agricultural sector and identifies development trends; iv) renders support to agricultural producers, prepares recommendations for the improvement of agricultural production and farming operation effectiveness; v) assesses and predicts the state of agricultural sector, provides necessary information for public and local authorities, institutions, enterprises and civil society.

The **Agency for Land Reclamation and Irrigation** is the central executive authority in the area of land reclamation and irrigation. It fulfills the functions related to elaboration of the common national policy and legal regulation in reclamation of land, use and conservation of water facilities and water resources. The Agency has the following responsibilities:

i) keep records and monitor water resources, provide services to water users on the basis of contracts; ii) keep records and monitor wastewater, ensure their disposal; iii) control irrigation, drainage and other structures that are under responsibility of the Agency, according to the general plan of water distribution adopted by its departments; iv) repair irrigation and drainage structures and, if necessary, repair other water management facilities that are under responsibility of the Agency at the expense of centralized or investment funds; v) identify needs for rehabilitation or improvement of flow capacity in irrigation structures, drains and other water management facilities that are on the books of the Agency; vi) develop Cadaster of land conditions, control

fulfillment of the Government's decrees for land improvement at the expense of available funds, supervise and prevent deterioration of land; vii) analyze and monitor bank-protection activities carried out along rivulets and rivers; viii) develop a plan for repair, rehabilitation and conservation of dams; ix) develop an annual plan for new land development.

The **Ministry of Economic Development and Trade** is responsible for overseeing the effective implementation of socioeconomic development priorities for Tajikistan, and has a role in developing sustainable strategies. It is also a co-executive body of the National Action Plan for Climate Change Mitigation and Adaptation.

WFP in Tajikistan

WFP has been present in Tajikistan since 1993, when it launched an emergency operation to provide life-saving assistance during the Civil War. WFP's strategy has shifted from crisis assistance in Tajikistan to increasingly focusing on three longer-term objectives: (i) Policy advocacy with the Government and partners to ensure food security and nutrition are prioritized in national strategies, policies and programmes; (ii) Support to the Government and partners to enhance their capacity to implement and monitor sustainable hunger solutions, through social safety nets for the most vulnerable and (iii) Direct support to communities to respond to crises and to improve their longer-term food security and resilience to shocks.

WFP's priorities include long-term development, resilience and capacity building of local institutions. WFP operations focus on DRR and climate change adaptation, school meals, conditional transfers for assets creation, nutrition and support to tuberculosis patients and their families. Globally, WFP has comprehensive policies, strategies and tools to support nations to ensure sustainable food security, nutrition, disaster risk reduction, more specifically also climate change adaptation and resilience. WFP actively contributes to both the formulation and implementation of global policies, strategies and guidelines. This project will be supported by WFP experts from its Regional Bureau in Cairo as well as its Headquarters in Rome.

E.5.3. Engagement with NDAs, civil society organizations and other relevant stakeholders

National Level Consultations for concept note development

WFP has worked in close coordination with the NDA and the Committee of Environmental Protection (project's national executing entity) since day one of developing the concept note. Once the concept note was developed, the NDA and his technical team had a chance to review it and provide their inputs and suggestions to align the project with the national strategy as well as complement existing projects in the region.

During the concept note development, extensive consultations were held at the national level (See Annex 1.6 for detailed reports) with the following key stakeholders between July and August, 2016: Agency of Land Management and Irrigation, Institute of Water Problems, Hydropower and Ecology, Committee of Emergency Situations and Civil Defence, GIZ, Committee for Environmental Protection, Ministry of Energy and Water Resources, EBRD, Agency of Forestry, Welthungerhilfe Tajikistan, Ministry of Health and Social Protection, Agency of Hydrometeorology and Centre of Climate Change Research and Ozone Layer, Meeting with Academy of Agricultural Sciences, Oxfam, Asian Development Bank (ADB), Meeting with Centre of Climate Change Research and Ozone Layer, PPCR Secretariat, FOCUS (AKDN)

Full proposal development: Activities pertaining to climate services under component one (Output 1.1-1.4) were developed through close coordination with the National Hydromet Service in Dushanbe. A capacity assessment exercise was conducted by a WFP climate services specialist to identify the key capacity gaps and needs at the national level and the type of climate data and inventory available through the recent modernisation of the hydromet. Activities on community capacity and resilience building (Output 1.6 – 2.4) were formulated based on in depth consultation with communities, local authorities as well as NGOs in Tajikistan.

National Capacities: A capacity needs assessment was conducted at the Tajikistan Agency of Hydrometeorology in December, 2016 to inform development of a project proposal on building climate resilience of vulnerable and food insecure communities in the Republic of Tajikistan with a component on improving climate services to inform appropriate climate risk management decisions and practice in agriculture and food security, and disaster risk reduction. The goal of the assessment was to identify the: (i) Tajikistan Agency of Hydrometeorology (Hydromet) capacity needs for improved climate services, and (ii) users' (potential) needs for climate services, and recommend activities that needs to be implemented to address the gaps to support generation, delivery and adequate use of climate services by end-users for climate-risk management decisions in agriculture and food security to reduce climate-related loses that undermine food security. The assessment was carried out by climate services experts from WFP and based on interviews and discussions with the Hydromet; the climate service users from government sectors in charge of agriculture, water, environment and disaster management; and international non-governmental and humanitarian organizations. The list of stakeholders who participated in the assessment is provided in (See Annex 3).

Market needs: To understand the local market environment for sale of agricultural produce, experts from WFP's Vulnerability Analysis and Mapping team conducted three separate missions between November and December, 2016 in Khatlon & Faziobod, Rasht as well as GBAO. Following the semi-structured interview methods, the experts interviewed local authorities, head of markets, retailers, wholesalers, and truck and minivan owners. The missions were tasked to assess the main challenges encountered by farmers and identify the main gaps to fill to connect farmers to markets. The main question that the assessment aimed at answering was if the markets in the targeted areas (mostly mountainous areas subject to supply chain disruption linked to natural disasters) were functional and could absorb an increased demand and respond to market shocks due, among other, to natural hazards. It also aimed at understanding possible secondary impacts of the injection of cash in the economy. At the same time the study aimed to understand the main constrains to connect farmers to markets and improve their wellbeing. (See Annex 6) for detailed findings of the report.

Community needs: To assess the needs of the communities as part of Component 1 and 2, three separate consultations were held by WFP at the regional levels where members of dehkan farms, representatives of villages, pastoralists, local authorities, women's associations, CBOs as well as women's associations, representative from district hukumats and local administration authorities (including Min. of Agriculture, Hydromet, Committee of Environmental Protection, Agency of Forestry) were invited. Structured as well as unstructured discussions were done to identify the needs and challenges faced by the communities (See Annex 2 & 8). These consultations were held in 3 separate sessions with a gender balance, where possible. To understand livelihood types, activity profiles and household challenges faced due to the impact of climate change, exercises were also gender segregated.

Addressing climate change risks was explicitly stated as a priority by all the participants, enhancing the potential for their collaboration and interest in this project. As ownership at various levels is essential for the appropriation and sustainability of approaches and activities, this project, through its participatory, cultural and gender approaches will base all planning and implementation on the results of these considerations. A strong emphasis was laid on inclusion of youth in training and inclusion in adaptation activities to ensure the future generation is informed and responsible. Women expressed their desire to generate incomes through cottage industries like drying fruits and the challenges faces due to lack of adequate energy supplies. The inability to plan and manage available resources due to lack of climate and market information was also identified as a major challenge affecting all livelihoods.

Communities also mentioned the need for more robust storage capacities, greenhouses and rainwater harvesting tanks as well as need for better inputs. The capacity of community-based organizations to adequately address socio-economic and environmental risks associated with climate variability and change was identified. Thus, communities in the targeted areas have identified climate change risk reduction as a priority which will help them strengthen their livelihoods by not only reducing economic hardships on families and vulnerable

groups, protecting the environment by not chopping trees, but also avoid negative strategies like sale of productive assets, and outmigration. Through this project, a concerted process with communities will enable them to reinforce their strong collaborative culture to address the problems related to climate change that they have collectively identified. Also, there is a recognition that their subsistence and cultural models are closely associated with how they address the risks that affect nature and the resources provided. Thus, commitment to and ownership of the project from the communities is a low risk.

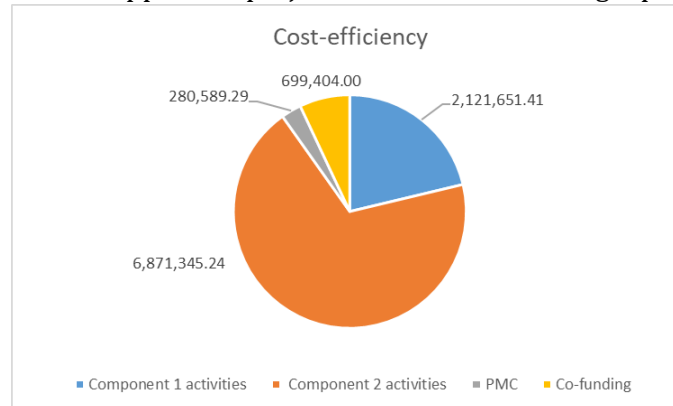
WFP continues to constantly consult with the relevant stakeholders including the NDA, the Hydromet, NGOs as well as regional authorities and community members.

E.6. Efficiency and Effectiveness

Economic and, if appropriate, financial soundness of the project/programme

E.6.1. Cost-effectiveness and efficiency

For this project 70% of the project budget will be spent on adaptation activities, 21% on capacity building, and 3% on project management costs to support the project execution. Co-funding represents 7% of the total budget.



The proposed project will be implemented through existing structures at district and jamoat levels whilst creating user groups to maintain project sustainability in the long run, thus saving costs in project mobilization and inception. Another factor contributing to efficiency and cost-effectiveness is that potential beneficiaries and communities will be screened and prioritized against specific pre-determined selection criteria. Further, the project will invest in climate change adaptation interventions that fall into nationally prioritized areas as described by various regulations enlisted under section E5. These filters will ensure that investments are targeted appropriately.

E.6.2. Co-financing, leveraging and mobilized long-term investments (mitigation only)

The project is an adaptation intervention and requests full project funding through a grant.

E.6.3. Financial viability

The proposed project does not envisage any large-scale investments in infrastructural objects and technologies. Rather, WFP will develop and implement a mix of approaches and tools to be applied at the micro-scale in various locations within project areas to strengthen the adaptive capacity of communities, taking into consideration local contexts. During the first year, the project will start with sensitization of the farmers/end users and during the second year the project will produce, deliver and support the use of the weather forecast by farmers/end users. During these first two years of project, end users will be also sensitized about fee-based subscription and have the time and possibility to test the advantages of receiving and using specialized weather forecasts. Starting from the third year, farmers/end users will subscribe for fee-based specialized weather services, which will be mutually agreed between Hydromet and subscribers.

As this is a project-based grant intervention, there will be no revenue generated for the donor nor for the accredited entity. However, adaptation interventions through this project will enable the target population to make better decisions based on climate information, diversify their livelihoods and income sources as well as strengthen government capacities in the long run. The project will complement existing measures while implementing replicable practices for future scale up.

In addition, through the project activities, the beneficiaries will enjoy significant cost savings. For example, interventions such as climate services under Component 1 and tree planting, canal cleaning and storages under Component 2 will ensure that beneficiaries are prepared well in advance and do not suffer negatively from climate shocks.

E.6.4. Application of best practices

This project will leverage practices and learnings of relevant programs in Tajikistan including the World Bank’s Environmental Land Management And Rural Livelihoods Project, the Climate Adaptation and Mitigation Program for the Aral Sea Basin and the Pilot Program for Climate Resilience (PPCR). Implementation of outputs under component 1 pertaining to climate services will be carried out in partnership with UK Met Office and capacity building at the Hydromet will be conducted in partnership with experts from the University of Reading. Best practices will also be adopted as per the standard of the WMO specifically to conduct data rescue under component 1. The standards adhered to by these academic and research based organizations are internationally recognized and reputed as leading practice to the standard of the IPCC. It should be noted that a number of leading authors from the University of Reading also contributed to the AR5.

The end-user engagement elements of component 1 of the project will use the Participatory Integrated Climate Services for Agriculture (PICSA) approach. This decision-driven and science-informed approach has been used by several leading organizations such as CCAFS, SEI, the University of Reading as well as WFP as a last mile approach to reach the end user and seek their feedback (Annex 10).

Outputs under component 2 will focus on livelihood diversification and income generation, access to drinking water, renewables and post-harvest storage facilities for households and communities as well as soil conservation on slopes and riverbanks through tree planting. WFP will leverage its proven solutions (including the EbA approach) in building adaptive capacity in Tajikistan and will collaborate with the Committee of Emergency Services as well as draw upon experience of regional NGOs such as FOCUS who have had several successes in their projects across the country.

One of the main benefits of this project will be that capacity building, awareness generation and community asset creation will be backed up by science, technology and innovation. Consequently, the investments in this project will not only be replicated in other villages in the selected oblasts, but will also catalyze further investments that will help scale up this nationwide approach. Lessons learned from the GCF project will provide the basis for detailed documentation of the impacts of livelihood diversification on community resilience with specific reference to benefits provided to women and youth. These will be shared nationally, through awareness campaigns as well as internationally to contribute to current knowledge on building climate resilience.

E.6.5. Key efficiency and effectiveness indicators

Estimated cost per t CO ₂ eq, defined as total investment cost / expected lifetime emission reductions (mitigation only)

GCF core indicators	(a) Total project financing	US\$_____
	(b) Requested GCF amount	US\$_____
	(c) Expected lifetime emission reductions overtime	_____ tCO ₂ eq
	(d) Estimated cost per tCO₂eq (d = a / c)	US\$_____ / tCO ₂ eq
	(e) Estimated GCF cost per tCO₂eq removed (e = b / c)	US\$_____ / tCO ₂ eq
	<i>Describe the detailed methodology used for calculating the indicators (d) and (e) above. Please describe how the indicator values compare to the appropriate benchmarks established in a comparable context.</i>	
	N/A	
	Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (mitigation only)	
	N/A	
Other relevant indicators (e.g. estimated cost per co-benefit generated as a result of the project/programme)		

** The information can be drawn from the project/programme appraisal document.*

F.1. Economic and Financial Analysis

Due to the public good nature of the Project's outputs, a financial analysis of the overall project is not deemed pertinent. Component 1 of the project builds capacity and social behavioral change whilst Component 2 improves resilience of communities which will prevent losses and damages due to the impact of climate change. However, due to the activities of component 1 and 2, communities and authorities will save significant costs which would otherwise be incurred due to climate induced disasters.

The small-scale nature and varied types of activities result in economic benefits that are multi-dimensional and multi-sectoral. Further analysis along sectoral lines will be necessary to detail specific economic and financial parameters. Benefits from activities under component 1 and 2, are described below:

Capacity strengthening under component 1: The use of weather and seasonal climate information by farmers, and those undertaking crop and livestock management activities, will lead to better decisions related to crop and other activities, including planting, irrigation, harvesting, production of fodder and protection of plants and animals, and minimize losses. Recent studies shows a cost-benefit ratio of 4:1 to 36:1⁷², highlighting a how climate services that support more effective decision-making is one of the most cost-efficient adaptation measures available.

Adaptation activities under component 2: This benefit-cost analysis was carried out for potential concrete adaptation measures considered under component 2. The analysis carried out (Annex 4.3) reports on direct benefits through the project activities. Direct benefits are calculated as incomes generated by the proposed activities, or as cost savings in terms of assets and products (agricultural commodities). Sources of data include national databases and surveys from different government entities and business organizations, as well as fieldwork exercises and surveys performed in November and December of 2016.

Indirect long term benefits including impact of improved health and nutrition as well as losses avoided from disasters **are excluded** as baseline numbers were only available nationally across all 58 districts. Nevertheless, these are additional benefits which could be quantified. The Benefit-cost analysis (Annex 4.3) showed that the

⁷² Clements and Ray 2013, Value of climate services across economic and public sectors, report to USAID

component 2 activities will have a cumulative net flow of USD 2.3 million in the fifth year (i.e. one year after the project closure) and up to USD 9.4 million after the end of the eighth year. Assuming a discount rate of 6%, the project has a positive net present value across the projected 8 year period, while the benefit-cost ratio is estimated at of **3.54**.

Sensitivity analysis: In Annex 4, a sensitivity analysis was performed (tabs 4.3.1 and 4.3.2.), whereby benefits have been increased and decreased by 10%. The benefit cost ratio increases from 3.54 to 3.90 for +10% scenario, or decreases to 3.19 for -10% scenario, but remains above 1 for both scenarios.

The Government of the Republic of Tajikistan requests that 100% of the proposed GCF project is committed in the form of grant finance as the country's macro-economic environment is significantly challenged. According to the World Bank, the economic slowdown in Russia had a major impact on Tajikistan's economy in 2014 through the decline in remittances. The U.S. dollar value of remittances decreased by 8.3 % in 2014 from a year earlier, largely due to the strong depreciation of the Russian ruble. Given the slowdown in foreign exchange inflows from remittances, the major source of foreign exchange and the principle source of financing of the current account deficit, the trend is likely to continue.

In the period between 2013 and 2014, climate-related development finance of USD 286 million per year was committed to Tajikistan. While the majority of finance has been committed to mitigation projects (61%), a significant size of commitments has been made to multi-focal projects (both mitigation and adaptation). The amount of finance for multi-focal projects however is largely attributed to two largescale activities: a project on climate-resilient hydropower rehabilitation, supported by the European Bank for Reconstruction and Development (EBRD), and the "Rural Development Programme I", supported by the European Union (EU), which together account for 95% of total finance for multi-focal segment.

F.2. Technical Evaluation

The two components of this project have been developed through elaborate consultation with all stakeholders including communities, local authorities, NGOs as well as user associations. The adaptation solutions proposed through this project include a combination of capacity building and awareness raising activities which will include best practices in information gathering, training and planning.

Activities in component 1 that use technological applications include the use of mobile phone technology to distribute and receive warnings and advisories. This is a low cost technology that enhances the reach of these services and is available to a large number of households. However, it is recognized that costs can become significant if a large number of users are engaged and hence the project will envisage targeting households on the basis of need and level of dependence on climate sensitive livelihood. Alternative traditional means of engagement through radio, TV and community centres will also be explored. In an effort to reduce communication costs, telecommunication companies (Megafone and T-Cell) have already been approached and concrete discussions to test the feasibility of public-private partnerships will be planned during implementation. The same will be done with radio and television stations based on viewership and audience spread.

Activities in component 2 will include certain technologies such as solar panels for domestic power generation and providing household level heating (including heating, storage and drying facilities for women-led SMEs) as well as greenhouses (at community level) for supporting production during extreme weather conditions. Certain areas may prefer installation of household level windmills in lieu of solar citing the abundance of wind in the region. These solutions have been shortlisted after seeing their effectiveness in other projects across Tajikistan.

Procurement of all material for Components 1 and 2 carried out by WFP, will be done in conformance with government standards as well as in consultation with relevant government agencies specifically the Agency of Standardization, Metrology, Certification and Trade Inspection under the Government of Republic of Tajikistan which is a member of the ISO.

In preparation of the funding proposal, the draft was submitted to the Executing Entity and supporting partners in order to obtain a technical evaluation from government experts in Agency of Hydromet, Ministry of Agriculture as well as the CEP. The funding proposal was carefully evaluated by all relevant sector experts.

F.3. Environmental, Social Assessment, including Gender Considerations

Compliance of project using the eight performance standards of the GCF E&S safeguards

The project has been designed using knowledge of best practices from other pertinent projects and through extensive consultations with the targeted communities and stakeholders, all relevant authorities, and with expert input from consultants who know the area and the communities. These consultations took place in November 2016 in Gharm, Kurgan Tube and Khorog to involve local communities and project participants in the project design and assess local impacts of climate change on livelihoods in project areas. Participants identified key climatic risks affecting their communities and recommended actions to address specific adaptation needs which has been provided the basis for the project. The consultations were facilitated in Tajik language and delivered by Tajik nationals with women facilitating gender segregated exercise, together with officials from the Committee of Environment Protection, the Executing Entity. Community consultations complement a national stakeholder level consultation which was held in August 2016. During project implementation, in-depth consultation with every project community in the 11 target districts will be undertaken to fine tune and ensure safeguards in project implementation based on the local conditions – which may vary from one village to another.

The adaptation measures proposed by the project to adapt to climate change are small-scale, culturally-appropriate activities selected by the communities and have virtually no negative environmental impact. In fact, due to the inclusive approaches undertaken in this project, together with the type of asset creation activities, there will be a positive environmental and social impact. After screening the project using the GCF's 8 core Environment and Social Safeguard standards, this proposal has been categorized as a Category "C" project.

Resource efficiency and pollution prevention – The project activities will not generate pollution and will promote sustainable use of natural resources including water and energy. Activities in Component 2 will promote tree planting and use of renewables resulting in a net positive impact on the environment.

Community health, safety and security – Activities of the project will lead to improved food security and nutrition levels amongst the target population. There will be no safety and security risks introduced by the project. The project will mobilize local populations for any minor asset creation activities as well as tree planting exercises. Through climate services and skills development, climate risks and adaptation planning will be embedded in district level plans and hence overall safety of populations will increase.

Biodiversity conservation and sustainable management of living natural resources – The project activities will conserve local biodiversity and improve ecosystem services in the target areas. Introduction of new seeds, saplings and trees will be done in consultation with the relevant ministries to ensure that invasive species are not introduced. Adaptation activities in component 1 and 2 will indeed contribute to creating enabling environments, new market access, income generation as well as improved knowledge and awareness of target communities, thereby promoting overall economic and social development.

Cultural heritage – Through activities of this project, cultural heritage will be untouched. There will be no impact on critical cultural heritage that is essential to the identity and/or cultural, ceremonial, or spiritual aspects of Indigenous Peoples lives. Certain activities in component 2 will aim at building trust amongst community members and strengthening a unified approach to addressing climate risks.

Land acquisition & involuntary resettlement – there will be no resettlement of people under the project. The adaptation actions will target the most vulnerable rain-fed agriculture and rehabilitate the most degraded forest

beyond the community settlement areas. To the contrary, the project objective is to enable communities to continue to live sustainable lives in harmony with nature in the same place where their ancestors lived.

Labour and working conditions– using cash transfers under Component 2, beneficiaries will have opportunities to produce small scale agricultural and rural infrastructure assets that benefit their communities and halt or reverse land degradation. The timing to carry out asset works will be identified through consultations, and participation of poor families will be ensured through conditional cash-based transfer mechanisms. The asset creation activities will be executed in compliance with government regulations. In May 2016, WFP has conducted consultations with relevant government agencies, UN and NGO partners involved in infrastructure building projects and reviewed and updated work norms for asset creation considering gender and protection aspects. All participants will be above 18 years and will have access to first aid facilities. In addition, a thorough community participatory process will be carried out inclusively to gain a common understanding and agreement among the people, and to ensure that the adaptation actions (under Component 2) will not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. All contractual labour activities will comply with national employment and labour laws.

Gender Equity and Women’s Empowerment – the project will take into account issues / challenges related to gender relations to ensure that the design of the activities is gender sensitive. Activities should, at the very least, not have a negative effect on gender relations and, if feasible, contribute to improved gender equity. For example, in farmer communities in Tajikistan, women often actively participate in agricultural activities, while also seeing to household chores and raising children. This has implications on the availability of women to participate in activities. However, because they play a key role in achieving food security, in terms of food availability, access and utilization and nutrition security, their active participation is crucial. Therefore activities will be designed in such a way that women participate in and take the lead in planning, designing and implementing projects and ensuring that they make full use of the means, knowledge and skills that allow them to fulfil their potential.

Indigenous people and vulnerable communities – the project will address the development priorities for livelihoods, targeting the disadvantaged and most vulnerable communities. WFP’s Vulnerability Analysis and Mapping (VAM) examined geographical variation of food insecurity and vulnerability at sub-national levels to support evidence-based geographical targeting and programme designing. WFP will conduct planning workshops with the District Development Committee in the districts selected under this project to address needs of the most vulnerable groups in a culturally appropriate manner. There will be no adverse impacts on human rights, dignity and aspirations of people. The project will not only respect but reinforce human rights, especially those related to ensuring access and equity, prioritization of marginalized and vulnerable groups, gender equity and women’s empowerment, core labour rights and protection of indigenous people.

Assessment and management of environmental and social risks and impacts – Community assets developed through this project will be small-scale and have negligible environment and social impacts. Specific environmental impact assessments (EIA) are not generally required for community-based and small scale projects. However, the following table includes a selection of asset creation activities and how any negative impact will be mitigated.

Component 1 is comprised of studies, workshops, knowledge sharing sessions, fairs, and training sessions on Climate, EWS, and a compilation of best practices. Capacity building, knowledge and awareness have essentially zero environmental impact. Component 2 “Resilience building at household and community level through diversification of livelihoods and establishment of value chains for market access” has some concrete adaptation measures under outputs 2.1, 2.2 and 2.3 that are evaluated for potential impact as a rationale for their categorization ranking. The screening against GCF ESS standard on specific subcomponents will be carried out by WFP and partners by the end of the first year of the project.

Policies and strategies guiding project design and implementation

Tajikistan has developed a series of environment-related strategies which have guided the design and will be adhered to throughout the project implementation. Critical ones relevant to the project include the social protection and environmental protection in the context of mitigation and adaptation to climate change which include priorities identified by the National Development Strategy for 2016-2030. The Concept of Transition to Sustainable Development, 2007–2030 defines implementation mechanisms for sustainable development with economic, environmental, and social solutions. State Environmental Program, 2009–2019 is a major national long-term environmental program detailing measures on environmental protection. The National Strategy on Disaster Risk Management includes five components aimed at reducing preventable damages of natural and industrial disasters.

Tajikistan is an active member of the United Nations Framework Convention on Climate Change and has the lowest level of absolute and per capita emissions in Central Asia. It has so far submitted three national communications, has ratified the Paris Agreement and is in the process of finalizing its new National Climate Change Adaptation Strategy (NCCAS) in 2017.

Grievance and feedback mechanism

District level implementing and monitoring committee will coordinate project implementation at the jamoat level. WFP will remain accessible for project beneficiaries through its network of sub offices and focal points to receive feedback related to the project implementation. Moreover, a Feedback and Complaint Management Committee (FCMC) will be established in every community targeted by the project. FCMC committees will be established at the village assembly in consultation with community members composed of at least 4 people, of which 50% are female. FCMC members will not be part of Project Management Committee, they should not be related to each other or to the Head of Village/Jamoat in any way (i.e. brother, sister, son, daughter, spouse). FCMC committees are responsible for handling complaints related to the project implementation, identifying and ranking problems, providing fair solutions, and in necessary cases reporting the abuse directly to WFP while maintaining confidentiality (sub office telephone numbers and email will be provided). Committee members will be trained in maintaining confidentiality and processing feedback. Committee members will not be directly involved in the implementation of project. Rather, the expectation of their role is to assist the community on volunteer basis, to support the implementation of the project and guarantee transparency. Beneficiaries will be sensitized to address their concerns to relevant committees.

In addition, Cooperating Partners, WFP monitors and representatives of Executive Entity, will be regularly visiting project sites to monitor the success of the project and beneficiary satisfaction using the complaint committees. Selection process of FCMC will be documented and reported by the WFP sub offices. This system is already tested and functional in the framework of WFP's resilience building activities.

Community consultations

Between November 10 and 24, 2016, three community consultations were conducted in Tajikistan to inform the development on the project. This community consultation process supplements an elaborate national level stakeholder consultation which was held in August 2016 during the concept note development stage. The results of the community consultation, in addition to an in depth market assessment exercise, were the basis of the development of the full proposal to be submitted to the Green Climate Fund. The full proposal has incorporated suggestions, feedback and concerns from national level as well as local level authorities and representatives. During project implementation, an in depth consultation with every target community in the 11 target districts will be undertaken to fine tune the project implementation based on the local conditions – which may vary from one village to another.

The first consultation was held on November 10-11, 2016 in Kulyab, Khatlon (to cover Khovaling and Muminobod); the second and third consultations were held in parallel on November 23-24, 2016 in Khorog to cover GBAO districts and Garm to cover Rasht Valley area. The consultations were facilitated in Tajik language and delivered by Tajik nationals (and women to facilitate the gender segregated exercise) jointly with officials

from the Committee of Environment Protection (the executing entity). The participants were not briefed about the project during the exercise in order to not tilt them in a particular direction. All questions were clearly explained and feedback has been recorded below.

Methodology: The consultation workshop lasted 2 full days and included three target regions of Tajikistan. Participants included members of the community, farmers, women, NGOs, local administration etc. Various factors had to be considered to conduct this exercise including the availability of resources, permissions from government to speak with local communities (the President's office must be involved), human resources (translation from English to Tajik and sometimes in Russian and local dialects) during facilitation and surveys, and Tajik to English to record and report, organizing venues for discussions in remote areas, inviting local officials (includes approval from President's office/central office), availability of participants (incl. women from communities, who are not always free to move outside) throughout the exercise etc. The exercise aimed at collecting information for Component 1 (Capacity building, including Climate Services activities) as well as Component 2 (livelihood resilience building, incl. market access and livelihood diversification) and included a focus group discussion and two group exercises. The exercise included dichotomous questions, contingency questions, multiple choice questions, and open ended questions. For the first group exercise, participants were divided into groups of men and women. For the second group exercise, participants were divided into members of community and those that are local administrators and members of institutions like NGOs.

The two day consultation was aimed at getting a deeper understanding at the community level on a variety of issues. Day 1 included activity profile, resource access profile, and perception of change using seasonal mapping (comparing seasons 20 years ago versus current) as well as two group exercises. Day 2 included an assessment of existing adaptive capacities as well as community needs for climate change adaptation. While the communities initially attributed changes in livelihoods to a post-Soviet lifestyle as well as other factors like the Aral Sea, it became very clear towards the end that the communities were living through a changing climate and had very little adaptive capacity or understanding of the phenomenon. This validated our initial assessments and plans for intervention through the proposed GCF project.

Gender considerations will be integrated throughout the design, implementation and monitoring of this project to ensure gender-transformative activities to address the gender inequalities and discriminatory socio-cultural norms which generally disadvantage women. WFP will ensure the sex and age disaggregation of all person-related data; the embedding of gender analysis in all assessments, technical assistance, knowledge, information management and related work; the mainstreaming of gender across capacity-strengthening initiatives; and the engagement of women and men in a manner that is empowering, fosters equitable outcomes and advances gender equality. The Project will draw on community based participatory planning approach, to ensure gender responsiveness. This is also in direct alignment with SDG 5. Through this project, women and men will be trained on the importance of nutrition, understanding and using climate services as well as skill development in order to generate income through provision of inputs, seeds and water for irrigation and drinking. Training women on nutrition and dietary diversity will also enable them to improve the nutrition of their children. Men and religious leaders will be sensitized to the importance of women's inclusion. The project will closely work with partners (like Oxfam) - who have done extensive work in this dimension in Tajikistan - to ensure that the project does not create, exacerbate or contribute to gender inequalities or discrimination.⁷³

F.4. Financial Management and Procurement

⁷³ Oxfam GB has developed a community participatory methodology (Rapid Care Analysis) for assessing women's contribution to unpaid household and care work that it plans to use in Tajikistan. The methodology could be used to ensure that women benefit from development activities (and are not, in fact, additionally burdened); to gather evidence about gender equality; and to advocate for practical improvements to ease women's workload (which, in the Tajikistan context, could include communal laundries, infrastructure improvements that enable home labor-saving devices, preschools for children, care centers for the elderly, promotion of paternal leave, etc.).

Financial Management: The project will utilize WFP financial management and procurement systems in-line with its accreditation. All financial management and procurement, including financial accounting, disbursement methods and auditing will be specified under the Funded Activity Agreement (FAA) and will be aligned with the process and method agreed in the accreditation master agreement (AMA).

The GCF will transfer funds to WFP on the basis of a disbursement schedule (annually) as outlined in the project proposal and relevant agreements. WFP will create a Trust Fund or Grant Specific fund to receive the GCF fund at the country office level. All relevant expenditures will be charged directly to the Trust Fund or Grant Specific fund. WFP's Finance and Treasury Division at Head Quarters level certifies annual financial statements of relevant expenditures. WFP will be responsible for ensuring that project funds are spent according to the funding project proposal and the above mentioned agreements that will be entered with the GCF.

Procurement: WFP shall be responsible for all project procurement of goods and/or services in accordance with WFP Regulations and Rules. WFP follows a competitive and transparent process when procuring goods and services from suppliers. The executing entity is responsible for procuring in a transparent manner consistent with internationally recognized procedures and best practice. WFP Tajikistan will oversee the procurement processes to ensure compliance.

Audit: A final certified financial statement would be sent to the GCF once the project is completed in line with the financial regulations, rules and directives of WFP. WFP's financial accounting, disbursement methods and auditing are compliant with UN rules and regulation as well as with the requirements of all major donor agencies worldwide.

G.1. Risk Assessment Summary

As identified in section F3, the project has negligible environmental and social risks associated primarily with Component 2. There are, however, project related risks (elaborated below) which may affect the implementation of the project. Whilst the risk of political instability is low, Tajikistan has a history of civil war and ethnic unrest which may create volatilities, however, this risk is deemed to be low and confined to areas beyond the project target sites. The project's activities will also introduce new approaches and technologies which may face some resistance from older population groups more familiar with traditional livelihood and farming models. Lack of capacity, high turnover rates and coordination within government levels may also hamper the progress of project execution. Lastly, being highly prone, natural disasters and extreme weather may impede the progress made.

All the above risks have been carefully identified and mitigation measures have been put in place. Nevertheless, the scale and duration of some of these identified risks may be difficult to perceive at the planning stage and risk of realization of every risk will be carefully monitored as per the schedule described in section H2.

G.2. Risk Factors and Mitigation Measures

Please describe financial, technical and operational, social and environmental and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures.

Selected Risk Factor 1

Description	Risk category	Level of impact	Probability of risk occurring
Probability that political volatility and civil unrest could interrupt the project.	Social and environmental	Medium (5.1-20% of project value)	Low

Mitigation Measure(s)

The political environment in Tajikistan has been stable in years. WFP will mitigate this project risk by establishing strong operational partnerships and ownership of the project with various national organizations and government stakeholders. Through the development of this project, the NDA and his team as well as various ministries involved have been closely consulted with. WFP also has a number of MoUs in place with various ministries further emboldening trust and cooperation in joint activities.

Selected Risk Factor 2

Description	Risk category	Level of impact	Probability of risk occurring
Technical Capacity of government partners	Technical and operational	Medium (5.1-20% of project value)	Low

Mitigation Measure(s)

Because unexpected constraints relating to the capacities of national partners could result in delays in implementation, WFP will continue to develop partnerships with a broad range of development organizations to ensure sustainability and to limit risks.

Selected Risk Factor 3

Description	Risk category	Level of impact	Probability of risk occurring
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Natural disasters, in particular landslides, floods and drought in project sites	Social and environmental	High (>20% of project value)	Medium
Mitigation Measure(s)			
WFP and its partners have been supporting Committee of Emergency Situations (CoES) of the Republic of Tajikistan to strengthen National and District level disaster preparedness and early warning systems. Moreover, WFP conducted analytical studies (Impact of Climate Change on Food Security and an Integrated Context Analysis) where areas exposed to natural disasters and shocks have been identified and mapped according to vulnerability level. To address these risks, WFP together with the CoES, will ensure that the communities selected have early warning systems and preparedness actions in place to minimize the impact of possible disasters.			
Selected Risk Factor 4			
Description	Risk category	Level of impact	Probability of risk occurring
Staff turnover impedes capacity building and retention of skills and knowledge in the relevant institutions	Technical and operational	Low (<5% of project value)	Low
Mitigation Measure(s)			
To ensure the necessary buy-in WFP will directly engage with the local communities and leaders. Government technical services will be also fully involved in the project implementation and design. To mitigate the possible effect of the high turnover, WFP will include communities and different levels of district authorities in the project implementation, so as to ensure that acquired skills and knowhow are adequately handed over.			
Other Potential Risks in the Horizon			
<i>Please describe other potential issues which will be monitored as “emerging risks” during the life of the projects (i.e., issues that have not yet raised to the level of “risk factor” but which will need monitoring). This could include issues related to external stakeholders such as project beneficiaries or the pool of potential contractors.</i>			

** Please expand this sub-section when needed to address all potential material and relevant risks.*

H.1. Logic Framework.

Please specify the logic framework in accordance with the GCF's [Performance Measurement Framework](#) under the [Results Management Framework](#).

H.1.1. Paradigm Shift Objectives and Impacts at the Fund level ⁷⁴						
Paradigm shift objectives						
<i>Increased climate-resilient sustainable development</i>	The proposed project contributes to climate-resilient development pathways in Tajikistan through the sustained impact of project measures that have high potential for replicability and scale. Overall, these impacts can be scaled to reach 100% of national coverage. The project stimulates a demand-based model for climate information and use of ICT/mobile platforms to enable public and private sector participation, innovation, and market development. It contributes to key policies in the country and supports efforts to mainstream climate change adaptation into development plans. It institutionalizes knowledge generation and learning through the incorporation of climate change and food security in the national and district level planning processes. At the community level, the project introduces new technologies, rehabilitates dilapidated assets and strengthens community resilience through social and behavioral change.					
Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
Fund-level impacts						
<i>A2.0 Increased resilience of health and well-being, and food and water security</i>	Number of male and females benefiting from the adoption of diversified, climate-resilient livelihood options	Community consultation workshops, Household surveys	Vulnerable poor in target location are not familiar with climate resilient livelihood options	12,500 men and 12,500 women	25,000 men and 25,000 women	Communities are interested and willing to participate in identification, planning implementation and maintenance of project activities.
<i>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</i>	Number of food-insecure households disaggregated by male and female headed households (in areas/periods at risk of climate change impacts)	Household surveys. FSMS	30% of population in targeted areas are food insecure 35,100 women and 32,400 men	31,450 women and 29,040 men	23,140 women and 21,360 men	

⁷⁴ Information on the Fund's expected results and indicators can be found in its Performance Measurement Frameworks available at the following link (Please note that some indicators are under refinement): http://www.gcfund.org/fileadmin/00_customer/documents/Operations/5.3_Initial_PMF.pdf

H.1.2. Outcomes, Outputs, Activities and Inputs at Project/Programme level

Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
Project/programme outcomes	Outcomes that contribute to Fund-level impacts					
A6.0 Increased generation and use of climate information in decision-making	Use of climate information products/services in decision-making in climate-sensitive sectors	WFP monitoring	Farmers do not have access to climate information generated by climate services	8,000 women and 5,400 men engaged in farming in the targeted area will receive climate information	18,900 women and 12,600 men engaged in farming in the targeted area will receive and use climate information	Agency for Hydromet under the CEP will be generating the information
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	Number of males and females reached by Climate services, capacity strengthening, livelihood diversification and asset creation activities.	Gender-sensitive field surveys in priority districts,	Existing household and community assets are dilapidated and prone to damage due to climate induced shocks. Households report low food consumption score.	40% of community assets restored; 12,500 women and, 11,500 man will have access to created/rehabilitated climate resilient community assets; 90% of planted trees survived; 40% of households with improved Food Consumption score.	80% of community assets restored; 22,500 women and 20,700 men will have access to created/rehabilitated climate resilient community assets; 93% of planted trees survived; 80% of households with improved Food Consumption score.	Communities are interested and willing to invest time and effort to implement the project.
A8.0 Strengthened awareness of climate threats and risk-reduction processes	Number of males and females made aware climate threats and related appropriate responses	Gender sensitive household surveys	Male or female households in the targeted area do not have information about climate	At least 35,000 women and 32,500 men in the targeted	At least 50,000 women and 45,000 men are aware of climate	Communities are interested and willing to participate in

			threats and adaptive measures	communities are aware of climate threats and adaptive measures	threats and adaptive measures	awareness sessions.
Project/programme outputs	Component 1: Capacity strengthening and awareness raising of food insecure climate vulnerable communities and national actors for enhanced rural resilience and food security.					
Output 1.1: Climate and weather products improved and tailored to the needs of vulnerable food insecure communities through increased capacity of hydromet.	-Number of personnel proficient in using climate data to generate advisories, disaggregate by sex	Surveys/ tests of proficiency at the beginning and end of training	Government staff not adequately trained.	25 government staff (15 men and 10 women) trained	50 government staff (30 men and 20 women) trained,	Trained personnel are retained and not transferred to other positions - not related to climate change. Number of men employed in the Government structures is much higher.
Output 1.2: Locally relevant delivery mechanisms for the provision of tailored climate and weather information through relevant ICTs identified and piloted.	-Delivery mechanism for provision of climate services to local authorities and vulnerable communities established;	Project reports	General weekly TV announcements, website of hydromet, delayed delivery from information centres.	1 new effective delivery mechanism for provision of climate established	3 new effective delivery mechanism for provision of climate established	Stakeholders have an adequate understanding of climate issues and are interested in implementation .
Output 1.3: Decision making in vulnerable households enhanced through improved capacities to interpret and act on tailored climate advisories.	No. of households using climate services to make livelihood decisions, disaggregated by male and female headed households	Project reports	Currently none of the community members have direct access to climate services	29,00 women and 27,000 men of the target community households have access to climate services	58,000 women and 54,000 men of the targeted community households have access to climate services	Communities are interested and willing to use climate services.
Output 1.4: Improved community capacities and awareness on climate change impacts on health and nutrition	% of targeted people (disaggregated by sex) who received trainings and key messages on climate change, health and nutrition risks	Project reports	No,/limited knowledge on climate risk and impact of climate change on nutrition	30,000 women and 28,000, men in the targeted communities understand key messages	60,000 women and 56,000 men understand key messages related to health and nutrition	Households in 11 targeted districts are motivated to invest time and effort in the activities.

				related to health and nutrition risks resulting from climate change	risks resulting from climate change	
Output 1.5: Publications of lessons learnt and best practices compiled and disseminated.	Communication materials developed and disseminated among national, districts authorities and other stakeholders.	Project reports	None	10,000 booklets/publications produced;	15,000 booklets/publications produced; 4 radio shows per month describing climate advisories 16 newspaper articles and coverage	
Output 1.6: Adaptation plans integrated at District Development Committees (DDC) with full participation of community members and local authorities	Capacity building of District Development Committees in developing of adaptation planning	Project Report	Climate change adaptation and food security not included in district level planning	5 District development plans prioritize adaptation actions for most vulnerable jamoat, villages and households	11 District development plans prioritize adaptation actions for most vulnerable jamoat, villages and households	Local and district governments recognize and prioritize climate risks as a threat to development gains
Activities	Description	Inputs		Description		
1.1.1 Training Workshop for Data Clerks and Managers on DaRe activities including use of CLIMSOFIT Climate Data Management System	Capacity strengthening for hydromet to improve skills and equip with tools for analysis	Trainers, technical experts and procurement of software				
1.1.2 Data Rescue (DARE) exercise	Capacity strengthening for hydromet to improve skills and equip with tools for analysis	Trainers, technical experts and procurement of software				
1.1.3 Capacity building of the Hydromet to generate monthly and seasonal climate forecasts	Capacity strengthening for hydromet to improve skills and equip with tools for analysis	Trainers, technical experts and procurement of software				
1.1.4 Capacity building in GIS mapping tools to monitor crops and pasture conditions	Capacity strengthening for hydromet to improve skills and equip with tools for analysis	Trainers, technical experts and procurement of software				

1.2.1 Developing mechanisms for provision of tailored climate services	Identify and develop delivery mechanisms that are relevant to local communities	Climate information & relevant ICTs				
1.2.2 Provision of climate information (radio/TV/SMS)	Pilot dissemination of climate information through identified delivery channels	Climate information & relevant ICTs				
1.3.1 Visit of PICSA trainers from University of Reading	Build capacities of communities to understand and utilize climate information	Technical experts				
1.3.2 Training the communities on use of PICSA approach		Trainers & technical experts				
1.4.1 Community awareness raising on climate risk management measures, climate advisories, health and nutrition risks	Capacity strengthening for communities and women on climate risk management measures with regards to health and nutrition	Community awareness sessions and trainings				
1.5.1 Exchange visits from adjacent communities, lessons learned and awareness raising	Collection and production of lesson learned & best practices					
1.5.2 Dissemination of publications of lessons learnt and best practices	Dissemination of publications produced					
1.5.3 National conference to inform policy development based on lessons learnt	Inform national policy with learnings and best practices collected					
1.6.1 Reviewing district plans with local authorities	Integrate climate change adaptation planning within district plans	District plans, local authorities and community members				
1.6.2 Development of district level plans with Climate Change Adaptation	Integrate climate change adaptation planning within district plans					
Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target	Assumptions	
Project/programme outputs	Component 2: Resilience building at household and community level through diversification of livelihoods and market access.					
Output 2.1: Climate change adaptation supported through diversification of livelihoods.	<p>Hectares of orchards established in targeted districts;</p> <p>Hectares of agroforestry established in targeted districts;</p> <p># of women group received training on</p>	Project Report	<p>There are no climate resilient varieties of orchards established in targeted districts</p> <p>Limited knowledge, especially among women</p>	<p>6,350 women and 5,870 men benefiting from 200 ha of orchards and 100 ha of agroforestry established</p>	<p>12,700 women and 11,000 men benefiting from 400 ha of orchards and 200 ha of agroforestry established in targeted districts;</p>	<p>Farmers and women groups in targeted districts are motivated to invest time and efforts in the activities.</p>

	drying fruits, vegetables and herbs, processing and marketing activities		on drying fruits, vegetables and herbs, processing and marketing activities	in targeted districts; 15 women group received training on drying fruits, vegetables and herbs, processing and marketing activities	40 women group received training on drying fruits, vegetables and herbs, processing and marketing activities	
Output 2.2: Improved water management for drinking water and small-scale irrigation.	Number of assets built, restored or maintained by targeted households and communities, by type and unit of measure	Project Report	Natural and physical livelihood assets are very insufficient to provide adequate protection to climate change risk	12,000 women and 10,000 men in the 50 targeted villages have access to clean drinking water; 1200 ha of arable land will be irrigated in 30 villages and 10,000 women and 8,000 men benefit from it; 800 women and 750 men will benefit from drip method of irrigation.	20,000 women and 18,000 men in the 69 targeted villages have access to clean drinking water; 2300 Ha of agricultural land will be irrigated in 75 villages and 23,400 women and 21,600 men benefit from it; 1,600 women and 1,500 men will benefit from method of drip irrigation.	Target population are interested and willing to participate in identification, planning, implementation and maintenance of project activities.
Output 2.3: Provision of and training to utilize green houses, renewables and climate proof post-harvest storage facilities established to withstand long-term climate change.	Number of people engaged in income diversification strategies to reduce risks and vulnerability of food security to climate	Project Report	People in targeted districts, especially in mountainous districts have high risk and vulnerability of food security to climate	100 greenhouses and storage facilities are established in the targeted communities. 1,100 women and 990 men have access to storage	232 greenhouses and storage facilities are established; 2,500 women and 2,300 men have access to storage facilities and greenhouses;	Community support the initiative and willing to participate

				facilities and greenhouses; 4,160 women and 3,840 men have access to renewable energy sources	9,300 women and 8,700 men have access to renewable energy sources	
Output 2.4: Household resilience and adaptive capacity of climate vulnerable poor in target areas improved.	No. of smallholders using market information through SMS. % of farmers supported by the project that raise their income through sale to public or private sector (including national school meal programme)	Project Report	Market prices are not institutionalized for access by farmers. Smallholders do not have sustainable partnerships for income generating activities.	9,300 smallholder women and 8,600 men have access to market prices through SMS. 7,000 smallholder women and 6,500 men have improved income generating opportunities.	18,700 smallholder women and 17,300 men have access to market prices through SMS 18,700 targeted smallholder women and 17,300 men have improved income generating opportunities.	Smallholders will negotiate with middlemen for better sales prices. Opportunities for public and private sector partnerships exist.
Activities	Description	Inputs	Description			
2.1.1 Delivery of seedlings		Seedlings and technical experts	2.1.1 Delivery of seedlings			
2.1.2 Installation of natural fences		Technical experts	2.1.2 Installation of natural fences			
2.1.3 Tree planting (orchards and agro forest)		Technical experts	2.1.3 Tree planting (orchards and agro forest)			
2.2.1 Drinking water supply systems	Improve water management for drinking water	Technical tools and experts	2.2.1 Drinking water supply systems			
2.2.2 Irrigation activities	Improve small scale irrigation systems	Technical tools and experts	2.2.2 Irrigation activities			
2.3.1 Installation of storage facilities	Install storage facilities that withstand long-term climate change	Technical tools and experts	2.3.1 Installation of storage facilities			
2.3.2 Installation of solar greenhouses	Provide and train on the use of greenhouses	Greenhouses, technical experts and trainers	2.3.2 Installation of solar greenhouses			
2.3.3 Provision of solar dryers and trainings	Install and train on the use of solar dryers	Solar dryer, technical experts and trainers	2.3.3 Provision of solar dryers and trainings			
2.3.4 Installation of biodigesters and trainings	Install and train on the use of biodigesters	Biodigesters, technical experts and trainers	2.3.4 Installation of biodigesters and trainings			

2.4.1 Provision of market information including market locations, demand for commodities, prices etc... (SMS, IVR, information boards)	Improve access of farmers to market	Technical experts	2.4.1 Provision of market information including market locations, demand for commodities, prices etc... (SMS, IVR, information boards)
2.4.2 Training of 500 dehkan farms and information sharing to better link local production with markets and supply chain	Improve access of farmers to market	Technical experts & trainers	2.4.2 Training of 500 dehkan farms and information sharing to better link local production with markets and supply chain

H.2. Arrangements for Monitoring, Reporting and Evaluation

Project monitoring and evaluation (M&E) will be carried out in accordance with WFP procedures, under WFP supervision. WFP will assume financial oversight of the project and provide information on a regular basis in conformance with GCF operational regulations. To facilitate coordination on outcome monitoring and evaluation, project management team meetings will take place at least twice per year.

In addition to semi-annual performance reports, technical reports and a yearly performance report, specific M&E activities to be undertaken include the following:

A **Project Inception Workshop (IW)** will bring together all stakeholders for project implementation within the first two months after project approval. Through this workshop, stakeholders and local leaders will build project ownership and identify priorities for first year of implementation. This workshop will involve local leaders and community youth, women and elders. A supervision plan will be agreed upon by relevant stakeholders during this workshop.

An **Annual Progress Report (APR)** will be prepared by the project management team and evaluate yearly project progress, using identified M&E indicators. The APR will identify yearly objectives and targets, lessons learned and risk mitigation measures, as well as relevant financial information. The data for monitoring will consist of financial, procurement and physical progress reports as well as compliance with the requirements of the environmental and social assessment and management frameworks, along with financial audit reports. It will also include measures considered in the risk management plans proposed in Section G2.

An independent and external **Mid-term Evaluation** will take place at the mid-point of project implementation (Nov/Dec, 2019). The MTE will determine progress made toward outcome achievements, assess financial, social and environmental risks and pinpoint corrective actions as required. It will present initial lessons learned on project implementation and management. The findings of this review will be incorporated in a midterm report.

An **independent and external final evaluation** will also be submitted no later than nine months after the completion of the project. These reports will assess progress towards the project's outcomes and impacts defined in the logical framework as well as the overall project performance against the six GCF investment criteria. Final evaluations will include information on challenges and lessons learnt.

I. Supporting Documents for Funding Proposal

- NDA No-objection Letter
- Feasibility Study
- Integrated Financial Model that provides sensitivity analysis of critical elements (xls format, if applicable)
- Confirmation letter or letter of commitment for co-financing commitment (If applicable)
- Project/Programme Confirmation/Term Sheet (including cost/budget breakdown, disbursement schedule, etc.) – see *the Accreditation Master Agreement, Annex 1*
- Environmental and Social Impact Assessment (ESIA)
- Appraisal Report or Due Diligence Report with recommendations (If applicable)
- Evaluation Report of the baseline project (If applicable)
- Map indicating the location of the project/programme
- Timetable of project/programme implementation

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

No-objection letter issued by the national designated authority

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UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

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№ 1128-03-8000 аз 01.06 соли 2017
Ба № _____ аз « _____ » соли 2017

To: The Green Climate Fund (“GCF”)

Re: Funding proposal for the GCF by the United Nations World Food Programme titled “Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan.”

Dear Madam, Sir,

We refer to the project “Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan” in the Republic of Tajikistan as included in the funding proposal submitted by the United Nations World Food Programme to us on May 12, 2017.

The undersigned is the duly authorized representative of the Committee for Environmental Protection, the National Designated Authority of the Republic of Tajikistan.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no-objection, it is implied that:

- (a) The government of the Republic of Tajikistan has no-objection to the project as included in the funding proposal;
- (b) The project as included in the funding proposal is in conformity with The Republic of Tajikistan’s national priorities, strategies and plans;
- (c) In accordance with the GCF’s environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project, as included in the funding proposal, has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,



Mr. Khayrullo Ibodzoda,
NDA/Chairman of the Committee for
Environmental Protection of the Republic of Tajikistan

Environmental and social report(s) disclosure

Basic project/programme information	
Project/programme title	Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan.
Accredited entity	UN World Food Programme
Environmental and social safeguards (ESS) category	Category C
	<i>Note: Environmental and social report disclosure not required for Category C and Intermediation 3 projects and programmes.</i>
Environmental and social report disclosure information	
Description of report/disclosure	N/A