Climate Investment Funds

PPCR/SC.21/7
November 13, 2017

Meeting of the PPCR Sub-Committee
Washington D.C.
Tuesday, December 12 – Wednesday, December 13, 2017

Agenda Item 7

PPCR STRATEGIC PROGRAM FOR CLIMATE RESILIENCE FOR KYRGYZ REPUBLIC

PROPOSED DECISION

The PPCR Sub-Committee, having reviewed the document PPCR/SC.21/7, *Strategic Program for Climate Resilience (SPCR) for Kyrgyz Republic* [endorses] the SPCR.

The Sub-Committee encourages the Government of Kyrgyz Republic and the MDBs to actively seek resources from other bilateral or multilateral sources to fund further development and implementation of the projects foreseen in the strategic plan.

КЫРГЫЗ
РЕСПУБЛИКАСЫНЫН
ПРЕМЬЕР-МИНИСТРИ

ПРЕМЬЕР-МИНИСТР
КЫРГЫЗСКОЙ
РЕСПУБЛИКИ

«8» 11 2017 № 19-33601

Руководителю программы
Климатического
инвестиционного фонда
госпоже Мафальде Дуарте

Уважаемая госпожа Дуарте,

Позвольте выразить благодарность Климатическому инвестиционному фонду (далее - Фонд) за поддержку развития технического потенциала Кыргызской Республики.

После получения в 2015 году от Фонда финансовых средств через Европейский банк развития и реконструкции, Азиатский банк развития и Всемирный банк проводилась активная работа по разработке проекта Климатической инвестиционной Программы для Кыргызской Республики. В процесс консультаций при подготовке Программы был вовлечен широкий круг заинтересованных сторон, включая государственный и частный сектор, научные круги, партнеров по развитию, общественные организации и местные сообщества.

В рамках обеспечения эффективности данной Программы Правительством Кыргызской Республики создана специальная рабочая группа по приведению проекта Программы в соответствие с действующими национальными стратегиями развития страны.

В настоящее время разработка проекта Климатической инвестиционной Программы завершена. В августе 2017 года для координации работ в области климатического финансирования в Кыргызской Республике учрежден Центр по климатическому финансированию.

В этой связи Правительство Кыргызской Республики настоящим письмом вносит Программу на рассмотрение Фонда для проведения соответствующих процедур (прилагается).

Вместе с тем, в работе подкомитета Пилотной программы по адаптации к изменению климата (далее - Пилотная программа) при рассмотрении Климатической инвестиционной Программы Кыргызской Республики в декабре 2017 года планируется участие

первого вице-премьер-министра Кыргызской Республики господина Толкунбека Абдыгулова, являющегося контактным лицом в Пилотной программе.

Уверен, что наша совместная работа в этом направлении обеспечит приток климатического финансирования и укрепит устойчивость ключевых секторов экономики Кыргызской Республики.

Пользуясь случаем, желаю Вам благополучия и успехов в Вашей профессиональной деятельности.

Приложение: упомянутое, на 197 л..

С уважением,

Сапар Исаков

Кыргыз
Республикасынын
Өкмөтүнүн
Аппарат жетекчисинин
орун басары

Заместитель
Руководителя Аппарата
Правительства
Кыргызской
Республики

№ 19-33601 2017-ж.г. «8» 11

МИД КР

Прошу препроводить по дипломатическим каналам.

С.Б.Уметалиев

Зав. отделом

Исполнитель Тел.

Government of the Kyrgyz Republic

Kyrgyz Republic: Climate Investment Programme

FINAL DOCUMENT

November 2017

Acronyms

ADB	Asian Development Bank
AE	Accredited Entity (to the Green Climate Fund)
AF	Adaptation Fund
BAU	Business as usual
CAIAG	Central-Asian Institute for Applied Geosciences
CNK	Climate Network of Kyrgyzstan
CCC	Climate Change Centre
CCCCP	Coordination Commission on Climate Change Problems
CDM	Clean Development Mechanism
CCDP-Kg	Climate Change Dialogue Platform
CCMIP	Coordination Council on Macroeconomic and Investment Policy
CFCM	Climate Finance Coordination Mechanism
CFC	Climate Finance Centre
CIF	Climate Investment Funds
COP	Conference of the Parties (to the UNFCCC)
DPCC	Development Partners Coordination Council
EBRD	European Bank for Reconstruction and Development
EE	Executing Entity (for the Green Climate Fund and Adaptation Fund)
FAO	Food and Agriculture Organization (of the United Nations)
GCF	Green Climate Fund
GEF	Global Environment Facility
GEF SCCF	Global Environment Facility's Special Climate Change Fund
GHG	Greenhouse gas
Gosstroy	State Agency for Architecture, Construction and Communal Services
IAWG	Inter-Agency Working Group (on Climate Finance)
IDA	International Development Association
IE	Implementing Entity (for the Adaptation Fund)
IFCA	Investment facility for Central Asia (of the European Commission)
INDC	Intended Nationally Determined Contribution
MDB	Multilateral Development Bank
NAS KR	National Academy of Sciences of the Kyrgyz Republic
NCSD	National Council for Sustainable Development
NDA	National Designated Authority
NEGK	National Electrical Grid of Kyrgyzstan
NGO	Non-governmental Organization
NISS	National Institute for Strategic Studies
NSSD	National Strategy for Sustainable Development
MFI	Micro-finance Institution
OFP	Operational focal point (for the GEF)
PAC	Proposal Appraisal Committee
PIF	Project Identification Form
PPCR	Pilot Programme for Climate Resilience
PPP	Public-private partnerships
SAEPF	State Agency on Environment Protection and Forestry
SALSGIR	State Agency on Local Self-Governance and Interethnic Relations
SDGs	Sustainable Development Goals
SME	Small and Medium Enterprise

SNC	Second National Communication
SPCR	Strategic Programme for Climate Resilience
TNC	Third National Communication
UCA	University of Central Asia
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
WB	World Bank

Table of Contents

Introduction

The scale of international climate financing is significantly increasing in accordance with the International Agreements adopted in December 2015 in Paris, which provide opportunities for implementing transformative investments in adaptation to climate change.

Growing competition among developing countries for climate financing requires the Kyrgyz Republic to take targeted measures to program climate action (UN SDG 13).

The Climate Investment Fund (CIF) supported the initiative of the Government of the Kyrgyz Republic and, in 2015 the Kyrgyz Republic was included in the Pilot Program for Enhancing Resilience to Climate Change (PPCR).

As a result of the work under the PPCR, this document has been developed - the Operational Framework for Management and Access to Climate Finance, which is a kind of Climate Investment Programme (CIP), comprising 11 priority investment components.

This document supplements the "Priority directions of adaptation to climate change" adopted by the Government of the Kyrgyz Republic on October 2, 2013 and designed to attract climate finance, since the main objective of the PPCR is to attract resources through international climate finance mechanisms to implement investment programs in the field of climate change resilience in priority sectors, as well as the establishment of an institutional mechanism for the coordination of climate financing. This program will serve as a basis for the development of the National Adaptation Programme and Strategic Priorities of Low-carbon Development - the Green Economy, which will meet the requirements of the Paris Agreement.

1 Background and rationale

1.1 Country circumstances

The Kyrgyz Republic is a lower-middle income country located in Central Asia, bordering China, Kazakhstan, Tajikistan, and Uzbekistan. As a landlocked, largely mountainous country, it shows a varied climate ranging from dry continental, to polar in the southeast (Tien Shan Mountains); subtropical in the southwest (Fergana Valley); and temperate in northern foothill zone. It has a population of 6.02 million (2016 Kyrgyz National Statistics Committee (NSC KR) data), of which most live in rural areas. The annual population growth rate in the Kyrgyz Republic (1,67) [1] was the highest among Central Asian countries after Tajikistan (2.43)[2]. Growth rates are higher in rural areas, particularly in the southern provinces (Batken, Osh, and Jalalabad) and Talas province[3].

The Kyrgyz Republic's economy is highly reliant on few natural resources – gold (8% of the national GDP, 2016 NSC KR data), and on remittances from migrants living abroad. While the Kyrgyz Republic has one of the most liberal economies and societies among Central Asian countries, 25.4% of the population lives below the national poverty line (2016 NSC KR data), especially in rural areas[4]. Together with high poverty rates, unemployment is a major problem with 7,6%[5] of the population above 15 years of age[6] being unoccupied (2015 NSC KR data). Since the country became independent in 1991, it has faced political and social instability and concerns over corruption, with significant civil unrest occurring in 2005 and 2010.

The government has aimed at social and economic reforms both at the national and local level, through the Kyrgyz Republic's National Strategy for Sustainable Development "Zhany Doorgo – kyrk kadam" (40 Steps to the New Era) 2018–2040 succeeding the Kyrgyz Republic's National Strategy for Sustainable Development (NSSD) 2013-2017. The NSSD 2018-2040 is aimed at diversifying economic activities and promoting establishment of modern and accessible infrastructure, and growth and productivity in key economic sectors. In the Kyrgyz Republic, the majority of services (e.g. education, health) and industries (e.g. electricity, water, and gas) are state-owned, while the private sector, that is dominated by small enterprises, remains the main driver of economic growth.

While the Kyrgyz Republic has a low contribution to global greenhouse gas emissions, building climate resilience through adaptation actions is a key priority. The economy of the Kyrgyz Republic faces unique challenges associated with current and predicted climate change impacts, due to its geographic and topographic characteristics, and the structure of its economy. Changing climate hazards in terms of increasing temperatures and uncertainty in future water discharge are bound to affect the country's sustainable development path over the next decades. Private sector stakeholders (e.g. businesses, business associations and banks) have critical roles to play in climate change adaptation and resilience-building through mobilisation of resources, scaling up adaptation measures and developing innovative solutions.

[1] Demographic Yearbook of the Kyrgyz Republic, 2012-2016. http://www.stat.kg/media/publicationarchive/e9f4dd01-137a-47fc-a90e-f2e7f8f500ff.pdf

[2] United Nations Department of Economic and Social Affairs, (2012). World Population Prospects: 2012 Revision. New York: UNDESA

[3] World Food Programme (2014). Kyrgyz republic: An overview of climate trends and the impact on food security. http://www.uncclearn.org/sites/default/files/inventory/wfp269918.pdf

[4] NSC KR. http://www.stat.kg/media/publicationarchive/01b28ef9-9e8c-4d84-9fae-4b1b58b1aa5a.pdf

[5] Labour market. http://www.stat.kg/ru/news/rynok-truda/

[6] According to the International Labour Organisation's methodology: http://www.ilo.org/moscow/lang--ru/index.htm

The Kyrgyz Republic is committed to the Paris Agreement and set forth adaptation and mitigation actions in its Intended Nationally Determined Contribution (INDC) in 2015. The Kyrgyz government officially signed the Paris Agreement on 21st September 2016, and currently is examining the issue of its ratification. The implementation of the Paris Agreement will require relevant amendments to the national legislation and will have important implications for climate resilience and climate finance reporting for the responsible Kyrgyz authorities.

The 2015 Kyrgyz Republic's INDC states the Kyrgyz Republic's adaptation target is to prevent the climate change related damage and losses in the country. It also sets out the required financial resources for adaptation and expected reduction of economic losses, along with monitoring and reporting modalities. [7]

For mitigation, the INDC indicates that the Kyrgyz Republic will reduce GHG emissions in the range of 11.49-13.75% below BAU in 2030, and in the range of 12.67-15.69% below BAU in 2050.[8] The Kyrgyz Republic had a total GHG emissions, accounting net emissions in the Land Use, Land-Use Change and Forestry (LULUCF) sector, of 13,046 Gg CO2-equivalent in 2010. Absolute emissions were reduced more than a half compared to 1990 levels when emissions amounted to 28,712 Gg CO2-equivalent. Most of the emissions are related to energy (53.5%) and agriculture (33.5%), with smaller contribution of the waste sector (7.9%) and industrial process (3.2%).[9]

1.2 Development context and climate risks

The Kyrgyz Republic is a developing country which has shown progress in human development levels over recent years. The global 2015 Human Development Report ranks the Kyrgyz Republic 120th (out of 187 countries) with a Human Development Index[10] rating of 0.66[11], which means that the country is in the lower part of the group of countries with medium human development. This points to regional and urban/rural disparities, as well as inequalities between men and women. The Kyrgyz Republic is placed 66th out of 146 countries on the UNDP Gender Inequality Index[12].

Levels of poverty are higher in rural areas, due to their dependence on natural resources. During the continuous stagnation period from 2006 to 2015, the national poverty line was above 30% with slow reduction. The national poverty rate below 30% was noted for the first time in 2016 only, when it declined from 32.1% to 26.4% in 2015[13]. In the Kyrgyz Republic, poverty is characterised by geographic and gender inequality. The poverty rate is higher in rural areas and southern provinces. According to 2016 estimates, 74% of 1.557 mln poor people lived in rural areas. In the past three years, the poor averaged 25% of urban population and 32% of rural population. The highest poverty rate is observed in Batken (45.2%), Jalal-Abad (56%), and Naryn (37.4%) provinces. The majority of poor people live in rural areas, making 66% of the total population with significant geographic disparity being more concentrated in the southern part of the country. The households living below the national poverty line have limited buying capacity in terms of both staple foodstuffs and non-foods.

[7] Government of the Kyrgyz Republic (2015). The Kyrgyz Republic Intended Nationally Determined Contribution.
[8] Government of the Kyrgyz Republic (2015). The Kyrgyz Republic Intended Nationally Determined Contribution.
[9] Government of the Kyrgyz Republic (2016). Third National Communication of the Kyrgyz Republic under the UNFCCC.
[10] Index reflects the basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living.
[11] UNDP (2017). Human Development Reports: Kyrgyzstan. http://hdr.undp.org/en/countries/profiles/KGZ
[12] UNDP (2017). Human Development Reports: Kyrgyzstan. http://hdr.undp.org/en/countries/profiles/KGZ
[13] NSC KR. http://www.stat.kg/media/publicationarchive/01b28ef9-9e8c-4d84-9fae-4b1b58b1aa5a.pdf

Gender inequalities in the Kyrgyz Republic are high and rising, with significant regional disparities[14]. Women experience higher unemployment rates than men (9% versus 6.5%)[15] and are over-represented in occupations with lower wages[16]. Similar to other countries in Central Asia, female labour force participation is low, at 45.4%, compared to 70.5% for men[17], a situation entrenched by the substantial earnings gap between women and men, lack of career progression opportunities[18]. .

Irrespective of climate change, there is a growing pressure on natural resources, particularly water resources. This pressure results from population growth, increased resource consumption, lack of infrastructure development (particularly the irrigation system), limited productive arable land under irrigation, and concentration of irrigation in certain areas[19]. Access to water and sanitation have declined steadily over the past 20 years. For example, in 2011, only 11% of urban poor had access to running water, down from 33% in 2005, and only 63% of non-poor, down from 71% in 2005[20]. Inadequate management of, and unequal access to natural resources, such as water, land, pastures and forests, is a potential source of social tension[21].

The Kyrgyz Republic is highly vulnerable to climate risks due to the high frequency of climate-related disasters, its dependency on climate-sensitive economic sectors and its ageing infrastructure. Despite progress made in reducing extreme poverty in the Kyrgyz Republic in the last few years, climate risks pose significant threats to ensuring sustainable livelihoods, food security and infrastructure services. Climate-related events, such as the increasing numbers of floods and mudflows each spring, drought in 2008 and severe cold spells in 2008-9, and the consequent impacts on society and the economy highlight the country's vulnerability to climate risks[22]. Small businesses are sensitive to the impacts of climate change on the availability of water, energy and raw materials, both directly and through their supply chains.

Specific climate risks for key sectors are discussed in more detail below.

1.2.1 Water resources

Managing water resources to ensure a secure supply is already a major challenge in the Kyrgyz Republic. Water resources are used for irrigation, industrial and domestic water supply, together with energy generation. Many of these uses puts pressure on water resources and maintaining water security is a key priority for the rural poor[23], many of whom are engaged in the agricultural sector.

Water resources has been identified as the most vulnerable sector to climate change in the Kyrgyz Republic. Climate change impacts to water resources are expected to have a wide array of subsequent negative consequences across a number of sectors. As such, this sector is recognised as one of the country's priorities for adaptation in the "Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017".

[14] UN Women (2017). UN Women in Kyrgyzstan. http://eca.unwomen.org/en/where-we-are/kyrgyzstan
[15] NSC KR: Labour Market. http://www.stat.kg/ru/news/rynok-truda/
[16] EBRD (2015). Strategy for the Kyrgyz Republic.
[17] NSC KR: Labour Market. http://www.stat.kg/ru/news/rynok-truda/
[18] EBRD (2015). Strategy for the Kyrgyz Republic.
[19] Kyrgyz Republic's National Strategy for Sustainable Development (NSSD) 2013–2017
[20] World Bank (2013). Country Partnership Strategy for the Kyrgyz Republic for the Period FY14-17.
[21] UNPBF (2013) Peace Building Needs Assessment in the Kyrgyz Republic. Bishkek: United Nations Peace Building Fund.
[22] World Food Programme (2014). Kyrgyz republic: An overview of climate trends and the impact on food security. http://www.uncclearn.org/sites/default/files/inventory/wfp269918.pdf
[23] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119

Increasing annual average temperatures will affect glacier coverage and associated surface water run-off, which in turn will affect other sectors such as agriculture, energy and municipal water supply. Ensuing from this is a reduction in surface water flow and significant impacts on its intra-annual distribution, such as reducing the summer maximum flow and shifting it to an earlier season. Crucially, the timing of the 'tipping point' (peak water) in glacial runoff remains unknown. It could already have occurred in Kyrgyz Republic (i.e. runoff could already be in decline), or it could occur in the next few decades, or later in the century. According to the Third National Communication (TNC) (2016), for the worst-case climate change scenario (RCP 8.5 scenario and the annual precipitation reduction by 5%) runoff may reduce by approximately 40%. Agriculture, which uses 92-96% of all water for the purposes of irrigation, is among the sectors most at risk, with ensuing impacts on public health, food security and the national economy.

The ongoing glacial melt and reduction of snow melt are expected to exacerbate trans-boundary water and energy tensions in Central Asia. Key river basins in Central Asia, such as the Amu Darya and Syr Darya, are important to the economies of several countries, as they supply water to vast expanses of agricultural land and generate most of domestic electricity in the form of hydropower. There is currently a clash between summer irrigation needs in downstream countries (Kazakhstan, Turkmenistan, and Uzbekistan) and winter energy needs in upstream countries (Afghanistan, the Kyrgyz Republic, and Tajikistan). Trade with other Central Asian countries is linked to water release agreements and any climate impacts on water resources could also affect trade ties and agreements between the Kyrgyz Republic and its neighbours.

1.2.2 Agriculture

In the Kyrgyz Republic, agriculture is the key economic sector in provision of national food security, local employment and export potential development, contributing to one-third of GDP and employing 65% of the population[24]. As such, it is recognised as one of the priorities for economic development of the country in the Kyrgyz Republic's Governmental Programme "40 Steps to the New Era". In this sub-section, focus is placed on the climate risks to agricultural production, livelihoods and food security; the climate risks facing the private sector more broadly, of which agriculture forms a large part, is covered in sub-section 1.2.10.

The agriculture sector is inherently extremely vulnerable to climate variability and change, due to the natural connections and dependencies that exist between climatic conditions, plant development and animal health. Climate change will affect agricultural productivity in the Kyrgyz Republic, although the degree of risk will depend on location and altitude of agricultural sites. As such, this sector is recognised as one of the country's priorities for adaptation in the "Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017".

A key risk for agriculture is changes in water availability. This is likely to result from projected decreases in precipitation, increased rate of evapotranspiration and reduced glacial reserves, especially as the glacial contribution to runoff is important for sustaining agriculture during dry periods[25]. This could have serious impacts on water availability for irrigation of crops and other agricultural uses with negative impacts on food security and the wider population in the Kyrgyz Republic.

The climate risks facing the agricultural sector are different depending on location and altitude. Agricultural production at lower altitudes (below 1500m) will be impacted mainly by heat stress along

[24] NSC KR http://www.stat.kg/media/publicationarchive/712ba4ee-ac1c-4c6b-a7f2-d373c5243031.pdf
[25] MSDSPKG, 2011. Climate Change Analysis Kara Kulja

with more probable droughts in the summer season, negatively affecting workers and livestock[26]. Areas in the middle and high altitudes (above 1500m) are projected to be less affected by heat stress and could even benefit, but could also be affected by extreme events such as river floods, flash floods, and mudslides due to projected increases in the intensity of spring precipitation. This in turn could result in risks to livelihoods and livestock owing to injury of people or animals, decreased access to pastures and damages to infrastructure, which would negatively affect the agriculture sector and also the 65% of labour force working in this sector. Increasing temperatures could also increase the risk of new pests, predators and diseases affecting agricultural resources.

Longer-term, conditions of agricultural productivity may change in certain areas due to the redistribution of various landscape-climatic zones. This is a result of projected changes in temperature and precipitation patterns, as well as a reduction of average humidified areas[27]. For instance, the coverage of arid desert areas could increase from 1.3% in 2000 to 3.1% by 2100 (under RCP 8.5), although individual provinces may experience significantly higher levels of desertification[28]. The productivity and surface area of highland rangelands may decrease as a result, leading to a loss of suitable agricultural territory. These changes will have knock-on consequences on food security and thus livelihoods and health.

1.2.3 Energy

The energy sector is of central importance to the Kyrgyz economy, accounting for roughly 3.9% of GDP and 16% of industrial production[29]. The bulk of the country's current generating capacity is hydropower (~90%), developed for the dual purpose of generating electricity and serving as the irrigation water supply for the Kyrgyz Republic and downstream countries. The remaining 10% is generated by thermal combined heat and power plants (CHPs). The Kyrgyz Republic is connected to its neighbours through the Central Asia Power System (CAPS), which it uses for seasonal electricity exports, and also transports electricity from the south to the north of the country where most of the electricity is consumed. The NSSD and the Kyrgyz Government Programme "40 Steps to the New Era" defines the development of the energy sector as a priority for the socio-economic development of the country in the medium- and long-term.

Energy generation is extremely sensitivity to climate variability and climate change due to the sector's reliance on hydropower. Energy has been identified as an area of intervention among the "Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017", although the document only addresses mitigation actions for this sector. Climate change will have a direct impact on electricity production both from hydropower and CHPs, increasing the pressure on energy sector assets. Many of power generation and distribution assets in the Kyrgyz Republic need rehabilitation and already are causing considerable distribution losses.

The main risks to hydropower production stem from a projected increase in temperatures affecting runoff rates and seasonal flow rates and a projected decrease in precipitation, which could reduce runoff, thus reducing electricity generation in the Kyrgyz Republic. According to a study carried out by Cardno Ltd. for the ADB, reduced in flow on the Naryn cascade is calculated to be 3.24 km^3/y by 2050 and 5.90 km^3/y by 2100[30]. This equates to the loss of power generation due to climate change of 956

[26] Climate change impact on the livestock sector in Kyrgyz Republic, 2013.
[27] TNC (2016)
[28] TNC (2016)
[29] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119
[30] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119

GWh/y at 2050 and 1,738 GWh/y at 2100. At the current low selling price of power, this loss of power production would total USD 9.5 million per year in 2050 and USD 17.4 million per year in 2100[31]. Given the importance of hydropower to the Kyrgyz Republic, any changes in hydropower production could negatively affect consumers' access to electricity. This would also have knock-on effects on the broader national economy and on health and emergency situations.

Changes in climate, together with economic development, are likely to change seasonal energy demand over coming decades. An increased average annual temperature will also affect energy demand in winter and summer. Although increased temperatures could imply a reduction in the energy demand during the winter season, it may not necessarily count as a reduction in annual electricity demand as there will be an increase in demand for cooling due to a larger number of hotter days in the summer[32].

Transmission and distribution networks are also exposed to climate risks. Increased temperatures and increases in extreme events, such as landslides and mudslides, could also have impacts on transmission and distribution lines transporting energy between the CAPS and also from the South to the North of the Kyrgyz Republic. Given the transmission and distribution network already suffer considerable losses due to aged equipment, lack of maintenance and extensive wear and tear, climate change could further increase these losses and an increase in extreme events would cause further physical damage to the infrastructure.

1.2.4 Emergency situations

Most of the territory of the Kyrgyz Republic is mountainous, leaving it exposed to a number of hazards such as landslides, mudslides, landslips, rockfalls, avalanches, flooding and glacial lake outbursts, which are already causing considerable damage every year[33]. According to the Kyrgyz Ministry of Emergency Situations (MES), 5,259 natural disasters occurred from 1990 to 2016, with 2,936 of them having happened in the past decade. Meteorological hazards such as winds, heavy rainfalls, and severe weather and climate hazards amounted to 13.3% of all disasters in the country. The rate and magnitude of landslides and avalanches, 70% of flooding and phreatic rise depend on seasons rains, snow and glacier melting. (Data from the MES KR book "Hazard monitoring and forecasting 2017".) The scale and frequency of climate change-related natural disasters increase more than 1.5 times every 10 years. The number of climate-caused natural disasters such as floods and mudslides (41% of all disasters), landslides (12%) and avalanches (17%) significantly increased, which resulted in major destructions involving human and livelihood losses. In the past five years from 2012 to 2017, the number of hazardous areas and facilities increased to 22%. In 2016, direct losses from natural disasters amounted to KGS 1,006,176,000 (44% from floods and mudslides, 42% from fires and technological emergencies, and 11% from hail showers) [34]. The annual losses from natural disasters make USD 30-35 mln. As such, emergency situations are included as a "Priority Direction for Adaptation to Climate Change in the Kyrgyz Republic till 2017" and are also recognised by the NSSD as a threat to sustainable development.

[31] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119
[32] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119
[33] TNC (2016)
[34] Monitoring and forecasting of hazardous processes and events in the Kyrgyz Republic in 2017. http://mes.kg/upload/Kniga_2017.pdf

Observed trends in weather extremes are expected to continue into the future. Climate change is projected to result in the following changes in the frequency of certain emergency situations[35]:

- An increase in occurrence of heavy rain, floods and mudflows and avalanches;
- Unchanged distribution of wind storms; and
- An increase in the number of landslides.

The increased frequency of some of these hazards is likely to translate into increased loss of life or serious injury, damage to property and infrastructure, with ensuing economic productivity losses and increased pressure on emergency services in the country.

1.2.5 Healthcare

Climate change and an associated increase in extreme weather events are likely to have direct and indirect impacts on the health sector and population's wellbeing. The "Programme of the Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011-2015" lists several areas that will be affected by changing climate conditions with associated health risks: food security, food and water safety, frequency of disasters and emergencies (such as flooding and mudslides), and the prevalence and spread of pests and diseases. The key impacts identified are:

- Decreased food security as a result of reductions in agricultural production;
- Increased incidence of infections (in particular gastro-intestinal diseases such as salmonella) as well as re-emergence and/or occurrence of malaria in the Kyrgyz Republic (especially in the southern areas of Osh, Jalal-Abad and Batken oblast) due to rising average annual temperatures, as well as water contamination associated with increased flooding;
- Increases in the frequency of and magnitude of floods and mudflows resulting in direct injuries and respiratory problems and also damage to crops and local infrastructure that could further augment food insecurity; and
- Increased risk of heatwaves, particularly from vulnerable populations in the areas of Osh, Jalalabad and Batken Provinces, the Fergana Valley area, the southern part of the country, and Chui Valley, including Bishkek.
- **Temperature, air pressure and precipitation changes are expected to increase the number of lost life years due to premature mortality with strong dependence on temperature. The number of lost life years due to premature death from respiratory diseases in men under 65 was 2.6 times higher than in women.**

However, climate change may also bring some positive benefits for public health in the Kyrgyz Republic. For example, the "Programme of the Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011-2015" anticipates a decrease in winter mortality and prevalence of respiratory diseases owing to lower precipitation. However, climate change caused by climate variability may reduce these potential benefits.

1.2.6 Forestry and biodiversity

The Kyrgyz Republic harbours a high concentration of biodiversity in its diverse ecosystems, including 2% of the world's flora and 3% of the world's fauna species within its relatively small territory[36]. They

[35] TNC, (2016)

provide a source of livelihood for rural communities and also various ecosystem services that help (e.g. increase tourism potential of the country). As such, forestry and biodiversity together have been included as one of the "Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017". The NSSD also recognises the importance of healthy and functioning ecosystems to the overall economy and wellbeing of the Kyrgyz Republic.

Climate change will impact all forest landscapes and biodiversity in the Kyrgyz Republic[37]. A key risk is that the increase in annual average temperature and change in precipitation patterns (in particular a decrease) could result in a much longer growing season and also a vertical displacement of plant community zones (particularly at an altitude of around 1600m). This would mean an increased likelihood of redistribution of tree growth zones to higher altitudes. Many tree and plant species may not be able to adapt to the changes to the warmer climate and may disappear, resulting in a loss of the ecosystem services they provide. For instance, according to modelling carried out when developing the "Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017"[38], tree growth areas of the three main tree species in the Kyrgyz Republic (juniper, walnut and spruce) are all projected to change slightly under projected temperature change of 1.5°C while under a scenario of 4°C and 6.4°C increase in temperature is projected to lead to a complete displacement of the species, accompanied with the loss of the ecosystem services they provide. In addition, the area of forest destroyed by forest fires has increased in the period 2011-2014[39], and could increase further in line with increased average annual temperatures. Finally, forests are also vulnerable to more frequent outbreaks of pests and diseases as an impact of climate change. The gypsy moth and globose scale, in particular, have been dangerous pests whose occurrence has been linked to climate change.

1.2.7 Municipal water supply

Water supply infrastructure is already in very poor condition and heavily dilapidated. For instance, many of the 1,074 water systems are failing and water loss rates are high (35-45%)[40]. Over half the rural populations obtain their drinking water from water pumps, and one-fifth from springs, ditches, rivers and ponds[41]. There are already numerous health risks involved in obtaining drinking water from open water bodies. While the Kyrgyz Government Programme "40 Steps to the New Era" recognises the risks posed by environmental threats and risks including climate change to uninterrupted water supply, this sector is not included as a separate "Priority Direction for Adaptation to Climate Change in the Kyrgyz Republic till 2017" (although it is briefly noted under the Priority Direction on Water Resources) despite risks to the population's wellbeing from dilapidated or damaged municipal water supply infrastructure.

The quantity of water available for human consumption and irrigation could be at risk due to climate-driven changes in water resources, together with exposure to natural hazards. Retreating glaciers and changed in seasonal snowfall and melt will lead to greater uncertainty over water discharge patterns

[36] Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector, 2015.
[37] Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector, 2015
[38] The comprehensive reference is not included in the Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector but a reference is made to the modelling carried out by V.A. Kuzmichenok in 2011.
[39] Number of forest firest per year: 2011 – 13ha; 2012- 37ha; 2013 – 22.9ha; 2014 – 54h, according to the Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector.
[40] ADB Climate Change Assessment for the CSP 2013-2017.
[41] SNC, 2009

over the year and could threaten domestic supply and agriculture production, among other areas[42]. Furthermore, an increase in annual average temperatures could lead to further deterioration of water quality in open water bodies, possibly causing more infections. In addition, increased frequency of landslides and other events can cause increased harm to infrastructure, further disrupting water supply.

1.2.8 Transport

Transport infrastructure is generally in poor condition, with limited financial resources for upgrade and maintenance, and is vulnerable to damage from extreme climate events. Inland roads[43] constitute the most important transport infrastructure due to the mountainous geography of the country and lack of navigable waterways. These roads, of which only 38% are paved, are extremely vulnerable to damage from landslides, mud-flows floods and avalanches[44]. Transport is one of the strategic development sectors, and the Kyrgyz Government under its Programme "40 Steps to the New Era" will enhance the transit capacity and aim its efforts at rehabilitation and maintenance of motor roads and development of international transport corridors, owing to the need to "*increase the transport and transit potential of the country to improve the access of the population to markets for goods and services*". Despite the importance of transport infrastructure to national economic development and its current vulnerability to extreme events, the sector was not included as a "Priority Direction for Adaptation to Climate Change in the Kyrgyz Republic till 2017", nor has a dedicated vulnerability assessment been done on the transport sector for the SNC or TNC, although it is mentioned under the emergency situations section.

Climate change will have direct negative impacts on transport infrastructure. As discussed in Section 1.2.4, the frequency of emergency situations is projected to change as a result of increase in average annual temperatures and changes in precipitation trends. For instance, in the Kara Kulja region, flood and mudflows normally occur from April to June as a result of heavy rain during this period, causing significant damage, including the destruction of infrastructure, bridges, and roads. In the same region, climatic factors associated with climate change including heavy rain, rapidly melting heavy snow, and glacial melt have caused an increase in the occurrence of floods over the period 2005-2011 which have caused extensive damage, destroying bridges, roads and houses[45]. In addition to the increase in frequency of extreme events that threaten to cause more frequent damage and of a larger magnitude, increase in average annual temperatures could also affect road surfaces sensitive to softening or melting.

1.2.9 Mining

The mining industry is an important and very strategic sector of the Kyrgyz economy and as such, it is included in the NSSD and the Kyrgyz Government Programme "40 Steps to the New Era" as one of priority sectors of the economy. According to the NSSD, *"the location of the majority of mining facilities (92 radioactive and toxic sites of the mining industry) in the vicinity of the formation of cross-border water flows in territories with high seismicity, proneness to mudslides and landslides represents*

[42] ADB Climate Change Assessment for the CSP 2013-2017.
[43] Covering 340,000km in total in the Kyrgyz Republic (SNC, 2009).
[44] SNC, 2009.
[45] From the document: Climate Change Trends, Impacts, and Adaptation in Kara Kulja: a Final Report, 2011.

a major danger to the entire Central Asian region". Furthermore, the Kyrgyz Republic does not have appropriate facilities for storage and treatment of unusable toxic industrial wastes[46].

Mining activities are normally located in fragile mountainous areas and could be threatened by an increased frequency of extreme events, such as mudslides and glacial lake outburst floods. The storage of waste products from mining is an area of particular concern. Tailings and other toxic waste (for instance, radioactive waste) typically stored in tailings dams could be at risk of breaching due to changes in surface water flow[47], extreme events and glacial lake outburst floods. Any failure of these dams would cause spillovers of hazardous waste slurry, with catastrophic environmental consequences and risks to public health. There has already been one such incident on the second tailings dump of the Aktuz mining and processing complex which produced lead. At this site a dam breach resulted in an accidental, uncontrolled release of 100,000m^3 of pulp from the processing plant. The waste slurry covered the fields and orchards of five villages near the Kazakh border before it could be collected. Surveys taken decades after the incident reveal that the territory and neighbouring areas have been contaminated with lead, and have caused health impacts on a major percentage of habitants there[48]. Climate change could result in increased risk of industrial accidents and dam breaches, particularly if not constantly monitored, in line with projections of increased surface flow and increased frequency of extreme events. Several concerns about expanding size and volume of a glacier lake and increasing probability of its glacial moraine dam break with threatening consequences for the tailing pit of one of Kyrgyz Republic's largest gold mines have already been raised[49].

1.2.10 Private sector

The private sector in the Kyrgyz Republic is dominated by small entities operating in the informal sector – mainly farmers, individual entrepreneurs and small enterprises – who have high dependency on income from climate-sensitive sources. These income sources include agriculture and low and unsustainable income sources, including unskilled labour and social allowances[50]. The potential impacts of climate risks, such as lower agricultural productivity of some main crops, higher market prices of crops and an increase in climate-related disasters, affects household income and ability to meet their food requirements,[51] and the wider economy.

Climate-related shocks, particularly from extreme events such as floods and landslides, have destructive impacts on private sector assets and the ability of private sector stakeholders to transport their goods. This leads to increased capital expenditure and operating costs. Naturally, small enterprises are predominantly focused on immediate cash flow and improvement of their local circumstances. This makes it challenging to engage them in the issue of climate resilience, which is inherently a more long-term planning issue.

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[46] SNC, 2009

[47] For instance, changes due to an increase in surface water flow in the near term (before the tipping point for 'peak water') due to glacial melt

[48] SNC, 2009

[49] http://www.irinnews.org/feature/2015/12/02/cop21-how-glacial-melt-and-toxic-waste-could-spell-disaster-kyrgyzstan

[50] World Food Programme (2014). Kyrgyz republic: An overview of climate trends and the impact on food security. http://www.uncclearn.org/sites/default/files/inventory/wfp269918.pdf

[51] World Food Programme (2014). Kyrgyz republic: An overview of climate trends and the impact on food security. http://www.uncclearn.org/sites/default/files/inventory/wfp269918.pdf

The private sector is exposed to current and future climate risks associated with water and energy security. Moving beyond the climate risks to farmers (covered in Section 1.2.2), the other main areas of private sector activity in the Kyrgyz Republic facing climate risk are mining and manufacturing (mainly agro-processing and textiles). Climate-related risks to mining are outlined in Section 1.2.9. Manufacturing businesses are reliant on a secure supply of water and energy – both are which are uncertain under a changing climate. For agro-processing, climate impacts to water quality can also create risks for product quality and safety standards.

The climate risks individual farmers and small businesses face are often exacerbated by poor access to financial services. Financial inclusion, including access to saving and transfer services, and provision of credit and insurance at an affordable cost, offers significant climate resilience benefits[52]. Where interest rates on loans are high, this discourages investment in adaptive capacity, and leads to greater debt burdens for poor households taking loans, or both[53].

1.3 Overview and linkages to existing development plans and programs

The Kyrgyz Republic has taken substantive steps towards creating national and sectoral strategies that address development and climate resilience. Several of these are due to expire soon, or are being renewed (see Table 1). This document builds on these policies and strategies, aligns with them as appropriate, and integrates them in order to provide a coherent investment plan.

Table 1. Kyrgyz Republic's key national strategies and policy documents relevant for climate resilience

Policy document	Responsibility for drafting	Year of adoption	Status	Purpose
National Strategy for Sustainable Development for the Kyrgyz Republic 2013-2017	National Council for Sustainable Development of the Kyrgyz Republic)	2013	Ongoing; expiring in 2017	The NSSD outlines a five-year vision for the Kyrgyz Republic and is the "*first public document outlining key vectors of political, economic and social development of the country that has been developed in the new format of the country's political system*". The NSSD also stresses the importance of climate change considerations as part of a sustainable development approach.
Long-term Strategy for Development of the Kyrgyz Republic till2040	National Council for Sustainable Development	--	Under development	--
Program of the Kyrgyz Republic on Transition to Sustainable Development for 2013-2017	Kyrgyz Government	2013	Ongoing; expiring in 2017	The Program is a road map document, describing the implementation process for the NSSD. Like the NSSD, climate change adaptation is included in the Environment Section in the Programme.
Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017	State Agency on Environment Protection and Forestry	2013	Ongoing; expiring in 2017	The main goal of the Priority Directions for Adaptation on Climate Change in the Kyrgyz Republic is to establish a national policy for resource mobilization to minimize risks to the most vulnerable economic sectors of the Kyrgyz Republic and take advantage of potential opportunities arising from climate change.

[52] Haworth, A., Frandon-Martinez, C., Fayolle, V. and Simonet, C. (2016). Climate Resilience and Financial Services. BRACED Working Paper. https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10316.pdf

[53] Hoff, H., Warner, K., Bouwer, L.M. (2005). The Role of Financial Services in Climate Adaption in Developing Countries, Vierteljahrshefte zur Wirtschaftsforschung, ISSN 1861-1559, Duncker & Humblot, Berlin, Vol. 74, Iss. 2, pp. 196-207

Policy document	Responsibility for drafting	Year of adoption	Status	Purpose
Kyrgyz Republic's Third National Communication (TNC) to the UNFCCC	State Agency on Environment Protection and Forestry, Climate Change Centre	2016	Submitted to UNFCCC	The TNC provides a report on the steps the Kyrgyz Republic is taking or envisage undertaking to implement the provisions under the UNFCCC. The Adaptation section of the TNC presents the methodology of the assessments of the most vulnerable sectors to expected climate change impacts.
The Kyrgyz Republic's Intended Nationally Determined Contribution (INDC)	State Agency on Environment Protection and Forestry, Climate Change Centre	2015	Submitted to UNFCCC	The INDC presents information on actions to tackle climate change by the government that are in alignment with the main strategic national development documents (NSSD and implementation plan), and with the national adaptation policy (Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017) and sectoral adaptation strategies

The Kyrgyz Republic has created coordination bodies and sectoral working groups in charge of climate change-related matters, including several with explicit reference to climate resilience. These include, for example, the Coordination Commission on Climate Change Problems (CCCCP)[54], the Interagency Working Group (IAWG) on climate finance[55], and the working group on adaptation to climate change in the health sector[56]. Regulations have been drawn up to formally establish these bodies. A Focal Point on climate finance has been appointed within the government at the level of Vice Prime Minister.

Several laws, regulations and decrees are connected to the fulfilment of the Kyrgyz Republic's obligations under the Kyoto Protocol and the decisions achieved under the UNFCCC. The ratifying Law for the Paris Agreement was due for release after September 21, 2016, when the Kyrgyz Republic officially signed the Paris Agreement. The ratification is expected to follow the signature; it will have important implications for climate resilience and climate finance reporting for the responsible Kyrgyz authorities.

Line ministries in the Kyrgyz Republic have developed several sectoral adaptation strategies and plans of action for key climate-sensitive socio-economic sectors, such as water resources and agriculture (addressed jointly), health, forestry and biodiversity, and emergency situations. However, other economically-important, climate sensitive sectors including energy, mining, transport and municipal water supply do not have sectoral adaptation strategies to date, even though they are considered as priority sectors for sustainable development in the NSSD 2013-2017. While energy is discussed in "Priority Directions on Adaptation to Climate Change in the Kyrgyz Republic till 2017", only climate change mitigation actions are listed for the energy sector in that document.

1.4 Rationale for PPCR support

The Kyrgyz Republic's sustainable livelihoods, food security, infrastructure services, and supply chains are increasingly exposed to the negative impacts of climate change on a variety of key socio-economic

[54] Establishment of the Coordination Commission for the Climate Changes Problems, 21/11/2012 No. 783.
[55] Official SAEPF Order on the establishment of the IAWG, 04/2016. Amended with Official Order of SAEPF 30/06/2016 Ref. No. 01-9/182.
[56] Creation of a Working group on adaptation to climate change in the health sector of the Kyrgyz Republic under the Ministry of Health, 20/05/2009 No. 271.

sectors and the environment. As discussed in Section 1.2, climate change is likely to affect Kyrgyz Republic's sustainable development path if not properly addressed. As presented in Section 1.3, measures are in place that address development and climate resilience, but there is need for a framework that brings coherence to the multiple strategies, plans and funding opportunities currently existing in the country.

Therefore, the first major rationale for PPCR support is this document is an Operational framework for managing access to climate finance in the Kyrgyz Republic (hereinafter, the Climate Investment Programme (CIP)). This CIP proposes ten investment priority components, that are presented in more detail in Section 2 of this document. The CIP is therefore seen as a plan to mobilise and leverage finance for climate resilience in key economic sectors, from a variety of sources, including PPCR, other climate finance mechanisms, such as the Green Climate Fund (GCF), Multi-lateral Development Banks (MDBs) finance, and development partners.

The second rationale is that the CIP will provide a shift in approach to development planning and scaled-up action towards climate resilience. The Kyrgyz Republic's wide-ranging vulnerabilities require a systematic approach, rather than a series of reactive, uncoordinated, near-term interventions. CIP will provide financial and technical support to the Kyrgyz Republic in order to undertake the systematic, transformational changes required. To enable this shift in approach, capacity building, institutional strengthening and coordination among government, private sector and civil society stakeholders will be key, together with investments by both the public and private sectors.

The third rationale is that the CIP will provide the appropriate framework to address increasing international reporting obligations on climate change action and support. The CIP will define clear responsibilities for developing and implementing a common Monitoring and Evaluation (M&E) framework for investment proposals and projects. This will allow tracking of the delivery of agreed measures, establishing their effectiveness in reducing vulnerability, creating an opportunity for learning and adaptive management, and fulfilling reporting requirements with the UNFCCC, PPCR, GCF and other international Climate Funds. The role of organization responsible for climate finance in the country (the Climate Finance Centre, see next section) is described in Section 2.16 hereof.

The fourth rationale is that the CIP will provide a detailed capacity development programme, to be taken forward under PPCR Component 2. As an important part of the investment framework presented by the CIP, a training programme has been developed to enhance the capacities of key stakeholders in the Kyrgyz Republic for climate resilience strategic planning, delivery and monitoring. The training programme targets decision-makers and technical staff of the organization responsible for climate finance in the country (Climate Finance Centre – see next section) in the Kyrgyz Republic, and other key national stakeholders, including government ministries and agencies, NGOs and the private sector. It has been designed based on the findings of the Institutional Assessment, and will be implemented under PPCR Component 2. The training programme is presented in details in Section 1.5.5 hereof.

The fifth, and perhaps most important rationale is that this CIP will enable the Kyrgyz government to deliver an ongoing sustainable process for developing and managing investment components for climate resilience. The CIP will ensure coherence of proposed investments from organizations in the Kyrgyz Republic and international development partners, and set out a country-owned climate finance project cycle that can provide the basis to identify climate resilience investments and develop bankable projects. This will allow for the CIP to be a participatory, living investment plan that can evolve according to national priorities and stakeholders' interests over time. All identified programme components should be further developed and maintained by the organization responsible for climate

finance in the country (the Climate Finance Centre – see next section), with support from development partners and donors. This process is explained in more detail in Section 2 and subsections of this document. Finally, it is also expected that design and structuring of several priority investments in key economic sectors will be supported under PPCR Component 3. This is further described in Section 3.

1.5 Institutional analysis

This section summarises the results of an institutional assessment undertaken to inform decisions on the longer-term capacity development needs of the Kyrgyz authorities on climate resilience strategic planning, delivery and monitoring. The assessment covers the current institutional capacity of a range of stakeholders, including national bodies and local self-governments, the private sector, and NGOs, together with cross-cutting issues such as gender and vulnerable groups. Recommendations are then made on key capacity building areas and mainstreaming of cross-cutting issues, including a proposed training programme. This section closes with a description of the proposed institutional arrangements on climate resilience in the Kyrgyz Republic, including the establishment of a Climate Finance Coordination Mechanism (CFCM) and, within it, a Climate Finance Centre (CFC).

An efficient and effective CFCM and, within it, a CFC, will help the Kyrgyz Republic to successfully mainstream climate change considerations into sustainable development planning and align the country's efforts with international requirements regarding climate finance. A CFCM is a system of stakeholders and their relationships that work jointly to mobilise climate and development finance from a variety of sources, and coordinate and blend them together to support the development and implementation of climate projects in the country in alignment with national development priorities. The central administrative element of the CFCM is the CFC.

During the First Joint PPCR MDB Mission in April 2016, eight core functions were identified for the CFCM[57]. Some of these functions were deemed to already exist in the Kyrgyz Republic, but need to be further strengthened and better resourced. Other functions were considered to not yet exist in the country and need to be developed. A list of the core functions and examples of their key deliverables/outcomes is presented in Table 2.

Table 2. Core functions of the Climate Finance Coordination Mechanism needed to ensure an effective approach to climate resilience strategic planning, delivery and monitoring in the Kyrgyz Republic

Function	Key deliverables/outcomes
Function 1: Climate change strategy development and coordination	1. Incorporation of climate change considerations into key national policies and strategies relevant for climate resilience
Function 2: Identification of climate resilience project priorities	2. Long list of priority climate resilience measures (potential climate action priorities)
Function 3: Development and management of climate resilience project pipelines	3. Project pipeline
Function 4: Development of climate resilience project funding proposals	4. Project concept notes; Technical and Financial proposals

[57] The relationship between the eight core functions and how these could be delivered within the CFCM are explained in the Discussion Paper 'Options for the Climate Finance Coordination Mechanism and Climate Finance Secretariat in the Kyrgyz Republic', which was presented to the Kyrgyz authorities in December 2016.

Function 5: Government's approval of climate resilience project funding proposals	5.	No Objection Letter
Function 6: Implementation of climate resilience projects	6.	Project implementation
Function 7: Monitoring, evaluation and reporting on climate resilience projects	7.	Monitoring and evaluation (M&E) Report
Function 8: Communication, outreach and awareness-raising on climate resilience projects and activities	8.	Communications via appropriate channels (e.g. website, workshops, newsletters, TV)

1.5.1 Current institutional arrangements and capacity to address climate resilience

This section presents an overview of the current institutional set-up that is relevant for coordinating climate change and climate resilience matters in the Kyrgyz Republic. It summarises the climate-related mandates and responsibilities of national level government institutions and inter-ministerial coordination committees and bodies, regional and local level government institutions, private sector, NGONGOs, academia, and development partners that could play roles in the Kyrgyz Republic Climate Finance Coordination Mechanism (CFCM).

1.5.1.1 National government institutions and inter-ministerial coordination bodies and committees

The Vice Prime Minister for economic affairs has been appointed as the Focal Point on climate finance (specifically for PPCR) within the Kyrgyz government. The State Agency for Environment Protection and Forestry has been appointed as the Nationally Designated Authority (NDA) for the Green Climate Fund (GCF).

The newly created Climate Finance Centre has been appointed as the lead institution in charge of climate finance-related matters. The Government of the Kyrgyz Republic has established the CFC[58] as the Secretariat of the Climate Finance Coordination Mechanism, on 14 August 2017. The main role of the Centre is to assist the Government in attracting financial resources from climate funds, including from the GCF as well as various international organizations, and to support design and implementation of climate resilience investment projects and programme.

In addition, the CFC is tasked to interact with state authorities, international organizations, development partners, interested NGOs, business organizations, educational and scientific institutions on climate change. Its mandate also includes to provide assistance to the Government in developing a national strategy on climate change and monitoring of climate change investment programmes by GCF and other international organizations.

The institutional location, management and internal structure of the CFC are currently being discussed within the government (September 2017).

The Coordination Commission on Climate Change Problems (CCCCP)[59] is the main inter-governmental coordination platform for climate change issues. In August 2017, the Government of the Kyrgyz

[58] Official resolution of the Kyrgyz Republic Government on establishment of the Climate Finance Centre, 14/08/2017 No. 478.
[59] Establishment of the Coordination Commission for the Climate Changes Problems, 21/11/2012 No. 783.

Republic has issued an amendment to the resolution on the CCCCP[60], which can be summarised as follows:

- The Vice Prime Minister is the Chairman of the CCCCP and the national coordinator for projects related to Nationally Determined Contribution (mitigation), adaptation and Clean Development Mechanism;
- The Deputy Head of the Government Office is the Deputy Chairman of the CCCCP (previously SAEPF's Director performed this role); and
- The Head of the Climate Finance Centre is now a member of the CCCCP (the Director of the NGO Climate Change Centre was removed from the list of members).
- SAEPF now serves as the working body of the CCCCP.

Table 3 below describes national government institutions of relevance to climate resilience that could have roles to play within the CFCM under the guidance of the CFC and in coordination with the CCCCP.

Table 3. Key national government institutions relevant for climate resilience

National government Institution	Mandate and responsibilities for climate resilience
Climate Finance Centre (Climate Financing Centre of the Kyrgyz Republic)	The newly created Climate Finance Centre is mandated to assist the Government in attracting financial resources from climate funds, including from the GCF as well as various international organizations, and to support design and implementation of climate resilience investment projects and programme.
KR President's Office	The Department of Financial and Economic Analysis and Monitoring of Development holds the main responsibility to coordinate the preparatory work on the new NSSD for the period up to 2040, and hosts the Secretariat of the National Council for Sustainable Development (NCSD).
Parliament (Zhogorku Kenesh of KR)	It debates and ratifies laws that approve financial agreements in relation to climate change and climate resilience loan-based projects.
KR Prime Minister	The Prime Minister chairs the Coordination Commission on Macroeconomic and Investment Policy (CCMIP).
KR First Vice Prime Minister	The First Vice Prime Minister has responsibility over economic development and planning, investment attraction and Eurasian economic Council.
KR Vice Prime Minister	The Vice Prime Minister chairs the Coordination Commission on Climate Change Problems (CCCCP) and is the main Focal Point for climate finance (PPCR). The Vice Prime Minister has responsibility over agriculture development, environment and forest management, water management policies, industry, fuel and energy complexes, use of subsoil and mineral resources.
KR Vice Prime Minister (for social affairs)	The Vice Prime Minister has responsibility over social policy, migration, employment, family, children, youth, education, sciences, health care, ethnic development, gender policy, cultural development, and communication.
KR Vice Prime Minister (for cross-border issues)	The Vice Prime Minister has responsibility over defence and protection of the population and territories from emergency situations.
KR Government Office	The Government Office carries out the monitoring, analysis and information work and the elaboration of proposals on

[60] Resolution of the Government of the Kyrgyz Republic No. 477 of August 14, 2017. On Amending the Decree of the Government of the Kyrgyz Republic "On the Coordination Commission on Climate Change" of November 21, 2012 No. 783.

	the implementation of foreign policy, development of international cooperation and cooperation with international organizations, under the coordination of the Chief of the Government Office. The Department of Economy and Investments of the Government Office serves as Secretariat of the Coordination Committee on adaptation, implementation and monitoring of the Sustainable Development Goals (SDGs) till 2030. It also has a coordination role with regard to the new National Strategy for Sustainable Development (NSSD) for the period up to 2040. The Department of Agro-Industry and Ecology of the Government Office is in charge of coordinating climate change-related issues under the Vice Prime Minister. The Deputy Chief of Staff of the Government Office (responsible for environmental issues) is the Deputy Chairman of the Coordination Commission on Climate Change Problems (CCCCP), and is the national contact for climate financing and has the right to sign official documents required for the implementation of projects.
KR Ministry of Finance	The Ministry of Finance takes part in the review and approval phase, as well as monitoring and evaluation of loan-based investment projects on climate resilience; in particular, it is responsible to sign off the Letter of Interest on proposed projects. It has the mandate to prepare an Action Plan on the introduction of a coordination system of external aid with definition of concrete sources of financing for SDGs.
KR Ministry of Economy	The Ministry of Economy is responsible for key activities in relation to management of investment and development projects, including climate change investments. It coordinates the development of medium- and long-term National Strategies for Sustainable Development. It also serves as Secretariat of the CCMIP.
State Agency on Environment Protection and Forestry under the Kyrgyz Government	The State Agency on Environment Protection and Forestry (SAEPF) responsible for policy implementation and regulation in the area of environmental conservation, environmental security, and nature use. It is responsible for fulfilment of the obligations of the Kyrgyz Republic under the UNFCCC and Kyoto Protocol (Resolution of the Kyrgyz Government of 16 January 2006) and is the focal point for the UNFCCC and the National Designated Authority for GCF. It serves as the working body of the CCCCP under the Vice Prime Minister. It also leads the multi-stakeholder partnership of the Climate Change Dialogue Platform of Kyrgyzstan (CCDP-Kg). SAEPF's Director is: • the Operational Focal Point (OFP) for the GEF; • Co-chair of the Inter-ministerial Commission on GEF; • Chair of the Inter-Agency Working Group (IAWG) on Climate Finance; • Member of the PPCR Sub-Committee.
KR Ministry of Foreign Affairs	The Ministry of Foreign Affairs has the responsibility for representing the Kyrgyz Republic in international fora and

	is involved in international and national climate change policy processes, with the Department of International Organizations and Security within the Ministry. The Vice Minister of Foreign Affairs co-chairs the Inter-ministerial Commission on Cooperation with the GEF, together with the Director of SAEPF, and debates and approves project proposals to GEF.
KR Ministry of Emergency Situations	The Ministry of Emergency Situations supervises the work of the Hydrometeorology Agency, KyrgyzHydromet. The Ministry works to prevent damages produced by environmental disasters including those linked to climate change. It is responsible for the sectoral adaptation strategy on emergency situations.
KyrgyzHydromet under MES KR	KyrgyzHydromet provides a wide range of data and information, including specialized environmental, meteorological, agro-meteorological and hydrological information. It issues warnings about weather-related events.
KR Ministry of Health	The Ministry of Health is in charge of public health and is active on climate change issues, primarily through its research groups including the Scientific and Production Centre for Preventive Medicine (SPCPM) and the National Centre of Cardiology and Therapy. It is responsible for the adaptation strategy for the health sector; it has established working groups on climate change and adaptation.
KR Ministry of Agriculture, Food Industry and Land Reclamation	The Ministry of Agriculture, Food Industry and Land Reclamation is responsible for the national policy on agriculture, land and water resources, irrigation and land reclamation infrastructure and processing industry, including the climate change adaptation strategy covering agriculture and water sector.
KR Ministry of Transport and Roads	The Ministry of Transport and Roads is responsible for national policies and regulations on transport including road maintenance reform and financing.
KR Ministry of Education and Science	The Ministry of Education and Science coordinates state policy in the field of education, science and scientific-technical activities.
KR Ministry of Labour and Social Development	The Ministry of Labour and Social Development holds the overall responsibility for gender equality issues and for coordinating the National Council for Gender Development. The Department of Gender Policy monitors the implementation of activities by ministries under the National Plan of Action on gender equality.
State Agency for Architecture, Construction and Communal Services under the Kyrgyz Government	The State Agency for Architecture, Construction and Communal Services (Gosstroy) is responsible for the implementation of national planning, monitoring and management in the country's municipal water and construction sectors.
State Agency on Local Self-Governance and Interethnic Relations under the Kyrgyz Government	The State Agency on Local Self-Governance and Interethnic Relations (SALSGIR) coordinates the creation of conditions for the sustainable development of the system of local self-government, for achievement of economic growth and welfare of the population, and strengthening of interethnic relations.
KR State Committee on Industry, Energy and Mining	The State Committee on Industry, Energy and Mining is responsible for development and implementation of policy in industry (excluding food industry), fuel and energy sector and mining. It has established incentive mechanisms for energy efficiency and conservation, and renewable energy use.
National Energy Holding Company JSC	The National Energy Holding Company (JSC) is a

	government-owned company, subordinated entity to the State Committee on Industry, Energy and Mining, and serves as the main assets holding company of the thermal and hydropower production, transmission and distribution companies in country and supplier of electricity to internal and foreign demand.
KR National Statistical Committee	The National Statistical Committee is responsible for the collection, processing, analysis and dissemination of statistical information on macro-economic, social, demographic and environmental phenomena and processes taking place in the Kyrgyz Republic and its Provinces. It provides gender-disaggregated and climate-relevant socio-economic indicators. In the context of the SDGs nationalisation process, it is leading work on development of indicators monitoring methodology, system of interrelated indicators and additional indicators for the SDGs. The Department of Sustainable Development and Environmental Statistics of the National Statistical Committee has established a section that works on climate change issues; dedicated working groups develop climate change indicators and recommendations.
KR National Institute for Strategic Studies	The National Institute for Strategic Studies (NISS) is a governmental research centre, providing high-quality research and analytical consulting for higher authorities to facilitate state decisions. It supports the Prime Minister in preparing strategy documents and investment projects, including on climate finance coordination issues.
KR National Academy of Science	The National Academy of Science (NAS KR) conducts and develops fundamental research in natural, technical, and social sciences in the Kyrgyz Republic. It comprises specialised research institutions, such as the Institute of Water Problems and Hydropower, Institute for Biology and Soil, Institute of Geology, Institute of Physics and Mountain Rocks, Forest Institute, Institute for Nuts and Fruit Farming in Jalal-Abad. It regularly provides expert support to SAEPF in developing policy documents on climate change.

Table 4 lists the inter-ministerial committees and bodies established within the Government of the Kyrgyz Republic to serve a variety of purposes relevant to climate resilience, that could have a role to play within the CFCM under the guidance of the CFC and in coordination with the CCCCP.

Table 4. Inter-ministerial committees and bodies relevant for climate resilience

Inter-ministerial committee	Mandate and responsibilities for climate resilience
Coordination Commission on Climate Change Problems	The Coordination Commission on Climate Change Problems (CCCCP) manages and coordinates the activities of ministries, agencies and organizations that are related to performance of the Kyrgyz Republic's obligations under the UNFCCC and the Kyoto Protocol, including reporting. It coordinates activities of ministries and agencies to ensure mainstreaming of climate change considerations in national, social, economic and environmental policies. It coordinates with potential investors on strategic matters related to climate change. It coordinates activities in relation to drafting and implementation of climate change project proposals and has the right to mobilize experts of government bodies for the purposes of carrying out scientific and technical review of climate projects.

	It coordinates and facilitates in developing normative legal documents, instructions and methodologies that regulate the process of managing climate change activities. In relation to approval of investments: • CCCCP Chair (Vice Prime Minister) is the focal point for mitigation (NDC, CDM), and adaptation projects; • CCCCP Deputy Chair (The Deputy Chief of Staff of the Government Office) is the national contact for climate financing and has the right to sign official documents required for the implementation of projects. • SAEPF is the working body for CCCCP.
Coordination Council on Macroeconomic and Investment Policy	The Coordination Council on Macroeconomic and Investment Policy (CCMIP) considers and approves general investment proposals, based on a well-defined methodology for selection of priority investments projects for funding from foreign investors and international organizations.
Inter-ministerial Commission on Cooperation with the GEF	The Inter-ministerial Commission on Cooperation with the GEF approves project proposals to the GEF which are aligned to national priorities, and to monitor their implementation.
Inter-Agency Working Group on Climate Finance [formerly: Inter-agency Working Group on PPCR]	The Inter-Agency Working Group (IAWG) on Climate Finance is responsible to participate in PPCR activities; as well as for interagency and inter-sectoral coordination for the review, discussion, provision of recommendations, and approval process of funding proposals for climate change adaptation and mitigation.
Business Development and Investments Council	It responsible for developing and preparing recommendations and suggestions to the President of the Kyrgyz Republic, Government of the Kyrgyz Republic and other state agencies concerning problems of improving the business environment and investment situation in the Kyrgyz Republic and implementing projects necessary to accelerate socio-economic development, under the Prime Minister. It has regional branches in Osh and Naryn.
KR National Council for Sustainable Development	The National Council for Sustainable Development (NCSD) approved the 2013-2017 NSSD and is in charge of monitoring of the strategy implementation. The Secretariat of the National Council for Sustainable Development coordinates the development of the Long-term Strategy for Development of the Kyrgyz Republic till 2040.
Coordination Committee on Adaptation, Implementation and Monitoring of the Sustainable Development Goals till 2030	Coordination Committee on Adaptation, Implementation and Monitoring of the Sustainable Development Goals (SDGs) till 2030 coordinates the nationalisation process of the SDGs in the Kyrgyz Republic. The Department of Economy and Investments of the Government Office hosts the Secretariat of the Committee (which was previously assigned to the Ministry of Economy).
Climate Change Dialogue Platform of Kyrgyzstan	The Climate Change Dialogue Platform of Kyrgyzstan (CCDP-Kg) is a multi-stakeholder platform focused on climate change established by SAEPF. It is open to interested parties and stakeholders in order to build effective communication and dialogue on adaptation

	plans and development initiatives. It was engaged in discussions on national positions within the UNFCCC and on the Kyrgyz Republic's INDC.
National Council on Gender Development under the Kyrgyz Government	The National Council on Gender Development is in charge of equality legislation, policies and implementation of gender equity, and is coordinated by the Ministry of Labour and Social Development.

Regional public and municipal structures

The Kyrgyz Republic sub-national administrative system has three main levels: provinces (oblast), districts (rayon) and local administrations (towns or villages). In addition, there are two cities of republican status (Bishkek city and Osh city). In practice, the functions and authorities at local levels, as well as responsibilities between the bodies are not clearly defined.

Regional government structure and municipalities agree that their level of awareness and action on climate resilience requires significant capacity development. Climate change is not on the local agenda and climate change considerations are not yet integrated as appropriate into local development programmes. There are exceptions where some capacities already exist and would require strengthening (e.g. Bishkek municipality). Local governments have potential roles to play in the Climate Finance Coordination Mechanism, especially for implementation of climate resilience projects. Province, district and community level consultees stated that they are highly interested in developing their adaptive capacities since they perceive that climate change already negatively affects local livelihoods.

1.5.1.2 Private sector

Key relevant private sector organizations for climate resilience include businesses such as Small and Medium Enterprises (SMEs), business associations and local finance institutions. Businesses in the Kyrgyz Republic are mostly represented by small entities operating in the informal sector – mainly farmers, individual entrepreneurs and small enterprises – who have high dependency on income from climate-sensitive sources. The institutional assessment focused primarily on the assessment of two groups of private sector entities: local microfinance institutions (MFIs) and business associations who are members of the Business Development and Investment Council under the government of Kyrgyz Republic.

Private sector consultees agree that the capacities of the sector on climate resilience strategic planning, delivery and monitoring require strengthening. Climate change was recognised as a threat by all private sector organizations who were consulted; however, most MFIs consultees had only just started looking into climate risk and resilience issues in detail, and most business organizations have not looked into them at all yet. Therefore, they do not yet have a solid understanding of climate-related risks and opportunities, and knowledge of how to adapt.

A range of barriers to action on climate resilience were identified through the institutional analysis. The most significant barriers preventing MFIs from understanding and taking actions to adapt to a changing climate are reported to be: lack of access to climate finance, and lack of information about available technological solutions. For business organizations, the main barriers reported include: lack of understanding of the benefits of adapting to climate change, insufficient staff capacity, and lack of access to climate finance.

1.5.1.3 Non-governmental Organizations

The NGO sector in the Kyrgyz Republic is considered one of the strongest in Central Asia. NGO representatives are engaged with the government at the national and local levels through numerous

consultative public councils at the ministries and agencies. Kyrgyz NGOs work in a wide range of areas, including human rights, support to vulnerable groups, culture and art, health, protection of the environment, youth and sport, education and advocacy. A group of organizations works specifically on climate change issues, under the banner of the Climate Change Dialogue Platform of Kyrgyzstan (CCDP-Kg) and the Climate Network of Kyrgyzstan (CNK). These networks gather organisations that have undertaken numerous joint initiatives on climate change, in collaboration with ministries and state agencies of the government of the Kyrgyz Republic, where NGOs act as implementing entities.

Specialised national research institutions and National Academy of Science (NAS KR), together with other academic institutions who engage in research and dissemination of climate change data and information. These include research organizations that have the status of foundations and NGOs – most notably the Climate Change Center (CCC) – and specialised institutions within public and semi-private universities.

NGOs and academic institutions have many strengths and comparative advantages to offer with respect to building climate resilience, including:

Experience in developing climate funding proposals; they can provide knowledge of local circumstances, needs and barriers of local communities into project design;

Opportunities to reach out to local communities to raise awareness on climate change and promote climate resilience among target groups through participatory processes; and

The ability to represent women's groups and vulnerable groups in climate resilience processes.

Nevertheless, they agree that it is necessary to significantly improve capacity across all climate finance functions, particularly the development and management of climate resilience project pipelines and preparation of project proposals.

1.5.1.4 Cross-sectoral issues

<u>Gender equality</u>

Drastic limitation of women's access to implementation of their economic opportunities seems to be the most acute and noticeable gender problem in the Kyrgyz Republic. Gender equality is among the key conditions that facilitate effective implementation of transformative climate resilience actions: it is necessary to identify women and men's differentiated vulnerabilities to climate change, incorporate specific needs of both women and men in climate resilience programmes and projects, and consider possible barriers that would prevent women from benefitting from such measures and investments.

Some mechanisms and instruments are already in place to promote gender equality in the Kyrgyz Republic. These can help track progress on gender equality and can represent useful gender entry points in climate resilience project formulation and monitoring, including the National Strategy on Gender Equality to 2020 and the National Action Plan on Gender Equality for 2015-2017.

Coordinated action by the Kyrgyz government, development partners, private sector and NGOs on gender and climate change is still to be developed. The government has assigned main responsibilities for the promotion of gender equality to the Ministry of Labour and Social Development, the National Council on Gender Development under the Kyrgyz Government, and the National Statistical Committee. However, the systemic capacity to ensure mainstreaming of gender issues in public life is still developing. The lack of gender focal points, properly institutionalised structures within departments, and the overall need for appropriate human and financial resources, leave gender policy largely unimplemented in the Kyrgyz public administration. Development partners are working

on gender issues in the country. Also, the private sector offers microfinance services for women entrepreneurs. Women's groups are better represented by NGOs compared to other vulnerable groups, and may therefore have a higher chance to participate in climate-related decision-making.

Vulnerable groups

Climate-vulnerable groups in the Kyrgyz Republic include the rural population engaged in climate-sensitive sectors, such as agriculture, and internal migrant workers. Currently, the Kyrgyz Republic takes steps to reduce the rural-urban divide in terms of access to services. Socially vulnerable groups that work in climate-sensitive sectors such as agriculture are exposed to multiple vulnerability factors: increase in frequency, severity and intensity of extreme weather and climate events that keep them in a poverty trap. Internal migration flows from rural to urban areas are an increasing phenomenon. Lack of access to basic services for internal migrant workers reduces their capacity to cope with climate change impacts.

Coordinated action by the Kyrgyz government, development partners, private sector and NGOs, jointly addressing vulnerable groups and climate change is still to be developed, although some initiatives are in place. For example, the World Food Programme (WFP) undertakes local consultations to identify problems, prepare proposals and implement them with participation of farmers and other stakeholders in order to develop climate resilience project proposals.

Knowledge management, education and scientific capacity

Effective management and dissemination of reliable climate information needs strengthening in the Kyrgyz Republic, in order to be an effective mechanism supporting climate-resilient development in the long term. In the Kyrgyz Republic, the Hydrometeorology Agency under MES (KyrgyzHydromet) has the technical expertise. This organization requires development of its technical expertise, and is lacking financial and human resources.

There are questions about the robustness of climate data and scenarios used in climate risk assessments. The Kyrgyz Republic, like other Central Asian countries, suffers from a degraded hydrometeorological observation network. Further, current climate risk assessments for the country do not draw on a wide range of climate model outputs, so they cannot be considered robust to climate change uncertainties. Several development partners' projects relate to the collection and processing of climate change data, conducting climate risk and/or vulnerability assessments, and training for Kyrgyz Republic institutions on the areas of climate change science and knowledge.

Links between academia and decision-makers on climate change issues require strengthening, as research efforts are not currently focused on providing climate services to support decision-making on climate resilience in key sectors. Specialised institutions within the National Academy of Science (NAS KR), the Climate and Green Technologies Institute (CAIAG), and the universities' network in Kyrgyzstan could undertake this research if their capacities on climate change are strengthened.

There are no studies on introduction of innovative climate resilient approaches in the agriculture, which could be recommended to farmers for implementation.

A system for transfer of skills, knowledge and technologies (including on climate resilience) has not been developed at the local level. There is no sustainable farmer training system. Currently, WFP is supporting the testing of the National Short-Term Farmer Training System (SKaP). This system can be used as a platform for dissemination of knowledge and building of a research and practice educational chain.

1.5.2 Proposed institutional arrangements on climate resilience/ climate finance coordination

This section presents the proposed institutional design for an efficient and effective Climate Finance Coordination Mechanism (CFCM) and, within it, a Climate Finance Centre (CFC) which will help the Kyrgyz Republic to successfully mainstream climate change considerations into sustainable development planning and align the country's efforts with international requirements regarding climate finance.

A CFCM is a system of national stakeholder organizations and their relationships that work jointly to mobilise climate and development finance from a variety of sources, and coordinate and blend them together to support the development and implementation of climate projects in the country in alignment with national development priorities.

The central administrative element of the CFCM is the CFC. As mentioned above, the CFC[61] was established on 14 August 2017 by the government of the Kyrgyz Republic with the following main objectives:

- Assistance in the attraction of financial resources and investments from the Green Climate Fund and other international organizations;
- Assistance in advancing of investments, implementation of programs and projects in the field of climate change.

The specific tasks of the CFC include:

- Interaction with State authorities, international organizations, development partners, interested NGOs, business organizations, educational and scientific institutions on climate change;
- Assistance in developing a national strategy on climate change;
- Assistance in attraction of financing in the sphere of climate change;
- Participation in the implementation of programs and projects funded by the GCF and other international organizations;
- Participation in the monitoring of climate change projects;
- Participation in raising public awareness in the field of climate change.

Structure of the CFC

The institutional location, management and internal structure of the CFC are currently being discussed within the government (October 2017). It is anticipated that the final arrangements for the CFCM and CFC will be approved by a government decision. A Grant Agreement between EBRD and the Kyrgyz Republic for PPCR *Component 2 – Institutional strengthening, capacity building and awareness raising* will then be put in place.

The proposed structure and key reporting lines of the CFC in the Kyrgyz Republic are illustrated in Figure 1. The structure of the CFC envisages 10 potential staff positions, under the supervision of a CFC Head and Deputy Head. Specialists are to be recruited to ensure that the CFC addresses the eight CFCM functions, including in relation to coordination of climate policies, climate finance and

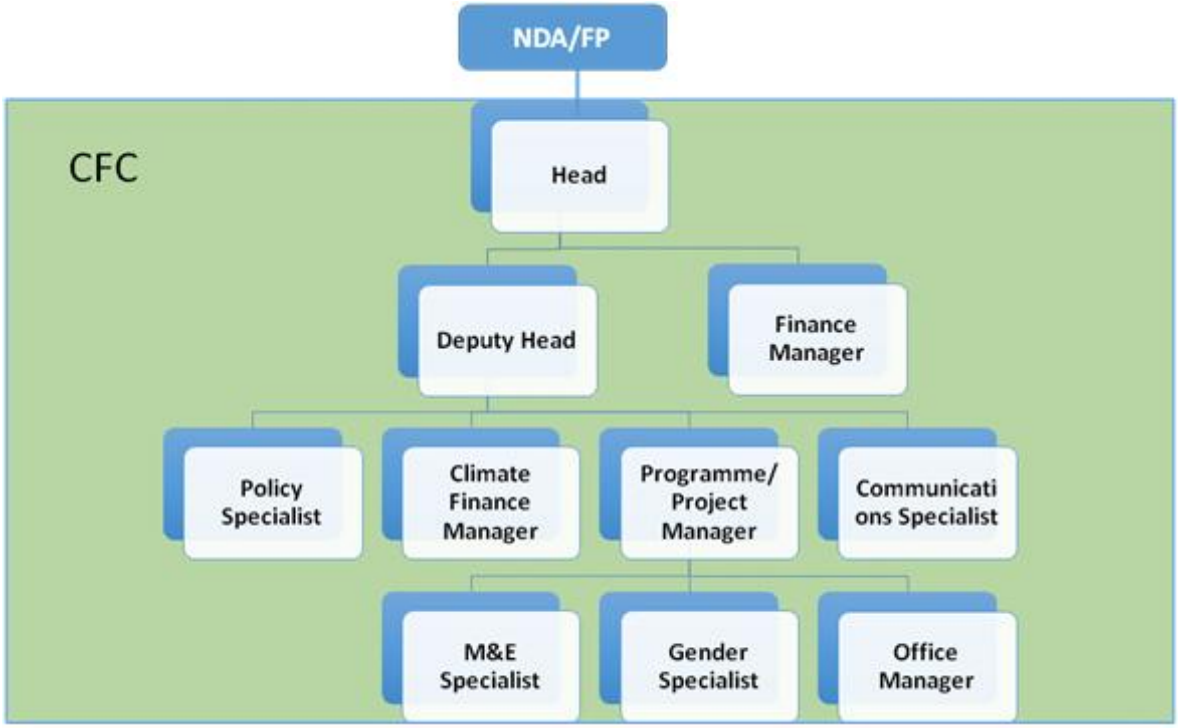
[61] Official resolution of the Kyrgyz Republic Government on establishment of the Climate Finance Centre, 14/08/2017 No. 478.

programme/project development and management, as well as for monitoring and evaluation (M&E), gender, and communications. It is expected that CFC staff will be contracted as Government employees (as opposed to consultants). The duration of the staff contracts will depend on the annual budget required to run the CFC. Typical Project Implementation Unit (PIU) payscales will be a starting point for salary negotiation. Office arrangements will depend on the government decision about the institutional location of the CFC. While initially the operations of the CFC will be funded under the Grant Agreement, thereafter additional funding will be required to ensure sustainability of the CFC over time.

The CFC Head will report to the climate finance Focal Point in the country. The NDA / Focal Point is responsible for overall coordination of stakeholders involved in climate change and climate finance. It develops work programmes, oversees funding proposals and directly engages with the GCF through the SAEPF that functions as the NDA for GCF until the final decision is made by the Kyrgyz Government[62]. **As noted above, while a focal point on climate finance (PPCR) has been appointed at the level of Vice Prime Minister, and SAEPF is the GCF NDA. Expert recommendations based on other countries' experience show that it will be important for the same lead institution to cover both the role of coordination lead on climate finance (i.e. heading the CFC) and the NDA / Focal Point functions.**[63]

Further details on the organization's structure and staff requirements are presented in Annex 3.

Figure 1. Proposed structure and reporting lines of the Climate Finance Centre of the Kyrgyz Republic



[62] Aide Memoire of the Second Joint Mission of MDB, September 23, 2017.

[63] Examples are illustrated in the Discussion Paper 'Options for the Climate Finance Coordination Mechanism and Climate Finance Secretariat in the Kyrgyz Republic', which was presented to the Kyrgyz authorities in December 2016.

1.5.3 Recommendations for key capacity building areas and mainstreaming of cross-cutting issues

A set of recommendations has been developed through the institutional assessment, to address the identified capacity gaps, to ensure the Kyrgyz Republic is well-positioned to access and utilise climate finance effectively, and so that cross-cutting issues can be mainstreamed in climate resilience activities. They are briefly summarised in this section and presented in full in Annex 1. These recommendations have informed the design of the training programme described in the following section.

Capacity-building is needed for the following functions of the CFCM:

- **Function 1: Climate change strategy development and coordination.** The Kyrgyz Republic has made progress on developing strategies for sustainable development and climate resilience (as noted in Section 1.1), but the coordination and inclusiveness of these processes with stakeholders outside national government ministries and agencies can be strengthened and improved.
- **Function 2: Identification of climate resilience project priorities.** Technical expertise, financial and human resources for organizations managing climate data and information and undertaking climate risk assessments can be strengthened. Production and accessibility of climate data and climate change risk assessments targeted at each stakeholder group can be improved. Capacities of all stakeholders should be enhanced via targeted training.
- **Function 3: Development and management of climate resilience project pipelines.** Coordination among stakeholders can be enhanced, including through the establishment of Public Private Partnerships. Dedicated training targeted at each stakeholder group on basic and detailed project preparation, including participatory planning, to build project pipelines, should be provided.
- **Function 4: Development of climate resilience project funding proposals.** Collaboration between stakeholders that can provide technical support in proposal preparation can be fostered. Dedicated training on climate finance proposal preparation in line with requirement of climate funds such as GCF targeted at each stakeholder group should be provided.
- **Function 5: Government's approval of climate resilience project funding proposals.** There is need to ensure that the lead organization on climate finance coordination has a well-defined, transparent, and inclusive process for government's approval of climate resilience funding proposals.
- **Function 6: Implementation of climate resilience projects.** Coordination of efforts between stakeholders on project implementation can be improved. Dedicated training on management and implementation of climate resilience projects, and on GCF accreditation, targeted at each stakeholder group should be provided, including for municipalities, private sector and NGOs.
- **Function 7: Monitoring, evaluation and reporting on climate resilience projects.** Training and capacity building on M&E of climate resilience projects for the lead organization for climate finance and targeted stakeholders for monitoring of physical project implementation should be provided; specific focus must be also placed on climate change impact indicators and evaluation of adaptation functions opportunities and their effectiveness. Harmonisation and integration of indicators and methodologies related to monitoring and reporting on climate change and Sustainable Development Goals (SDGs) can be promoted.
- **Function 8: Communication, outreach and awareness-raising on climate resilience projects and activities.** Dissemination and awareness-raising campaigns can be organised by the lead organization on climate finance, also considering the role of municipalities, private sector and NGOs. A long-term, public awareness-raising programme on climate change and climate resilience at national and local level that

promotes the inclusion of vulnerable groups and women, with the involvement of all stakeholders, can be developed.

Capacity-building is needed to improve consideration of gender equality and vulnerable groups in all activities associated with climate resilience planning, delivery and monitoring. This will aim to ensure integration of socially-inclusive and gender-responsive approaches in all of the areas for capacity-building listed above. In particular, it is also recommended that a Gender Specialist should be appointed in the CFC to liaise with key national authorities, NGOs and other stakeholders.

1.5.4 Recommendations for developing climate resilience policies and CIP

The institutional assessment process also contributed to identify the appropriate structure for the CIP investment plan. The key recommendations have been accounted for in the design of this CIP document. The recommendations are presented in full in Annex 1, and summary recommendations are listed below.

- The CIP Operational Framework document should be considered a "living document", that will enable a participatory, dynamic investment plan that can evolve according to national priorities and stakeholders' interests over time. All identified programme components should be further developed and maintained by the Climate Finance Centre with support from development partners and donors.
- Appropriate indicators to measure climate resilience from the early stages of project preparation, taking into account indicators for cross-cutting issues, as well as relevant overlaps with SDGs indicators, should be included in the CIP proposed investments.
- In this CIP Programme, coherence of proposed investments from Kyrgyz Republic's Government and international development partners should be ensured. A country-owned climate finance project cycle should be set out, that can provide the basis to identify climate resilience investments and develop bankable projects.
- In developing and implementing the CIP, the participation of all stakeholders for investment components and capacity building activities, should be considered as appropriate.
- In the CIP, economically-important climate-sensitive socio-economic sectors to be considered should be based on, and complement, existing national priorities and policy documents, and draw from a range of scientific studies.
- In the CIP, cross-cutting issues should be incorporated by considering differentiated needs of women's and vulnerable groups, and sex-disaggregated indicators. A framework for climate information services for economic sectors should also be included.

1.5.5 Training programme

A training programme has been developed to enhance the capacities of key stakeholders in the Kyrgyz Republic for climate resilience strategic planning, delivery and monitoring. The training programme targets decision-makers and technical staff of the Climate Finance Centre (CFC) in the Kyrgyz Republic, and other key national stakeholders, including government ministries and agencies, NGOs and the private sector. It has been designed based on the findings of the Institutional Assessment, and will be implemented under PPCR Component 2. The primary objectives of this training are to: 1) Build knowledge and capacity of the CFC and national stakeholders on accessing, managing and monitoring climate finance; and 2) Contribute to an informed dialogue on climate finance amongst stakeholders at all levels.

The training course has a modular structure to address a wider range of learning needs of stakeholders, with varying objectives and levels of proficiency in climate change, climate finance and project development. A modular structure allows trainers to choose appropriate content and design tailored training courses according to the learning needs and objective of the targeted audience. The proposed course for the Kyrgyz Republic is structured around 6 training packages, with a total of 17 modules targeting specific learning needs, as presented in Table 5.

Table 5: Overview of the training packages and their corresponding modules

Package	Modules
Introduction to climate change	**Module 1:** Climate change
Climate change policy and responses	**Module 2.** Climate change policies **Module 3**. Adaptation and mitigation strategies
International Climate Finance Landscape and access modalities	**Module 4.** Introduction to international climate finance **Module 5.** National climate funds **Module 6.** Introduction to accessing international climate finance **Module 7.** Introduction to GCF accreditation process and requirements
Institutional climate finance framework	**Module 8.** Stakeholders and institutions **Module 9.** Private sector engagement
Climate change mainstreaming, planning and budgeting	**Module 10.** Climate change mainstreaming in planning and budget **Module 11.** Good financial governance **Module 12.** Measurement, Reporting and Verification (MRV)
Project development	**Module 13.** Project pipeline development **Module 14.** Project proposal development **Module 15.** Logical framework Module 16. Gender **Module 17.** Monitoring & Evaluation

Further details on the training programme are provided in Annex 2, including a detailed description of each module outlined in Table 5.

1.6 Stakeholder engagement for the development of the CIP

The participation process that led to the development of the CIP included consultations with a wide range of stakeholders, for the institutional assessment, and related to ongoing and future investment plans relevant to the CIP. **A full list of the stakeholders consulted is provided in Annex 4.**

1.6.1 Joint MDB Official and Technical missions

The development of the CIP was informed by the information collected in the course of PPCR missions:

1. First PPCR MDB Joint Official mission (18-22 April 2016), that included:
    - Consultations on institutional arrangements and on investment prioritisation and preparation
      with the Kyrgyz Government (19 April 2016).
    - Workshop with NGOs (21 April 2016).
    - Workshop with donors and international organizations (21 April 2016).
2. PPCR MDB Joint Technical mission (5-9 December 2016), that included:
    - Consultations on identification of effective CFCM with the Kyrgyz Government (7 December 2016).
3. Second PPCR MDB Joint Technical mission (19-22 September 2017), that included:
    - Discussions on the CIP consultation draft held with the Kyrgyz Government (September 20, 2017),
    - Workshop with NGOs (September 21, 2017), and
    - Workshop with donors and international organisations (September 21, 2017).

1.6.2 Participation process for the Institutional Assessment

The institutional assessment was informed by targeted meetings:

1. Questionnaire-based consultations undertaken in large group workshops and through semi-structured interviews with individuals or small groups from single organizations. Specifically:
    - Two workshops: one involving members of the Interagency Working Group (IAWG) (on 16 August 2016), and one with NGOs (23 August 2016). Both workshops were hosted by the State Agency on Environment Protection and Forestry (SAEPF).
    - Smaller consultation meetings with government ministries and agencies, development partners, private sector stakeholders and NGOs, from August to November 2016.

2. Participation in climate change events and workshops in the Kyrgyz Republic, specifically:
    - Roundtable “Strengthening Public-Private Dialogue”, organised by the Business Development and Investment Council under the government of Kyrgyz Republic (Issyk Kul, 1-3 September 2016).
    - High-level workshop “From Paris to Bishkek: on the way of climate-resilient sustainable development in Kyrgyzstan”, organised by UNDP and Embassy of Finland (Bishkek, 28 September 2016).

3. Online surveys dedicated to assessing the capacity of the private sector with:
    - Business representatives, through the Secretariat of the Business Development and Investment Council under the government of Kyrgyz Republic.
    - Local microfinance institutions, through a dedicated workshop organised by MicroEnergy International (Bishkek, 24 October 2016).

1.6.3 Consultations on identification of a well-functioning and effective Climate Finance Coordination Mechanism (CFCM), including a Climate Finance Centre (CFC) in the Kyrgyz Republic

During the course of the institutional analysis, Kyrgyz authorities expressed their interests in identifying the most suitable option for the CFCM and the location of the CFC within that mechanism. A joint MDB technical mission to the Kyrgyz Republic was therefore undertaken to present and discuss options for the CFCM and CFC with the representatives of the Kyrgyz Government in December 2016.

Following the MDB Joint Technical Mission, the Government Office of the Kyrgyz Republic met with the MDBs and development partners to further facilitate the establishment of the CFCM.

Over December 2016 and January 2017, internal governmental discussions on the CFCM took place at the national level. As a result of this process, the Prime Minister of the Kyrgyz Republic informed MDBs that:

- the responsibility for climate finance coordination will lie with the Government Office;
- the First Vice Prime Minister has been nominated by the Prime Minister to lead the CFCM discussions and engage with MDBs and development partners on this topic, and
- the Government will issue a Government Resolution that will clarify institutional arrangements for climate finance coordination.

On 1st March 2017, MDBs made a presentation at the 96th Development Partners Coordination Council's (DPCC) meeting. DPCC members were informed by MDBs about the latest development on CFCM, including the outcome of the MDB Joint Technical mission in December 2016.

On 22nd March 2017, there was a meeting between the First Vice Prime Minister of the Kyrgyz Republic Mr. M. D. Abulgaziev and development partners, including MDBs, UNDP, GIZ and FAO. The First Vice Prime Minister emphasized the importance of establishing the CFCM and defining climate investments for the Kyrgyz Republic.

Following this meeting, a few other meetings between the First Vice Prime Minister, Government Office and MDBs were held. MDBs were duly informed about the ongoing internal discussions on CFCM.

A Government Resolution establishing the Climate Finance Centre (Secretariat of the CFCM) including its Charter, was issued on 14th August 2017. On the same day, an amendment to the Government Resolution on the CCCCP was also issued, stating that the CCCCP will remain the main coordination platform for climate change issues in the country with some changes in roles and membership.

1.6.4 Consultations for the development of the Operational framework for managing access to climate finance in the Kyrgyz Republic

Development of this document involved detailed consultations, both formal and informal. Three MDB Joint Missions and a number of informal consultations have been arranged.

On September 5, 2017, the Kyrgyz Government has distributed the consultation draft of the CIP document among Kyrgyz ministries and agencies in order to receive feedback by October 1, 2017. In addition, the website www.climatefinance.kg has been launched to post the consultation draft and received comments on the document from all stakeholders.

In course of the Second PPCR MDB Mission (19-22 September, 2017), formal consultations on the consultation draft of the Operational Framework for Managing Access to Climate Finance in the Kyrgyz Republic have been held with ministries and agencies. Consultative workshops on the PPCR project in the Kyrgyz Republic were also held with NGO, donors and international organisations.

Following the Second MDB Joint Mission, consultations with line ministries and agencies were undertaken with support from the Kyrgyz Government Office, which have immediately contributed to development of concepts for activities applying for grants. These meetings allowed discussion and clarification of partners' expectations and integrate their proposals and suggestions in the document.

2 Proposed investment program components

2.1 Outline of the CIP

The Kyrgyz Republic's climate resilience needs are numerous and involve several socio-economically important, climatically-vulnerable sectors. Hence a strategic and transparent approach is required to leverage financing opportunities and ensure that investments are targeted and deliver multiple benefits. The Kyrgyz Republic is highly vulnerable to the adverse effects of climate change, and significant investments in climate resilience are required to reduce the risks to critical infrastructure, economic activities, vulnerable communities, and important services and ecosystems. The NSSD identifies investment needs in important sectors of the economy, which have been developed without consideration of climate risks and resilience. This CIP document recognises that there are opportunities – not to be missed – to incorporate climate resilience into those investment projects.

The CIP builds on the national policies and strategies, aligns with them as appropriate, and integrates them in order to provide a strategic investment plan of the Kyrgyz Republic. The Kyrgyz Government's adaptation policy, "Priority Directions on Adaptation to Climate Change in the Kyrgyz Republic till 2017" and associated sectoral adaptation strategies, identify a range of sectoral adaptation investment needs, which when pooled together create a long list of potential climate resilience measures. In the country context of limited resources for implementation, particularly financial and institutional capacities, developing a more strategic and transparent approach helps to focus efforts and demonstrates a comprehensive and robust assessment to climate finance providers, donors and private investors.

The CIP is considered a "living document", with the CFC being responsible for coordinating the process of selecting investment components, in line with existing priorities of development partners and donors. It is envisaged that over time, a participatory and dynamic investment plan will evolve according to national priorities and stakeholders' interests.

The financing needs for building climate resilience in the Kyrgyz Republic are significant and beyond the timespan and resources available from PPCR alone. Therefore, as the CIP moves towards implementation, it will be important to explore synergies between the PPCR and other SCF programmes, including the Green Climate Fund (GCF), together with Multilateral Development Banks (MDBs) and development partners' investments in the region. The CFC has the overall responsibility to attract international funding, participate in the development and financing of proposals, and conduct examinations of the proposed and implemented climate resilience projects. The CCCCP is the main coordination platform in relation to drafting and implementation of climate change project proposals and can draw upon experts within government bodies for the purposes of carrying out scientific and technical reviews of climate resilience projects.

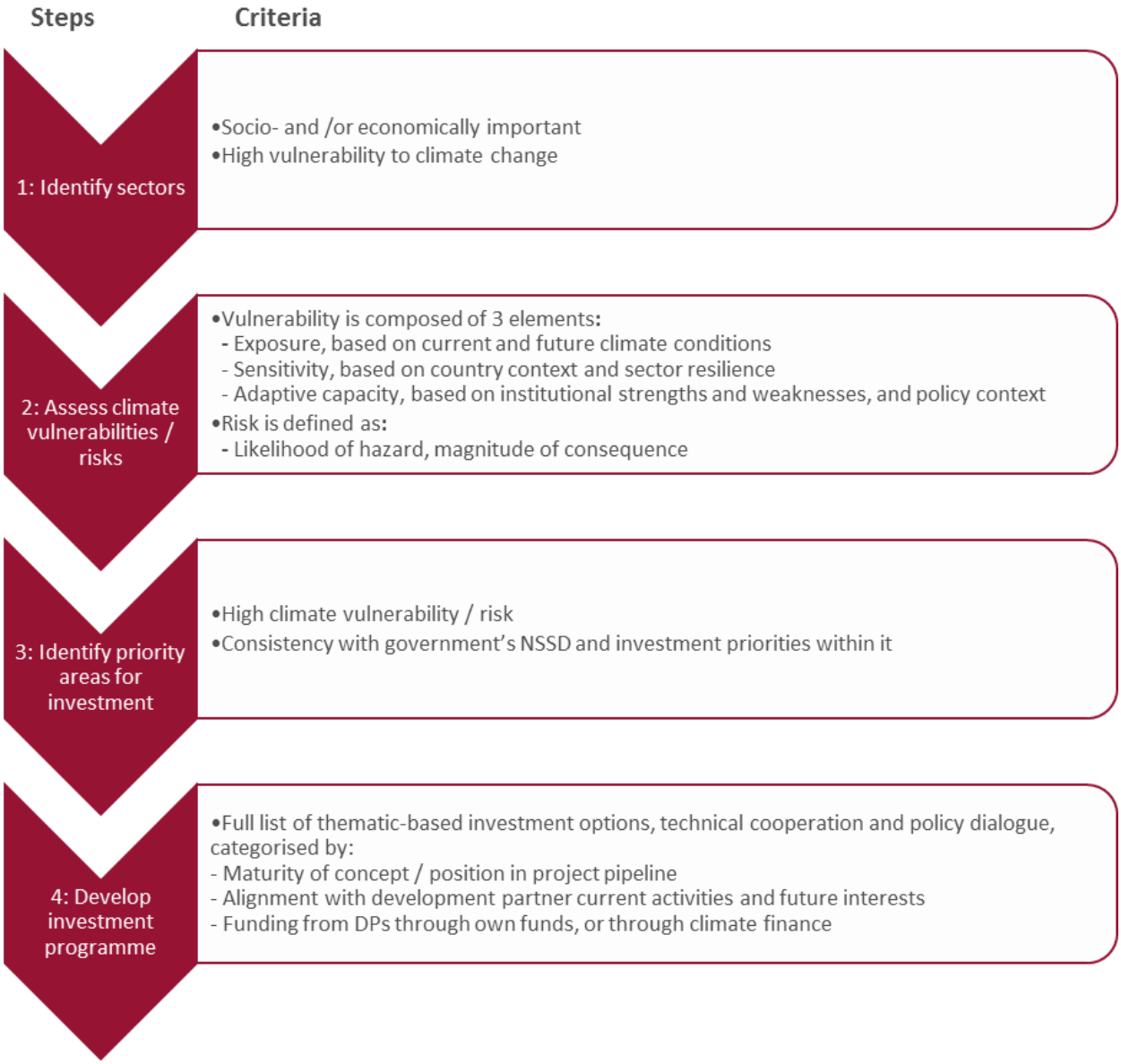
2.2 Framework for identifying climate resilience investment program components

The framework developed for the CIP has been developed following a logical, step-by-step risk-based approach to identify investment needs. To promote transformational change, the framework is systematically connected to the country's existing national development policies, investment planning and priorities. As presented in Figure 2, there are four key steps in the process, as follows:

- Step 1: Identify the sectors that are socio- and / or economically important and highly vulnerable to current and future climate change. Sectors deemed socio-economically important include those contributing significantly to GDP, employing a large proportion of the country's workforce, providing infrastructure or services of national importance and contributing to key development objectives, as noted in the National Strategy for Sustainable Development for the Kyrgyz Republic for the period 2013-2017 (NSSD). In terms of vulnerability to climate change, focus has been placed on sectors that are already susceptibility to disruption from severe weather events and likely to face increasing risks in the face of climate change. For the Kyrgyz Republic, this naturally leads to the inclusion of agriculture, energy and healthcare, for example.
- Step 2: Assess sectoral vulnerabilities, climate risks and opportunities. A robust assessment of the climate vulnerabilities and risks facing the Kyrgyz Republic has been undertaken using existing published information. High risk is defined as high likelihood of occurrence and large magnitude of consequence. For some economically important sectors in the Kyrgyz Republic, the evidence base on climate risks is less developed, however, this does not mean the sector is "lower priority" for climate resilience; rather the initial resilience-building activities for these sectors will focus more on developing knowledge and collecting further information, in order to identify adaptation investment needs.
- Step 3: Identify priority areas for investment, using the criteria of exposure to high climate risk (as defined above) and alignment with the government's current investment priorities and strategic vision. The priority areas for investment are based on meeting the needs outlined in:
    - National Strategy for Sustainable Development for the Kyrgyz Republic for the period 2013-2017 (NSSD), namely the specific investments where climate resilience can be mainstreamed in key economically-important and climate-sensitive sectors. These include rehabilitation or upgrades to existing infrastructure and industrial facilities, and investments in new facilities. It should be noted that a new NSSD is being developed, covering the long-term (to 2040) and medium-term (2018-2023). The investment programme set out in this CIP will be reviewed and revised when the new NSSD is published, to ensure coherence.
    - Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017;
    - 2015 Intended Nationally Determined Contribution (INDC), and subsequent NDCs to be developed and submitted to the UNFCCC, outlining the Kyrgyz Republic's adaptation and mitigation targets;
    - Sectoral adaptation strategies for agriculture and water resources, emergency situations, healthcare, forestry and biodiversity; and
    - Concepts and proposals being developed by line ministries with the support of development partners.
- Step 4: Develop an investment programme, which is presented as a pipeline of climate resilience activities. Under each priority area identified at Step 3, there are pipelines of climate resilience activities, covering investment ideas and concepts, through to full proposals, together with technical assistance and policy dialogue. The pipeline represents a cluster of activities, some of which are stand-alone and others require sequencing and implementation in tandem with other activities. As such, the pipeline reflects the concept of climate resilience being a 'pathway'; a long-term process with some activities being implemented in the short-term or at short notice, and others that require more long-term planning and preparation. Infrastructure, the built environment and industrial sectors are priorities in the NSSD, and investments in these sectors typically require longer lead times between decision and implementation and the assets involved are frequently long-lived. Integration of climate resilience at an early stage in such investments is much more cost-effective than later retrofit. In these cases, it will be important that project design, operation and maintenance plans address the implications of future climate change in order to ensure operational performance and efficiency over

asset lifetimes. The long-lived nature of infrastructure, the built environment and industrial sectors mean that it is crucial to integrate climate resilience as early as possible to avoid potential future lock-in or costly retrofits.

Figure 2: Step-by-step framework for identifying investments



2.3 Introduction to the investment program components

The Kyrgyz Republic's climate resilience investment needs fall under a number of high-level sectoral themes and additional cross-cutting elements, which have been broken down into investment program components to ensure alignment with the institutional set-up of the Kyrgyz government. Based on literature reviews and in-country consultations, the high-level themes where resilience building is most needed are centred on:

- **Infrastructure and built environment:** Infrastructure and the built environment are long-lived and involves large investments. The Kyrgyz Republic has plans for significant investments in infrastructure

as set out in its NSSD, including rehabilitation of existing facilities and new infrastructure. It is essential that climate resilience is built into these investments to ensure the infrastructure continues to provide its services effectively for decades to come, in the face of climate variability and change. Buildings are also long-lived and involve significant investments for their owners.

- Water resources: Water resources underpin a number of other key sectors, including agriculture, energy, health, mining, forestry and biodiversity. There are already tensions over the existing use of water resources, both within the Kyrgyz Republic and with its neighbours. It is essential that current and future water resource management considers the implications of climate variability and change.
- Health and food security: Improving health and food security are key development objectives, with the two very much inter-related. Food security and nutrition issues as an investment priority must be addressed in terms of enhancement of buying power and capacities of people so that they can afford staple foodstuffs and non-foods, manage climate risks and, therefore, be more climate resilient owing to higher quality, diversified incomes as well as less climate-sensitive livelihoods. Food security is recognised in the NSSD as a significant threat to the country's sustainable national development, resulting in part from degradation of agricultural land. It is essential that climate resilience is integrated into agricultural practices to ensure food security and the health and wellbeing of Kyrgyz citizens.
- Ecosystems: Healthy and functioning ecosystems are vital for multiple sectors, including agriculture, water resources, and sectors dependent on them. An ecosystem-wide perspective is needed when considering any individual climate resilience activity, across a range of sectors. This is particularly pertinent for the Kyrgyz Republic considering the government's aspirations for an expansion of ecosystem-based tourism.
- Private sector: The private sector faces both risks from climate change and the opportunity to be a solution provider, through the provision of services, technology or finance. This means that within the context of this CIP, the private sector can be both a beneficiary of investment and a delivery agent. Improving the business environment and developing the private sector are seen as fundamental pillars of the NSSD, and it will be critical that this is achieved considering the implications of climate change, in terms of both the risks and opportunities.
- Emergency situations. Enhancement of adaptation in the Kyrgyz Republic's emergency situations sector is required first of all to make population, infrastructure and economy less vulnerable to natural disasters. Apart from short-term implications such as direct economic losses, emergencies adversely affect the long-term development and security of the society. Enhancement of adaptation in the emergency situations sector is aimed at improvement protection of population and territories against emergencies in order to enable sustainable development of the country. Climate resilience measures in the sector of emergency situations cover the spheres of all concerned parties and stakeholders, specifically, public bodies, local self-governments, civil society and private sector.

Within these themes, investment program components[64] are identified, which have been developed so that they align with the sectoral structure of the Kyrgyz government (line ministries and agencies) to ensure ownership within Government. As shown in Table 6, some of the investment program components support several themes, as represented by the repetition of components between rows.

In addition, for climate resilience activities to be effective within individual sectors, there are a number of cross-cutting elements. These elements:

[64] Priority areas for climate resilience investment

(i) support appropriate decision-making (e.g. through the provision of information, such as climate information services);
(ii) enable delivery and implementation of climate resilience investments (e.g. via NGOs and financial intermediaries); or
(iii) ensure equity (e.g. gender equality and inclusion of vulnerable groups).

These are also shown in Table 6.

Socially-inclusive and gender-responsive approaches are integrated into the design of the climate resilient investment proposals. Gender-disaggregated socio-economic variables are taken into account in the early stages of proposal development and will be monitored throughout the implementation phase. Project Result Management Framework and Performance Management Frameworks include gender indicators. Additionally, the investments align with national policies and priorities on gender. This is particularly crucial in the agriculture, water, energy and health sectors where women are disproportionately vulnerable to climate change in the Kyrgyz Republic.

In summary, the 'investment program components' identified for the Kyrgyz Republic are:

1. Improving the quality of climate services;
2. Improving food security from agriculture, through improved water resources, land management and agricultural practices;
3. Making energy supply infrastructure climate resilient;
4. Making transport infrastructure climate resilient;
5. Making municipal water supply climate resilient;
6. Making buildings climate resilient;
7. Increasing the climate resilience of healthcare;
8. Increasing the climate resilience of mining;
9. Enhancing private sector participation in climate resilience;
10. Enhancing the climate resilience of forestry and biodiversity; and
11. Enhancing the climate resilience of emergency situations.

Each of these investment program components is described in more detail below, with a narrative covering:

- Background and rationale;
- Development objectives;
- Activities (the pipeline described in more detail below);
- Programme-level key indicators; and
- Implementation arrangements.

Under each of these components, there are pipelines of climate resilience activities, covering investment ideas and concepts, through to full proposals, together with technical assistance and policy dialogue. Each activity within the pipeline is categorised based on:

- **Type of measures:** Physical ('hard'); Operational; Ecosystem-based; Technical cooperation; Policy dialogue; Learning and knowledge management
- **Status of preparation:** Early stage; Concept note; Full proposal
- **Source of funding:** Climate finance; Development Partners own funds; National budget

Further details are provided in an Excel-based pipeline spreadsheet, which includes indicative costs (where known), financial instrument (where applicable), lead government ministry/agency, lead development partner, other partners, e.g. NGOs, private sector, (where applicable), timeframe, risk assessment and management, results monitoring and reporting.

Table 6 provides a summary of the high-level sectoral climate resilience themes and cross-cutting elements, together with their associated investment program components.

Table 6: High-level sectoral climate resilience themes and cross-cutting elements, together with their associated investment program components.

Themes	Investment program components	Section
I. Infrastructure and built environment	• COMPONENT 3: Making energy supply infrastructure climate resilient	2.7
	• COMPONENT 4: Making transport infrastructure climate resilient	2.8
	• COMPONENT 5: Making municipal water supply climate resilient	2.9
	• COMPONENT 6: Making buildings climate resilient	2.10
II. Water resources	• COMPONENT 2: Improving food security from agriculture, through improved water resources, land management and agricultural practices	2.6
	• COMPONENT 3: Making energy supply infrastructure climate resilient	2.7
	• COMPONENT 5: Making municipal water supply climate resilient	2.9
III. Health and food security	• COMPONENT 7: Increasing the climate resilience of healthcare	2.11
	• COMPONENT 2: Improving food security from agriculture, through improved water resources, land management and agricultural practices	2.6
IV. Private sector	• COMPONENT 9: Enhancing private sector participation in climate resilience	2.13
	• COMPONENT 2: Improving food security from agriculture, through improved water resources, land management and agricultural practices	2.6
	• COMPONENT 8: Increasing the climate resilience of mining	2.12
	• COMPONENT 10: Enhancing the climate resilience of forestry and biodiversity	2.14
V. Ecosystems	• COMPONENT 10: Enhancing the climate resilience of forestry and biodiversity	2.14

	• COMPONENT 2: Improving food security from agriculture, through improved water resources, land management and agricultural practices	2.6
VI. Emergency situations	• COMPONENT 11: Enhancing the climate resilience of emergency situations	
Cross-cutting elements	**Investment program components**	**Section**
Climate information services	• COMPONENT 1: Improving the quality of climate services	2.5
Civil society organizations as delivery partners	• *The role of NGOs is embedded within several investment program components*	2.6, 2.10, 2.13, 2.14
Financial intermediaries as delivery agents	• COMPONENT 9: Enhancing private sector participation in climate resilience	2.13
Ensuring gender equality and inclusion of vulnerable groups	• *These elements are embedded within all investment program components*	All

2.4 COMPONENT 1: Improving the quality of climate services

2.4.1 Background and rationale

The Kyrgyz Republic is situated in the region, which is considerable exposed to natural calamities and disasters. In the republic, natural disasters occur quite frequently since the most part of its territory is mountainous, and almost all types of natural disasters can be seen in the country: mudslides, avalanches, landslides, floods, droughts, hail showers and high winds.

In fact, every economic sector is directly or indirectly, constantly or temporarily exposed to climate change impact, which is the primary source of uncertainty in the economy.

The Hydrometeorology Agency under MES – KyrgyzHydromet – plays the key part in provision of climate services. In 1990-es, the necessity of considerable financial investments and permanent lack of budgetary funds caused decrease in KyrgyzHydromet capacities, suspension of many activities and significant reduction of the observation network.

In the past decade, under the regional "Central Asia Hydrometeorology Modernization Project" financed by the World Bank, and other projects financed by WMO, WB, Swiss Government, Finnish Government, UNDP, GCF, ADB, WFP and FAO, KyrgyzHydromet experienced significant changes in equipment and technological infrastructure, staff training and re-training, and improved the quality of hydrometeorological servicing of customers. Currently, owing to methodological support of the integrated international climatology expert, KyrgyzHydromet develops a climate change scenario in Kyrgyzstan with expansion of range and quality of climate services being provided to customers.

However, the efforts made do not cover all current needs for modernization of the KyrgyzHydromet and demands of economic sectors and population for quality climate information services including forecasting of hazardous weather events. Today, it is still necessary to enhance technical, staff and analytical capacities in such domains as hydrology, agrometeorology as well as avalanche and glaciological services.

Improving the quality, coverage and access to climate information services will facilitate more effective decision-making across a number of sectors (e.g. agriculture, water resources, energy and transport). Weather and climate-forecasting information and early warning systems can support agricultural and grazing lands by providing forecasts for farmers to improve productivity, and protecting lives and assets from floods and droughts. Climate information services also offer benefits to the energy and water sectors by enabling them to take both a more strategic, long-term planning approach and make day-to-day adjustments to operations.

2.4.2 Development objectives

To build climate resilience in vulnerable sectors and communities by improving the quality of hydrometeorological and climate services, to preserve lives and livelihoods, protect critical infrastructure and maximise socio-economic development. This component is designed to build climate resilience in Kyrgyz economic sectors through better long-term weather and hazard forecasting, expanding the coverage of early warning systems, provision of quality analytical hydrometeorology and climate change data, and development of local climate change scenarios.

2.4.3 Activities

A focused suite of activities for improvement of hydrometeorological and climate information services have been identified, covering investment, policy, technical and capacity building measures. These are presented in Table 7.

Table 7: Activities, project concepts and proposals to improve climate and hydrometeorological information services. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
1	Improvement of the hydrometeorological monitoring system to ensure early warning of hazardous (elemental) and adverse hydrometeorological events, and water resources management	TCB	Emergencies situations plan of measures (2015-2017)	
2	Improvement of the quality of climate and hydrometeorological services	TCB	Priority Directions; Emergencies situations plan of measures (2015-2017)	GFCS
3	Enhancement of the analytical capacity	TCB		Concept plan for development of the KyrgyzHydromet climate service
4	Establishment of the State Glaciological Monitoring System	TCB	Emergencies situations plan of measures (2015-2017)	

2.4.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to improve climate information services, including forecasting and management of climate-related emergency situations:

- More reliable weather, hydrological and climate forecasts, directly contributing to the Kyrgyz Republic's economic development, particularly in disaster reduction, agricultural, water resources management, energy/hydropower sectors and public health;
- More substantive hydrological and meteorological data for input to climate change studies;
- Better quality and more variable information products presented in a user friendly, client-oriented format;
- Better user satisfaction; and
- Improvement of regional data and information exchange, particularly on hazards.

More specific details on key indicators will be defined during individual project preparation phases.

2.4.5 Implementation arrangements

Under the guidance of the CFC and in close coordination with the CCCCP, it is envisaged that the KyrgyzHydromet will lead the activities under this investment component. In addition, the Ministry of Agriculture, Food Industry and Land Reclamation with Department of Water Economy and Melioration, State Agency on Communication under the Kyrgyz Government, State Agency on Environmental Protection and Forestry under the Kyrgyz Government, Institute of Water Problems and Hydropower of NAS KR are expected to be the main collaborating/supporting agencies. Other important stakeholders will be NGOs, including Central - Asian Institute for Applied Geosciences (CAIAG), Public Association "AGROLEAD", Public Foundation "EnConsult" and Climate Network of Kyrgyzstan (CNK). NGOs are expected to play an important role in project implementation, especially in mobilising and assisting communities in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders.

2.5 COMPONENT 2: Improving food security from agriculture, through improved water resources, land management and agricultural practices

2.5.1 Background and rationale

At present, low agricultural productivity is slowing the reduction of poverty and food insecurity, particularly amongst vulnerable groups, such as the rural poor. Much of the land used for agriculture has been seriously degraded and the water management capability of farmers presents a limiting factor in production potential. Despite numerous initiatives to improve farm productivity, actual yields remain far lower than potential yields, due to a number of reasons: (i) insufficiency of agricultural machinery and limited capital investment; (ii) high cost and limited availability of agricultural inputs (fertiliser, seeds and fuel); (iii) deterioration of irrigation systems and and the need

for their rehabilitation, modernisation and development; and (iv) insufficiency agronomy and pest management[65].

Climate risks pose significant threats to ensuring sustainable livelihoods, food security and health. The climate trends of increasingly erratic rainfall and glacier melt will likely result in more extreme weather events, which will have detrimental effect on livelihoods and food security. During times of food security and safety-related shocks, such as harvest failure, income losses and high / volatile food prices, households frequently reduce the quality of their diet to mitigate the impacts[66]. Again, it is vulnerable groups, such as the rural poor, who are more frequently and severely affected by such impacts, which exacerbate existing inequalities related to low life quality of rural population.

Improving the provision of water resources is critical for the agriculture sector. Essentially all agriculture is irrigated because of the climate of the region, with glaciers provide most of the water for irrigation[67]. Conveyance of irrigation water is initially through the rivers of the region and picked up through an extensive complex of irrigation infrastructure. The country has an abundant source of good quality fresh water; however, because of seasonal variations, water supplies often do not correspond to need.

The poor condition of irrigation infrastructure and inappropriate water and land management practices means that many farmers are unable to obtain sufficient quantities of water to satisfy crop demands. Irrigation infrastructure has been deteriorating since the 1990s, due to a substantial reduction in investment and operation and maintenance budgets for irrigation systems, and a concurrent loss of institutional capacity[68]. There is also a lack of water control and discipline within the system, as better management of water comes at a cost for the farmer, either through increased capital investment or increased labour[69]. The lack of water control on sloping lands means that furrow irrigation is directed down steeply sloping fields, which results in significant soil losses and increased silt loads in tail waters[70]. Soil carried back into the irrigation network then becomes a problem for downstream users and thousands of hectares of irrigated land have been lost to irrigation due to the blocking or filling up of delivery canals with silt[71].

The recently published Draft State Program on development of irrigation (2017-2026) seeks to solve the problem of efficient use of water resources. The program is aimed at providing new irrigated lands to rural communities for the cultivation of agricultural products, to improve the socio-economic situation of the regions, address food security and reduce poverty. The program is allocating 58.8 billion Kyrgyz Soms (nearly USD 850 millions) to introduce 65,500 hectares of irrigated land, increase water availability to 51,000 hectares of land, transfer 9,500 hectares of land from machine to gravity irrigation, and improve ameliorative condition of 50,000 hectares of land.

The NSSD (2013-2017) identifies 91.7 million USD of investment in the agriculture sector, with a large number of projects not started and seeking finance. Of the sectors included in the NSSD, the agriculture sector had the highest number of projects identified (24). However, as of October 2016, the level of completion was lowest for the agriculture sector, with over 40% of the projects not started and a further 25% in the implementation stage, some of which with uncertain futures due to a shortage of State funding. Projects with unknown funding sources total 31 million USD, and projects

[65] ADB (2013). Developing Water Resources Sector Strategies in Central and West Asia: Kyrgyz Republic. TA8015-REG. https://www.adb.org/sites/default/files/project-document/79760/45353-001-tacr-01.pdf
[66] World Food Programme (2014). Kyrgyz Republic: An overview of climate trends and the impact on food security.
[67] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119
[68] ADB (2013).
[69] ADB (2013).
[70] ADB (2013).
[71] ADB (2013).

with State funding, but could be eligible for other external funding (including climate finance) total a further 31 million USD. These projects include works to irrigation infrastructure and the development of a laboratory focusing on plant health, both of which have synergies with climate resilience objectives.

2.5.2 Development objectives

Supporting the agriculture and water sector become more climate resilient will help to ensure long-term food security, increase farmers' incomes and contribute to the national economy. Supporting the development and increased resilience of the agriculture sector is one of the most important priorities for sustainable economic development in the Kyrgyz Republic, considering the sector's contribution to the economy and high levels of employment, role in providing raw materials to industry and the population with food[72]. A comprehensive approach to solving existing problems in the development of this sector will also help reduce social tension in the country and address problems associated with rural poverty and gender inequality.

2.5.3 Activities

Based on literature review, climate resilience activities in the agriculture and water resources sector can be grouped into three main areas:

A. **Improved water resources;**

B. **Improved land management; and**

C. **Improved agricultural practices and new technology.**

These activities are presented in Table 8.

Table 8: Activities, project concepts and proposals to improve the climate resilience of agriculture, water resources and land management. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
	A. Improved water resources			
5	Rebuild existing irrigation schemes where rehabilitation not sufficient, infrastructure is too old, and/or not designed for transitional agriculture	I	Priority Directions; NSSD; ADB (2016). Economics of Climate Change in Central and West Asia. State Programme for Development of Irrigation in the Kyrgyz Republic for	•

[72] Kyrgyz Republic's National Strategy for Sustainable Development (NSSD) 2013–2017

			2017-2026.	
6	Improve water supply efficiency (reduce water loss in existing irrigation systems through maintenance and repair and adopt efficient irrigation technology (e.g. drip or pulse irrigation))	I	ADB (2016)	Rehabilitation and modernization of irrigation and land reclamation infrastructure on the area of about 200,000 ha.
7	Develop alternative water harvesting and storage programs and technology for communities	I	ADB (2016)	
8	Diversify water supply sources (landscape water conservation, groundwater abstraction, low-flow devices, rainwater harvesting etc.).	I	ADB (2016)	
9	Develop incentives for the use of efficient irrigation systems and/or advanced irrigation systems to improve water use efficiency in crop production to boost production	TCB	ADB (2016)	
10	Continue the establishment of water users associations	TCB	ADB (2016)	Continue the establishment of water users associations and federations, and their support
11	Establish an information Hubs for growers on water conservation technology	TCB	ADB (2016)	Establish an information Hubs for promotion and introduction of water conservation technologies
12	Develop a National Water Strategy and Basin Water Management Plans	P	Agriculture and Water adaptation program and action plan (2016-2020)	
13	Revisit water sharing agreements, based on the principles of Integrated Water Resources Management and specifically addressing climate resilience and the need to improve water use efficiency	P	Expert team	
	B. Improved land management			
14	Integrative rangelands management and cattle breeding development, taking into account adaptation to climate change	TCB	Priority Directions; NSSD	
15	Landscape approach to sustainable watershed management for erosion control & catchment protection (including construction of contour banks, contour ploughing, and other soil-moisture conservation practices that reduce land degradation, improve soil health, and	TCB	ADB (2016)	

	increase soil-moisture availability and groundwater recharge capacity)			
16	Introduce community-based catchment conservation and integrated watershed management programs	P	ADB (2016)	
17	Reforestation and bioengineering works for slope stabilisation for landslide protection, hill slope and gully erosion control	I	ADB (2016)	
18	Increase on-the-ground implementation of existing stream restoration practices (e.g. riparian buffers, storm water management, sediment control)	TCB	ADB (2016)	
	C. Improved agricultural practices and new technology			
19	Optimisation of agriculture production allocation and specialisation	TCB	Priority Directions; NSSD	
20	Carrying out of selective works, associated with growing of drought- and salt resisting crops	TCB	Priority Directions; NSSD	• Creation of a complex of modern laboratories (which meet international standards of quality certification) (NSSD)
21	Carrying out of phyto-ameliorative works	TCB	Priority Directions; NSSD	
22	Improvement of corresponding agriculture infrastructure for better adaptation to negative consequences of climate change	I	Priority Directions; NSSD	
23	Employ Climate Smart Agricultural farming techniques including the introduction of alternative farming systems, water harvesting and high yielding drought resilient crop varieties	TCB	ADB (2016); NSSD	
24	Adjust the selection of planting dates (e.g. earlier planting and harvesting dates to avoid arid late-summer conditions)	TCB	ADB (2016)	
25	Employ conservation tillage methods (e.g. no-till, mulching, strip till) to increase water infiltration and maintain soil moisture	TCB	ADB (2016)	
26	Introduction of Improved grazing systems and livestock management practices such as alternative crop and pasture management practices, rotational grazing, improved soil health management, crop husbandry and livestock production technologies to alleviate water stress, forage and feed shortages, overgrazing and land degradation	TCB	ADB (2016); NSSD	
27	Introduction of Integrated Crop Management (ICM) and livestock management practices	TCB	ADB (2016)	

	aimed at improving animal productivity and fodder production through the introduction of perennial crops, improved pasture productivity and cut and carry stall feeding, herd improvement and improved animal husbandry			
28	Introduction of sustainable agro-forestry could reduce climate change vulnerability, enhance income generation from cash crops (fruits, nuts, medicines, fuel, timber, and fodder) and provide opportunities for improvements in value chain processing and marketing of agro-forestry products	TCB	ADB (2016)	
29	Expand technical assistance programs to help farmers make decisions about sustainable crops and production practices	TCB	ADB (2016)	
30	Create or enhance existing networks to facilitate the rapid transfer and adoption of new knowledge and technologies to help farmers adapt to a changing climate, promote sustainability and provide benefits for the environment, rural communities and farmers	TCB	ADB (2016)	
31	Improvement of food security monitoring system and creation of yielding capacity forecasting system.	TCB	Priority Directions; NSSD	
32	Improvement of the food safety monitoring system in the field of laboratory foodstuff control, diagnosis and prevention of zooanthroponosis diseases.	TCB/I	Priority Directions; NSSD	Preparation of project proposals

2.5.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to improve the climate resilience of agriculture, water resources and land management (grouped under the 3 main headings used in Table 8):

A. Improved water resources

- Rehabilitation, modernisation and construction of irrigation and land reclamation infrastructure;
- Technical standards, codes of practice and guidelines for climate-resilient water infrastructure (e.g. irrigation and drainage) developed and applied (e.g. km of infrastructure managed under these standards);
- Reduced maintenance costs for water resource infrastructure (e.g. annual routine maintenance costs and years before periodic maintenance required); and
- Communities adopt effective and enhanced water use practices in combination with improved agricultural practices.

B. Improved land management

- Proven improved land management practices and technologies that will strengthen climate resilience are adopted; and
- Productivity of lands and farming systems in the watersheds enhanced.

C. Improved agricultural practices and new technology

- Number of farmers adopting stress tolerant and adaptive varieties;
- Total area of cropped land under adaptive varieties; and
- Number of farmers adopting improved cropping pattern.

More specific details on key indicators will be defined during individual project preparation phases. Where appropriate all indicators should be disaggregated to show the different impacts on men, women and vulnerable groups.

2.5.5 Implementation arrangements

With support from the CFC and in close coordination with the CCCCP, it is envisaged that the Ministry of Agriculture, Food Industry and Land Reclamation will lead the activities under this investment component. In addition, the State Agency on Environmental Protection and Forestry, Institute of Water Problems and Hydropower of NAS KR, Kyrgyz Agriculture Academy are expected to be the main collaborating / supporting agencies. Other important stakeholders will be NGOs, including Public Association "AGROLEAD", Public Foundation "Camp Alatoo", Rural Advisory Services and Climate Network of Kyrgyzstan (CNK) and Water Users Association of Kyrgyzstan. NGOs are expected to play an important role in project implementation, especially in mobilising and assisting communities in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders. Since a number of the activities will follow a decentralised approach, District Irrigation and Agriculture Departments and Ayil Aymaks are expected to be the main government stakeholders at region, district and community level. Participation of the private sector will be sought, especially in promotion of water saving technologies (e.g. drip irrigation) and climate smart agriculture practices.

2.6 COMPONENT 3: Making energy supply infrastructure climate resilient

2.6.1 Background and rationale

Significant deterioration of the energy infrastructure can be a major constraint on the Kyrgyz Republic's pursuit of sustained economic growth. The energy sector is characterised by: (i) deterioration of energy assets that are beyond their economic life; (ii) high commercial and technical losses, (iii) below-cost electric and thermal energy tariffs and market-based fuel (coal, gas and fuel oil) tariffs that provide distorted signals; (iv) poor financial performance; and (v) operational constraints caused by linkage between water release and energy production[73]. The above factors cause decreased reliability of energy supply to consumers.

The Kyrgyz Republic enjoys abundant hydropower resources, however these resources are highly vulnerable to climate change. In order to safeguard the Kyrgyz Republic's development, it is essential

[73] ADB (2016). Economics of Climate Change in Central and West Asia. Draft FINAL REPORT. RDTA-8119

that the country's hydropower sector is developed in a way that is climate resilient. The river basins in which hydropower facilities are located depend upon glacial meltwater and snowmelt. Climate models predict significant changes in the dynamics of glaciers, snowmelt and precipitation over the coming decades as the climate warms. The impacts of climate change on hydrology need to be taken into account in the design, rehabilitation and management / operation of hydropower facilities to ensure that they are able to cope with more frequent extreme events such as floods and mudslides, and continue to generate electricity safely, efficiently and reliably under a range of projected climate change scenarios.

Transmission and distribution networks are vulnerable to climate-related hazards, meaning supply may be interrupted to individual communities or into / out of the Kyrgyz Republic through regional transmission networks. Transmission lines may extend over thousands of kilometres depending on the configuration of points of energy supply and demand, exposing the equipment to a range of hazards. For instance, weather phenomena that can cause transmission power line failures include extreme winds and ice loads, combined wind-on-ice loads, lightning strikes, conductor vibrations and galloping, avalanches, landslides and flooding[74].

The NSSD (2013-2017) identifies 4.5 billion USD of investment in the energy sector, with some large projects still outstanding and seeking sources of finance. Projects already in the implementation phase includes rehabilitation of energy sector assets (ADB project, 55 million USD; World Bank project, 25 million USD), reconstruction of a number of HPPs, construction of small scale hydro, improvements to electrical energy supply in Bishkek and Osh and reforms to distribution companies. The two main projects yet to be started are the very large construction project of the Kambar Ata-1 HPP (valued at 3 billion USD) and construction of the Upper Naryn Cascade of HPPs (valued at 0.7 billion USD). To ensure these schemes operation effectively over their planned lifespans, it will be crucial that future climate-induced changes in hydrology are factored into their design and operation.

2.6.2 Development objectives

To strengthen the energy sector, as a key economic and social development driver. Realising the Kyrgyz Republic's enormous potential for generating hydropower and protecting critical energy infrastructure from climate-related damage is critically important for expanding its economy, alleviating poverty, developing the private sector, creating jobs, attracting foreign investment and generating tax revenues to support better public services.

2.6.3 Activities

Based on literature review, climate resilience activities in the energy sector can be grouped into four main sub-programs:

A. **Development of climate resilience in operation of existing HPPs;**
B. **Development of climate resilience measures for construction of new HPPs;**
C. **Ensuring energy supply is climate resilient through diversification of generation sources; and**
D. **Development of climate resilience measures for power transmission and distribution facilities.**

These activities are summarised in Table 9.

[74] Schaeffer, R., Szklo, A.S., de Lucerna, A.F.P., Borba, B.S.M.C., Nogueira, L.P.P., Fleming, F.P., Troccoli, A., Harrison, M. and Boulahya, M.S. (2012). Energy sector vulnerability to climate change: A review. Energy, 38, 1-12.

Table 9: Activities, project concepts and proposals to make energy infrastructure climate resilient. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
	A. Development of climate resilience measures for existing HPPs			
33	Replace outdated turbines and generators with more efficient equipment at hydropower facilities to increase generation per unit of water and generate more efficiently across a range of flow conditions	I	ADB (2016). Economics of Climate Change in Central and West Asia	
34	Improve operating efficiency of existing HPPs, increase storage with construction of new HPPS and improve operating rules that are more responsive to reduced flows and seasonal changes in water content of rivers	TCB	ADB (2016).	
35	Development of action plans considering the forecasted decreasing of precipitation amount due to climate change	TCB	ADB (2016).	
36	Monitor instream flows with a more comprehensive and responsive stream gauging system, and alter the timing of hydropower generation to more closely mimic a river's natural ebb and flow	TCB	ADB (2016).	
37	On-going analysis of flood safety and reservoir bathymetry (silting)	TCB	Expert team	
38	Conduct vulnerability assessments of energy-system assets at risk of climate impacts to reduce risks to energy production facilities and infrastructure	TCB	Priority Directions	
39	Energy price reform	P	ADB (2016).	
	B. Development of climate resilience measures for new HPPs			
40	Ensuring that infrastructure design factors in climate change allowances (e.g. for the number, design and dimensions of spillways, or the scenarios/ techniques used to estimate the Probable Maximum Flood under climate change)	TCB	Expert team	• Construction of new generating assets
41	Use climate model outputs to stress test various adaptation options, including different configurations of infrastructure and operation rules in the power sector	TCB	Expert team	
42	Employ adaptive reservoir management to ensure that levels of performance for water supply, energy production and environmental flows are sustained even under future climate regimes (e.g. drought)	TCB	Expert team	

43	Ensure reservoir operation is cognisant of basin-wide threats from expected impacts of climate change on the timing and severity of flood hazards and sedimentation rates	TCB	Expert team	
	C. Ensuring energy supply is climate resilient through diversification of sources			
44	Improve energy supply side management through the adoption and use of less water-intensive renewable energy sources (e.g. wind, solar, bio-diesel, etc.) to compensate for lost hydro potential	I	Priority Directions; ADB (2016).	
45	Promotion of application of cogeneration in the industry sector for lost hydro potential	TCB	ADB (2016).	
45	Examination of wind, solar and biomass energy potential, further implementation of projects for construction and commissioning pf wind and solar power plants	TCB/I	SCIPSU (State Committee of Industry, Power and Subsoil Use)	
46	Introduction of incentive mechanisms for energy consumers to stimulate use of renewable energy sources in households, civil and commercial construction.	P/TCB	SCIPSU	
47	Introduction of incentive energy saving mechanisms for consumers to reduce the load on energy generation.	P/TCB	SCIPSU	
48	Development of efficient energy saving indicators to monitor the energy saving development process in households, civil and commercial construction.	P/TCB	SCIPSU	
	D. Development of climate resilience measures for transmission and distribution systems			
46	Conduct vulnerability assessments of energy-system assets at risk of climate impacts to reduce risks to energy production facilities and Infrastructure	TCB	ADB (2016).	
47	Identify and protect energy infrastructure vulnerable to potential climate impacts, including flooding, landslides, drought and low water	TCB	ADB (2016).	
48	Assess vulnerability of electricity conduits and communication lines to flooding, and enhance the resilience of electric grid and communications infrastructure (e.g. towers, lines) in flood zones at risk from more frequent and stronger storm events	TCB	ADB (2016).	
49	Update the standard technical documentation in the power sector to reduce electricity transmission and distribution llosses	P	ADB (2016).	
50	Improve the reliability of energy infrastructure and equipment identified as most likely to fail	TCB	ADB (2016).	

	during extreme events			

2.6.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to improve the climate resilience of the energy sector (grouped under the 3 main headings used in Table 9):

A. **Improving the climate resilience of existing HPPs**

- Technical standards, codes of practice and guidelines for climate-resilient energy infrastructure developed and applied; and
- Reduced maintenance costs for energy infrastructure (e.g. annual routine maintenance costs and years before periodic maintenance required).

B. **Improving the climate resilience of new HPPs**

- Technical standards, codes of practice and guidelines for climate-resilient energy infrastructure (developed and applied ; and
- Reduced maintenance costs for energy infrastructure (e.g. annual routine maintenance costs and years before periodic maintenance required).

C. **Ensuring energy supply is climate resilient through diversification of sources**

- Increased power contribution from wind, solar, biomass and bio-diesel; and
- Level of uptake of cogeneration within the industrial sector (e.g. number of businesses supported to invest in micro-generation)

D. **Improving the climate resilience of transmission and distribution systems**

- Technical standards, codes of practice and guidelines for climate-resilient energy infrastructure developed and applied (e.g. km of T&D systems managed under these standards); and
- Reduced maintenance costs for energy infrastructure (e.g. annual routine maintenance costs and years before periodic maintenance required).

More specific details on key indicators will be defined during individual project preparation phases.

2.6.5 Implementation arrangements

Under the guidance of the CFC and in close coordination with the CCCCP, it is envisaged that the State Committee on Industry, Power and Subsoil Use of the Kyrgyz Republic and National Energy Holding JSC will lead the activities under this investment component. In addition, JSC "Electrical Power Plants", JSC "NEGK", four electricity distribution companies, State Agency on Regulation of Fuel and Energy Complex at the Kyrgyz Government and KyrgyzHydromet are expected to be the main collaborating / supporting agencies. Additionally, energy and water research institutes, like the Energy and Economy Research and Development Institute at the KR SCIPSU, Institute of Water Problems and Hydropower of NAS KR is highly expected. Other important stakeholders will be NGOs, including PF UNISON, PF Fluid, Centre on Renewable Energy, Energy Efficiency Development, PF "EnConsult" and Renewable Energy Association of Kyrgyzstan, Climate Network of Kyrgyzstan. NGOs are expected to play an

important role in project implementation, especially in mobilising and assisting communities in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders.

2.7 COMPONENT 4: Making transport infrastructure climate resilient

2.7.1 Background and rationale

The Kyrgyz Republic suffers from inadequate road infrastructure and maintenance regimes. Of the international and national roads, one third are in poor condition and need rehabilitation or reconstruction (the remaining two thirds are in sustainable condition, requiring only routine or periodic maintenance)[75]. The 2011 budget allocation of 1.1 billion Kyrgyz Som for the Ministry of Transport and Communications (MOTC) maintenance work covers only one-third of the estimated 3.5 billion Kyrgyz Som needed to maintain the roads at an international standard[76]. This financing gap makes it impossible to sustainably maintain the road network and if this situation persists, it is assumed that the roads that are now in good condition or were recently rehabilitated with external or internal funding will require more investment for rehabilitation[77].

Road infrastructure has been routinely affected by climate-induced extreme events, including extreme temperatures, landslides, and mudslides[78]. Because this trend is likely to continue due to climate change, further investment will be needed for the rehabilitation and maintenance of road infrastructure. It may be necessary to consider re-routing of existing road infrastructure away from high risk zones. For planned infrastructure, it is critical that climate change risk assessments are included in any feasibility and environmental impact assessment studies.

The NSSD (2013-2017) identifies a suite of transport sector projects, a large number of which have already entered the implementation phase. The majority of the projects relate to rehabilitation of motorway infrastructure and it unclear whether climate change considerations have been integrated within their design and maintenance regimes. Feasibility studies are also underway into new railway connections (between north and south Kyrgyzstan, and a transboundary route connecting China, Kyrgyzstan and Uzbekistan). Again, it is unclear at present whether climate change risk assessments have been included in these studies.

2.7.2 Development objectives

Improving the penetration, sophistication and reliability of transport networks will benefit the Kyrgyz Republic's citizens and industry, thus contributing to the country's socio-economic development objectives. Development of the transport sector will meet people's needs for passenger and freight transport in the short-term and support the growth of exports in the longer-term.

[75] Government of the Kyrgyz Republic (2012). "It's unwise to pay too much, but it's foolish to spend too little": Sustainable road sector development through asset management in the Kyrgyz Republic. Bishkek
[76] ADB (2012). Country Partnership Strategy: Kyrgyz Republic, 2013-2017. Sector Assessment (Summary): Transport. https://www.adb.org/sites/default/files/linked-documents/cps-kgz-2013-2017-ssa-03.pdf
[77] ADB (2012).
[78] TNC (2016).

2.7.3 Activities

A focused suite of activities have been identified to make transport infrastructure climate resilient, covering informational, technical and capacity building measures. These are presented in Table 10.

Table 10: Activities, project concepts and proposals to make transport infrastructure climate resilient. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
51	Mainstreaming of climate risk management into the engineering design and planning of new and existing road and associated infrastructure (e.g. tunnels, bridges, etc.). For example, ensuring that surface water drainage, attenuation and outfall systems are designed to cope with projected volumes of water	TCB	Expert team	Sino-Kyrgyz-Uzbek Trunk Railroad (NSSD) Railroad branch connecting the North and the South of the country (NSSD)
52	Integrate a climate resilience component into all transport infrastructure rehabilitation project terms of reference and feasibility studies	TCB	Expert team	
53	Review and amend current operation and maintenance procedures (e.g. clearance of drains)	TCB	Expert team	
54	Undertake research on the climate/ disaster vulnerability of transport networks to identify highly vulnerable locations	TCB	Expert team	
55	Development of the MOTC capacity for preparedness to climate change and extreme events	TCB	Expert team	
56	Electrification of the Lugovaya-Bishkek railways	I	Kyrgyz Republic's Ministry of Transport and Roads	Concept paper of KR MT&R
57	Construction of anti-avalanche galleries on the alternative North-South motor road.	I	Kyrgyz Republic's Ministry of Transport and Roads	

2.7.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to improve the climate resilience of the transport sector:

- Technical standards, codes of practice and guidelines for climate-resilient transport infrastructure developed and applied (e.g. km of roads managed under these standards); and
- Reduced maintenance costs for transport infrastructure (e.g. annual routine maintenance costs and years before periodic maintenance required).

More specific details on key indicators will be defined during individual project preparation phases.

2.7.5 Implementation arrangements

Under the guidance of the CFC and in close coordination with the CCCCP, it is envisaged that the Ministry of Transport and Roads will lead the activities under this investment component. In addition, the Ministry of Emergency Situations, Kyrgyz Hydromet, State Enterprise "Kyrgyz Railways" and Kyrgyz Dorproekt (Design Institute) are expected to be the main collaborating / supporting agencies. Other important stakeholders will be regional Road Exploitation Units of MOTR, REUs are expected to play an important role in project implementation activities in the regions. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases.

2.8 COMPONENT 5: Making municipal water supply climate resilient

2.8.1 Background and rationale

In both urban and rural areas, water supply service levels are currently low. Most water supply infrastructure in the Kyrgyz Republic was built 40 to 50 years ago, and years of under-investment in facilities and infrastructure, coupled with poor operating conditions, have led to unreliable and low quality water supply and high water losses. The key issues identified are: (i) low water supply coverage of 60-90% in cities and 50-60% in rural areas; (ii) non-potable water, with 2% of chemical and 10% of microbiological tests failing; (iii) reduced hours of supply, with many cities providing water only 4-20 hours / day; and (iv) high water losses, estimated to be at least 45% of supply[79]. The lack of adequate equipment, human capital, and funding for maintenance and expansion of these services makes it difficult for municipal authorities to sustain and increase access to quality services[80].

Climate change is expected to affect the availability of water in the Kyrgyz Republic and this will heighten the need to manage water resources carefully and efficiently. The quantity of water available for human consumption could be at risk due to climate-driven changes in water resources, together with exposure to natural hazards. As presented above, water supply coverage is lower in rural areas, meaning inhabitants (often women) are forced to source water from other sources (e.g. wells, ponds, etc.), which typically have lower water quality standards. Consideration of water supply issues in rural areas and smaller municipalities will be important in order to address social inequalities.

There is scope to boost the climate resilience of municipal water supplies through demand-side water efficiency improvements across a wide range of sectors. Experience from other Central Asia countries has shown that projects such as upgrading leaky pipe networks, switching from surface / shallow to deep groundwater intake and the use of metering and water pricing to change consumer behaviour have been effective to improve water efficiency[81]. Improvements to water supply are also expected to increase consumer willingness to pay, thereby enhancing the sustainability of infrastructure and operations and ensuring that the climate resilience benefits are sustained in the longer term.

[79] ADB (2013). Country Partnership Strategy: Kyrgyz Republic, 2013–2017. Sector Assessment (Summary): Water supply and other municipal infrastructure and services.
[80] World Bank (2015). The Kyrgyz Republic: Insights on household access to water supply and sanitation. http://documents.worldbank.org/curated/en/680561468184774661/pdf/99774-WP-P147694-Box393219B-PUBLIC-KG-WaterAccess-100115-ENGL.pdf
[81] EBRD (2017). Building Resilience to Climate Change: Investing in adaptation. http://www.ebrd.com/cs/Satellite?c=Content&cid=1395244437607&pagename=EBRD%2FContent%2FDownloadDocument

2.8.2 Development objectives

To enable inhabitants in key municipalities to enjoy uninterrupted access to safe drinking water in the face of increasing climatic variability, with significant benefits for public health. Women particularly benefit from improved water supply (and sanitation) services since they are the main users of water, being more likely than men to be fetching water and dealing with health impacts of substandard services on family members[82].

2.8.3 Activities

A small set of activities are identified to improve the climate resilience of municipal water supply, covering informational and technical measures. These are presented in Table 11.

Table 11: Activities, project concepts and proposal to make municipal water supply climate resilient. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
58	Identification and reduction of technical (leakage) losses, through rehabilitation / new construction of water supply infrastructure	TCB/I	Expert team	Projects under the State Programme for Development of Water Supply and Disposal in Localities of the Kyrgyz Republic for 2014-2024.
59	Undertake research to identify of commercial (illicit) losses to increase water security	TCB	Expert team	Projects under the State Programme for Development of Water Supply and Disposal in Localities of the Kyrgyz Republic for 2014-2024.
60	Include leakage monitoring and reporting technologies as part of on-going operation and maintenance programmes, including the setting up of distribution monitoring areas to provide active leakage monitoring and control	TCB/I	Expert team	Projects under the State Programme for Development of Water Supply and Disposal in Localities of the Kyrgyz Republic for 2014-2024.
61	Demand-side management through technological (e.g. water efficient appliances), financial (e.g. metering), legislative (e.g. restrictions on water use), operation & maintenance (e.g. reducing losses), and educational (e.g. awareness raising)	P/TCB/I	Expert team	Projects under the State Programme for Development of Water Supply and Disposal in Localities of the Kyrgyz Republic for 2014-

[82] ADB (2013). Country Partnership Strategy: Kyrgyz Republic, 2013–2017. Sector Assessment (Summary): Water supply and other municipal infrastructure and services.

				2024.
62	Water pricing reform: price water to reflect its true cost and that reward conservation, and allow rate decoupling for urban, agricultural, industrial, and commercial use	P	Expert team	Projects under the State Programme for Development of Water Supply and Disposal in Localities of the Kyrgyz Republic for 2014
63	Capacity development programme on asset management, leakage control and water quality	TCB	Expert team	Projects under the State Programme for Development of Water Supply and Disposal in Localities of the Kyrgyz Republic for 2014

2.8.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to make municipal water supply climate resilient:

- Technical standards, codes of practice and guidelines for climate-resilient water supply infrastructure developed and applied (e.g. km of infrastructure managed under these standards);
- Reduced maintenance costs for water supply infrastructure (e.g. annual routine maintenance costs and years before periodic maintenance required);
- Communities adopt effective and enhanced water use practices; and
- Policy reform processes for water pricing are supported by a range of stakeholders.

More specific details on key indicators will be defined during individual project preparation phases. Where appropriate all indicators should be disaggregated to show the different impacts on men, women and vulnerable groups.

2.8.5 Implementation arrangements

With support from the CFC and in close cooperation with the CCCCP, it is envisaged that the Department of Development of Drinking Water Supply and Sanitation at the State Agency on Architecture, Construction and Communal Services will lead the activities under this investment component. In addition, the Department of Sanitary and Epidemiological Surveillance of the Ministry of Health, State Agency on Environmental Protection and Forestry and municipalities are expected to be the main collaborating / supporting agencies. Other important stakeholders will be NGOs, including Kyrgyz Alliance for Water and Sanitation and Rural Public Associations of Drinking Water Consumers. NGOs are expected to play an important role in project implementation, especially in mobilising and assisting communities in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders. Since a number of the activities will follow a decentralised approach, Ayil Aymaks are expected to be the main government

stakeholders at region, district and community level. Participation of the private sector will be sought, especially in promoting water saving technologies.

2.9 COMPONENT 6: Making buildings climate resilient

2.9.1 Background and rationale

Residential and public buildings frequently experience a gap between heat supply and customers' needs, which leads to low comfort levels in many buildings. In the cities of Bishkek and Tokmok, for example, around 20-25% of the residential and public heating demand is not satisfied every year due to insufficient and unreliable heat and electricity supply in winter[83]. The widespread use of electricity for heating is a key driver of growing residential electricity consumption during winter months: from 2009 to 2013 residential electricity consumption increased by more than 60% in the Kyrgyz Republic[84]. This increase in electricity load aggravates the problems facings the energy sector, specifically the winter power shortages due to low hydropower output during these months.

Addressing energy demand issues, through improved energy efficiency of residential and public buildings, would increase the climate resilience of the energy sector more broadly. The energy performance of residential and public buildings is poor, with high heat losses, largely resulting from the age of the building stock, lack of maintenance and the absence of proper insulation[85]. However, there is significant potential for improving the energy efficiency of the residential and public building stock by implementing basic energy efficiency measures. Estimates suggest that energy efficiency improvements could reduce energy consumption by 30 to 50%[86]. This would significantly ease pressure on the energy sector more broadly, specifically power generation from hydropower, both at present and under a changing climate. Energy efficiency measures would also offer a number of other co-benefits, including improved comfort levels in buildings, reduced air pollution and reduced energy expenditures for households and public institutions. This is particularly pertinent for vulnerable groups, such as rural and urban poor, who frequently live in sub-standard accommodation and struggle with household bills.

Increased water resource stress will create a need to improve water efficiency in buildings. Although municipalities and industry only use 7% of the total water resources[87] (in 2006), there are opportunities to improve water efficiency, for the benefit of the whole sector. Outside the residential sector, water intensive buildings with the highest opportunity for investment in water-saving mechanisms include hospitals, schools, offices and hotels.

With both energy and water efficiency investments, newly constructed buildings and regeneration of residential stock offer excellent opportunities to build in climate resilience measures at lower capital cost. For example, experience in other Europe and Central Asia countries has demonstrated that linking heating system improvements to building energy efficiency measures generates significant operational and financial synergies[88]. With respect to newly constructed buildings, the Kyrgyz Republic has an advanced legislative framework for efficient energy performance standards, however,

[83] World Bank (2015). Keeping Warm: Urban heating options in the Kyrgyz Republic. Summary Report. Balabanyan, A., Hofer, K., Finn, J. and Hankinson, D. http://documents.worldbank.org/curated/en/555021468011161504/pdf/97409-WP-P133058-Box391503B-PUBLIC-Heating-Assessment-for-Kyrgyz-P133058-Final.pdf
[84] World Bank (2015).
[85] World Bank (2015).
[86] World Bank (2015).
[87] FAO (2017). AQUASTAT: Kyrgyzstan. http://www.fao.org/nr/water/aquastat/countries_regions/KGZ/
[88] World Bank (2015)

less than 10% comply with these building codes[89]. If newly constructed buildings were to comply with the enacted energy performance standards, specific heat demand in those buildings could be reduced by 15 to 25%[90].

Another key area of climate resilience activity is around protecting buildings from damage associated with extreme climate events. Poor populations are disproportionately harmed by natural disasters, as their settlements are frequently in areas prone to such hazards (e.g. floodplains), and their informally constructed houses tend to be highly vulnerable to climate and disaster risk (e.g. landslides, heatwaves). Improvements in construction, building code implementation and appropriate land use planning have a crucial role to play in climate resilience and disaster risk reduction, particularly amongst vulnerable groups.

2.9.2 Development objectives

Improving the quality and climate resilience of residential and public buildings is critical for people's well-being and the daily functioning of essential public services. Given the cold climate and long heating seasons in the Kyrgyz Republic, access to reliable heating services is an essential need for everyday life. Increased protection of buildings from hazards associated with extreme weather events is also critical to preserve lives and livelihoods and maximise socio-economic development.

2.9.3 Activities

Based on literature review, climate resilience activities for buildings can be grouped into two main areas:

A. **Addressing energy and water efficiency; and**

B. **Protecting buildings from extreme weather events and associated hazards.**

These activities are presented in Table 12.

Table 12: Activities, project concepts and proposals to make buildings climate resilient. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
	A. Addressing energy and water efficiency			
64	Promotion of energy efficient buildings to reduce energy consumption through improvements in building design, insulation and fuel efficient heating and cooking systems	TCB	ADB (2016). Economics of Climate Change in Central and West Asia	
65	Replace or retrofit the building stock over time with resource-efficient, climate-adaptive buildings that are energy and water efficient	I	ADB (2016).	
66	Adoption of the most up-to-date water conservation technologies and water-efficient practices and use alternative water supplies	I	ADB (2016).	

[89] World Bank (2015)
[90] World Bank (2015)

	whenever possible			
67	Develop alternative water harvesting and storage programs and technology for communities	I	ADB (2016).	
68	Diversify water supply sources (landscape water conservation, groundwater abstraction, low-flow devices, rainwater harvesting etc.).	I	ADB (2016).	
69	Water pricing reform: price water to reflect its true cost and that reward conservation, and allow rate decoupling for urban, agricultural, industrial, and commercial use	P	ADB (2016).	
	B. Protecting buildings from extreme weather events and associated hazards			
70	Improvement of building codes to ensure infrastructure and buildings resilience to extreme weather events	P	Priority Directions; NSSD	
71	Employ dams, levees or dykes, diversion weirs, floodwalls and embankments to reduce peak discharge, divert floodwaters, increase groundwater recharge and protect downstream infrastructure and buildings	TCB	ADB (2016).	
72	Restore riparian vegetation (including planting riparian flora, fencing off riparian zones, and the provision of off-river watering points for domestic stock) to reduce risk of riverbank erosion and damage to infrastructure and buildings	TCB	ADB (2016).	
73	Use land use planning / zoning restrictions and hard engineering structures and other structures to protect urban areas (where possible)	P	ADB (2016).	

2.9.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to make buildings climate resilient (grouped under the 2 main headings used in Table 12):

A. Addressing energy and water efficiency

- Technical standards, codes of practice and guidelines for climate-resilient, energy and water efficient buildings developed and applied (e.g. number of buildings managed under these standards);
- Communities adopt effective and enhanced energy and water use practices; and
- Policy reform processes for water pricing are supported by a range of stakeholders.

B. Protecting buildings from extreme weather events and associated hazards

- Technical standards, codes of practice and guidelines for climate-resilient buildings and infrastructure developed and applied (e.g. number of buildings managed under these standards, km of flood protection infrastructure); and

- Area and number of persons protected from extreme weather events and associated hazards; and
- Reliable and easily accessible early warning information available to the public.

More specific details on key indicators will be defined during individual project preparation phases. Where appropriate all indicators should be disaggregated to show the different impacts on men, women and vulnerable groups.

2.9.5 Implementation arrangements

With support from the CFC and in close coordination with the CCCCP, it is envisaged that the Kyrgyz State Agency on Architecture, Construction and Communal Services will lead the activities under this investment component. In addition, the State Committee of Industry, Power and Subsoil Use and municipalities of the Kyrgyz Republic are expected to be the main collaborating / supporting agencies. Other important stakeholders will be NGOs. NGOs are expected to play an important role in project implementation, especially in mobilising and assisting communities in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders. Since a number of the activities will follow a decentralised approach, municipalities are expected to be the main government stakeholders at region, district and community level. Participation of the private sector will be sought, especially in promoting energy saving construction technologies.

2.10 COMPONENT 7: Increasing the climate resilience of healthcare

2.10.1 Background and rationale

The healthcare system faces a number of current challenges, which may be further exacerbated under a changing climate. Following the collapse of the Soviet Union, the Kyrgyz Republic's health sector has suffered increasing shortages of healthcare professionals and medicine[91]. Climate change presents an additional challenge, with the Ministry of Health identifying the following health risks: food security; food and water safety; frequency of disasters and emergencies (such as flooding and mudslides); and the prevalence and spread of pests and diseases.

The government has identified public health to be a priority sector in their climate resilience actions. The "National Programme of the Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011-2015" focuses on the following key areas: (i) direct risks of climate change on human health (e.g. cardiovascular and respiratory diseases or vector-borne diseases); (ii) risks on preparedness of health services infrastructure and staff (e.g. surveillance and early-warning systems or training of health services providers); and (iii) risks to other socio-economic and environmental factors relating to health and climate change (e.g. water and food safety).

The NSSD identifies the need to attract more investment in the modernisation of healthcare, particularly improving health care facilities and medical equipment, ensuring adequate supplies of drugs and suitably qualified personnel. These overarching areas of interventions should also incorporate the

[91] Library of Congress (2007). Country Profile: Kyrgyzstan. https://www.loc.gov/rr/frd/cs/profiles/Kyrgyzstan.pdf

implications of climate change on all aspects of healthcare, including demand for services, ensuring the building stock is climate resilience and staff are adequately trained.

In the Kyrgyz Government Programme "40 Steps to the New Era", the population health problem is addressed in Kadams (steps): 16 – Clean water, 26 – Health investments. Healthy life, 27 – Modernisation of health care infrastructure, 38 – Environmental safety and climate resilience. Provision of population with clean potable water is a guarantee of healthy nation. Investments for improvement of water supply and disposal will be sought from international aid. These steps are aimed at modernisation of health care infrastructure, introduction of information technologies, improvement of diagnosis quality, prevention of diseases, creation of safe environment, healthy nutrition, provision of population with free and quality services of primary health care, public health care and emergency health services. The health adaptation programme will enable timely identification of vulnerable groups of people, register them, offer clinical examination and inform about adverse climate and weather conditions, ensure season-specific monitoring of infections incidence among population and of drinking water and foodstuffs safety.

2.10.2 Development objectives

To ensure citizens of the Kyrgyz Republic are protected from the adverse effects of climate change on their health and wellbeing. The Ministry of Health identifies the following key objectives: to prevent and reduce infectious disease morbidity; reduce mortality due to exposure to adverse climatic factors; prevent accidents due to extreme natural events; develop measures to provide access to safe drinking water and foods; and improve public health infrastructure to provide quality medical care to the population in a changing climate[92].

2.10.3 Activities

Based on literature review, an extensive and detailed set of activities have been identified to increase the climate resilience of healthcare in the Kyrgyz Republic, covering informational, technical, capacity building and public awareness measures. These are presented in Table 13.

Table 13: Activities, project concepts and proposals to increase the climate resilience of healthcare. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
74	Strengthen mainstream public health and health services – in general, and ensure climate change is included in wider health and public health policy; more specifically, strengthen environmental health services, including water and sanitation, vaccination programs and laboratory services	TCB	Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of the concept and project proposals for donors
75	Build capacity and develop the workforce - integrate training on climate change and health impacts and responses into mainstream under and post–graduate	TCB	Programme of The Health Sector of the Kyrgyz Republic on Climate Change	Development of project proposals for donors to revise curricula

[92] Ministry of Health of the Kyrgyz Republic (2011). Programme of the Health Sector of the Kyrgyz Republic on climate change adaptation for 2011-2015.

	training programs; ensure sufficient staffing and resources and build capacity of staff in priority areas related to climate change and health.		Adaptation for 2011 – 2022; Priority Directions	and train teaching personnel
76	Enhancement of surveillance of non-infectious diseases related to natural and climatic factors, including diseases of the heart, circulatory system, respiratory system and injuries	TCB/I	National Programme "Den Sooluk", Kyrgyz Republic's Non-Infectious Diseases Prevention and Control Programme for 2013-2020, Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of project proposals for donors to introduce modern technologies and non-infectious disease surveillance
77	Enhance surveillance – strengthening surveillance of climate sensitive infections, for example, on water borne infections, malaria and tic borne infections with the respective prevention and treatment measures required	TCB/I	Programme for Prevention of Local Transmission of Malaria in the Kyrgyz Republic for 2014 – 2018, Target Maintenance Programme on Intestinal Parasitosis in the Kyrgyz Republic for 2015-2019, Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022; Priority Directions	Development of project proposals for donors to introduce modern technologies and infectious and parasitic disease surveillance
78	Improve monitoring of climate related factors that affect health (air quality, water safety and levels of malnutrition) and ensure that modern information technologies are used to improve planning and responses	TCB/I	Programme for Prevention and Control of Respiratory and Allergic Diseases for 2016 – 2020, Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022; Priority Directions	Development of project proposals for donors to improve laboratory services for monitoring of air quality in living and working areas, drinking water, foodstuffs and consumer goods
79	Enhance foodstuff safety monitoring system, improve control and quality procedures, and introduction of HACCP system	TCB/I/P	Programme for Food Safety and Nutrition in KR for 2015-2017.	Development of project proposals for donors

80	Develop early warning systems and strengthen health sector engagement in emergency planning and response for extreme weather events (floods, mudslides, dust storms heat-waves and extreme cold), and develop cross-sector plans	TCB/I/P	Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of project proposals for donors to develop and introduce early warning and emergency response systems.
79	Develop and improve emergency health services to population during emergencies and adverse weather events	TCB/I/P	Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022; Priority Directions	Development of project proposals for donors to enhance emergency health services
80	Improve the medical wastes management system.	TCB/I/P	Concept	Development of the concept and project proposals for donors
81	Create and improve e-health and strengthen capacity for better communication and awareness raising, and early warning system for emergencies and weather hazards.	TCB/I	Programme for E-health in the Kyrgyz Republic for 2016-2020** Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022; Priority Directions	Development of project proposals for donors
82	Raise public awareness of climate impact on health for healthy life and strengthened responsibility for their own health (healthy schools and cities, safe route, etc.)	TCB	Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of project proposals for donors
83	Conduct scientific researches to assess the influence of climatic factors on the health of the population and implement green innovation technologies in the health system	TCB/I	Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of project proposals for donors
84	Use of energy-efficient and energy-saving technologies in the health sector	I/TCB	Priority Directions Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of project proposals for donors
85	Use of renewable energy for hot water and electricity in the health facilities	I/TCB	Priority Directions Programme of The	Development of project proposals

			Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	for donors
85	Use of energy-efficient and energy-saving technologies in the health sector	I/TCB	Priority Directions Programme of The Health Sector of the Kyrgyz Republic on Climate Change Adaptation for 2011 – 2022	Development of project proposals for donors

2.10.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to increase the climate resilience of healthcare:

- Technical standards, codes of practice and guidelines for climate-resilient community and health care facilities developed and applied (e.g. number of facilities managed under these standards);
- Comprehensive climate change and health hazard mitigation and prevention programme developed and rolled-out at the community level;
- Timely and effective management of climate-related disasters or emergencies;
- Sustainable health care practices that reduce climate-related health burdens; and
- Effective communication of climate-related health risks to the public.

More specific details on key indicators will be defined during individual project preparation phases. Where appropriate all indicators should be disaggregated to show the different impacts on men, women and vulnerable groups.

2.10.5 Implementation arrangements

Under the guidance of the CFC and in close coordination with the CCCCP, it is envisaged that the Ministry of Health will lead the activities under the investment component 7. In addition, the Ministry of Emergency Situations of the Kyrgyz Republic, Ministry of Agriculture, Food Industry and Land Reclamation of the Kyrgyz Republic and other concerned ministries and agencies are expected to be the main collaborating agencies on the issues of drinking water safety, food safety and response to adverse natural and weather situations and events. The Ministry of Health of the Kyrgyz Republic together with lower organisations will undertake activities for implementation of Component 7. In development of curricula (pre- and postgraduation training) for non-infectious disease surveillance, the leading part will be played by educational and scientific institutions and facilities of the Kyrgyz Ministry of Health and the Kyrgyz Ministry of Education and Science. In addition, other stakeholders will be engaged in implementation of projects: business sector, local self-governments, NGOs and international partners. Involvement of the business sector is expected to accelerate introduction of HACCP principles in provision of food safety and medical wastes management system. NGOs are expected to participate in project implementation, especially in mobilising communities to introduce healthy life principles and strengthen population responsibility for their own health. More specific

details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders. Since a number of the activities will follow a decentralised approach, Ayil Okmotu together with Rural Health Committees are expected to be the main stakeholders at district and community level. Participation of health facilities and private sector will be sought in implementing energy saving and energy efficient technologies.

2.11 COMPONENT 8: Increasing the climate resilience of mining

2.11.1 Background and rationale

The mining sector is exposed to changing climate risks because it relies on long-lived and capital-intensive assets, typically operates in regions that are highly vulnerable to climate extremes and is a major user of water. Competing pressures on water resources in particular will create challenges for the mining sector. Less water, declining water quality, and growing water demand are likely to create operational issues, restrictions on abstractions, more stringent water quality regulations, pressure to move towards full-cost water pricing, and increased public scrutiny of water practices[93]. Complex environmental permitting arrangements, and social licenses to operate, may be further undermined by the effects of a changing climate.

The mining sector is viewed as a key sector to support the Kyrgyz Republic's economic development, and as such, it is important that this sector is developed in a way that is cognisant of climate change risks. Very little knowledge exists that draws out the connection between climate change and natural resource development. On the one hand, climate change carries the risk of further aggravating changes in natural environmental conditions, which may, in turn, disrupt resource-dependent livelihood generation, including agriculture and herding[94]. On the other hand, limited technical and financial resources already pose a challenge for current efforts to adapt to a changing climate[95]. Therefore, it is important that the role of the mining sector in a broader development context, including its complex interlinkages with a changing climate is better understood and incorporated in policy and strategic decision making[96].

For both existing and new mining prospects, it is critical that climate change risks are integrated into criticality assessments, and that these improved assessments are reflected in minerals / resource policies[97]. For existing mining practices, it is important that climate change risk assessments are undertaken and measures put in place to mitigate or manage any high level risks. An area of potential risk already identified is the storage and management of mining and processing waste and tailings. For new mining prospects, it is crucial that consideration is given to any potential future climate risks, both during the mines operating lifespan and post-closure. Mining companies have long-term obligations to protect water quality and maintain tailings and waste storage structures. Requirements can range from a period of hundreds of years to perpetuity, meaning that structures must be

[93] Acclimatise (2010). 'Building Business Resilience to Inevitable Climate Change'. Carbon Disclosure Project Report. Global Mining. Oxford
[94] Rüttinger, L. and Sharma, V. (2016). Climate Change and Mining: A foreign policy perspective. Climate Diplomacy Report. German Federal Foreign Office, adelphi and University of Queensland.
[95] Rüttinger, L. and Sharma, V. (2016).
[96] Rüttinger, L. and Sharma, V. (2016).
[97] Rüttinger, L. and Sharma, V. (2016).

designed to withstand events that are likely to occur once every several thousand years[98]. Structures designed to current or historical climate may not perform as planned under future climate conditions.

2.11.2 Development objectives

To facilitate the growth of a sustainable and climate resilient mining sector, so that it provides national income and employment for Kyrgyz citizens. Realising the Kyrgyz Republic's potential for expanding the mining sector is important for growing its economy, alleviating poverty, developing the private sector, creating jobs, attracting foreign investment and generating tax revenues to support better public services.

2.11.3 Activities

Based on international literature and the expert team's knowledge, a range of activities have been identified to increase the climate resilience of the mining sector. These are presented in Table 14.

Table 14: Activities, project concepts and proposals to increase the climate resilience of the mining sector. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
86	Implement an appropriate / proportional fee basis for the use of nature and reimbursement of damages to the environment inflicted as a result of violations of the environmental legislation	P	NSSD	
87	Ensuring environmental impact assessment among planned commercial and other development projects	P	NSSD	
88	Improvement of a system for accounting for, and reporting on, parameters of environmental pollution	P	NSSD	
89	Creation of a sustainable system of environmental control and monitoring and rational nature use for balanced managerial decision making	P	NSSD	
90	Reinforce assets to withstand future climate conditions (e.g. higher temperatures, heavy rainfall episodes)	I	ICMM (2013): Adapting to a changing climate: implications for the mining and metals industry	
91	Amend engineering design standards, design criteria and contract specifications to account for a changing climate (e.g. increased capacity in water and waste storage ponds)	P	ICMM (2013)	

[98] ICMM (2013). Adapting to a changing climate: implications for the mining and metals industry. https://www.icmm.com/website/publications/pdfs/5173.pdf

92	Relocate or raise assets and operations outside of high-risk areas (e.g. flood plains)	I	ICMM (2013)	
93	Improve water efficiency in mining operations, through a higher level of reuse and recycling	I	ICMM (2013)	
94	Increase the frequency of maintenance and monitoring of assets sensitive to weather effects	TCB	ICMM (2013)	
95	Develop land-use management and mine and metals site expansion plans	TCB	ICMM (2013)	
96	Retain or restore natural buffers in river environments to increase resilience against flooding, erosion and other extreme weather events	TCB	ICMM (2013)	
97	Evaluate whether retreat is necessary over the longer term in certain areas or investments, based on expected changes in climate and other stressors	TCB	ICMM (2013)	
98	Ensure that post-closure activities, including reclamation and long-term water quality monitoring, consider future climate conditions	TCB	ICMM (2013)	
99	Mapping / modelling of waste collection sites (e.g. tailings dams) to understand their exposure to future hydrological and land stability changes	TCB	Expert team	
100	Define national research and development programme on climate impacts on the mining sector and climate resilient, sustainable mining practices (e.g. research on climate impacts, alternative sources of freshwater, appropriate reforestation systems and closed circuit mining)	TCB	Expert team	
101	Conduct high level analysis on past climate impacts on the mining sector (small and large scale) and modelling of future risks (e.g. impacts on infrastructure, operations, labour, etc.)	TCB	Expert team	
102	Develop and implement awareness raising programmes to promote climate resilient and sustainable mining practices once understood	TCB	Expert team	
103	Develop guidance to integrate climate resilience considerations into Environmental Impact Assessments when building new mining infrastructure	TCB	Expert team	
104	Review and update Mining School curriculum to include climate change considerations in relevant modules	TCB	Expert team	
105	Promote the utilisation of GIS/remote sensing to inform climate resilient decision making in mining	TCB	Expert team	
106	Train relevant regulatory agencies in satellite imagery interpretation of mining operations to enable better monitoring and enforcement	TCB	Expert team	

107	Design and implement forest rehabilitation programmes by small, medium and large scale miners	TCB	Expert team	
108	Develop and implement awareness raising programmes to promote climate resilient and sustainable mining practices once understood	TCB	Expert team	

2.11.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to increase the climate resilience of the mining sector:

- Technical standards, codes of practice and guidelines for climate-resilient mining practices developed and applied (e.g. number of mining operations managed under these standards); and
- Mining operations adopt effective and enhanced energy, water and land use practices.

More specific details on key indicators will be defined during individual project preparation phases.

2.11.5 Implementation arrangements

Under the guidance of the CFC and in close coordination with the CCCCP, it is envisaged that the State Committee on Industry, Energy and Sub-soil will lead the activities under this investment component. In addition, the State Agency on Environmental Protection and Forestry, Institute of Geology under NAS KR are expected to be the main collaborating / supporting agencies. Other important stakeholders will be NGOs, including Extractive Industries Transparency Initiative (EITI), Research and Development Centre Ken-Too and Kyrgyz Association of Mining Engineers. NGOs, together with engineering, geo-technical and environmental companies are expected to play an important role in project implementation, especially in mobilising and assisting mining companies in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders.

2.12 COMPONENT 9: Enhancing private sector participation in climate resilience

2.12.1 Background and rationale

Globally, the private sector is increasingly viewed as playing a key role in adapting to climate change and major climate finance mechanisms, such as the Climate Investment Funds (CIF) and Green Climate Fund (GCF), are developing private sector adaptation programmes. While governments have an important role to play, the responsibility for dealing with climate risks frequently rests with private businesses (and households)[99]. The same applies for the Kyrgyz Republic; the private sector must be engaged to facilitate and deliver climate resilience measures. In order to effectively contribute to and

[99] Vivid Economics (2015). Building an Evidence Base on Private Sector Engagement in Financing Climate Change Adaptation. Final report prepared for EBRD.

engage in climate resilience, private sector companies need to have the knowledge, capacity and financial incentives necessary to take appropriate and timely action.

Agriculture is a key activity for income generation in the Kyrgyz Republic, from small-scale farmers to larger agribusinesses, making it an important area for climate resilience. Currently, about 97% of agricultural output is produced by the private sector[100]. Climate change will have diverse impacts on agriculture, stemming from shifts in temperature, changes in water availability and different weather patterns. Such changes may influence growing seasons and cropping patterns, with implications for both the small-scale farmer selling their produce at local markets and larger agribusinesses processing and transporting food further afield. *[Activities to improve agricultural production are covered in section 2.5].* Given the country's desire to increase production, exports and create agricultural enterprises, in order to increase the physical volume of production and the depth of processing of agricultural products[101], it is critical that climate resilience is integrated in agribusinesses of all sizes. Emphasis should also be given to support vulnerable groups, including the rural poor and women, to diversify their income sources, which helps them buffer income losses related to climate-related events.

Small businesses in other areas of manufacturing are also sensitive to the impacts of climate change on the availability of water, energy and raw materials, both directly and through their supply chains. This is especially true of manufacturing processes that entail the use of large volumes of water, such as textile production. The manufacturing sector in the Kyrgyz Republic also includes small-scale garment production, which is typically dominated by women. Ensuring that these women are protected from the impacts of climate extremes on their day-to-day work activities and access to markets would facilitate the growth of their micro-enterprise, with associated economic and social benefits.

Climate resilience measures should seek to improve water and energy use, and make supply chains more resilient through improved equipment and facilities for production, storage and transport. The justification for persuading businesses to invest in water and energy saving measures should focus on cost saving, ensuring security of supply at a reasonable price and reputational benefits.

There is an expanding market for climate-related products and services, which Kyrgyz businesses may be able to provide. Opportunities are likely to exist in manufacturing, finance and insurance, construction and technical activities. For example, there is the opportunity for the private sector to deliver energy and water efficiency-related products and services to residential and industrial customers. This role of the private sector as "adaptation solution providers" will generate increased revenue, higher levels of employment and improved climate resilience across a range of sectors.

2.12.2 Development objectives

To ensure the private sector is protected from the impacts of climate change and exploiting the market opportunities climate change presents, through increased demand for climate resilient products and services. This component seeks to improve access to climate resilient technologies and reduce market barriers in specific sectors that prevent the private sector from playing its role in building climate resilient communities. Supporting the development of the private sector with help create jobs, alleviate poverty, attract foreign investment and generating tax revenues to support better public services.

[100] NSSD (2013)
[101] NSSD (2013)

2.12.3 Activities

A targeted set of activities have been identified to support the development of the private sector to deliver climate resilience. These are presented in Table 15.

Table 15: Activities, project concepts and proposals to enhance private sector participation in climate resilience. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
109	Promotion of energy and water efficient production and manufacturing processes to reduce consumption	TCB	Expert team	
110	Replace or retrofit industrial buildings and processes over time with resource-efficient, climate-adaptive solutions that are energy and water efficient	I	Expert team	
111	Promote adoption of the most up-to-date water conservation technologies and water-efficient practices and use alternative water supplies whenever possible	TCB	Expert team	
112	Facilitate access to finance across agricultural and manufacturing supply chains to meet the investment requirements for developing adaptive capacity	I	Expert team	
113	Incentivise the private sector to invest in climate resilience building through the development of new financial mechanisms	I	Expert team	
114	Provide financial support and training to businesses seeking to provide climate-related goods or services	I	Expert team	
115	Capacity building activities to improve knowledge amongst the private sector on the most appropriate sector-specific technologies and practices	TCB	Expert team	

2.12.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to enhance private sector participation in climate resilience:

- Technical standards, codes of practice and guidelines for climate-resilient, energy and water efficient buildings developed and applied (e.g. number of buildings managed under these standards);
- Private sector adopts effective and enhanced energy and water use practices (e.g. number of businesses supported to invest in new technology);
- Number of recipients and beneficiaries of financial incentives to invest in climate-resilience; and

- Effective communication of climate-related risks to the private sector.

More specific details on key indicators will be defined during individual project preparation phases. Where appropriate all indicators should be disaggregated to show the different impacts on men, women and vulnerable groups.

2.12.5 Implementation arrangements

With support from the CFC and in close coordination with the CCCCP as well as other important concerned public bodies and stakeholders, particularly, business associations, NGO, public associations, it is envisaged that the Ministry of Economy will lead the activities under this investment component . Business associations, NGO, public associations are expected to play an important role in project implementation, especially in mobilising and assisting companies in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases. This will be undertaken in a participatory process with all concerned government and non-government stakeholders.

2.13 COMPONENT 10: Enhancing the climate resilience of forestry and biodiversity

2.13.1 Background and rationale

Despite the Kyrgyz Republic's small size, it is one of the 200 priority ecoregions in the world[102]. This is due to the high concentration of species and diversity – about 2% of the world's flora, and 3% of the world's fauna species[103]. Problems with biodiversity conservation are in most cases connected with the negative anthropogenic impact on natural ecosystems. However, climate change is likely to be an increasing risk driver for Kyrgyz Republic's unique forest and biodiversity.

Ensuring the forestry sector is managed in a climate resilient manner could significantly benefit the national economy, society and environment. Ecosystem-based adaptation (EBA) is a key approach to help communities adapt to climate change. Benefits could be gained through conservation of biodiversity and sustainable forestry management.

The State Agency on Environment Protection and Forestry under the Kyrgyz Government identifies two key climate change adaptation priorities: (i) conservation of biodiversity; and (ii) increasing the forest area[104]. To achieve these objectives, there is a need for (i) expanded network of specially protected natural areas (SPNA), conservation of flora, fauna and their habitats, increased social significance of biodiversity and ecosystem services; (ii) efficient forestry management, namely, timely forest accounting, protection of forest against forest offences and fires, pests and diseases, reproduction of forest resources (afforestation, reforestation), and increased forest productivity.

2.13.2 Development objectives

To protect the Kyrgyz Republic's unique forest and biodiversity from the impacts of climate change, and to sure that social, economic and cultural benefits of climate resilience are realised. These benefits can

[102] State Agency on Environment Protection and Forestry under the Government of the Kyrgyz Republic. (2015). Climate change adaptation programme and action plan for 2015-2017 for the Forest and Biodiversity Sector.
[103] State Agency on Environment Protection and Forestry under the Government of the Kyrgyz Republic. (2015).
[104] State Agency on Environment Protection and Forestry under the Government of the Kyrgyz Republic. (2015).

include disaster risk reduction, sustainable livelihoods and food security, and sustainable water resources management.

2.13.3 Activities

Based on literature review, an extensive and detailed set of activities have been identified to increase the climate resilience of forestry and biodiversity in the Kyrgyz Republic, covering informational, technical, capacity building and public awareness measures. These are presented in Table 16.

Table 16: Activities, project concepts and proposals to enhance the climate resilience of forestry and biodiversity. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
116	Improve efficiency of SPNA management and expansion of SPNA network.	TCB, I	Priority Directions Conservation of biodiversity	Development of concept and project proposals for donors
117	Preservation and restoration of wetlands as a habitat of natural biodiversity species and a vital component of the nature environment to play a decisive role in the adaptation to climate change	TCB	Priority Directions Preservation of wetlands	Development of concept and project proposals for donors
118	Implementation of the Global Snow Leopard and Ecosystem Protection Programme	TCB, I	Global Snow Leopard and Ecosystem Protection Programme	Development of concept and project proposals for donors
119	Economic appraisal of ecosystem services	TCB	Priority Directions Conservation of biodiversity	Development of concept and project proposals for donors
120	Determination of ecological capacity in planning of economic activity	P	Priority Directions	Development of concept and project proposals for donors
121	Sustainable forest management	P	Concept	FAO Project TCP/KYR/3603 Support the Elaboration and Alignment of Forest Policy and Action Plan to SDGs and Climate Change Agenda
122	Sustainable forestry (monitoring, guarding, protection, forest regeneration)	TCB, I		Development of concept and project proposals for donors
123	Cooperative forest management	TCB, I		Development of concept and project proposals for donors

124	Development of added value chains and processing of forest wood and non-wood products	TCB	Concept	Development of concept and project proposals for donors
125	Introduction of integrated natural resources management	TCB, P	Concept	World Bank's Integrated Forest Ecosystem Management Project
126	Incorporating climate change impacts into protected areas and forest enterprises management plans and practice	P	Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector)	
127	Promoting the conservation and restoration of damaged natural ecosystems to strengthen their resilience to climate change	TCB	Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector)	
128	Increasing the capacity and awareness of stakeholders of the Forest and Biodiversity sector on adaptation	TCB	Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector)	
129	Monitoring of flora and fauna populations under climate change	TCB	Climate Change Adaptation Programme and Action Plan for 2015-2017 for the Forest and Biodiversity Sector)	

2.13.4 Key indicators

The following key indicators have been identified as a starting point to evaluate the effectiveness of projects to enhance the climate resilience of forestry and biodiversity:

- Proven improved land management, forestry and biodiversity practices that will strengthen climate resilience are adopted; and
- Biodiversity maintained or improved, with flora and fauna populations are protected from the adverse effects of climate change.

Activities	Indicators	Indicator measurement unit
Improve efficiency of SPNA management and expansion of SPNA network	Area, percentage of the country territory	%
Preservation and restoration of wetlands as a habitat of natural biodiversity species and a vital component of the nature environment to play a decisive role in the adaptation to climate change	Area of protected wetlands, ha	ha
Implementation of the Global Snow Leopard and Ecosystem Protection Programme	Number of snow leopards	units
Economic appraisal of ecosystem services	Economic value	KGS
Determination of ecological capacity in planning of economic activity	Forest use standards	Statutory instrument (SI)
Sustainable forest management	Policy	SI
Sustainable forestry (monitoring, guarding, protection, forest regeneration)	Statistic data/ha	SI
Cooperative forest management	Number of forest users (lease + CBFM (community-based forest management))	person
Development of added value chains and processing of forest wood and non-wood products	Number of households	units
Introduction of integrated natural resources management	Number of IMPs (integrated management plan)	units
Incorporating climate change impacts into forest management and specially protected natural areas plans and practice	Number of plans	units
Promoting the conservation and restoration of damaged natural ecosystems to strengthen their resilience to climate change.	Number of implemented projects	units
Increasing the capacity and awareness of stakeholders of the Forest and Biodiversity sector on adaptation	Number of trainees/ publications	units
Monitoring of flora and fauna populations under climate change	Number of studies/ reports	units

2.13.5 Implementation arrangements

With support from the CFC and in close coordination with the CCCCP, it is envisaged that the State Agency on Environment Protection and Forestry will lead the activities under this investment component. This will be undertaken in a participatory process with use of all steps required in implementation of investment projects.

- Review of current situation
- Study
- Analysis and recommendations
- Development of project proposals
- Expert examination and discussions

- Search for donors
- Implementation of projects in compliance with national laws
- Project monitoring and evaluation

Since a number of the activities will follow a decentralised approach, Ayil Aymaks are expected to be the main government stakeholders at region, district and community level.

2.14 COMPONENT 11: Enhancing the climate resilience of emergency situations

2.14.1 Background and rationale

Kyrgyz Republic is exposed to a wide range of climate-related hazards including landslides, mudslides, landslips, rockfalls, avalanches, flooding and glacial lake outbursts. Climate variability and projections of future climate change indicate that, with the exception of landslides, such extreme events are only going to increase in frequency over time. To achieve the objective for raising the level of population and territory protection against emergencies, investments are needed in monitoring and forecasting of hazardous natural processes and events, and a complex of measures must be carried out to protect population and territories against emergencies. Specifically, protective measures have to be undertaken comprising preventive, remedial and research actions on potentially dangerous sites.
Improved early warning systems would enable equal access to information about anticipated hazardous events including for the most vulnerable groups living in disaster-prone areas. These investments are deemed as efficient because they would help stem recurring economic losses and the loss of human lives from weather-related disasters[105].

2.14.2 Development objectives

The primary objective of enhancing the climate resilience is development, implementation and support of specific measures aimed at better protection of population, infrastructure and territories against risks of climate change-related natural disasters and adverse weather events.

2.14.3 Activities

A focused suite of emergency situations activities have been identified, covering investment, policy, technical and capacity building measures. These are presented in Table 17.

Table 17: Activities, project concepts and proposals to improve climate information services, including forecasting and management of climate-related emergency situations. Activities are classified into investment (I), policy (P) or technical and capacity building (TCB) measures.

#	Activities	Activity type	Source of information	Project concepts and proposals
130	Development of the State System of Civil Protection capacity for preparedness to disasters risks	TCB	Emergencies situations plan of measures (2015-2017)	

[105] World Bank (2011).

131	Development of the monitoring and forecasting system for hazardous weather processes and events	TCB	NSSD; Emergencies situations plan of measures (2015-2017)	
132	Protective measures (remedial actions, capital construction and dedicated preventive and recovery measures).	TCB	NSSD; Emergencies situations plan of measures (2015-2017), "40 Steps to the New Era" Programme implementation plan	
134	Development of the Unified Information Management System for emergency and crisis situations	TCB	Emergencies situations plan of measures (2015-2017); "40 Steps to the New Era" Programme implementation plan	
135	Improvement of knowledge and understanding of disaster risks		NSSD; Emergencies situations plan of measures (2015-2017), "40 Steps to the New Era" Programme implementation plan	

2.14.4 Key indicators

The following key indicators have been identified as expected outcomes to evaluate the effectiveness of projects for enhancing the climate resilience in emergency situations:

- Raised level of protection against natural disasters and high level of emergency response
- Improved quality of monitoring and forecasting of hazardous natural processes and events to take measures for disaster risk reduction
- Improved resilience of communities and infrastructure to natural disasters through implementation of mitigation measures
- Enhanced capacity of the Unified Information Management System for emergency and crisis situations
- Improved "safety culture" of population

More specific details on key indicators will be defined during individual project preparation phases.

2.14.5 Implementation arrangements

Under the guidance of the CFC and in close coordination with the CCCCP, it is envisaged that the Ministry of Emergency Situations will lead the activities under this investment component. In addition, KyrgyzHydromet is expected to be the main collaborating/supporting agency. Other important stakeholders will be NGOs, including Central - Asian Institute for Applied Geosciences (CAIAG), Public Association "AGROLEAD", and Climate Network of Kyrgyzstan (CNK). NGOs are expected to play an important role in project implementation, especially in mobilising and assisting communities in assuming their implementation role. More specific details on the implementation arrangements and required capacity building/ strengthening measures will be defined during individual project preparation phases.

2.15 Climate finance project cycle

As already noted, the Kyrgyz Republic has taken substantive steps towards the development of overarching strategies that address development and climate change, both directly or indirectly. However, in order to move from climate change policy-making to investment implementation, a coherent and coordinated mechanism is needed to identify, develop, implement, monitor and evaluate climate change projects, engaging with various governmental and non-governmental stakeholders throughout the process.

A climate finance project cycle has been designed to assist the Kyrgyz authorities in developing climate resilience projects, from the identification of a project or programme to implementation, completion and evaluation, through approval by the relevant government and climate fund /donor authorities. The main features of the proposed climate finance project cycle are illustrated below, and presented in full in Annex 5.

The proposed climate finance project cycle is meant to be adopted by the CFC as the climate finance lead organisation in the Kyrgyz Republic, and shall be further specified and elaborated. The CFC has a key role to play in attracting international finance and developing and managing bankable project proposals on climate change and resilience. Other stakeholders involved in the CFCM can also use this project cycle to ensure consistency when developing project proposals, including development partners, government ministries and agencies, NGOs and the private sector in the Kyrgyz Republic.

The proposed project cycle is structured around 8 stages corresponding to Functions 3 to 7 of the CFCM, from the development and management of climate resilience project pipelines to the M&E and reporting on climate resilience projects (see Figure 3). The project cycle is further described in Figure 4, which identifies for each stage: the sub-steps/scope, key stakeholders to be engaged, an indicative timeline to complete each stage, and primary (lead) and secondary (supporting) stakeholders involved at each stage.

The timeline should be considered as indicative, as it is dependent on a number of factors such as: the climate fund's own project cycle, the level of complexity and due diligence requirements for the project, and the level of baseline information available on the project, such as technical studies (e.g. feasibility studies).

This project cycle should be further tailored to future developments in the still-evolving climate finance institutional architecture in the Kyrgyz Republic. Particular attention should also be paid to linkages with the existing approval processes by the government of the Kyrgyz Republic and the development of a GCF no-objection procedure under stage 4 of the project proposal process (approval). In addition, future amendments to the existing two approval platforms (CCCCP and CCMIP) should be taken into account when revising the climate finance project cycle. In particular, the CCCCP is not fully operational, and as such, there is currently no clear approval process for climate-related investments.

Figure 3: Eight stages of the proposed project cycle showing how it relates to the corresponding CFCM functions

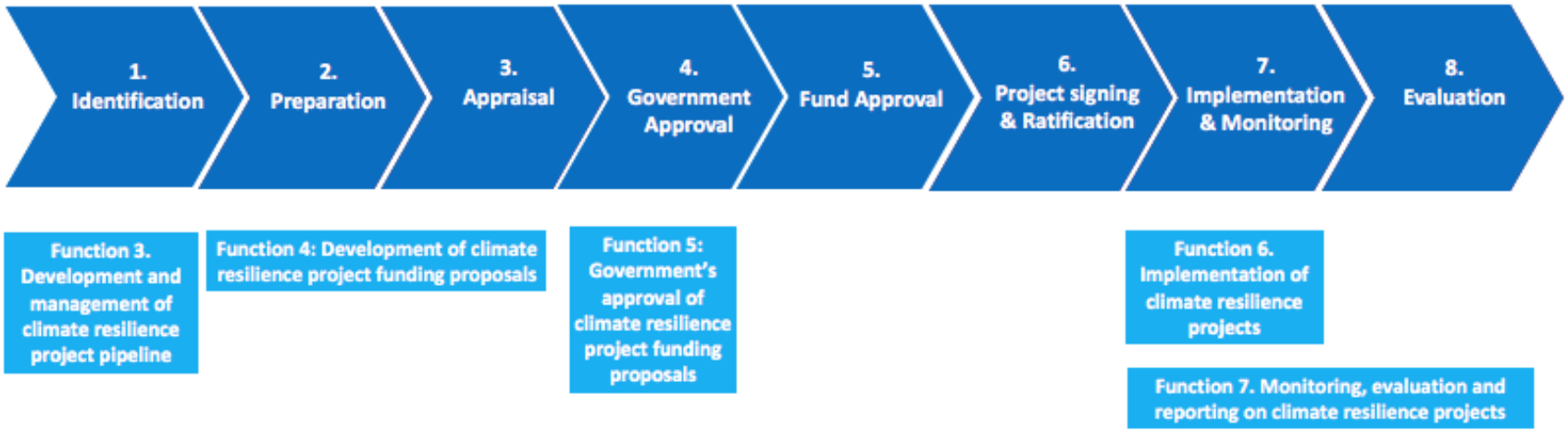
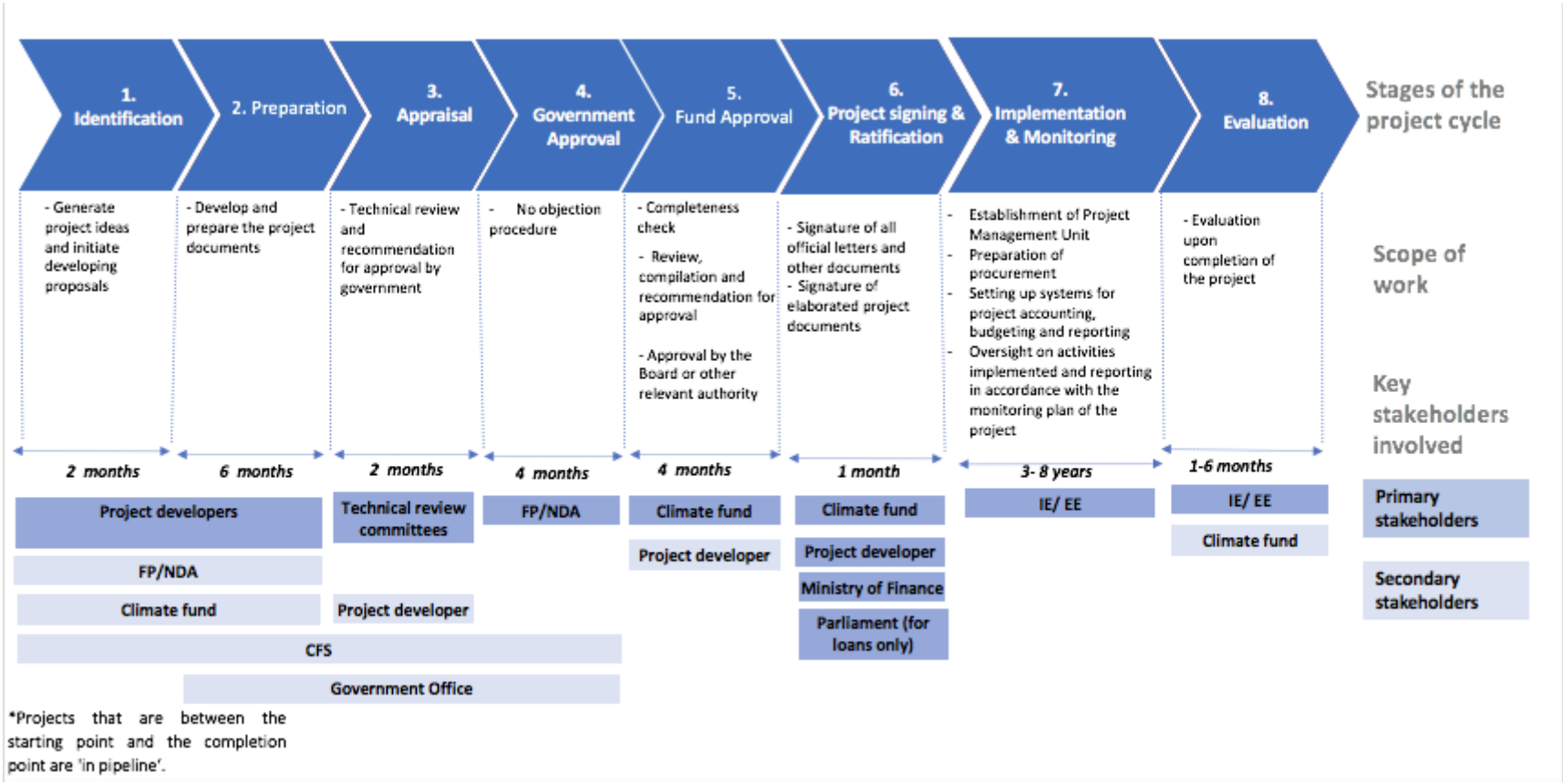


Figure 4: Overview of the climate finance project cycle, including different stages, various governmental and non-governmental stakeholders engaged and indicative timeline to complete each stage



2.15.1 Proposed stages of the climate finance project cycle

Each of the stages presented in Figure 3 and Figure 4 are further described below.

Stage 1 - Identification

The CIP sets out the climate risks facing key socio-economic sectors in the Kyrgyz Republic (Section 1 of the CIP) and the proposed investment program components to address those risks (Section 2 of the CIP). It sets out the framework for identifying climate resilience investments (Section 2.2 of the CIP) which should be applied at this stage. Using this framework, international development partners, government ministries and agencies, NGOs and private sector generate ideas and initiate developing proposals, by responding to a Request for Proposal (RFP) process from a climate fund or other donor, or preparing a spontaneous application. International development partners may also have country strategies which set out their funding and investment priorities, indicating the sectors and topics where they are more interested in developing proposals. Multilateral and bilateral development partners may also undertake consultative scoping missions in-country to discuss potential project proposals with government counterparts and other stakeholders.

Government ministries and agencies can also engage with a climate fund or donor to formally express their interest in preparing and submitting a funding application. Alternatively, the CFC could consider publishing calls for funding proposals or conducting multi-stakeholder workshops to generate proposal ideas aligned with national climate change strategies, policies, strategies and action plans.

Stage 2 - Preparation

Project developers develop and prepare the project documents (concept notes and/or full funding proposals) for submission in line with the fund's project cycle process and project requirements. Depending on the climate fund or donor's project size and cycle, project developers may have to follow a one-step (full proposal) or two-step application (concept note followed by full proposal). For instance, developing a concept note is voluntary for the GCF.

Project developers can be international development partners, government ministries and agencies, NGOs and the private sector in the Kyrgyz Republic.

Stage 3 - Appraisal

Once the funding proposal is finalised, it has to go through a technical review as part of the in-country approval processes by central planning ministries, and technical commissions following the specific process and methodology depending on the type of the project and relevant financial instruments used (grant versus loan). Further information on the national-level review, appraisal and approval process is provided in Section 8.2. Once the proposal has passed the initial review stage, the CFC provides a recommendation for the no-objection/approval to the relevant Focal Point (FP)/ National Designated Authority (NDA)[106]. A proposal may require additional clarifications from the project developer.

It should be noted that temporary arrangements are in place in the Kyrgyz Republic for the approval of GCF proposals (as described in Section 8.2). These arrangements are likely to change under the GCF readiness support implemented by FAO, through the setup of the GCF funding proposal review/screening criteria. These criteria are required in order to ensure that the funding proposals are

[106] A FP as the focal person (an individual) and NDA as the focal authority (an agency) are in charge of coordinating climate funds' activities in the country.

in conformity with national climate priorities as well as national laws and regulations. The review/screening criteria can cover technical, financial and legal aspects, as well as stakeholder involvement. The results of the review process will be presented to the relevant national working groups/ committees in order to provide recommendations for approving a no-objection letter.

Stage 4 - Government approval

Based on the outcome of country appraisal process, the Focal Point / National Designated authority (FP/ NDA) provides a no-objection letter to the Implementing Entity (IE) for submission to the climate fund alongside the full funding proposal.

Stage 5 – Fund approval

The climate fund secretariat will then undertake a review of the completeness of the funding application. This will be followed by a technical review (including through an independent assessment by technical experts), before submission for consideration to the fund's board or relevant committee.

Based on the funding package provided by the fund's secretariat, the fund's board or relevant committee will then make one of the following decisions:

- Approve funding
- Provide an approval which is conditional upon modifications to the project or programme
- Reject the funding proposal.

Following the approval of funding of the proposal, legal arrangements are negotiated and signed between the IE and the climate fund.

Stage 6 - Project signing

After the project's approval at the national and fund-levels, relevant project letters and other documents are prepared by the IE in close collaboration with the relevant fund and government authorities. This includes the Term Sheet agreed to by the all Parties - subject only to final internal approvals - setting out, in summary form, the key terms and conditions relating to the project or programme (for example, the elected holding currency for disbursements or any specific deviations, derogations or modifications). This process will differ depending on whether it is a loan-based or a grant-based project or programme, as discussed in Section 8.2.

- *Loan-based projects or programmes*

A proposal for a loan-based project or programme has to go through the general governmental approval process, i.e. from the initiating ministry via the Department of Agro-industry and Ecology of the Government Office to obtain other ministries' and three Parliament Committees agreement (no objection) and final Government Resolution, and finally to Parliament for ratification. A special justifying cover letter with a reference statement on the importance of the project activities, including benefits to the country and justifying the loan, is developed by the initiator and sent to the Government Office.

Subsequently, an agreement on the financial support is developed by the Government Office based on consultations with the line ministries, three committees of the Parliament (Budget, International Relations and Sectoral Committee) and the Ministry of Finance and agreed on by the involved International Implementing Agency and the line ministry on behalf of the government. Loan-based funding proposals are required to be agreed upon (no objection) by a minimum of half of the

Government, including mandatorily the Ministry of Finance, Ministry of Economy, Ministry of Justice, with a primary role of the Ministry of Finance. After obtaining the signed Government Resolution on the corresponding Agreement on financing the project, that Agreement is debated in the Parliament and then ratified by the Law.

- *Grant-based projects or programmes*

Grant-based projects or programmes are typically allocated within existing mid-term or long-term Inter-Governmental Agreements with development partners, which provide the legal basis for them. These agreements follow the approval procedure established for Inter-Governmental Agreements which involves ratification by Parliament. Usually such agreements have a duration of several years, which gives the designated beneficiary ministry or agency the power to sign further decisions within the agreement on behalf of the Government. Thus, decisions for grants are taken directly by the designated government body or by the development partner on behalf of the government body.

Stage 7 – Implementation, monitoring and reporting

The project then moves into the implementation period, whereby funds are transferred to the IE according to agreed tranches. Following this step, the project becomes effective and the process of monitoring and evaluation (M&E) commences and continues until the project or programme closes and exit the climate fund's portfolio.

The Executing Entity (EE) carries out the project or programme activities under the supervision and overall management of the IE, ensuring the quality, quantity and strategic orientation of measures implemented on the ground.

The IE undertakes regular monitoring under the project or programme's monitoring plan (in line with national M&E requirements, as well as those of the climate fund). This can include among other things, periodic supervision missions, audit reviews and multi-stakeholder engagement. In addition, a mid-term review may be performed by the climate fund to ensure that required oversight on activities has been performed by the IE. In addition, annual performance reports may be required.

Stage 8 - Evaluation

Upon completion of the project or programme, a final evaluation is conducted by the IE to assess the performance of the project or programme. The evaluation should be done by an independent evaluation, based on best professional ethical standards and best practice methodologies, such as the Organization for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) criteria (relevance, efficiency, effectiveness, results and sustainability). In addition, an interim evaluation may be also carried out during the project implementation phase.

2.15.2 Key stakeholders involved throughout the project cycle

Table 18 below provides an overview of the key stakeholders involved throughout the project cycle and their respective roles. As described under stage 1 of the project cycle, project developers can be a wide range of actors such as international development partners, government ministries and agencies, NGOs and the private sector in the Kyrgyz Republic. Table 36 provides further information regarding the different responsibilities of IEs and EEs. Based on the information available at the time of writing this analysis, the NDA function in the Kyrgyz Republic and the CFC are kept separate in Figure 4 and Table 18.

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Table 18: Overview of stages at which each stakeholder is engaged and their corresponding role (note: stakeholders marked as 'XX' are seen as primary whereas stakeholders marked as 'X' are seen as secondary.)

Stakeholder	1. Identification	2. Preparation	3. Appraisal	4. Government's approval	5. Fund's approval	6. Project signing & ratification	7. Implementation and evaluation	8. Evaluation
Parliament/ Ministry of Finance				XX (if loans)		XX		
NDA or FP	X	X		XX				
CFC	X	X	X	X				
Technical committees			XX				X	
NGOs	X	X						
Climate fund (Donor)	X				XX		X	
Implementing Entity						XX	XX	
Executing Entity						XX	XX	
Project developer	XX	XX		X				

Table 19: Difference between Implementing Entities (IEs) and Executing Entities (EEs)

Implementing Entity (IE)	• Develops and submits funding proposals for projects and programmes. • Oversees project and programme management and implementation • IEs can include: line ministries and agencies, NGOs, private sector, international development partners, for the GCF, AF and GEF.
Executing Entity (EE)	• Develops and submits funding proposals for projects and programmes through an IE. • Executes funding proposals working under the supervision and overall management of an IE. • EEs can include: line ministries and agencies, NGOs, private sector, international development partners

It should be noted that the framework for identifying climate resilience investment programme components to guide the Kyrgyz authorities on maintaining and continuing to develop the CIP investment programme in the future (presented in Section 2.2 above), as well as the M&E Framework (presented in Section 2.16 below), and the stakeholder engagement plan for the implementation of the CIP (presented in Section 2.17) are further elaborations of some of the steps of the climate finance project cycle.

2.16 Monitoring and Evaluation Framework to track, report, monitor and evaluate adaptation and resilience benefits

Monitoring and Evaluation (M&E) is vital to assessing progress in building climate resilience in the Kyrgyz Republic. Establishing a common M&E framework will allow tracking of the delivery of agreed measures, establishing their effectiveness in reducing vulnerability, creating an opportunity for learning and adaptive management, and fulfilling reporting requirements with the UNFCCC, PPCR, GCF and other international Climate Funds. Article 7 of the UNFCCC Paris Agreement states that each Party should monitor, evaluate and learn from adaptation policies, plans, programmes and actions.

The CFC should be responsible for developing and implementing the M&E framework. Responsibilities include: (i) developing a results-based performance monitoring system for the CIP; (ii) tracking the status of each CIP component; (iii) assessing and summarising the results of CIP implementation; and (iv) ensuring that results and lessons learned are communicated and disseminated throughout the Kyrgyz Republic and to the CIF. As far as possible, M&E should be developed in a participatory way and adopt a more efficient multi-sectoral, rather than sectoral, approach.

The PPCR results framework[107] provides a useful starting point for the CIP M&E framework. An initial draft of the Kyrgyz Republic framework is provided in the logic model in Figure 5. This diagram is intended to demonstrate the cause and effect chain of results from inputs and activities through to project outputs, program outcomes, and national/international impacts. It does not show how these results will be measured through indicators; these will need to be defined by the CFC, in partnership with sectoral representatives, as discussed in more detail in the step-by-step process outlined below.

Figure 5: Application of the global PPCR logic model for the Kyrgyz Republic. This should be reviewed and refined by the CFC, as outlined in the step-by-step process below.

Global – CIF Final Outcome (15-20 yrs)	Improved low carbon, climate resilient development			
Country – Climate Funds Transformative Impact (10-15 yrs)	Improved quality of life for the people of Kyrgyz Republic, especially those most vulnerable to current climate variability and climate change Increased resilience in economic, social and ecosystems to climate variability and climate change through systematic and transformational interventions Increased capacity of KR Government to move from a reactive, donor-led approach to a proactive country-led approach and create the conditions for ownership of adaptation to climate change within the Kyrgyz Republic			
Country – Climate Funds Catalytic Replication Outcomes (5-10 yrs)	Improved government structures and processes to respond to climate variability & climate change through coordination of activity within Kyrgyz Republic	Enhanced information base on climate change risks and improved understanding of climate change amongst a variety of stakeholders	Scaled-up climate resilience investments in infrastructure, water management, disaster preparedness and response, and ecosystems	**Regional level**: Transfer of lessons to the Central Asia region
Project / Program – PPCR Outputs &	Improved capacity for climate resilient	Enhanced integration of resilience into	Increased resilience of infrastructure, water	**CIF Program** New and additional

[107] Climate Investment Fund (2012). Revised PPCR Results Framework. https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/revised_ppcr_results_framework_0.pdf

Outcomes (2-7 yrs)	development planning and implementation Increase knowledge, capacity and coordination of climate variability and climate change effects. Further integration of climate change resilience within revised National Strategy for Sustainable Development, Priority Directions for Adaptation to Climate Change and associated sectoral plans	development investments and strategies	supplies, agricultural productivity, health systems, ecosystems and the private sector Investments in key themes – infrastructure and built environment, water resources, health and food security, private sector, ecosystems and hydromet monitoring, disaster forecasting and warning	resources for climate resilience Increased other public and private sources of financing / investment
Project / Program – PPCR Activities (1-7 yrs)	Capacity building and knowledge management	Enabling environment	Investments	Leveraging
Program – PPCR Inputs	PPCR grant and loan funds will leverage planned and ongoing interventions by the MDBs, private sector and development partners			

There are a series of steps involved in both building CFC's capacity to develop the M&E framework and to then ensure its effective delivery. These are outlined below:

1. **Ensure a M&E specialist is part of the team at the CFC.** In multiple country contexts, M&E is a developing concept, with challenges involved in assessing adaptation outcomes and practical examples largely restricted to M&E design, rather than successful implementation. To navigate these challenges, it will be crucial that institutional arrangements for the CFC include the provision of a M&E specialist. Mainstreaming of M&E within the CFC will allow the Kyrgyz Republic to take the lead in establishing a results-based philosophy that will help enhance the design and impact of resilience building activities.
2. **Review national M&E systems and data sources for existing or potential future inclusion of climate adaptation.** In line with the PPCR basic principles for the application of the PPCR results framework (in common with all the results frameworks under the CIF), M&E should be designed to operate within existing national monitoring systems and data sources. Relevant questions to consider are:
    i. What data and information are being collected already (e.g. from agriculture, water, energy, health, economic development etc.) and are relevant for M&E of adaptation?
    ii. Which already existing data sources refer to climate change impacts, vulnerabilities, adaptation outputs and outcomes, etc.?
    iii. What could be done to make other data relevant for adaptation M&E – potentially through adjustments?
3. **Refine and further develop the PPCR logic model (outlined in Figure 5) and results framework to develop Kyrgyz Republic specific indicators of adaptation and resilience benefits.** In order to be able to aggregate country-level results at the programmatic level (CIP), a set of core indicators will need to be measured using compatible methodologies. The revised PPCR results framework[108] provides five core indicators, namely:

[108] Climate Investment Fund (2012). Revised PPCR Results Framework. https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/revised_ppcr_results_framework_0.pdf

i. Degree of integration of climate change in national, including sector, planning;

ii. Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience;

iii. Quality and extent to which climate responsive instruments/investment models are developed and tested;

iv. Extent to which vulnerable households, communities, businesses, and public sector services use improved PPCR supported tools, instruments, strategies, and activities to respond to climate variability or climate change; and

v. Number of people supported by the PPCR to cope with the effects of climate change.

For the purpose of aggregation and comparison, the PPCR core indicators should be translated and used within the national M&E systems and the project/program results framework. Results frameworks of specific projects can comprise many other indicators, which will need to be defined in partnership with the relevant MDBs[109].

4. **Develop indicator templates / scorecards to record progress**. The CFC will be responsible for developing indicator templates to aggregate information at sector, project and programme levels. Scorecards relating to the five PPCR core indicators are provided in the PPCR Monitoring and Reporting Toolkit[110]. It will be the responsibility of government agencies, municipal and local government, and development partners to fill these in. The CFC will also coordinate the development of a baseline assessment report and periodic performance reports to be disseminated to government, development partners and climate fund administration units. These should be designed to be consistent with reporting requirements from the GCF[111] and other international Climate Funds.

5. **Conduct regular monitoring and final evaluation at project/programme level**. The Implementing Entity (IE) of a project/programme undertakes regular monitoring under the project or programme's monitoring plan (in line with national M&E requirements, as well as those of the climate fund). This can include among other things, periodic supervision missions, audit reviews and multi-stakeholder engagement. In addition, a mid-term review may be performed by the climate fund to ensure that required oversight on activities has been performed by the IE. In addition, annual performance reports may be required. Upon completion of the project or programme, a final evaluation is conducted by the IE to assess the performance of the project or programme. The evaluation should be done by an independent evaluation, based on best professional ethical standards and best practice methodologies, such as the Organization for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) criteria (relevance, efficiency, effectiveness, results and sustainability). In addition, an interim evaluation may be also carried out during the project implementation phase.

2.17 Stakeholder engagement for the implementation of the CIP

As mentioned above, the CIP is considered a "living document", with the CFC being responsible for coordinating the process of selecting investment components, in line with existing priorities of

[109] MDBs will use their own processes, procedures and systems for monitoring and reporting.
[110] Climate Investment Funds (2016). PPCR Monitoring and Reporting Toolkit. https://www.climateinvestmentfunds.org/sites/default/files/knowledge-documents/ppcr_monitoring_and_reporting_toolkit_march_2016_revised.pdf
[111] For details on the M&E reporting requirements of the GCF, covering project implementation and post-implementation, please see: Fayolle V., Odianose S. and Soanes M. (2017), GCF Project Toolkit 2017. Guide to develop a Project proposal for the Green Climate Fund (GCF). Acclimatise, London. January 2017.

development partners and donors. It is envisaged that over time, a participatory and dynamic investment plan will evolve according to national priorities and stakeholders' interests.

2.17.1 Objectives

Stakeholders, from a range of different groups and levels, are crucial to the successful implementation of the CIP. It will be important to promote and foster an inclusive approach to implementation, recognising that it is not a top-down process, but one that requires a variety of actors to create the enabling conditions for climate resilient development to thrive in the Kyrgyz Republic.

The key objective of the presented stakeholder engagement plan is to lay out the strategy for effective multi-way engagement with key stakeholders to implement the CIP and the proposed investment components, in a continuous and participatory process. Upon approval of the CIP, the CFC shall be responsible for developing and implementing the stakeholder engagement plan. By delivering this plan, the CFC will ensure that:

- There is central coordination on communications, outreach and awareness raising on climate resilience projects and activities (CFCM Function 8) through a Communications specialist in the CFC team;
- There is effective engagement with a wide range of stakeholders to maximise awareness of the aims of the CIP, availability of climate funds and individual climate resilience projects;
- Stakeholder-relevant priorities feed into the process of designing, approving and implementing project proposals;
- Institutional capacity, collaboration and inclusiveness is strengthening in developing, aligning and updating national and sectoral strategy, policy and programmatic documents on climate change adaptation and sustainable development.

2.17.2 Stakeholder identification and roles

Different stakeholder groups will have different roles and responsibilities in the delivery of the CIP and climate resilience more broadly, as briefly outlined below:

- National government: Establish a clear, policy framework on climate resilience that provides long-term clarity and stability for investors and regional government.
- Local government: Promoting climate resilience at the local level; Awareness raising and helping co-ordinate multi-stakeholder engagement.
- Climate Funds / Donors: Contribute finance for large projects and knowledge of international best-practice.
- Development partners: Take an active role in identifying, funding and implementing projects at various scales.
- Research institutions: Developing the knowledge base of climate change impacts and resilience-building actions; Providing data / information and communicating research.
- Local NGOs: Awareness raising, developing and delivering local projects, especially in mobilising and assisting communities in assuming their implementation role, and M&E; Provide crucial link between international organizations, women's groups and local communities.

- International NGOs: International advocacy, alliance building and thought leadership; Manage large projects, with financial support from donors and own resources.
- Formal and informal private sector: Delivering local actions and, through increased climate resilience, positively contributing to the economy.
- Local communities: Guiding local vision and key decisions, and delivering local actions; Contribute local knowledge and cultural context to shape climate resilience projects.

The climate finance project cycle (presented in Section 2.14.4 and Annex 5) provides a specific role for various governmental and non-governmental stakeholders engaged in the different phases of the cycle, from the development and management of climate resilience project pipelines to M&E.

2.17.3 Governance through a coordination committee

The stakeholder engagement plan to be developed by the CFC should take into account the requirements of the international climate funds with regards to full stakeholder engagement as well as transparent review and approval process of project proposals. Analysis of other countries' coordination arrangements on climate finance reveals that several of them rely on a variety of coordination platforms that ensure multi-sector policy steering, stakeholder engagement and technical review and support to a Climate Finance Secretariat.[112] These show that there are advantages in utilising new or existing platforms to overcome the lack of a coordination and decision mechanism between key sectors and stakeholders, and implement the CIP efficiently and in a participatory way.

The CCCCP is the main inter-governmental coordination platform on climate change matters in the Kyrgyz Republic. Among its functions, it can draw upon experts within government bodies for the purposes of carrying out scientific and technical reviews of climate resilience projects. Furthermore, it can take part, within the limits of its mandate, in organizing and holding meetings, workshops and conferences on climate change issues. The management and membership of the CCCCP were recently strengthened through a recent government resolution approved in August 2017. Further strengthening may be necessary to perform key climate finance functions under the guidance of the CFC, in particular with regard to enlarged membership, strengthened methodology for appraisal and selection of climate-related investment proposals, and internal institutional arrangements for the technical review.

Other dialogue platform in the country exists and can be engaged for broader dissemination on climate finance issues. For example, the CFC should consider making use and strengthening the existing Climate Change Dialogue Platform of Kyrgyzstan (CCDP-Kg) and Aarhus Centres and territorial departments of State agencies, as appropriate.

2.17.4 Methods of engaging stakeholders

The following represent some of the possible channels that the CFC may choose to engage stakeholders in the implementation of the CIP, and in broader awareness-raising activities in relation to climate finance. In developing engagement, the CFC should pay particular attention to the integration of issues, involving relevant representatives of women and vulnerable groups, especially in rural and remote areas, with cooperation of NGOs, development partners, private sector and other stakeholders.

[112] Examples provided in the Discussion Paper 'Options for the Climate Finance Coordination Mechanism and Climate Finance Secretariat in the Kyrgyz Republic', which was presented to the Kyrgyz authorities in December 2016.

Meetings and conferences

- Launch event of the CIP;
- Bi-annual meetings of the multi-stakeholder coordination committee, and any thematic working groups;
- Continued focused consultation processes on climate vulnerability assessments / climate resilience.

Knowledge platform and products

- Designated CFC / CIP website;
- Social media presence (e.g. Twitter, Facebook);
- Promotion of CFC work in the country (e.g. newsletters, press releases, progress reports);
- Knowledge products (e.g. information and training materials), including cross-cutting issues of gender and climate.

Long-term programmes and campaigns

- Long-term, public awareness-raising programme on climate change and climate resilience, that promotes the inclusion of women and vulnerable groups;
- Education programmes in schools.

3 Proposed priority climate resilience investment projects

Action is already underway in the Kyrgyz Republic to identify, develop and seek finance for a number of climate resilience projects. As identified in section 2 of this document, a number of sector specific investment plans and programmes have been developed to guide the flow of national and international funds in support of their implementation. This section provides an initial list of proposed priority climate resilience investment projects in the Kyrgyz Republic likely to attract financial support from the international climate funds, including the PPCR and the GCF as well as development funds, including the funding Multi-lateral Development Banks (MDBs) and development partners.

Following the establishment of the CFC, this proposed pipeline of priority climate resilience investment projects will be the focus of the CFC's coordination activities with national stakeholders and community of development partners. Project development and design will be the responsibility of the executing and implementing agencies. It is expected that the CFC will provide technical and policy expertise on adaptation and climate finance related issues in the Kyrgyz Republic and provide guidance and support in moving these projects from investment ideas and concepts, through to full funding proposals for climate funding.

Following the approval of the CIP, the Climate Resilience Project Preparation Fund will be established to provide additional financial support to enable Kyrgyz authorities and project developers to move efficiently from investment planning phase to implementation phase. The financial support will be provided under PPCR Phase 1 Component 3 and is expected to fund the following three activities:

a) **Targeted sector analysis** to scope specific investment needs, ensuring alignment of the sector adaptation planning processes and financing priorities, including the National Adaptation Plan process and NDC implementation;

b) **Preparation of the investment project concept** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF;

c) **Preparation of the investment project funding proposals** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.

The Climate Resilience Project Preparation Fund is expected to be managed jointly by the Climate Finance Centre and MDB Steering Group. Financial support of approx. USD 500,000 will be available to Kyrgyz authorities and project developers on a competitive basis. A detailed process and implementation arrangements for accessing the resources from the Climate Resilience Project Preparation Fund will be elaborated following the approval of the CIP.

The pipeline of proposed priority climate resilience investment projects consists of 10 projects. These projects include:

1. Climate resilience and disaster risk reduction in water management.
2. Building climate resilience irrigation infrastructure in the Kyrgyz Republic.
3. Building mudflow resilience in Southern Kyrgyzstan communities.
4. Interfarm system rehabilitation and agricultural performance improvement.
5. Transition to climatically optimised land-use practices: mitigation through adaptive and sustainable forest and pasture management with community leadership.
6. Climate change-specific sustainable mountain and forest resources management.
7. Facility for the climate resilient development of the Kyrgyz Republic's small hydropower potential.

8. Second phase of the Central Asia Hydrometeorology Modernization Project (CAHMP).
9. Empowering food insecure and vulnerable communities through climate services and diversification of climate sensitive livelihoods in the Kyrgyz Republic.
10. Adressing sectoral (climatic) risks through ecosystem based approach for to climate change adaptation in the Kyrgyz Republic.

The above projects are presented in more detailed below.

Project 1: Climate resilience and disaster risk reduction in water management

Climate Resilience [Project / Programme] Summary	
D. Sectoral theme (as per Section 2 of CIP)	• Infrastructure and built environment
E. Investment Component (as per Section 2 of CIP)	• Improving food security from agriculture, through improved water resources, land management and agricultural practices
F. Project/Programme Name:	Climate Resilience and Disaster Risk Reduction in the Water Resources Sector
G. City/ Region:	TBD
H. Project/Programme Proposed Implementing Entity:	Executing Agency: Ministry of Agriculture Implementing Agencies: Department of Water Resources and Land Reclamation, Ministry of Agriculture; Ministry of Emergency Situations
I. Project/ Programme description (max. 600 words)	The Kyrgyz Republic is a country at high risk of impact from the adverse effects of climate change and extreme weather events. Climate change is likely to increase the frequency and magnitude of extreme weather events. Strengthening resilience to climate change and extreme weather events in water resources management is underpinned by the Kyrgyz Republic's Water Code (2005) and National Sustainable Development Strategy 2013–2017 (2013). To mitigate future climate and disaster impacts to the livelihoods of vulnerable communities: (i) water access and availability should be made more resilient to future disruptions, variability, and change; (ii) resilience to extreme weather events such as floods and landslides should be improved; and (iii) institutional capacity for climate and disaster risk monitoring, management, and response should be strengthened. Lessons call for (i) incorporating climate change and disaster risk assessment into project design, (ii) modernizing water resources and protective infrastructure, and (iii) supporting infrastructure investment with capacity building on climate resilience to ensure sustainability. The project will take a system/basin approach in its interventions, addressing both the upstream sources of climate change and disaster risk and their downstream impacts to discrete geographic areas (e.g. irrigation systems) and thereby capture the full scale and range of physical, economic, and social vulnerability. In addition, the project will incorporate novel and high-level technologies and techniques along with community-driven approaches.
J. Proposed project/ programme components	The project will strengthen climate change and disaster resilience in the water sector, with a focus on flood, landslide, and drought risks. The project interventions will be both structural (including civil works) and non-structural (including capacity building, planning, and training for disaster resilience) and comprise four outputs: (i) irrigation infrastructure modernized; (ii) disaster resilient agricultural and land management practices introduced; (iii) flood protection infrastructure modernized; and (iv) disaster risk and water resources data collection and analysis improved. The project outcome will be climate change and disaster resilience of infrastructure and water security improved.
K. Expected climate resilience	• Irrigated land and settlements protected from flood and landslides: XX ha (2017 baseline: XX) and XX inhabitants of which XX% women (201X

benefits/ results	baseline: XX and XX%) • Command area in target areas increased by XX ha (201X baseline: XX) • Agricultural water productivity increased by XX% by 202X among key crops (201X baseline: XX)	
L. Project/ Programme Beneficiary:		
M. Partners expected to be involved in design and implementation of the project/ programme	Executing and Implementing Agencies ADB Project Implementation Consultant Government and Civil Society Stakeholders	
N. Timeframe (indicative)	October 2018–September 2023	
O. Total project/ programme value	$30 million (TBD)	
P. Tentative funding request (USD million total)	Loan: TBD	USD
	Grant: TBD	USD
	Other Contributions:	- ADB: $10 million grant - ADB: $15 million loan - Government $5 million co-financing
Q. Type of project/ programme preparation support that may be required	**Preparation of the investment project funding proposals** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.	
R. Tentative required project/ programme preparation funding (in USD million):	TBD	

Project 2: Building climate resilience irrigation infrastructure in the Kyrgyz Republic.

Climate Resilience [Project / Programme] Summary	
S. Sectoral theme (as per Section 2 of CIP)	1. Infrastructure and built environment; 2. Water resources 3. Health and food security 4. Private sector
T. Investment Component (as per Section 2 of CIP)	• Improving food security from agriculture, through improved water resources, land management and agricultural practices • Enhancing private sector participation in climate resilience
U. Project/Programme Name:	*Building climate resilience irrigation infrastructure in the Kyrgyz Republic*
V. City/ Region:	Country-wide
W. Project/Programme Proposed Implementing Entity:	Department of Water Resources and Melioration EBRD Further partners may be identified during the programme feasibility stage.
X. Project/ Programme description (max. 600 words)	The Kyrgyz Republic is one of the most vulnerable economies to climate change in the Europe and Central Asia region. The incidence of poverty in rural areas - 40 percent in 2015 - is 30 percent higher than in urban areas. While agriculture was, and is still, the mainstay of the Kyrgyz economy, the sector went through a sharp recession during the 1990s, which led to profound reforms during the second half of the 1990s, including a comprehensive and largely equitable land reform resulting in multiple small individual farms. Currently, the agricultural sector is driven by small-scale irrigated agriculture and in 2015 generated 17 percent of the country's gross domestic product and about half of it employment: more than two-thirds of the rural population is employed in agriculture. At the same time, however, the transition led to a disregard of the irrigation and drainage infrastructure. The proposed programme will aim at supporting implementation of the national strategy on irrigation sector reform - State Program on development of irrigation (2017-2026).
Y. Proposed project/ programme components	- Technical assistance for building capacities of national and local stakeholders to implement national strategy on irrigation sector reform - Construction and rehabilitation of irrigation and drainage infrastructure with the aim of making more resilient to projected climate change risks - Technical assistance for climate resilient project preparation and implementation - Communication and awareness raising technical assistance

Z. Expected climate resilience benefits/ results	- Reduced vulnerability of irrigation infrastructure to climate change - Creation of new jobs - Uptake of innovative on-farm irrigations systems	
AA. Project/ Programme Beneficiary:	• National stakeholders responsible for irrigation sector • Local communities Exact list of programme beneficiaries will be identified during the programme feasibility stage.	
BB. Partners expected to be involved in design and implementation of the project/ programme	Department of Water Resources and Melioration (Coordinator) EBRD (lead financier) Programme technical consultant team (project preparation and implementation support)	
CC. Timeframe (indicative)	4-6 years	
DD. Total project/ programme value	USD 250 million	
EE. Tentative funding request (USD million total)	Loan:	TBC during the programme feasibility stage
	Grant: (CAPEX)	TBC during the programme feasibility stage
	Other Contributions:	TBC during the programme feasibility stage
FF. Type of project/ programme preparation support that may be required	a) **Preparation of the investment project funding proposals** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.	
GG. Tentative required project/ programme preparation funding (in USD million):	USD 400,000 for project preparation and feasibility work	

Project 3: Building mudflow resilience in southern Kyrgyzstan communities

[Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	This project will contribute to the impact on i) health and well-being as well as food and water safety; ii) most vulnerable people and communities; and iii) infrastructure and built-up environment.
B. Investment Component (as per Section 2 of CIP)	1. Improving climate services; 2. Improving food security from agriculture, through improved water resources, land management and agricultural practices 3. Making municipal water supply climate resilient 4. Enhancing the climate resilience of forestry and biodiversity 5. Enhancing the climate resilience of emergency situations
C. Project/Programme Name:	BUILDING MUDFLOW RESILIENCE IN SOUTHERN KYRGYZSTAN COMMUNITIES
D. City/ Region:	Osh, Jalal-Abad and Batken Provinces of the Kyrgyz Republic
E. Project/Programme Proposed Implementing Entity	NAME: UN Development Program MINISTRY/ AGENCY/ OTHER: - Ministry of Emergency Situations of the Kyrgyz Republic - Ministry of Agriculture, Food Industry and Land Reclamation of the Kyrgyz Republic - State Agency on Environment Protection and Forestry at the Government of the Kyrgyz Republic CONTACT DETAILS: Aliona Niculita, acting UNDP Resident Representative in the Kyrgyz Republic, aliona.niculita@undp.org UN House, Chuy Av., 160, Bishkek, Kyrgyz Republic Tel.: +996-312-611211
F. Project/ Programme description (max. 600 words)	In the Kyrgyz Republic, irrigation infrastructure supplies water for both domestic use and crop irrigation. Considering the fact that agriculture accounts for 16% of the national GDP and most of agricultural lands are irrigated, this water supply infrastructure forms the major part of the national economy. While being economically important, this infrastructure is exposed to significant risks of climate-related hydrometeorological disasters, particularly mudflows and floods. The climate change impact – specifically, increase in air temperature rise and precipitation rate – directly leads to growing intensity and frequency of these natural disasters. Unless climate resilience measures are taken, the damage to water supply infrastructure from natural disasters is expected to significantly influence the Kyrgyz economy with direct costs only being estimated at ca. USD 718 mln by 2100. The southern Kyrgyzstan is especially susceptible to mudflows and floods, where they currently cause significant losses to water infrastructure, arable lands and dwellings. Thus, the GCF project will invest in resilience of local communities in southern Batken, Jalal-Abad and Osh Provinces to mudflow and flood implications by: i) strengthening capacity of the Government of Kyrgyzstan (GoK) for modeling and forecasting of mudflows and floods; ii) climate protection of existing and planned water infrastructure; and iii)

	improvement of policies, regulations and building codes for institutionalization of the climate-guided approach to water infrastructure construction and planning. The project will closely cooperate with existing programmes of the Government and development partners, focused on initiatives for financing of additional costs of water infrastructure with climate protection.
G. Proposed project/ programme components	**Outcome 1. Strengthened capacity of the Government of Kyrgyzstan for modeling and forecasting of mudflows.** With this outcome, the GCF project will update and expand the national hydrometeorological observation network. In addition, it will build up the capacity for mudflow risk management through combination of hydrometeorological modeling, forecasting, early warning systems and recommendations. Activities for achievement of this outcome are listed below. **Activity 1.1.** Expansion of a network of hydrometeorological observation: under this activity the GCF project will supply equipment for monitoring of water regimes, snow masses and water equivalent of snow cover, amount of water, hydrometeorological conditions and threats, enabling modelling, forecasting and development of short-, medium- and long-term recommendations on mudflows for local communities. The Kyrgyz hydrometeorological service in coordination with international experts will design an expanded and updated observation network including the list of equipment with specifications. The project will also provide spare parts and maintenance within the first 3 years after project implementation and will support development of sustainable decisions on budgeting for future maintenance. The Government of Kyrgyzstan will undertake obligations for operation and maintenance of the observation network. **Activity 1.2.** Development of a mudflow forecasting and early warning platform for distribution of recommendations about mudflows with use of relevant software, data integration methods and communication protocols: the GCF project will support software updating, involvement of international experts and study tours for the personnel of the Kyrgyz hydrometeorological service and the Ministry of Emergency Situations. A communication protocol will be developed for the Kyrgyz hydrometeorological services to support it in collection and distribution of hydrometeorological data and early warnings of mudflows. This information exchange will be carried out through combination of modern and conventional communications including bulletins, forecasts, warnings and recommendations for several mass media including press, television and broadcasting. This activity will also enable forecast mapping for mudflows, vulnerability and risks for high-risk communities in the southern region. **Activity 1.3.** Enhancing technical and institutional capacity of the Kyrgyz hydrometeorological service and the Ministry of Emergency Situations: This activity will include training of personnel of national agencies and institutions who are engaged in monitoring, modeling, forecasting and providing of climatic information and recommendations about mudflow risks for public and private sectors. Training in maintenance will be also provided for operators and technicians. **Outcome 2. Protection against climate change of existing and planned water infrastructure.** Under this Outcome, the GCF project will prioritise protection of existing and planned water infrastructure against climate change in three southern provinces of Kyrgyzstan to reduce damage from mudflows. At present, such an infrastructure in these provinces is being built and/or rehabilitated without understanding of how current and future mudflow risks are related to the climate change. Observed and expected climate trends point to increasing frequency and intensity of mudflows. Most often, such mudflows result in complete destruction of any infrastructure on their ways. Therefore, GCF resources will be used to reduce mudflow impact on infrastructure of water supply by integration of new and innovative measures based on the international best practice into design and rehabilitation of this infrastructure. Activities for

	achievement of this outcome are listed below. Activity 2.1. Climate protection of existing water infrastructure against mudflows in high-risk areas: the exact size, specification and location of each of these small-scale infrastructure changes will depend on specific conditions of every site. A detailed design including environmental and social safety assessment will be prepared prior to construction. None of structures will be big to ensure EIA (i.e. activities will be carried out in low and medium protection level categories according to Environmental and Social Performance Standards of IFC). Activity 2.2. Protection against climate change of new water infrastructure: when designing future water infrastructure, climate change implications and mudflow modeling and forecasting data obtained from implementation of the Outcome 1 will be taken into account. Detailed designs will be developed for the planned water infrastructure, based on projects developed by various WUAs and local councils. These designs will be further elaborated depending on selected site specifics and in compliance with technical specifications based on the international best practice. Introduction of non-structural protection against mudflows for water infrastructure including ecosystem-based adaptation (EA) and land and forest reclamation: the protective capacity of physical measures will be increased with use of additional auxiliary measures, such as slope stabilisation through EA or land and forest reclamation. These measures will strengthen the structural integrity of mudflow channel banks and increase their resistance to further erosion. Activity 2.4. Enhancing the capacity of farmers and WUAs to ensure operation and maintenance of on-farm irrigation infrastructure and mudflow control (co-financing): Automated water meters will be installed on on-farm water channels to improve accuracy of flow rate readings and enable WUAs to charge farmers for water use more precisely. This will result in increased water payment collected by WUAs thereby increasing their financial opportunities for operation and maintenance of on-farm irrigation infrastructure. Under this Outcome, GCF resources will be used to provide WUAs with trainings in operation/maintenance of water infrastructure protected against climate change. Water meters and capacity building measures for financial management will be co-financed. Outcome 3. Improvement of policies, regulations and planning for the water infrastructure ensuring protection against climate change. With this Outcome, GCF will create a favourable environment and rules for improvement of building codes and standards for the infrastructure ensuring protection against climate impacts, against hydrometeorological disasters, particularly mudflows and floods. Activities for achievement of this outcome are listed below. Activity 3.1. Development of technical regulations and building codes for water infrastructure and ensuring protection of this infrastructure in climate change conditions: existing building codes and standards for materials will be reviewed; technical specifications for climate protection of water infrastructure will be developed based on the "Build Back Better" principle. Activity 3.2. Creating favourable conditions for improvement of coordination, planning and budgeting for investments in climate protection: relevant line ministries and planning departments at national and local levels will be trained in integration of climate change risks into development planning. Mudflow risk profiles generated under Outcome 1 will inform the decision-making and development planning process. In addition, operational guidelines will be developed for budgeting and coordination of response to mudflows in climate change conditions.
H. Expected climate resilience benefits/ results	Under the GCF Result Management Framework, the proposed GCF project will increase resilience to mudflows and floods of i) *the most vulnerable people and communities*; ii) *health and well-being as well as food and water safety*; and iii) *infrastructure and built*

	environment. This project will have positive effect on 50,000 farmers immediately through ensuring climate protection of their water infrastructure. This will also have indirectly positive impact on some 200,000 people in rural areas, by protection of their agricultural production, roads and settlements against floods and mudflows.	
I. Project/ Programme Beneficiary:	Local communities of the Osh, Jalal-Abad and Batken Provinces	
J. Partners expected to be involved in design and implementation of the project/ programme	- Ministry of Emergency Situations of KR - Ministry of Agriculture, Food Industry and Land Reclamation of KR - State Agency on Environment Protection and Forestry at the GoK.	
K. Timeframe (indicative)	2018-2023	
L. Total project/programme value	USD 28,000,000.00	
M. Tentative funding request (USD million total)	Loan: 0.00	USD
	Grant: 28,000,000.00	USD
	Other Contributions:	- MES KR 5,000,000 - UNDP: 3,000,000 - Development partners: 15,000,000.
N. Type of project/ programme preparation support required	b) Preparation of the investment project funding proposals to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.]	
O. Tentative required project/ programme preparation funding (in USD million):	Development is carried out using funds mobilised by the UN Development Program	

Project 4: Interfarm system rehabilitation and agricultural performance improvement.

[Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	Water resources
B. Investment Component (as per Section 2 of CIP)	Improving food security from agriculture, through improved water resources, land management and agricultural practices
C. Project/Programme Name:	Interfarm system rehabilitation and agricultural performance improvement.
D. City/ Region:	Kyrgyz Republic
E. Project/Programme Proposed Implementing Entity:	Department of Water Management and Land Reclamation of the Ministry of Agriculture, Food Industry and Land Reclamation of the Kyrgyz Republic.
F. Project/ Programme description (max. 600 words)	Considering the forecasted climate warming and related reduction of fresh water resources, the proposed project envisages rehabilitation and modernisation of irrigation infrastructure. This work will make it possible to reduce water losses and use water resources more efficiently and sparingly. In the Kyrgyz Republic, about 90% of fresh water resources taken from water sources are used for cultivation of crops on irrigated lands. Rehabilitation and modernisation of irrigation infrastructure is one of basic climate resilience tools. The project will help use available water resources more sparingly and efficiently to ensure implementation food security aspects and addressing improvement of economic and social conditions in rural areas and poverty reduction. The project will also consider gender issues.
G. Proposed project/ programme components	Under the project, the following components are preliminarily planned for implementation: a) Rehabilitation and modernisation of irrigation infrastructure b) Addressing institutional issues in water management c) Capacity building of water management structures to address climate resilience-related issues
H. Expected climate resilience benefits/ results	About 200,000 hectares of irrigated lands commanded by rehabilitated and modernised irrigation structures.
I. Project/ Programme Beneficiary:	Farmers, peasants, rural population
J. Partners expected to be involved in design and implementation of the project/ programme	World Bank
K. Timeframe (indicative)	5 years

L. Total project/programme value	USD 25-30 millions	
M. Tentative funding request (USD million total)	Loan: [AMOUNT, if applicable]	USD
	Grant: [AMOUNT, if applicable]	USD 25-30 millions
	Other Contributions:	- [SOURCES; AMOUNT] - [SOURCES; AMOUNT] - …
N. Type of project/ programme preparation support required	a) **Preparation of the investment project concept** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF. b) **Preparation of the investment project funding proposals** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.]	
O. Tentative required project/ programme preparation funding (in USD million):	USD 300,000	

Project 5: Transition to climatically optimised land-use practices: mitigation through adaptive and sustainable forest and pasture management with community leadership.

[Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	1. Infrastructure and built environment 3. Health and food security 4. Private sector 5. Ecosystems
B. Investment Component (as per Section 2 of CIP)	- Improving climate information services; - Improving food security from agriculture, through improved water resources, land management and agricultural practices; Enhancing private sector participation in climate resilience Enhancing the climate resilience of forestry and biodiversity
C. Project/Programme Name:	Transition to climatically optimised land-use practices: mitigation through adaptive and sustainable forest and pasture management with community leadership
D. City/ Region:	Naryn Province (Ak-Tala District), Jalal-Abad Province (Toguz-Toroy and Suzak Districts), and Osh Province (Uzgen District)
E. Project/Programme Proposed Implementing Entity:	SAEPF MAFILR FAO
F. Project/ Programme description (max. 600 words)	The geographical location and terrain of Kyrgyzstan turn the country into one of the Central Asian states most vulnerable to climate change implications. The country suffers from droughts, landslides and mudflows along with increasing frequency and intensity of floods and erosion of river banks. The maximum and minimum temperatures in Kyrgyzstan are expected to gradually grow within this century. Intensity of rains and snowfalls is supposed to increase together with the frequency of heat waves. Periodic extreme weather events and noticeable microclimate changes with a certain frequency are already observed in the target areas[113]. Forests and pastures already stressed due to human pressure are one of the most sensitive resources affected by the climate change. Forests are overused for the purposes of timber harvesting and fuelwood cutting (Orozumbekov et al., 2009, FAO 2011, IFAD 2013, Rehnus, M. et al. 2014, GIZ 2015) while pastures at low/ medium heights are overloaded due to limited access to high-mountain summer pastures (WB 2017, ADB 2016, GOK 2014, IFAD 2013). Reduction in low-height pasture productivity and forest ecosystem sustainability aggravate vulnerability of communities and adversely affect the livelihoods in rural areas. While forest and vegetable cover diminishes, frequency and intensity of

[113] See Section D.4 for details on climate vulnerability of the target areas of the country.

	landslides and flash floods have increased in large areas of the country and are the reason of grave safety problems for rural population (UN International Strategy for Disaster Reduction, 2015). Currently, climate change coupled with unsustainable management of natural resources threatens both key ecosystems and cultural heritage and development opportunities of Kyrgyzstan. According to existing and new materials, communities of the Naryn River basin located in the Jalal-Abad, Osh and Naryn Provinces[114] are among the most vulnerable ones since these areas are exposed to the cumulative impact of different direct and indirect climate change implications described above (JICA 2012, IFC/IEH/IFAD 2013, USAID/WWF 2015). According to the Law on Pastures of 2009, for the purposes of restoration of overused winter pastures in these areas it is recommended to apply rotational grazing to avoid vulnerability of local communities. Therefore, restoration and enhancement of environmental and social functions of forests and pastures in the key water basins of the country, such as the Naryn River basin, are the prerequisite for mitigation, adaptation, safety and sustainable development of rural communities[115]. Thus, the project will: (i) involve communities, decision-makers, community leaders, market players and (central and local) governments; (ii) provide resource users in the target areas with acceptable and feasible alternatives for stock-raising and plant growing, and use of pastures for alternative activities, such as bee-keeping; and (iii) reduce load on resources. Eventually, it will be proved that traditional approach-based business becomes expensive in both financial and existential terms (WB 2017, ADB 2016 and 2015, Nasritdinov 2008), and the project will be focused on motivating beneficiaries and decision-makers to change their practices that would place the ecosystem approach[116] in the centre of economic equation in rural areas. Consequently, rights and interests of communities as stakeholders will be recognized and they will be directly involved throughout the project cycle, including the project design problems identification stage. As a direct incentive for participation in the proposed strategy, the project will support those communities which apply climatically optimised farming practices to promote reorientation of practices and increase in incomes. Therefore, current life support strategies of involved communities will be analysed and enriched in order to reduce their dependence on natural resources and to increase productivity and efficiency. The value added chains (dairy products, meat, honey, fruits) existing in the target areas will also be supported by the country programming mechanism of FAO (Food and Agriculture Organization of the United Nations), which will support, inter alia, marketing of products as well as enforcement of compliance with production quality standards. The project will also invest in the knowledge sharing and establish relations between target communities and projects supporting added value chains and market development, financed by IFAD, EBRD, World Bank and the Russian-Kyrgyz Development Fund, to support small and medium

[114] See Annex III for details on the target areas.

[115] The scheme of the Theory of Change provided in the project is given in Section D.2 and Annex I

[116] The ecosystem approach is a strategy of integrated management of land, water and living resources promoting conservation and sustainable use on a fair basis (CBR, 1992)

	producers specialising in fruit-growing and production of meat, dairy products and honey. Given the current situation and priorities identified during national consultation process started in March 2017, the project will cover 14,500 households and more than 400,000 beneficiaries. Furthermore, the project will involve 6 various central institutions (ref: B.5), civil society, 3 province administrations, 4 districts, 60 rural communities and 25 associations of pasture users. In particular, the project will contribute to prevention of emissions equivalent to more than 8.2 million tons of CO2 through reforestation/ afforestation on 50,000 hectares of severely damaged ecosystems (forests and pastures) and additionally equivalent to 55 million tons of CO2 through stopping of deforestation on more than 530,000 hectares[117] under sustainable land management and plans for improving of sustainability[118]. Thus, the project will help increase national carbon reserves in live biomass of forests approximately by 14% and reduce the area of exhausted pastures by 9%, and will contribute to reduction of emissions through improvement of stock-raising management approximately by 75,000 tons of carbon dioxide. Project activity sustainability and replicability will be provided owing to the newly established community-level sustainable natural resources management mechanism and through creation of improved legal and regulatory conditions for scaling-up of activities. The proposed approach envisages performance based on the existing experience as well as further wide-scale adaptation, systematisation and introduction of the best practices. Therefore, the project will apply the pilot knowledge base created under on-going and past projects implemented by the Government and/or local civil society organisations and financed by international donors such as FAO, IFAD, WB, UNEP, GIZ, ADB, GEF and bilateral donors, such as ADF, SIDA, etc. Detailed information about living standards improvement strategies will be provided in the funding proposal after consultations with communities.
G. Proposed project/ programme components	1. Component 1. Climate change mitigation and disaster risk reduction through forestry, agroforestry and rehabilitation of pastures 2. Component 2. Support of climate resilience through investments in farms to increase productivity, reduce dependence on natural resources (forests and pastures) and promotion of sustainable development with low atmospheric emissions and sustainable farming practices 3. Component 3. Improvement of natural resources management at the community level and at local and national government levels 4. Component 4. Project management
H. Expected climate resilience benefits/ results	• Community-based mapping of available natural resources, status and prepared and observed capacities • Development of a community-based ecosystem restoration plan • Restoration of 50,000.00 hectares of severely damaged forests and pastures out of 530,000 hectares considered under the community

117

118 CO2 is estimated with use of FAO's EX-ACT tools. Detailed and accurate calculations will be included in the funding proposal.

	plan.	
I. Project/ Programme Beneficiary:	Forest farms, local population, Ayil Aymaks, Zhayit committees and farmers	
J. Partners expected to be involved in design and implementation of the project/ programme	SAEPF MAFILR	
K. Timeframe (indicative)	2018-2025	
L. Total project/programme value	USD 40 millions	
M. Tentative funding request (USD million total)	Loan: [AMOUNT, if applicable]	
	Grant: [AMOUNT, if applicable]	USD 40 millions
	Other Contributions:	
N. Type of project/ programme preparation support required	c) Preparation of the investment project funding proposals to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF	
O. Tentative required project/ programme preparation funding (in USD million):	USD 200,000	

Project 6: Climate change-specific sustainable mountain and forest resources management.

[Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	5. Ecosystems
B. Investment Component (as per Section 2 of CIP)	1. Improving climate information services, including forecasting and management of climate-related emergency situations 2. Improving food security from agriculture, through improved water resources, land management and agricultural practices 9. Enhancing private sector participation in climate resilience 10. Enhancing the climate resilience of forestry and biodiversity
C. Project/Programme Name:	Climate change-specific sustainable mountain and forest resources management
D. City/ Region:	Issyk-Kul Province (Ak-Su and Jeti-Oguz Districts), Naryn Province (Ak-Tala and Kochkor Districts), Chuy Province (Kemin, Zhayyl, Moscow and Sokuluk Districts), Jalal-Abad Province (Nooken and Suzak Districts) and Osh Province (Nookat District).
E. Project/Programme Proposed Implementing Entity:	SAEPF MAFILR FAO
F. Project/ Programme description (max. 600 words)	In accordance with GEF-5 Land Degradation program direction and SFM/REDD+ strategy, the goal of the project is to create more favourable environment in forest and agricultural sectors, as well as to support ecosystem services flows including increase of carbon stocks in forest and agricultural ecosystems. An especial task of the Project is to promote sustainable management and increase productivity of mountain forest - agro - pasture ecosystems, and improve living standard in mountainous areas of the Kyrgyz Republic, which will be achieved under three components of the project: (i) Creation of more favourable environment for sustainable management of forest and land resources (ii) Increase of carbon stocks in arid mountain forests (iii) Promotion and demonstration of climate resilient agriculture (iv) Knowledge management, monitoring and evaluation Interdepartmental cooperation and integration between forest and agricultural sectors will be supported at national, province and local levels by creation of cross-sector mechanisms, which will facilitate planning of integrated land use for expansion of SFM/SLM practices that will bring numerous benefits. All this will be supported by introduction of economic tools and incentives for forest and land users for their involvement in SFM/SLM. The State Agency of Environment Protection and Forestry (SAEPF) at the Government of the Kyrgyz Republic will lead the project in close cooperation with the Ministry of Agriculture, Food Industry and

	Land Reclamation of the Kyrgyz Republic (MAFILR). Key global ecological benefits to be brought by the project include expansion of lands under SFM and SLM that are supposed to reach 98,412 hectares by the project closure, and would lead to improvement of vegetable cover and increase in land productivity by 18% against the baseline, that would benefit 25,000 people in general, especially to women and children of labour migrants. Moreover, the Project will also bring considerable carbon benefits allowing avoidance of emissions and resulting in carbon deposition of nearly 243,258 tons of CO2 equivalent/year, and in total 973,032 tons of CO2 equivalent in four years, with indirect carbon benefits amounting to 4.8 million tons of CO2 equivalent on 1.3 million hectares of forest lands and forest pastures, and 3 million tons of CO2 equivalent on 776,000 hectares of farmlands.
G. Proposed project/ programme components	Component 1: Creation of more favourable environment for sustainable management of forest and land resources Component 2: Increasing carbon stocks in arid forests through innovative management and restoration techniques Component 3: Promotion and demonstration of climate resilient agriculture including pastures as a part of sustainable management of land and water resources in arid areas Component 4: Knowledge and project management, monitoring and evaluation
H. Expected climate resilience benefits/ results	Key global environmental benefits in the land degradation field include expansion of land area under SFM/SLM/ The project will lead to the following increase in land area under SFM/SLM in Kyrgyzstan: • 2 million hectares of lands under SLM and SFM in the long term owing to strengthening of favourable environment for SFM/SLM, which leads to dissemination of the good practice • 25,050 hectares of forest lands under improved multifunctional management of forest resources including agroforestry • 10,000 hectares of reforestation and/or afforestation • Improved management and restoration of 10,907 hectares of degraded agricultural lands • Restoration of 20,000 hectares of pastures. This will contribute to expansion of lands under SFM and SLM that will make 98,412 hectares in total by the project closure, and will lead to improvement of vegetable cover and increase in land productivity by 18% against the current state, which will benefit 25,000 people by the project closure – both men and women. Moreover, this will also help receive considerable carbon benefits including: • Reduction of emissions from forest degradation - 107,567 tons

	of CO_2 equivalent/year • Absorption of carbon in forest territories - 15,073 tons of CO_2 equivalent/year • Absorption of carbon in farmlands - 58,530 tons of CO_2 equivalent/year • Absorption of carbon in pastures - 62,088 tons of CO_2 equivalent/year In other words, the project will bring reduction of emissions and general absorption of carbon about 243,258 tons of CO_2 equivalent/year that makes in total 973,032 tons of CO_2 equivalent in four years, including indirect carbon benefits during this period - 4.8 million tons of CO_2 equivalent on 1.3 million hectares of forest lands and forest pastures, as well as 3 million tons of CO_2 equivalent on 776,000 hectares of farmlands.	
I. Project/ Programme Beneficiary:	Forest farms, local population, Ayil Aymaks, Zhayit committees and farmers	
J. Partners expected to be involved in design and implementation of the project/ programme	SAEPF MAFILR	
K. Timeframe (indicative)	September 2014 – August 2018	
L. Total project/programme value	USD 5,454,545	
M. Tentative funding request (USD million total)	Loan: [AMOUNT, if applicable]	
	Grant: [AMOUNT, if applicable]	USD 5,454,545
	Other Contributions:	
N. Type of project/ programme preparation support required	c) Preparation of the investment project funding proposals to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF	
O. Tentative required project/ programme preparation funding (in USD million):	USD 90,000	

Project 7: Facility for the climate resilient development of the Kyrgyz Republic's small hydropower potential

Climate Resilience [Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	5. Infrastructure and built environment; 6. Water resources; 7. Health and food security; 8. Private sector; 9. Ecosystems
B. Investment Component (as per Section 2 of CIP)	6. Improving climate information services, including forecasting and management of climate-related emergency situations 7. Improving food security from agriculture, through improved water resources, land management and agricultural practices 8. Making energy supply infrastructure climate resilient 9. Making transport infrastructure climate resilient 10. Making municipal water supply climate resilient 11. Making buildings climate resilient 12. Increasing the climate resilience of healthcare 13. Increasing the climate resilience of mining 14. Enhancing private sector participation in climate resilience 15. Enhancing the climate resilience of forestry and biodiversity
C. Project/Programme Name:	*Facility for the climate resilient development of the Kyrgyz Republic's small hydropower potential*
D. City/ Region:	Country-wide
E. Project/Programme Proposed Implementing Entity:	State Committee on Industry Energy and Mining
F. Project/ Programme description (max. 600 words)	The Kyrgyz Republic's electricity system is highly dependent on large hydropower (over 90%) and hence vulnerable to significant risks from the impacts of climate change on the country's water resources. In order to diversify its energy system, the Government has proposed plans to garner the country's enormous potential for low-impact, small hydropower plants (SHPPs) by private investors setting up a feed-in-tariff scheme. These efforts have not resulted in the desired development and barriers in technical capacity and economic feasibility persist. The facility aims at unlocking private investments in small hydropower by providing targeted technical support and offering additional, appropriately sized financial incentives for investors. This will bring best international practice into the development of SHPPs, supporting the technical capacity of local investors and ensuring the climate resilient development of the country's potential (applying the International Hydropower Association's newly developed climate resilience hydropower sector guidance). Utilising best practices in hydrological forecasting the facility will demonstrate the technical and economic feasibility of SHPPs in the Kyrgyz Republic in order

	to build a fertile ground for further investments and the climate resilient diversification of the Kyrgyz energy sector.	
G. Proposed project/ programme components	- Technical assistance component for project identification - Technical assistance for climate resilient project preparation and implementation - Small hydropower investment facility	
H. Expected climate resilience benefits/ results	- Generation of climate resilience power from SHPP [GWh per year] - No. of SHPP investments prepared in line with IHA climate resilient hydropower guidance [#]	
I. Project/ Programme Beneficiary:	Private sector investors will be identified in due course.	
J. Partners expected to be involved in design and implementation of the project/ programme	State Committee on Industry Energy and Mining (Coordinator) EBRD (lead financier) Private sector investors (project implementation) Programme technical consultant team (project preparation and implementation support)	
K. Timeframe (indicative)	The investment phase of the programme is expected to run for 3 years, with implementation following for up to 3 years	
L. Total project/ programme value	USD 30 million	
M. Tentative funding request (USD million total)	Loan:	USD
	Grant: (CAPEX)	USD 3 million
	Other Contributions: Loan resources Sponsor equity	- Up to $27 million (EBRD) - To be defined on a case-by-case basis*
N. Type of project/ programme preparation support that may be required	c) **Preparation of the investment project concept** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF. d) **Preparation of the investment project funding proposals** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.]	
O. Tentative required project/ programme preparation funding (in USD million):	$75,000 for project preparation $300,000 for project preparation and feasibility work	

Project 8: Second phase of the Central Asia Hydrometeorology Modernization Project (CAHMP)

Climate Resilience [Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	10. Infrastructure and built environment; 11. Water resources.
B. Investment Component (as per Section 2 of CIP)	16. Improving climate information services, including forecasting and management of climate-related emergency situations.
C. Project/Programme Name:	Second phase of the Central Asia Hydrometeorology Modernization Project (CAHMP)
D. City/ Region:	Capital city + TBD for field investments (monitoring equipment)
E. Project/Programme Proposed Implementing Entity:	Executing agency: Ministry of Emergency Situation Implementing agency: Agency on Hydrometeorology (KyrgyzHydromet)
F. Project/ Programme description (max. 600 words)	The Kyrgyz Republic experiences an average of 3-4 extreme meteorological events per year including frosts, heavy precipitation, 7-10 high-impact mudflows and avalanches, and seasonal river flooding, leading to average losses estimated at 1.5-2.0 percent GDP annually, with floods and mudflows the most frequent and devastating events. With climate change intensifying, extreme weather events are expected to become more prevalent, putting at risk about half of the country's economic output (there are estimates that almost 50% of the Kyrgyz Republic's GDP is weather dependent, making the availability of hydrometeorological and climate information a necessity for daily to seasonal planning of many essential economic activities in the country). Strengthening resilience to climate change and extreme weather events is a priority highlighted in the National Sustainable Development Strategy (2013-17) and the National Disaster-risk Management Strategy (2017-30). This includes in particular strengthening the capacity and information base to provide easily accessible, timely, and accurate hydrometeorological and climate information for better planning and operations of economic activities. As primarily the water resources of the Kyrgyz Republic are stored in glaciers, glacier monitoring is of utmost interest for the country, to inform projections on long-term water availability but also better identify zones at risk of Glacier Lake Outburst Flooding. Snow cover monitoring is also important to estimate seasonal to annual water availability. Both glacier and snow cover monitoring can also help better foresee risk of flash floods/mudflows. KyrgyzHydromet is in charge of cryosphere monitoring in the country and it is critical to organize the network for glacier and snow cover monitoring under KyrgyzHydromet, combining in situ observations with the use of automatic sensors and remote sensing technologies and image analysis, based on cutting-edge technologies. To better inform and mitigate climate and disaster impacts on the agriculture, energy, and water sectors, the proposed activity will support strengthening glacier and snow cover monitoring systems within KyrgyzHydromet, and to

	ensure the data they produce are assimilated with other hydrometeorological data and forecasts to deliver hazard and risk information and warnings across timescales. The Project will promote high level technologies and approaches along with capacity building of the institution.	
G. Proposed project/ programme components	The proposed activity is financing Phase 2 to the ongoing Central Asia Hydrometeorology Modernization Project (CAHMP) and will strengthen climate change and disaster resilience in the DRM sector, with a focus on improving climate information services. The activity interventions will be both structural (including civil works to install monitoring equipment) and non-structural (including capacity building, planning, and training for forecasting on water resource and disaster risk) and comprise three outputs: (i) glacier monitoring system set up; (ii) snow cover monitoring system set up; and (iii) improved weather and water information system, including forecasting capacity.	
H. Expected climate resilience benefits/ results	• Glacier monitoring system operational, covering XX glaciers and enabling the preparation and regular update of a glacier atlas; • Snow cover monitoring system operational, enabling improved water availability seasonal to annual forecasts; • Increased capacity to forecast water availability for water, energy and agriculture sector and inform early warning.	
I. Project/ Programme Beneficiary:	Public and private stakeholders in the Water, Energy, Emergency, and Agriculture sectors	
J. Partners expected to be involved in design and implementation of the project/ programme	Executing and Implementing agencies WB Project Implementation Unit Government institutions (representing benefitting sectors)	
K. Timeframe (indicative)	2019-2023	
L. Total project/ programme value	US$20 million	
M. Tentative funding request (USD million total)	Loan: TBD	USD
	Grant: TBD	USD
	Other Contributions:	- US$11 (CAHMP)
N. Type of project/ programme preparation support that may be required	e) **Targeted sector analysis** to scope specific investment needs, ensuring alignment of the sector adaptation planning processes and financing priorities, including the National Adaptation Plan process and NDC implementation.	
O. Tentative required project/ programme preparation funding (in USD million):	US$0.25	

Project 9: Empowering food insecure and vulnerable communities through climate services and diversification of climate sensitive livelihoods in the Kyrgyz Republic.

Brief description [project/program]	
A. Results area (based on Component 2 CIP)	12. **Food Security**; 13. **Private Sector;**
B. Investment Component (based on Component 2 CIPCIP)	17. Strengthen food security capacity through enhancing agriculture practice in water, land use and agriculture 18. Increase private sector participation in adaptation to climate change
C. Name of Project/Program:	Empowering food insecure and vulnerable communities through climate services and diversification of climate sensitive livelihoods in the Kyrgyz Republic.
D. City/Province:	Batken, Osh and Naryn provinces
E. Executing entity	Executing Entity: State Agency for Environmental Protection and Forestry, Ministry of Agriculture, Food Industries and Melioration and Ministry of Emergency Situations, Ministry of Labour and Social Development
F. Project / Programme Executive Summary (max 600 words)	The project "Empowering food insecure and vulnerable communities through climate services and diversification of climate sensitive livelihoods in the Kyrgyz Republic" (henceforth 'the project') will contribute to the capacity of the Government of Kyrgyz Republic, its line ministries, and local authorities and communities to implement climate change adaptation activities in the food security and nutrition and agricultural sectors of the country. The objective is to support the Government of the Kyrgyz Republic to reduce its vulnerability to climate change and to increase the adaptive capacity and resilience of rural poor, vulnerable households and communities in Osh, Batken and Naryn provinces, which are increasingly affected by climate change impacts and suffer from low adaptive capacity. The underlying principle of project implementation is an innovative yet pragmatic set of actions. These include an informed top-down but user-tailored generation and dissemination of climate services, a focused effort to support climate change adaptation actions at community level, and a generation of knowledge, awareness and best practices to inform broad-based capacity building and improved decision making, which taken together will contribute to an enabling environment for climate action in the Kyrgyz Republic.
G. Proposed project/program components	The proposed GCF project will support 102,000 direct poor and vulnerable (20,400 households) and 700,000 indirect beneficiaries in the Batken, Osh and Naryn provinces through implementation of the following three inter-linked components: 1. Climate services to support vulnerable rural communities to plan for and manage climate risks and increased weather variability[119];

[119] Climate services –a climate service is the provision of climate information in such a way as to assist decision-making by individuals and organizations. The service component involves appropriate engagement, an effective access mechanism and responsiveness to user-needs.

	2. Livelihood strengthening and diversification to increase the adaptive capacity of vulnerable groups and build community resilience; and 3. Capacity building and decision-making support to enhance climate action using a multi-sectoral approach. The three components are designed to create synergies and optimize investments made in each component to jointly contribute to the overall project objective, thus contributing to greater efficiency, impact and longer-term sustainability.	
H. Expected benefits/outcomes to climate change adaption	**Outcome 1:** Vulnerable communities are empowered to make informed decisions about their livelihoods, respond to climate risks and opportunities, and adapt to climate-related changes; **Outcome 2:** Livelihoods diversified and made climate resilient for vulnerable smallholder farmers and rural communities; **Outcome 3:** Knowledge, skills and ownership of local communities and government improved to manage climate risks and adaptation measures.	
I. Beneficiary of project/program:	Beneficiary: Climate vulnerable, poor and food insecure households and communities in rural Batken, Naryn and Osh provinces in the Kyrgyz Republic. These project areas are characterized by high levels of poverty, communities reliant on agriculture for their livelihoods, and a high level of exposure to natural disasters, land degradation. The changes in past annual temperature and precipitation in these areas are also more significant compared to other provinces in the country.	
Partners to be involved in the development and implementation of the project / program	WFP, State Agency for Environmental Protection and Forestry, Ministry of Agriculture, Food Industries and Melioration and Ministry of Emergency Situations, Ministry of Labour and Social Development	
K. Estimated implementation start and end date	Start: June 2018 End: May 2022	
L. Total budget of project/ program	[10 million US Dollar on a grant basis]	
M. Approximate amount of the request for funding (total, in million US dollars)	Credit: [Total, if applicable]	US dollars
	Grant: [Total, if applicable]	US dollars
	Other investments:	- [sources; amount] - [sources; amount] - …
N. Type of necessary support in the preparation of the project / program	[Choose from: f) Target sector analysis to determine the volume of specific investment needs, ensure consistency in sectoral adaptation planning processes and financial priorities, including the National Adaptation Plan process and the implementation of the **NDC.** g) **Preparation of the concept of an investment project** to be submitted to the international climate funds, including **the PPCR** and / or the GCF**.** h) **Preparation of proposals for the financing of investment projects** to be	

	submitted for consideration to international climate funds, including the PPCR and / or the GCF.] i) Lobbying and provision of support in GCF Secretariat for quick and smooth revision and submission to the earliest Board meeting approval. j) After project approval by GCF support is required in interagency coordination for implementation of the projects.
O. Approximate budget necessary for financing the project/program design	

Project 10: Adressing sectoral (climatic) risks through ecosystem based approach for to climate change adaptation in the Kyrgyz Republic.

Climate Resilience [Project / Programme] Summary	
A. Sectoral theme (as per Section 2 of CIP)	Ecosystem-based adaptation (EbA) is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change. In this meaning of the term, the project approach helps to solve adaptation tasks in the following sectors • Infrastructure and built environment • Water resources: • Health and food security • Ecosystems • Private sector • Emergency situations.
B. Investment Component (as per Section 2 of CIP)	1/Improving the quality of climate services; 2/Improving food security from agriculture, through improved water resources, land management and agricultural practices; 4/Making transport infrastructure climate resilient; 5/Making municipal water supply climate resilient; 9/Enhancing private sector participation in climate resilience; 10/Enhancing the climate resilience of forestry and biodiversity; and 11/Enhancing the climate resilience of emergency situations.
C. Project/Programme Name:	ADRESSING SECTORAL (CLIMATIC) RISKS THROUGH ECOSYSTEM BASED APPROACH FOR TO CLIMATE CHANGE ADAPTATION IN THE KYRGYZ REPUBLIC (the project is at an early stage of development)
D. City/ Region:	Kyrgyz Republic (project territories need to be selected based on criteria, so far pilot experiences exist in Naryn oblast) (Project implementation is possible at the regional level)
E. Project/Programme Proposed Implementing Entity:	The State Agency for Environmental Protection and Forestry, the Ministry of Agriculture and Melioration, the State Agency for Local Government and Interethnic Relations under the Government of the Kyrgyz Republic, KyrgyzHydroMet, the National Statistical Committee,

	GIZ
F. Project/ Programme description (max. 600 words)	The expected consequences of climate change are occurred in the Kyrgyz Republic primarily by the intensive melting of glaciers, the change in the water runoff regime, the uncertainty in the trend of the development of air temperature and the amount of precipitation. Mountainous regions of Central Asia are among the world's most vulnerable regions; therefore, mountain areas with their ecosystems in Kyrgyzstan are particularly vulnerable to degradation and destruction. The specific experience of GIZ and the tested approach of the Ecosystem Planning framework that logically integrates localized climate information into village planning and measure selection processes; that it establishes a long-term adaptation process in the villages. This approach logically integrates localized climate information into village development planning and selection processes for adaptation measures, which paves the way for a long-term process of village adaptation to the effects of climate change. The project aims to use innovative and economic approaches and strategies for implementing the ecosystem approach for the adaptation of different sectors. The developed EBA planning framework enables the elaboration and implementation of climate change adaptation strategy for local communities in high mountainous regions. Integrating the risk aspect, based on the further developed vulnerability concept in the latest Assessment Report 6 of IPCC, offers the identification of nature-based solutions for disaster prevention and thus opens doors for intersectoral cooperation, including private sector and engineers, as most “non-green” sectors perceive and evaluate climate change threats through risks, rather than through long term slow onset threats.
G. Proposed project/ programme components	Component 1. Strengthening the adaptation capacity (material and technical base, legal, informative-teaching, institutional) of local and national level in applying the EBA approach. Component 2. Improving the climate awareness and literacy of local communities. Improving the quality of services provided by localized and specific climate information. Component 3. Investments in the multiplication of EBA village planning framework (200 villages). Component 4. Transfer of planning framework to climate risks in other sectors (e.g. transport, private sector development). Component 5. Transparency and climate change adaptation impact monitoring.
H. Expected climate resilience benefits/ results	• Increase the adaptive capacity of local communities to the negative effects of climate change (Indicator: Developed a strategy for local community development in the light of climate change and diversification of economic activities and local incomes taking into

	account a climate change) • Increase the reliability of meteorological, hydrological and climate forecasts directly affecting the economic development of local communities through the introduction of the "civil science" approach, which will strengthen the interaction between local self-governance and National Institutes; • Improvement of land resources management, as well as enhancing of agricultural practices and introduction of new technologies; • Improvement of water management by developing effective and improved water use practices in combination with improved farming practice; • Well-informed private sector with enhanced financial incentives and opportunities;	
I. Project/ Programme Beneficiary:	- Local communities, Pasture committees, Forestry farms, water users association, Rural public association of potable water consumers - Private sector - SAEPF, Ministry of Agriculture and Melioration, the Ministry of Economy, the State Agency for Local Government and Interethnic Relations under the Government of the Kyrgyz Republic, etc	
J. Partners expected to be involved in design and implementation of the project/ programme	- Responsible executive agencies - GIZ office in Germany - Stakeholders of government and civil society - CAMP Alatoo, ARIS (working with the local community) - representatives of the private sector, such as MDS, BDS, JIA - Bai Tushum Innovation - Universities - Further partners can be identified at the program implementation stage	
K. Timeframe (indicative)	2019-2024	
L. Total project/ programme value	30.000.000 USD	
M. Tentative funding request (USD million total)	Loan: TBD	USD
	Grant: 30.000.000	USD
	Other Contributions:	- Possibly: Government of the Federal Republic of Germany; 3-10.000.000

N. Type of project/ programme preparation support that may be required	2. **Target sector analysis to determine the volume of specific investment needs,** ensure coherence in sectoral adaptation planning processes and financial priorities, including the National Adaptation Plan process and the implementation of the NDC. 3. **Preparation of the investment project funding proposals** to be submitted for consideration by the international climate funds, including the PPCR and/or the GCF.
O. Tentative required project/ programme preparation funding (in USD million):	200.000 Euro Cofinancing by GIZ is possible

4 Annex 1: Recommendations for Kyrgyz Republic's key stakeholders on climate resilience

A set of recommendations is presented below for:

- Building capacities of stakeholders in relation to climate finance coordination functions, to ensure the Kyrgyz Republic is well-positioned to access and utilise climate finance effectively (Table 20);
- Mainstreaming cross-cutting issues into climate resilience activities in the Kyrgyz Republic (Table 21);
- Developing climate resilience policies and the CIP (Table 22).

Table 20: Recommendations for capacity-building for stakeholders in relation to climate finance coordination functions

<table>
<tr><th>National</th><th>Sub-national</th><th>Private sector</th><th>NGOs</th></tr>
<tr><td colspan="4">Cross-functional</td></tr>
<tr><td rowspan="2">• Increase awareness of all ministries and departments about climate change adaptation as a core issue for sustainable economic development, not just an environmental matter.</td><td rowspan="2">• Promote reform of public administration and local governance for effective cooperation between Province, District and local administrations, and central government in the area of climate change policy development and implementation.</td><td rowspan="2">• Improve the business environment and develop the private sector, as fundamental pillars of national sustainable development.</td><td>• Make climate resilience strategic planning, delivery and monitoring a more participatory process with the involvement of NGOs representing women and vulnerable groups.</td></tr>
<tr><td>• Promote the engagement of national government with NGOs at early stages of the establishment of the climate finance coordination mechanism, to strengthen country ownership.</td></tr>
<tr><td colspan="4">• Ensure relevant government line ministries/ agencies, local government, private sector, NGOs, and development partners are involved in the process of designing, approving and implementing project proposals.</td></tr>
<tr><td colspan="4">Function 1: Climate change strategy development and coordination</td></tr>
<tr><td colspan="4">• Build capacity and strengthen institutional collaboration and inclusiveness in developing, aligning and updating national and sectoral strategy, policy and programmatic documents on climate change adaptation and sustainable development.</td></tr>
<tr><td colspan="4">Function 2: Identification of climate resilience project priorities</td></tr>
<tr><td rowspan="2">• Strengthen technical expertise, and financial and human resources for organizations managing climate data and information, and undertaking climate risk assessments (KyrgyzHydromet and CCC).</td><td colspan="3">• Build capacities to identify climate resilience project priorities, via a training programme targeted at each stakeholder group.</td></tr>
<tr><td colspan="3">• Improve the production and accessibility of climate data and climate change risk assessments targeted at each stakeholder group.</td></tr>
<tr><td colspan="4">Function 3: Development and management of climate resilience project pipelines</td></tr>
<tr><td colspan="4">• Provide dedicated training targeted at each stakeholder group on basic and detailed project preparation, including participatory planning, to build project pipelines.</td></tr>
<tr><td colspan="3">• Establish Public-Private Partnerships (PPPs) for design of climate resilience projects.</td><td></td></tr>
<tr><td colspan="4">• Enhance coordination among government line ministries/ agencies, local government, private sector, NGOs, and development partners at project pipeline stage to avoid duplication of efforts.</td></tr>
<tr><td colspan="4">Function 4: Development of climate resilience project funding proposals</td></tr>
</table>

National	Sub-national	Private sector	NGOs
• Provide dedicated training on climate finance proposal preparation in line with requirement of climate funds such as GCF **targeted at each stakeholder group.**			
• Foster collaboration between **government line ministries/ agencies, local government, private sector, NGOs, and development partners** that can provide technical support in proposal preparation.			
• Mainstream gender equality into climate resilience concepts and proposals involving **national and local government.**			
Function 5: Government's approval of climate resilience project funding proposals			
• Ensure **lead organization on climate finance coordination** has a well-defined, transparent, and inclusive process for government's approval of climate resilience funding proposals.	*[not applicable]*	*[not applicable]*	*[not applicable]*
Function 6: Implementation of climate resilience projects			
• Improve coordination of efforts between **government line ministries/ agencies, local government, private sector, NGOs, and development partners** on project implementation.			
• Provide dedicated training on management and implementation of climate resilience projects, **targeted at each stakeholder group.**			
• Build capacities of **targeted stakeholders** to potentially seek accreditation to the GCF.			
	• Provide training on the public procurement system for **municipalities**.	• Foster the development of **private sector firms** as climate resilience solutions providers, including improving policies, laws and regulations which incentivise private sector investments in adaptation.	• Consider creating a window for **NGOs** to deliver projects which will enable more effectiveness and transparency (making existing social contracting law operational). • Enhance the involvement of **NGOs** in project implementation at the sub-national/ local level.
Function 7: Monitoring, evaluation and reporting on climate resilience projects			
• Provide training and capacity building on M&E of climate resilience projects for the **lead organization for climate finance and targeted stakeholders**, with specific focus on climate change indicators.			
• Promote the harmonisation and integration of indicators and methodologies related to monitoring and reporting on climate change and SDGs by the **National**			

National	Sub-national	Private sector	NGOs
Statistical Committee.			
Function 8: Communication, outreach and awareness-raising on climate resilience projects and activities			
• Promote improved access to information on climate resilience projects and activities through various mechanisms / channels e.g. workshops, meetings, and an interactive platform / repository / portal maintained by the **lead organization on climate finance**.	• Make use of existing **Aarhus Centres and territorial departments of State agencies** for communication and awareness-raising activities.	• Promote transfer and sharing of good practice experiences on climate resilience of **private sector in other countries**.	• Strengthen the role of **NGOs** in communication and awareness raising, especially at the regional and local level where NGOs have good reach.
• Strengthen the existing **Climate Change Dialogue Platform of Kyrgyzstan (CCDP-Kg)**, working in coordination with development partners and NGOs, avoiding duplication of efforts with the above.			
• Enhance dissemination and awareness-raising campaigns, to be organised by the **lead organization on climate finance.** Develop a long-term, public awareness-raising programme on climate change and climate resilience at national and sub-national level that promotes the inclusion of vulnerable groups and women, with the involvement of **all stakeholders.**			

Table 21: Recommendations for mainstreaming cross-cutting issues into climate resilience activities

Gender equality	Vulnerable groups	Knowledge management, education and scientific capacity
Cross-functional		
• Promote consideration of **gender equality and vulnerable groups** in all capacity-building activities associated with climate resilience.		• Provide **CCC and KyrgyzHydromet** with adequate financial and technical resources. Upgrade technical equipment, information centres, and methodologies at KyrgyzHydromet, CCC, the National Academy of Sciences (NAS KR), specialised research institutions and universities.
• Ensure the inclusion of a Gender Specialist in the **CFC** that will liaise with key national authorities, NGOs and other stakeholders.		
Function 1: Climate change strategy development and coordination		
•		• Consider further the costs and benefits of changing **KyrgyzHydromet**'s status within the government structure, to be independent of the Ministry of Emergency Situations.

<table>
<tr><th>Gender equality</th><th>Vulnerable groups</th><th>Knowledge management, education and scientific capacity</th></tr>
<tr><td colspan="2">• Ensure a coordination role on climate and gender / vulnerable group issues by the lead organization on climate finance, in collaboration with existing relevant institutions (the Ministry of Labour and Social Development and the National Council on Gender Development at the Kyrgyz Government.)</td><td></td></tr>
<tr><td colspan="3">Function 2: Identification of climate resilience project priorities</td></tr>
<tr><td colspan="2" rowspan="2">• Promote research to investigate the impacts of climate change on women in the Kyrgyz Republic, and in particular, on women entrepreneurs and women-led businesses, and other vulnerable groups.</td><td>• Upgrade hydrometeorological observation network to begin to build robust data on observed hydrometeorological conditions as a basis for developing climate impact/risk assessments.</td></tr>
<tr><td>• Support CCC and other research centres to develop robust estimations of potential economic losses from climate change and shared with all relevant stakeholders; to verify existing climate risk assessments in Kyrgyz Republic, against the full climate model suite to assess if they are valid.</td></tr>
<tr><td colspan="2">• Integrate women's and vulnerable groups' investment needs into climate-resilience and development priorities.</td><td>• Enhance the supporting role of NAS KR, through training of specialised staff from its research institutions.</td></tr>
<tr><td colspan="3">Function 3: Development and management of climate resilience project pipelines</td></tr>
<tr><td>• Ensure mainstreaming of gender considerations into concept notes and proposals in accordance with Climate Funds' gender policies and frameworks.</td><td>• Support government institutions in the identification of vulnerable groups so as to ensure integration of socially-inclusive approaches in the design of climate resilient investment proposals.</td><td rowspan="2">• Enhance the supporting role of NAS KR, through training of specialised staff from its research institutions.</td></tr>
<tr><td colspan="2">• Implement participatory proposal development which involves consultations and meetings with women and vulnerable communities.</td></tr>
<tr><td colspan="3">Function 4: Development of climate resilience project funding proposals</td></tr>
<tr><td colspan="2">• Ensure integration of socially-inclusive, and gender-responsive approach in the design of climate resilient investment proposals. The project's Result Management Framework and Performance Management Frameworks (which inform M&E) should include relevant qualitative and quantitative indicators.</td><td>• Ensure that climate resilience indicators included in funding proposals align with nationalised SDG indicators, where appropriate.</td></tr>
<tr><td colspan="3">Function 5: Government's approval of climate resilience project funding proposals</td></tr>
</table>

Gender equality	Vulnerable groups	Knowledge management, education and scientific capacity
• In line with requirements of Climate Funds, check that **gender equality and vulnerable groups** are considered adequately as part of the approval process.		*[not applicable]*
Function 6: Implementation of climate resilience projects		
[not applicable]	*[not applicable]*	• Build capacities of **KyrgyzHydromet, CCC and Ministry of Emergency Situations** to potentially seek accreditation to the GCF.
Function 7: Monitoring, evaluation and reporting on climate resilience projects		
• Ensure systematic provision of disaggregated socio-economic data for monitoring and evaluation of climate resilience investments across identified **women's and vulnerable groups**.		• Develop a centralised monitoring system for emergency situations involving cross-sectoral coordination in the government under the **Ministry of Emergency Situations / KyrgyzHydromet.** Communicate information on emergencies to relevant climate resilience projects and across stakeholder groups as appropriate.
Function 8: Communication, outreach and awareness-raising on climate resilience projects and activities		
• Ensure continued focused consultation processes on climate vulnerability assessments / climate resilience involving relevant representatives of women and vulnerable groups, especially in rural and remote areas, with cooperation of **NGOs**, **development partners, private sector and other stakeholders.**		• Develop educational curricula on climate change and climate resilience for **schools and universities**, in collaboration with the **Ministry of Education and Science**.
• Issues of gender and climate should form integral part of the knowledge products (e.g. information and training materials) developed by the **CFC**.		
• Develop a long-term, public awareness-raising programme on climate change and climate resilience that promotes the inclusion of **women and vulnerable groups**.		

Table 22. Recommendations for developing climate resilience policies and the CIP

<table>
<tr><th>National organizations</th><th>Sub-national organizations</th><th>Private sector</th><th>NGOs</th><th>Socio-economic sectors</th><th>Cross-cutting issues</th></tr>
<tr><td colspan="6">• Consider the CIP as un update of the existing national adaptation strategy ('Priority Directions') that will present a concrete investment programme.</td></tr>
<tr><td colspan="6">• In the CIP, mainstream climate change into long-lived major investment projects and for major projects involving rehabilitation / upgrading of existing infrastructure.</td></tr>
<tr><td colspan="6">• In the CIP proposed investments, include appropriate indicators to measure climate resilience from the early stages of project preparation, taking into account indicators for cross-cutting issues, as well as relevant overlaps with SDGs indicators.</td></tr>
<tr><td colspan="6">• In the CIP, ensure coherence of proposed investments from organizations in the Kyrgyz Republic and international development partners, and set out a country-owned climate finance project cycle that can provide the basis to identify climate resilience investments and develop bankable projects.</td></tr>
<tr><td colspan="4" rowspan="3">• In the CIP, consider the participation of all stakeholders for investment components and capacity building activities, as appropriate.</td><td>• In the CIP, address climate-sensitive, economically-important sectors which are missing from the national adaptation strategy and are indicated in the NSSD as priorities for economic growth, including municipal water supply, transport and mining.</td><td>• In the CIP, identify differentiated vulnerabilities to climate change, incorporate specific needs in climate resilience programmes and projects, and consider possible barriers that would prevent women and vulnerable groups from benefitting from such measures and investments.</td></tr>
<tr><td>• In the CIP, draw on a wider range of studies on sectoral climate change risks and adaptation measures, to ensure that it presents scientifically-robust findings.</td><td>• Expand the CIP's focus beyond the available key indicators on finance, employment and services, and include sex-disaggregated considerations for relevant sectors.</td></tr>
<tr><td>• In the CIP, complement the findings presented in the TNC about sector adaptation investments needs.</td><td>• In the CIP, provide a coherent investment framework for improving climate information services, including forecasting and management of climate-related emergency situations.</td></tr>
</table>

5 Annex 2: Training Programme

5.1 Introduction

This document presents a training programme to build the capacity of the Climate Finance Centre (CFC) and key national stakeholders within the Kyrgyz Republic's Climate Finance Coordination Mechanism (CFCM) (to be established). It was prepared in the context of the Kyrgyz Republic's Pilot Program for Climate Resilience (PPCR) support for the development of the Climate Investment Program (CIP).

This training programme aims to build knowledge and capacity of the CFC and key national stakeholders on accessing, managing and monitoring climate finance and contribute to an informed dialogue amongst stakeholders at all levels. It has been designed based on the findings of the Institutional Assessment, which identified the capacity-building needs of Kyrgyz stakeholders to undertake the core functions required for successful climate resilience strategic planning, delivery and monitoring.

The proposed training course has been developed using a modular structure that aims to address a wider range of learning needs of stakeholders, with varying objectives and levels of proficiency in climate change, climate finance and project development. The proposed course is structured around 6 training packages, with a total of 17 modules targeting specific learning needs.

Table 23: Overview of the training packages and their corresponding modules

Package	Modules
1. Introduction to climate change	**Module 1: Climate change**
2. Climate change policy and responses	**Module 2. Climate change policies** **Module 3. Adaptation and mitigation strategies**
3. International Climate Finance Landscape and access modalities	**Module 4. Introduction to international climate finance** **Module 5. National climate funds** **Module 6. Introduction to accessing international climate finance** **Module 7. Introduction to GCF accreditation process and requirements**
4. Institutional climate finance framework	**Module 8.** Stakeholders and institutions **Module 9.** Private sector engagement
5. Climate change mainstreaming, planning and budgeting	**Module 10.** Climate change mainstreaming in planning and budget **Module 11.** Good financial governance **Module 12.** Measurement, Reporting and Verification (MRV)
6. Project development	**Module 13.** Project pipeline development **Module 14.** Project proposal development **Module 15.** Logical framework

	Module 16. Gender **Module 17.** M&E

In the past years, GIZ and other development partners have developed and implemented various training courses on climate change and climate finance. This course should build on these outputs, proven content and methodology, and thus avoid duplication. In section 3, further information is provided on which existing training programmes each module builds on.

The first step in developing a rollout and long-term strategy will be to connect with GIZ, FAO and other international development partners early-on in the training development. A version of this proposed outline could be circulated to potential partners to receive their feedback, and gauge specific interests for collaboration. These include resources in the context of the following programmes and initiatives:

- PPCR (to be provided by EBRD under PPCR Component 2)
- GCF Readiness Support for NDA (e.g. provided by FAO)
- Regional-level training (e.g. provided by GIZ, UNEP)

It will be important to specifically define potential contributions early in the process of training development, to accommodate busy schedules and to obtain a clear understanding of how partnerships could be developed and the gaps they could fill. This will help to focus the development of the training package modules and content.

5.2 Overview of proposed training programme

5.2.1 Objectives

The aim of the training programme is to enhance capacities among the CFC and key national stakeholders within the Kyrgyz Republic's Climate Finance Coordination Mechanism (CFCM). Its two primary objectives are: 1) to build knowledge and capacity of the CFC and national stakeholders on accessing, managing and monitoring climate finance and 2) to contribute to an informed dialogue on climate finance amongst stakeholders at all levels.

The training programme targets decision-makers and technical staff of the CFC, and key national stakeholders, including government ministries and agencies, civil society organizations (NGOs) and the private sector in the Kyrgyz Republic.

Table 24: How the proposed training responds to the Climate Finance Coordination Mechanism's functions

CFCM core CM functions	Description of function	Training course response
Function 1: Climate change strategy development and coordination	This function looks at the capacity of climate change lead institutions to develop and coordinate national policies that are coherent with national development priorities and address action on climate sensitive sectors, being inclusive of country-wide interests and concerns. For the Kyrgyz Republic, as in all countries, ensuring the national development strategy (i.e. National Strategy for Sustainable Development) incorporates climate change is a foundation stone for all the other functions of a CFCM. This involves creating or establishing a common understanding among stakeholders on the long-term objectives for national and sub-national development which takes climate change into account. Given that stakeholders at all levels of society will be affected by climate change and have roles to play, it is essential that a coordination mechanism is established to engage all stakeholders (government, private sector organizations, NGOs and development partners) in the process of climate resilience strategic planning. Following that, key sector strategies and activities need to be developed which are aligned with the strategic vision, to help deliver a programmatic approach.	**Module 2** will provide an overview of the existing climate change policy instruments and their characteristics. It will introduce existing climate change policies and strategies in the Kyrgyz Republic. Additionally, it will show how to identify the most relevant policy instruments for specific adaptation and mitigation objectives.
Function 2: Identification of climate resilience project priorities	This function aims at identifying priorities for action on climate resilience. Priorities should be identified on the basis of robust data, information and studies about climate variability and change and associated risks for all important economic, environmental and social sectors. Following these studies, adaptation options should be identified and appraised, in order to identify priority adaptation measures. During the 1st Joint Mission, a general, four-step approach for identifying priority climate change risks and resilience actions was discussed and endorsed by the Kyrgyz authorities. The stepwise approach follows the practices in developing adaptation sector strategies adopted by the Kyrgyz authorities. The priority climate resilience measures identified form the starting point for the development of pipelines of viable investment proposals for consideration for climate finance.	**Module 1** will introduce the basics of climate change including its impacts, risks and management strategies. The module will also explain the concept of adaptation and mitigation. **Module 3** will provide an overview of the adaptation and mitigation strategies. The module will go through the National Adaptation Programmes of Action (NAPAs), the National Adaptation Plans (NAPs), the Low-Emission Development Strategies and Plans (LEDs) and the Nationally Appropriate Mitigation Actions (NAMAs) giving participants a better understanding of how to identify national priorities on climate change mitigation and adaptation.
Function 3: Development and management of climate resilience	This function involves the development and management of a pipeline of climate resilience project proposals. Proposals that are under development up to the point of being ready to be submitted for	**Module 13** will give participants an understanding of how to identify project pipelines for the implementation of climate

project pipelines	financing are said to be “in the pipeline”. Project pipeline development must be coherent with Kyrgyz Republic's national strategies (i.e. it needs to be in line with Function 1). Participation of stakeholders is important throughout the pipeline development and management process, to gather information, ensure stakeholders’ views are represented and to build buy-in for project implementation. Project pipelines develop by the Kyrgyz authorities should be discussed with development partners, to identify synergies and mutual interests in taking specific proposal concepts forward.	strategies and will show examples from other countries. Participants will also learn how to develop a project pipeline, using tools and criteria for prioritization of projects through which to implement climate policies strategies.
Function 4: Development of climate resilience project funding proposals	This function involves developing proposals that are ready to be submitted for funding. The shortlist of prioritised measures from Function 2 is developed into concrete project proposals aligned with Climate Funds’ investments criteria. Technical and financial proposals for climate resilience projects need to be developed that meet with the requirements of possible funders, who may be GCF, PPCR, other climate funds, MDBs and development partners. There are many requirements which are common across these four key climate funds for the Kyrgyz Republic, and the authorities need the capacity to meet these requirements, in order to be well-positioned to access climate finance. Furthermore, there are requirements that are commonly considered by MDBs when assessing project proposals. For example, project financing structures must be in line with International Monetary Fund (IMF)’s concessionality criteria for sovereign lending and limits on sovereign risk (there is a requirement to contract the debt on concessional terms with grant element minimum at 35% in line with IMF). Also, project proposals should be viable and financeable: a well-structured, economically and financially viable project has better chances to attract long-term financing even if the project entails higher risks. Finally, projects should be implementable, i.e. the project methodology (design, analysis, etc.) should be sound, implementable and capable of contributing to the realisation of the project objectives.	Modules 14 to 17 will give an overview of the key design elements of a proposal and what a good project proposal looks like. Participants will get a better understanding of the review criteria used by international climate funds, with a focus on the GCF. Additionally, the module will provide useful tips about writing a project proposal.

Function 5: Government's approval of climate resilience project funding proposals	This function focuses on the national approval processes. Once the funding proposal is finalised, it has to go through required in-country approval processes, including: 1) **Technical review** by central planning ministries, and commissions (e.g. the CCCCP or CCMIP in the Kyrgyz Republic) and other stakeholders (e.g. the IAWG) and wider stakeholders, following specific processes depending on the typology/size of the project; 2) **No-objection process** via the Focal Point (FP)/ National Designated Authority (NDA) for specific climate funds. A national FP is the focal person (an individual) in charge of coordinating climate funds' activities in the country. An NDA is the focal authority (an agency) in charge of coordinating climate funds' activities in a country. For example, for the GCF no-objection process (letter) implies that the government: a. Approves the funding proposal; b. Confirms the funding proposal is in line with relevant national priorities and plans; c. Confirms the funding proposal is in line with relevant national laws and regulations including environmental and social safeguards. The approval process needs to be well defined by the Focal Point / NDA and strictly followed by all partners.	**Modules 4** and **6** will introduce international climate funds, with a focus on the Adaptation Fund, GCF and GEF and the key requirements to submit a funding proposal to these funds.
Function 6: Implementation of climate resilience projects	This function involves the realisation of the project and can be undertaken by Accredited Entities (AEs) for the Green Climate Fund (or Implementing Entities (IEs) for the Adaptation Fund) and Executing Entities (EEs). A wide variety of stakeholders, including public, private, NGOs and development partners, can be AEs/IEs, and EEs. Ensuring the quality, quantity and strategic orientation of measures implemented on the ground (both Technical Assistance and investment projects) is the key to enhancing climate resilience.	**Module 7** will provide an in-depth overview of the GCF accreditation process, the requirements to become a direct access implementing entity, focusing on the fit for purpose approach and fiduciary standards, the gender policy and Environmental and Social Safeguards (ESS). As part of the GCF fiduciary standards, competences regarding project management and implementation should be demonstrated by the applicant.
Function 7: Monitoring, evaluation and reporting on climate resilience projects	This function involves monitoring and evaluating the results of climate resilience projects, and provide valuable information for future adaptation planning and decision-making. Monitoring and Evaluation (M&E) systems for climate resilience are required to ensure effective resource allocation, improve	**Module 12** will present the rationale and overview of the challenges and key elements for Monitoring, Reporting and Verification (MRV) for climate change projects. Additionally, **Module 17** will provide an overview of how to elaborate a

	accountability, strengthen the coordination of adaptation plans and activities, and foster learning on adaptation. Each project proposal will have set out the M&E frameworks and indicators that will be used. The M&E report will need to meet with national M&E requirements, as well as those of climate funds.	Monitoring and Evaluation (M&E) plan, with a focus on the M&E requirements of the main climate funds (e.g. GCF, PPCR, Adaptation Fund).
Function 8: Communication, outreach and awareness-raising on climate resilience projects and activities	This function involves outreach and awareness raising with stakeholders, disseminating and discussing key messages on climate risks and resilience relevant to each specific project, and for the activities of the CFCM as a whole. Communication channels should be designed to ensure that they are effective in reaching the relevant stakeholders, with channels such as the media being more suitable for members of the public, and professional networks being more suited to public sector and private sector stakeholders. Engagement with the general public is particularly important, and NGOs have a strong role in supporting these activities, working with community groups. Involving women's representatives and disadvantaged groups is especially important since they are often disproportionally affected by climate change.	**Module 8** will provide overview of the relevant stakeholders in the climate finance field in the Kyrgyz Republic, their modes of interaction as well as roles and responsibilities in terms of communication and awareness-raising on climate resilience projects and activities.

5.2.2 Methodology and format

The course will follow a modular structure that will allow trainers to choose appropriate content and design tailored training courses according to the learning needs and objective of the targeted audience.

It will also apply a very practical and hands-on methodology, employing learning methods which convey messages through interactive, practical group-based work done by the participants. The practical work is mainly based on case situations of relevance to the training objective and accompanied by guiding questions, which stimulate discussions and allow participants to draw their own conclusions. The training will be conducted face-to-face, with virtual learning elements integrated at appropriate points in the training design, to enhance the learning experience and sustainability of the course. These elements may include online scenario-based exercises, audio/visual content, and an online platform for sharing or hosting material. Different formats of the course will be developed to respond to various stakeholder needs and resources available.

It is important that any standardized training course be tailored to the specific context of the participants and based on the strategic objectives of the training event. As such, when developing the training course, specific guidance and examples should be provided for trainers on how to effectively tailor the course's content and structure.

5.2.3 Training materials

The training package will include:

- Training materials

    - PowerPoint presentation slides
    - Participant's manual including exercises
    - Hand-outs (to be distributed after the relevant module has been covered)
    - Virtual learning elements/digital assets
- Moderation plan
- Trainer's handbook
- Two-page briefing note describing the course
- Suggestions/guidance for post-training support
- Standard template for training needs assessment

It is important to note that in using standardised training packages, there is always a need to tailor the material to national and organizational contexts, which requires preparation time prior to each training event.

5.2.4 Course content and structure

The proposed course is structured around 6 training packages, with a total of 17 modules targeting specific learning needs. Table 25 offers an overview of the training packages and corresponding modules. Indication about possible target audience in the context of the Kyrgyz republic is also provided, including the CFC, the GCF's National Designated Authority (NDA), other members of the CFCM and projects developers. Each module is further described in Section 5.3.

Box 1: Training needs for the GCF's NDA

To perform efficiently and effectively their function as a GCF's NDA, an institution shall ideally demonstrate the following capacities:

- Familiarity with both mitigation and adaptation efforts and needs in the country;
- Adequate knowledge of national priorities, strategies, and plans;
- The ability to contribute to and drive national development strategies and plans;
- Familiarity with relevant institutions and stakeholders in the countries (including contacts with multilateral and bilateral institutions, civil society organizations, and sub-national, national or regional entities that may be potential candidates for accreditation as intermediaries or implementing entities);
- Capacity to facilitate and coordinate country coordination mechanisms and multi-stakeholder engagement for country consultations;
- The ability to monitor and evaluate in accordance with relevant guidelines of the Fund; and
- An overview of activities of other relevant multilateral, bilateral, regional and global funding mechanisms and institutions.

The **first module** is introductory and primarily descriptive, offering a background to the concept of climate change, from a climate science perspective. **Module 2** and **3** provide an overview of the climate change policy processes, including adaptation and mitigation national strategies. **Modules 3, 4, 5** and **6** are more technically in-depth, and shift the focus to climate finance. They first provide an overview of the climate finance landscape from an international and national-level perspective. They introduce the major climate funds, with a focus on the Green Climate Fund (GCF) and the access modalities. **Modules 7** and **8** are linked to the country context, presenting the key stakeholders for

climate finance in Kyrgyzstan and the potential role of the private sector. **Modules 10, 11 and 12** are about budgeting and planning: they illustrate the importance of good financial governance in a country, the existing methodologies for measurement reporting and verification (MRV) as well as of the integration of climate change into budgeting and planning. **Modules 13 to 17** are the core of the course and focus on the development of climate change funding proposals. Starting from the identification of project pipelines, the modules will explain how to develop a climate change project proposal, with focus on the GCF project requirements including the six investment criteria, the logical framework, the integration of gender and the monitoring and evaluation (M&E) framework. The main objective of these modules is to equip project planners, managers and/or coordinators (field level) involved in planning/designing and managing/supervising climate projects/programs, with the necessary skills and tools to prepare investment ready project and programme proposals. The necessary skills include project design, implementation and monitoring. This will enable the developed project and programme proposals to respond to various climate funds requirements.

Table 25. Overview of the target audience for each training packages

Package	Target Audience
1. Introduction to climate change	CFC, other members of the CFCM, project planners, coordinators and managers
2. Climate change policy and responses	CFC, other members of the CFCM, project planners, coordinators and managers
3. International Climate Finance Landscape and access modalities	CFC, other members of the CFCM, project planners, coordinators and managers
4. Institutional climate finance framework	CFC, other members of the CFCM
5. Climate change mainstreaming, planning and budgeting	CFC, other members of the CFCM
6. Project development	CFC, other members of the CFCM and project planners, coordinators and managers

5.3 Detailed overview of the training modules

5.3.1 Module 1: Climate change

This first introductory module will provide an overview of the topic of climate change. This module will draw from the many existing training courses that already provide this type of background information, supplementing with additional material on climate change risks and impacts of most relevance to the Kyrgyz Republic.

Learning outcome
Understand the basics of climate change, impacts, risks and management strategies. Become familiarized with climate change terminology and the distinction between adaptation and mitigation.
Key questions
• What does this mean in terms of global and regional climate impacts and risks? • What actual and potential loss and damage arises from these impacts – both from sudden onset extreme events and gradual changes? • What are the main responses to climate change – mitigation, adaptation, comprehensive risk management (IPCC 2014) • What are the limits to adaptation of natural and human systems? What are tipping points? • What are the costs associated with not acting on climate change – economic and non-economic?
Key literature
IPCC (2014a). Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1132 pp. IPCC (2014b). Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L.White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 688. IPCC (2014c). Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. IPCC (2013). Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp. ADB (2011). The Economics of Climate Change. Available from: https://www.adb.org/sites/default/files/publication/29354/economics-climate-change-brochure.pdf
Informed by existing training courses
GIZ CliFit Training NAP country-level training Fortbildung Basiskompetenz Klima (training on main strategies dealing with climate change)
Indicative duration
0.5 day

5.3.2 Module 2: Climate change policies

This module will present the international policy context for climate change and finance. It will introduce the climate change policy instruments available under the UNFCC and will provide an overview of the latest development in terms of climate change policies and strategies in the Kyrgyz

Republic. It is important to note that given the international negotiations under the UNFCCC (as well as other international fora), this module could date quickly, and may need to be revised on an annual basis to ensure that it reflects the current negotiating position.

Learning outcome
Understand the international debates involving UNFCCC. Get a better understanding of climate change policy instruments and their characteristics. Gain awareness on the climate change policies and strategies developed (and under development) in the Kyrgyz Republic. Learn how to identify policy instruments for your adaptation and mitigation objectives
Key questions
• What are the climate change policy instruments under UNFCCC? • What are their characteristics? • How to identify the most relevant policy instruments? • What are the existing climate change policy and strategic frameworks in the Kyrgyz Republic?
Key literature
Briner, G., Kato, T., Konrad, S. and Hood, C. (2014). Taking Stock of the UNFCCC Process and its Inter-linkages. Climate Expert Group, Paper No 2014(4). OECD Environment Directorate, Paris. United Nations General Assembly (2015). Draft outcome document of the United Nations summit for the adoption of the post-2015 development agenda, 12 August 2015, Document A/69/L.85. Accessed November 16 2015 http://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E National Strategy for Sustainable Development for the Kyrgyz Republic 2013-2017 Program of the Kyrgyz Republic on Transition to Sustainable Development for 2013-2017 National Strategy for Sustainable Development for the Kyrgyz Republic medium term (2018-2022) and long-term (to 2030) – under development Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017 Kyrgyz Republic's Third National Communication to UNFCCC (2016) The Kyrgyz Republic's Intended Nationally Determined Contribution (2015)
Informed by existing training courses
GIZ CliFit Training NAP country-level training
Indicative duration
0.5 day

5.3.3 Module 3: Adaptation and Mitigation Strategies

This module will provide an overview of the key strategies in terms of climate change adaptation and mitigation. It will introduce the concepts of Low Emission Development Strategy (LEDS) and Nationally Appropriate Mitigations Actions (NAMAs) as well as their relevance for climate finance. The module will illustrate the rationale of planning for climate change adaptation and the difference between the National Adaptation Programme of Action (NAPA) and National Adaptation Plan (NAP).

Learning outcome
Get familiar with the importance of climate change mitigation and adaptation strategies and their relevance for climate finance. Understand the concepts of LEDs and NAMAs and their relevance for climate finance. Understand the concepts of NAPA and NAP and the difference between the two processes. Reflect on examples of countries who developed or are implementing their NAPs and NAMAs.
Key questions
• What are strategies and plans for climate change (including adaptation and mitigation)? What is the rationale? • How are the NAPs different from the NAPAs? • What is the status of NAPA, NAP, NAMA and LED in the Kyrgyz Republic? • How to develop a NAPA, NAP, NAMA and LED? • What are the financing sources available?
Key literature
UNFCCC, 2012. The National Adaptation Process. Technical guidelines for the national adaptation plan process NAP Central: http://www4.unfccc.int/nap/ Stockholm Environment Institute, 2014. Supporting NAP development with the PROVIA Guidance: A user companion The LDC Paper Series 2013. NAPAs and NAPs in Least Developed Countries LDCF, 2014. Accessing Resources under The Least Developed Countries Fund CCAP, 2013. Identifying Potential Sources for NAMA Finance Ecofys, 2013. Annual Status Report on Nationally Appropriate Mitigation Actions (NAMAs) E3G, 2014. Resourcing NAMAs. Stepping stones in a national climate financing strategy GIZ, 2013. Low-Emission Development Strategy (LEDS). Factsheet GIZ, 2013. LEDS tool GIZ, 2013. NAMA tool GIZ, 2013. Nationally Appropriate Mitigation Action (NAMA). Factsheet GIZ, 2012. The Climate Finance Cascade: A NAMA financing mechanism in a nutshell GIZ 2011. Supported NAMA for Sustainable Housing in Mexico. Mitigation Actions and Financing Packages IISD, 2013. Developing Financeable NAMAs. A Practitioner's Guide UNEP Riso Center, 2013. Understanding the Concept of Nationally Appropriate Mitigation Action UNFCCC, 2013. Guidance for NAMA Design. Building on Country Experiences Government of the Kyrgyz Republic, Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic till 2017
Informed by existing training courses
GIZ CliFit Training NAP country-level training Fortbildung Basiskompetenz Klima (training on main strategies dealing with climate change)
Indicative duration
0.5 day

5.3.4 Module 4: Introduction to international climate finance

This module will provide an overview of the global climate finance landscape. It will present the international climate finance flows and current commitment. The module will illustrate the key institutions of the complex climate finance architecture, including the funds under the UNFCCC, the multilateral and bilateral funds.

Learning outcome
Gain a better understanding of the current state of global climate finance architecture. Get acquainted with the most recent developments in international finance including the UN Framework Convention on Climate Change. Illustrate the multi-level structure of climate financing: multilateral, bilateral and national
Key questions
• What is climate finance? What are the relevant definitions internationally? • What are the latest developments on climate finance under the UNFCCC (including relevant Conference of the Parties (COP) decisions)? • How does the global landscape of climate finance look like? Who are the major multilateral, bilateral and national sources? • What are the major global climate funds? • Where are global climate funds going? • How much is flowing to the Kyrgyz Republic? • What are the main global climate funds accessed by the Kyrgyz Republic to date?
Key literature
Climate Funds Update website (ODI, Heinrich Böll Stiftung North America) http://www.climatefundsupdate.org/ Climate Policy Initiative's Inventory on Global climate finance: http://www.climatefinancelandscape.org/ Climate Funds Update, ODI (2016), Liane Schalatek, Neil Bird, The Principles and Criteria of Public Climate Finance. Available from: https://www.odi.org/sites/odi.org.uk/files/resource-documents/11018.pdf Climate Funds Update, ODI (2016), Smita Nakhooda, Charlene Watson, Liane Schalatek, The Global Climate Finance Architecture. Available from: https://www.odi.org/sites/odi.org.uk/files/resource-documents/11021.pdf Climate Funds Update, ODI (2016), Alice Caravani, Charlene Watson, Liane Schalatek, Climate Finance Thematic Briefing: Adaptation Finance https://www.odi.org/sites/odi.org.uk/files/resource-documents/11024.pdf ODI, Heinrich Böll Stiftung (2016), Smita Nakhooda, Charlene Watson, Liane Schalatek, 10 Things to know about climate finance in 2016. Available from: https://www.odi.org/sites/odi.org.uk/files/resource-documents/11058.pdf
Informed by existing training courses
GIZ CliFit Training
Indicative duration
1 day

5.3.5 Module 5: National climate funds

This module will provide an overview of national climate funds developed internationally by developing countries, their characteristics and functions.

Learning outcome
Learn about some of the key elements of national climate funds. Reflect on lessons learnt from existing national climate funds and challenges in setting up a national climate fund.
Key questions
• What are the key elements of a national climate fund? • Which are the priority areas to address when establishing a national climate fund? • Which criteria should be considered when deciding on establishing a national climate fund? • What are the pros and cons of a national climate fund?
Key literature
Flynn, Cassie (2011). *Blending Climate Finance through National Climate Funds: A guidebook for the design and establishment of national funds to achieve climate change priorities*. United Nations Development Programme, New York, NY, USA Glemarec, Yannick (2011). *Catalyzing Climate Finance – A Guidebook on Policy and Financing Options to Support Green, Low-Emission and Climate- Resilient Development*, United Nations Development Programme. Irawan S, Heikens A, Petrini K (2012) *National Climate Funds: Learning from the experience of Asia-Pacific countries.* UNDP Discussion Paper GIZ (2012). *It's not just the money: institutional strengthening of national climate funds. Discussion paper*. United Nations Development Group (2011), *UNDG Guidance Note on Establishing, Managing and Closing Multi-Donor Trust Funds*. Bangladesh Climate Change Resilience Fund (http://bccrf-bd.org/) Indonesia Climate Change Trust Fund (http://www.icctf.or.id/) Rwanda Environment and Climate Change Fund (http://www.fonerwa.org/)
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.6 Module 6: Introduction to accessing international climate finance

This module will introduce the access modalities to the major climate funds, including multilateral access, direct access and enhanced direct access modalities, focusing in particular on the approaches of the Adaptation Fund, GCF and GEF to direct access and enhanced direct access.

Learning outcome
Learn about the modes of access to international climate finance with particular focus on the direct access and enhanced direct access modalities. Get a better understanding of the approaches of the Adaptation Fund, GCF and GEF to direct access and enhanced direct access.
Key questions
• How can climate finance sources be accessed? • What are the access modalities of the major climate funds (international access, direct access and enhanced direct access)? • What are the role and responsibilities of a direct access implementing entity? • What are the specific requirements for the accreditation of a direct access implementing entity with a focus on the requirements of the GCF? • What are the potential challenges that institutions face in fulfilling the fiduciary and management capacities necessary to be accredited as a direct access implementing entity? • What are the GCF requirements for enhanced direct access?
Key literature
Rai N., Hossain I., Soanes M., Fayolle V., Nasir N. and Y. Mahid (2016) How can Bangladesh's private sector engage with the Green Climate Fund? IIED, London. Available from: http://pubs.iied.org/pdfs/10162IIED.pdf Adelphi video Interview - Claire Martin (2014). Available from: https://www.youtube.com/watch?v=JXoHULMoutw&feature=youtu.be Adelphi video interview with Dethie Soumare Ndiaye (2014). Available from: https://www.youtube.com/watch?v=_FW7QFiaQYw&feature=youtu.be GIZ Climate Finance (CF) Ready Toolbox. Available from : https://www.giz.de/expertise/downloads/giz2014-en-climatefinance-cf-ready-toolbox.pdf
Informed by existing training courses
GIZ CliFit Training
Indicative duration
1 day

5.3.7 Module 7: Introduction to GCF accreditation process and requirements

This module will introduce the basics of the GCF including funding windows (adaptation and mitigation), and strategic areas of funding. The module will then focus on its access modalities and will provide an in-depth overview of the GCF's accreditation requirements, including the Fiduciary standards, Environmental and Social Safeguards (ESS).

Learning outcome
Get introduced to the basics of the GCF and its access modalities. Get an in-depth understanding about the GCF accreditation process, the requirements to become a direct access implementing entity, focusing on the fit for purpose approach, the fiduciary standards and the Environmental and Social Safeguards (ESS)
Key questions
• What are the objectives of the GCF? • What kind of activities can be funded under the GCF? • What are the financial instruments available under the GCF? • What opportunities does the GCF offer to the private sector? • What are the requirements to access the GCF? • How does the accreditation process work?
Key literature
Fayolle V., Odianose S. and Soanes M. (2017), GCF Project Toolkit 2017. Guide to develop a Project proposal for the Green Climate Fund (GCF). Acclimatise, London. January 2017. Available from: https://cdkn.org/wp-content/uploads/2016/03/GCF-project-Toolkit.pdf GCF (2015a) Concept Note User Guide. Available from: http://www.greenclimate.fund/ventures/portfolio/fine-print Rai N., Hossain I., Soanes M., Fayolle V., Nasir N. and Y. Mahid (2016) How can Bangladesh's private sector engage with the Green Climate Fund? IIED, London. Available from: http://pubs.iied.org/pdfs/10162IIED.pdf Steeves, J et al. (2016) Business case for the Bangladeshi private sector to invest in climate change and access international climate finance. Available from: http://cdkn.org/wp-content/uploads/2016/06/Business-case-for-the-Bangladeshi-private-sector-to-invest-in-climate-change-and-access-international-climate-finance.pdf
Informed by existing training courses
GIZ CliFit Training
Indicative duration
3 days

5.3.8 Module 8: Stakeholders and institutions

This module will present the key stakeholders and institutions relevant in the field of climate finance in the Kyrgyz Republic. It will describe the institutional arrangements for climate finance coordination and in particular the roles and responsibilities of the CFC.

Learning outcome
Get an overview of the relevant stakeholders in the climate finance field in the Kyrgyz Republic with a focus on the international financing dimension. Learn about the key modes of interaction between the stakeholders and what they imply for coordination of the climate policy area.
Key questions
• Who are the key climate finance stakeholders and institutions in the Kyrgyz Republic (government ministries and agencies, CFC, non-governmental organizations (NGOs) and the private sector)? • What are thee climate finance coordination arrangements in the Kyrgyz Republic? • What are their capacities and responsibilities? How do they interact?
Key literature
"Institutional Assessment for Climate Resilience Strategic Planning, Delivery and Monitoring in the Kyrgyz Republic". Supporting document for Kyrgyz Republic Pilot Programme for Climate Resilience (PPCR) Phase 1 Component 1, 2017.
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.9 Module 9: Private sector engagement

This module will present the rationale for private sector engagement in climate finance. After defining who is the private sector, the module will illustrate the opportunities and risks for private sector engagement in climate finance from a public versus private sector perspective. Additionally, the module will provide an overview of the available instruments to further engage the private sector in climate finance.

Learning outcome
Gain a better understanding of the relevance of private sector engagement for climate finance. Identify the opportunities and risks for private sector engagement in climate finance from a public versus private sector perspective.
Key questions
• Who is the private sector? • What are the opportunities and risks for private sector engagement from a public-sector perspective? • What are the opportunities and risks for private sector engagement from a private-sector perspective? • What are the instruments for private sector engagement? • What are the relevant private sector stakeholders in the Kyrgyz Republic? • What kind of contribution can be expected by the identified private stakeholders? • What is the general interest of the identified private sector stakeholders? What is their particular interest regarding mitigation/adaptation? • What are the measures that the public sector could introduce to secure contributions by the identified private sector stakeholders?
Key literature
Rai N., Hossain I., Soanes M., Fayolle V., Nasir N. and Y. Mahid (2016) How can Bangladesh's private sector engage with the Green Climate Fund? IIED, London. Available from: http://pubs.iied.org/pdfs/10162IIED.pdf Steeves, J et al. (2016) Business case for the Bangladeshi private sector to invest in climate change and access international climate finance. Available from: http://cdkn.org/wp-content/uploads/2016/06/Business-case-for-the-Bangladeshi-private-sector-to-invest-in-climate-change-and-access-international-climate-finance.pdf Steeves, J. et al. (2016): Building Readiness of the Private Sector in Bangladesh for GCF Accreditation. Available from: https://cdkn.org/wp-content/uploads/2016/06/Private-sector-engagement-in-climate-change-action-in-Bangladesh-creating-an-enabling-environment.pdf
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.10 Module 10: Climate change mainstreaming in planning and budgeting

This module will provide an overview of how to mainstream climate change in planning and budgeting.

Learning outcome
Gain a better understanding about how to mainstream climate change into development planning and budgeting at all levels, starting from the various dimensions of climate change mainstreaming (in coordination mechanisms, in planning, in M&E systems, in budgets and in legal frameworks). Learn about the entry points, processes, institutional arrangements and tools to effectively integrate climate change into sectoral planning and budgets, at all relevant levels.
Key questions
• How to mainstream climate change in planning and budgeting at all levels (in coordination mechanisms, in planning, in M&E systems, in budgets and in legal frameworks)? • What are the enabling factors and political considerations for mainstreaming change? • What are the tools that can be used for mainstreaming climate change?
Key literature
GIZ (2011) Integrating climate change adaptation into development planning - A practice-oriented training based on an OECD Policy Guidance. Available from: https://www.oecd.org/dac/environment-development/45856020.pdf Olhoff A. & Schaer C. (2010) *Screening tools and guidelines to support the mainstreaming of climate change adaptation into development assistance: A stocktaking report*. Environment & Energy Group, United Nations Development Programme, New York. Available from: http://www.undp.org/climatechange/library_integrating_cc.shtml UNDP-UNEP (2011) *Mainstreaming Adaptation to Climate Change into Development Planning: A Guidance Note for Practitioners*. Draft version. UNDP-UNEP Poverty-Environment Initiative. Final version available from: http://www.unpei.org/knowledge-resources/publications.html World Bank (n.d.) *Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects*. World Bank, Washington, DC. Guidance Note #4 – Developing Readiness for Institutional Capacity Development and an Enabling Policy Framework. [Online] Available from: http://climatechange.worldbank.org/climatechange/content/mainstreamingadaptation-climate-change-agriculture-and-natural-resources-management-project
Informed by existing training courses
Integrating climate change adaptation into development planning - A practice-oriented training based on an OECD Policy Guidance National Adaptation Plan (NAP) country-level training Fortbildung Basiskompetenz Klima (training on main strategies dealing with climate change)
Indicative duration
1 day

5.3.11 Module 11: Good financial governance

This module will present why good financial governance is important to strengthen country systems and how national public finance systems can be strengthened to ensure coherent delivery of climate finance.

Learning outcome
Gain a better understanding of how climate finance can challenge good financial governance in a country. Learn how national public finance systems can be strengthened to ensure coherent delivery of climate finance. Understand how Climate Public Expenditures and Institutional Review (CPEIR) can help to assess the current public spending that is dedicated to climate relevant activities.
Key questions
• What is development effectiveness and Good Financial Governance (GFG)? • How to strengthen GFG and the country system? • What is the role of Climate Public Expenditures and Institutional Review (CPEIR)?
Key literature
Adelphi (2014) CliFit video interview with Claire Martin. Available from: https://www.youtube.com/watch?v=JXoHULMoutw&feature=youtu.be GIZ (2014) Good Financial Governance in German Development Cooperation. Promoting good governance in public finance. BMZ Sector Strategy Paper. Available from: http://www.bmz.de/en/publications/topics/good_governance/Strategiepapier342_04_2014.pdf Gomez-Echeverri L. and Müller B. (2009) Key Issues on Governance of Climate Change Finance. ECBI Policy Brief. Available from: http://www.oxfordclimatepolicy.org/publications/documents/ecbiLaRedoute9August.pdf CPEIR Database. Available from: https://www.climatefinance-developmenteffectiveness.org/
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.12 Module 12: MRV

This module will present the challenges and existing approaches used for MRV of climate finance (UNFCCC's Common Tabular Format for Biennial Reports, OECD DAC's Adaptation/Climate Marker, World Bank's Climate Finance Tracking System, UNDP's Climate Public Expenditure and Institutional Review). From a donor perspective, MRV helps to build trust and accountability with regards to climate finance commitments and to monitor trends and progress in climate-related investment. From a national government's perspective, MRV aims to certify to contributors and recipients that financial and technical support is reaching those who need it on the ground.

Learning outcome
Get acquainted with the rationale and challenges of MRV of climate finance. Learn about different approaches to track and code climate finance flows.
Key questions
• Why MRV of climate finance? • What are the key challenges to track climate finance? • What are the existing approaches to track climate finance?
Key literature
CPEIR Database: https://www.climatefinance-developmenteffectiveness.org/ UNFCCC (2012) Common tabular format for "UNFCCC biennial reporting guidelines for developed country Parties". Available from: http://unfccc.int/resource/docs/2012/cop18/eng/l12.pdf OECD (2011) Handbook on the OECD-DAC Climate Markers. Available from: https://www.oecd.org/dac/stats/48785310.pdf World Bank (2015) Joint report on multilateral development banks' climate finance. Available from: http://pubdocs.worldbank.org/en/740431470757468260/MDB-joint-report-climate-finance-2015.pdf
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.13 Module 13: Project pipeline development

This module will present the importance of project pipelines for the implementation of climate strategies. Projects that are between the starting point and the completion point are 'in the pipeline‘.

Learning outcome
Get a better understanding of the importance of project pipelines for the implementation of climate strategies and learn about selected examples in other countries. Learn how to develop a project pipeline, using tools and criteria for prioritisation of projects through which to implement climate policies strategies.
Key questions
• What is the importance of project pipelines in climate policies? • What is the need for prioritization? • How to develop a project pipeline? • Understand the importance of project pipelines for the implementation of climate strategies and learn about selected examples in other countries • Learn about the tools and criteria for prioritisation of projects through which to implement climate policies strategies (e.g. multi criteria analysis)
Key literature
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.14 Module 14: Project proposal development

This module will introduce the key design elements of a climate project proposal, focusing on the requirements and review criteria of major climate funds, focusing on the GCF.

Learning outcome
Get an overview of the key design elements of a proposal and what a good project proposal looks like. Get a better understanding of the review criteria used by international climate funds, with a focus on the GCF. Learn useful tips about writing a project proposal.
Key questions
• What does the GCF project approval cycle look like? • What are the GCF's project review criteria? • What are the key design elements of a proposal? • How does the GCF project proposal template look like?
Key literature
Fayolle V., Odianose S. and Soanes M. (2017), GCF Project Toolkit 2017. Guide to develop a Project proposal for the Green Climate Fund (GCF). Acclimatise, London. January 2017. Available from: https://cdkn.org/wp-content/uploads/2016/03/GCF-project-Toolkit.pdf GCF (2015a) Concept Note User Guide. Available from: http://www.greenclimate.fund/ventures/portfolio/fine-print GIZ (2013) Integrating climate change adaptation into development planning. A practice-oriented training based on an OECD Policy Guidance. Modules on Adaptation Monitoring and Evaluation (M&E). Trainer's Handbook. Available from: https://gc21.giz.de/ibt/var/app/wp342deP/1443/wp-content/uploads/filebase/me/me-tools/giz2014_OECD-adaptation-training-handbook-M&E.pdf
Informed by existing training courses
n/a
Indicative duration
3 days

5.3.15 Module 15: Logical Framework

This module will present the GCF Results Management Framework and will explain how to develop a logical framework (or *log-frame*) to show how the activities included in the proposal will achieve the desired outcomes and objectives of a project.

Learning outcome
Gain an understanding of the GCF Results Management Framework (RMF). Learn how to development a logical framework for their proposals and to use the relevant indicators from the Performance Measurement Framework (PMF).
Key questions
• What is the GCF's RMF? • What is the PMF? • How to develop a logic framework (log-frame)? • What are the relevant indicators for your project?
Key literature
Fayolle V., Odianose S. and Soanes M. (2017), GCF Project Toolkit 2017. Guide to develop a Project proposal for the Green Climate Fund (GCF). Acclimatise, London. January 2017. Available from: https://cdkn.org/wp-content/uploads/2016/03/GCF-project-Toolkit.pdf GCF (2015a) Concept Note User Guide. Available from: http://www.greenclimate.fund/ventures/portfolio/fine-print Rai N., Hossain I., Soanes M., Fayolle V., Nasir N. and Y. Mahid (2016) How can Bangladesh's private sector engage with the Green Climate Fund? IIED, London. Available from: http://pubs.iied.org/pdfs/10162IIED.pdf GCF (2014) Initial Results Management Framework of the Fund. Available from: https://www.greenclimate.fund/documents/20182/24943/GCF_B.07_04_-_Initial_Results_Management_Framework.pdf/
Informed by existing training courses
n/a
Indicative duration
0.5 day

5.3.16 Module 16: Gender

This module will present the importance of gender for climate finance and the rationale for the integration of gender considerations in climate change projects. Climate change is not gender-neutral, as such an effective response to climate change must consider gender specific vulnerabilities as well as the potential of women to contribute to combat climate change with their knowledge and skills. The module will provide an overview of the gender policies used by the main climate funds (e.g. GCF, PPCR, Adaptation Fund), looking at concrete examples of projects integrating gender their design through the elaboration of a Gender Assessment and Action Plan (GAP).

Learning outcome
Gain a better understanding of the relevance of gender in climate change policy processes and finance. Learn how to integrate gender into the policy process. Gain an awareness of the gender issue when it comes to international funding of climate change projects and learn how to integrate gender concerns into project design.
Key questions
• What is the relevance of gender in climate finance? • How to integrate gender issues into climate finance? • What has been done so far by the climate funds? • How to design a gender-sensitive project?
Key literature
Burns and Patouris, 2014. United Nations Framework Convention on Climate Change (UNFCCC) Decisions and Conclusions: Existing Mandates and Entry Points for Gender Equality IUCN / UNDP / GGCA, 2009. Training Manual on Gender and Climate Change Schalatek, 2012. INTERACTIVE EXPERT PANEL. Climate Financing for Gender Equality and Women's Empowerment: Challenges and Opportunities Schalatek, Nakhooda, 2012. Gender and Climate Finance Schalatek, 2014. Of Promise, Progress, Perils & Prioritization Gender in the Green Climate Fund Schalatek 2014. Gender and Climate Finance UNDP 2012: Gender and Climate Finance. Training Module 5 UNDP Policy briefs and training modules, 2014. Gender and Climate Change – Asia and Pacific UNDP 2011. Ensuring gender equity in climate change financing UNDP 2007. Gender Mainstreaming. a Key Driver of Development in Environment & Energy. Training Manual UNDP 2014. Incorporating Gender and Poverty Analysis in the Climate Public Expenditure and Institutional Review. A Methodological Note Fayolle V., Odianose S. and Masson V., 2016 "What does it mean for a climate project to be gender sensitive?" Available from: https://cdkn.org/2016/12/opinion-what-does-it-mean-climate-project-gender-sensitive/?loclang=en_gb Fayolle V., Odianose S. and Masson V., 2016 "How gender-inclusive approaches can improve the 'bankability' of climate projects" Available from: https://cdkn.org/2016/12/opinion-gender-inclusive-approaches-can-improve-bankability-climate-projects/?loclang=en_gb
Informed by existing training courses
GIZ CliFit Training
Indicative duration
0.5 day

5.3.17 Module 17: M&E

This module will present the key elements for tracking the delivery of results and the elaboration of a M&E plan, with a focus on the Initial Monitoring and Accountability Framework and relevant M&E requirements of the main climate funds (e.g. GCF, PPCR, Adaptation Fund).

Learning outcome
Get an overview of how to develop a M&E plan for climate change projects and the relevant M&E requirements of the main climate funds (e.g. GCF, PPCR, Adaptation Fund).
Key questions
• What are the different impact levels (output, outcome, impact) and how they are intertwined (concept of the results chain)? • How can indicators be used to track the delivery of results? • What are the requirements of the main climate funds in terms of M&E? • How to develop an M&E plan?
Key literature
Olhoff A. & Schaer C. (2010) *Screening tools and guidelines to support the mainstreaming of climate change adaptation into development assistance: A stocktaking report*. Environment & Energy Group, United Nations Development Programme, New York. Available from:http://www.undp.org/climatechange/library_integrating_cc.shtml UNDP-UNEP (2011) *Mainstreaming Adaptation to Climate Change into Development Planning: A Guidance Note for Practitioners*. Draft version. UNDP-UNEP Poverty-Environment Initiative. Final version available from: http://www.unpei.org/knowledge-resources/publications.html World Bank (n.d.) *Mainstreaming Adaptation to Climate Change in Agriculture and Natural Resources Management Projects*. World Bank, Washington, DC. Guidance Note #4 – Developing Readiness for Institutional Capacity Development and an Enabling Policy Framework. [Online] Available from: http://climatechange.worldbank.org/climatechange/content/mainstreamingadaptation-climate-change-agriculture-and-natural-resources-management-project GCF (2015) Initial monitoring and accountability framework for accredited entities. Available from: https://www.greenclimate.fund/documents/20182/87610/GCF_B.11_05_-_Initial_monitoring_and_accountability_framework_for_accredited_entities.pdf/9dfc58ab-6653-41f7-af8b-273fef5c6603 Fayolle V., Odianose S. and Soanes M. (2017), GCF Project Toolkit 2017. Guide to develop a Project proposal for the Green Climate Fund (GCF). Acclimatise, London. January 2017. Available From: https://cdkn.org/wp-content/uploads/2016/03/GCF-project-Toolkit.pdf GCF (2015a) Concept Note User Guide. Available From: http://www.greenclimate.fund/ventures/portfolio/fine-print
Informed by existing training courses
n/a
Indicative duration
0.5 day

5.4 Rollout and long term strategy: How will the training be launched and sustained?

Once the training package is developed it is important that it can be used, updated and sustained over time, in order to effectively contribute to capacity building and dialogue in the Kyrgyz Republic. A strategy for rollout and long-term implementation is thus necessary, based on a multiplicity of resources and partners. Several key elements of this strategy are discussed below, including the overall approach, training of the trainers (ToT), partnerships with international stakeholders, post-event support and ownership of the training package.

5.4.1 Overall approach

To ensure sustainability of the training, the proposed training modules will be ideally supported by multiple development partners, according to their respective areas of work and expertise.

These include resources in the context of the following programmes and initiatives:

- PPCR (to be provided by EBRD under PPCR Component 2)
- GCF Readiness Support for NDA (e.g. provided by FAO)
- Regional-level training (e.g. provided by GIZ, UNEP)

5.4.2 Training of the Trainers (ToT)

The rollout of the training package should plan for a Training of the Trainers (ToT) event(s), in order to develop a pool of trainers who can then deliver the training. Following the cascade training method, training would be provided to selected staff of the CFC and to key stakeholders involved in the CFCM who then provide the same training to others.

The ToT programme is not specified at this stage, as this will be influenced by the course's format as well as interest and cooperation from partner institutions. ToT details will be developed at a later stage, once the training package has been further developed and partnerships have been established.

5.4.3 Partnership with international stakeholders

The first step in developing a rollout and long-term strategy will be to connect with a variety of national, regional and international organizations early-on in the training development. A version of this proposed outline should be circulated to potential partners to receive their feedback, and gauge specific interests for collaboration. Partners may take on various roles, including:

- Contributing to the development of modules
- Providing key expert interviews (audio or video) to be integrated into the training
- Providing guest speakers for training events (including test runs)
- Hosting the training package within an institution
- Co-organising and implementing a ToT event(s)
- Delivering the training package or integrating part of its content into their training offerings

It will be important to specifically define potential contributions early in the process of training development, to accommodate busy schedules and to obtain a clear understanding of how partnerships could be developed and the gaps they could fill. This will help to focus the development of the training package modules and content.

5.4.4 Post event support and ownership within the Government of Kyrgyz Republic

Key to the sustainability and lasting impact of each training event, including the ToT, will be post-event support. There should be a mechanism through which participants can ask questions and request further support following the delivery of a training event. It is recommended that this be part of the Terms of Reference (ToR) for any training event; trainers should plan for the provision of such support. Potential options include: a helpdesk, using a dedicated email address or phone number, available to participants within the weeks following the training; an online platform through which participants can pose questions; or briefing notes provided to participants following the training.

Also important is ownership of the training package. A contact person within a national organization should act as the gateway for questions about the training, whether from trainers, participants, potential clients etc. This will direct the flow of information and provide consistency in response.

Box 2: Engagement with international stakeholders

There are many actors currently involved in work on relevant to climate finance and project development. During the development of the conceptual framework of the training, it is crucial to engage with multiple stakeholders to receive feedback and assess interest in collaboration. These stakeholders include:
Multilateral organizations/fora:

- United Nations Framework Convention on Climate Change (UNFCCC)/Warsaw International Mechanism for Loss and Damage (WIM) Executive Committee (EXCOM)
- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- United Nations Institute for Training and Research (UNITAR)
- World Bank/ Global Facility for Disaster Reduction and Recovery (GFDRR)
- Organization for Economic Co-operation and Development (OECD)-Development Assistance Committee (DAC)

Bilateral development partners/donors:

- Swiss Development Cooperation (SDC)
- UK Department for International Development (DFID)
- United States Agency for International Development (USAID)
- Climate Development and Knowledge Network (CDKN)
- German Red Cross (GRC)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Research institutes:

- International Centre for Climate Change and Development (ICCCAD) and the Asia Pacific Forum on Loss and Damage
- International Institute for Environment and Development (IIED)
- Overseas Development Institute (ODI)
- Grantham Research Institute on Climate Change and the Environment
- United Nations University (UNU)

NGOs

- Leadership for Environment and Development (LEAD)
- Germanwatch

- ActionAid
- Environmental Grantmakers Association (EGA)

Funds

- Adaptation Fund
- Green Climate Fund

5.5 Additional information: Training courses relevant to the training development

The following courses have been identified as relevant to the training development; they focus on climate change and climate finance. In most cases, material is not available online or free of charge and is therefore not immediately available to review. Courses of particular interest may be selected to request training material (where contacts exist). Other courses of interest will be mentioned in the outreach to the corresponding international organizations, inviting discussion on potential collaboration.

GIZ

National Adaptation Plan (NAP) Process Country-Level training - Capacity development for multi-sectoral involvement in the NAP process
http://www.adaptationcommunity.net/new-national-adaptation-plan-nap-process-country-level-training/

GIZ's Adaptation Training: Integrating Climate Change Adaptation into Development Co-operation - A Practice-Oriented Training based on OECD Policy Guidance, *Integrating Climate Change Adaptation into Development Co-operation*,
http://www.oecd.org/dac/environment-development/integratingclimatechangeadaptationintodevelopmentplanningapractice-orientedtrainingbasedontheoecdpolicyguidance.htm

- In addition, *Tailor made training courses on CCA: A cookbook for different formats and target groups* is useful for ideas on training design

http://www.adaptationcommunity.net/?wpfb_dl=146

CliFit Training - developed by Adelphi on behalf of GIZ's Climate Finance Readiness Programme
https://clifit.org/

UN CC: Learn – The One UN Climate Change Learning Partnership

http://www.uncclearn.org/node

The One UN Climate Change Learning Partnership (UN CC:Learn) is a collaborative initiative involving 34 multilateral organizations which supports countries in designing and implementing country-driven, results-oriented and sustainable learning to address climate change. The initiative was launched at the 2009 Copenhagen Climate Change Summit.

At the global level, the partnership supports knowledge sharing, promotes the development of common climate change learning materials, and coordinates leaning interventions through collaboration of UN agencies and other partners. At the national level, UN CC:Learn supports countries in developing and implementing national climate change learning strategies.

Thematic focus areas include:

- Climate change science
- Climate finance
- International climate negotiations
- Adaptation planning
- Climate change and health
- Climate change and forests
- Climate change education for children

Three programme areas:

- Knowledge Sharing and Management
- One UN Climate Change Training
- Human Resources, Learning and Skills Development in Partner Countries

Resources: Online learning platform, online materials, library with case studies, list of UN learning paltforms (http://www.uncclearn.org/learning-resources/learning-platforms), videos, events, introductory PPTs

UN:CC Climate Responsive Budgeting for UN:CC Climate Policy and Public Finance

The e-tutorial is divided into five sections:

- What is climate change?
- What is happening in Asia and Pacific?
- How does climate change affect your job as government official?
- National and international finance for climate change.

A strategic framework for managing climate finance.

UNITAR Free courses

http://www.unitar.org/free-courses

Some on climate change in general, others on conflict and peacekeeping

UNEP Training courses

http://www.unep.org/training/news_events/MOOCs.asp (all web-based)

Some on climate change in general

UNU OnLine Learning – Dealing with Disasters

http://onlinelearning.unu.edu/en/disasters/index.html

The course is implemented real-time over video-conferencing with 15 sessions, each lasting 2.5 hours. Hosted on the Moodle Learning Management System maintained by the University of Hawai'i.

UNDP Adaptation Learning Mechanism (UNDP-ALM)

http://www.undp-alm.org/resources

The UNDP-Adaptation Learning Mechanism is UNDP's knowledge-sharing platform on country led programmes and projects. UNDP-ALM is structured to be used as an interactive platform for sharing and learning about country led initiatives that advance green, low-emission and climate-resilient development. By increasing the availability of tailored information, UNDP-ALM intends to catalyze knowledge that can support governments to integrate climate change risks into poverty reduction and development strategies.

Feature on NAP training workshops: http://www.undp-alm.org/projects/naps-ldcs/meetings-and-workshops

Resources: Country profiles, publications, videos and photo stories, project profiles

Disaster Risk Management Course by SLE (Seminar für Ländliche Entwicklung/Centre for Rural Development, Humboldt University, Berlin)

https://www.sle-berlin.de/index.php/en/training-2/courses/course-disaster-risk-management

(programme available, no course materials)

Format: 2-week course, face to face

Course Content

- Risk assessment and risk mapping with GIS (Geographic Information System) both in theory and practice by using a landscape model including detailed hazard analysis and vulnerability assessment (using scoring systems).
- Means of disaster prevention, mitigation and preparedness related to drought, landslide, flood and cyclone in theory and practice including sharing among participants.
- Assessment of stakeholders and local implementing partners (tools, procedures and approaches).
- The social, economic and political context of risk management programs and how to link such programs to climate change adaptation and development
- Different options of fostering resilience among vulnerable communities related to natural disasters and climate change and tools to identify essential livelihood resources (participatory climate assessment tools)
- Tools for assessing implementing partners and risk management projects as well as evaluation and monitoring tools
- Mainstreaming DRR in humanitarian aid and development cooperation

Community-based Disaster Risk Management by GFDRR

https://www.gfdrr.org/community-based-disaster-risk-management-course (only description)

The objective of this course is to introduce the concepts, tools, and mechanisms which help design and implement community-based disaster risk management programs. The course highlights the flexibility and innovation required for these community-based initiatives. Further, it underscores the need for greater engagement with people and a better understanding of their risks and resources.

Format: self-paced module (3 audio sessions 30-40min each), discussion forums, exercises, readings, case studies, tests and learning via interaction with program faculty and peers, materials made available online for participants and on a CD

Short courses about adaptation by ICCCAD

http://www.icccad.net/short-courses/ (no materials online, only short course descriptions)

All face to face

Climate Change Adaptation: Drivers, Barriers and Strategy by Imperial College London and Climate KIC

http://www3.imperial.ac.uk/cpd/courses/subject/environmental/adaptation (only description)

Brochure (more details about structure):
https://workspace.imperial.ac.uk/cpd/Public/Adaptation2012.pdf

Format: 2-day face to face course

7th International Training Course On Climate Risk Management In A Changing Environment by ADPC

http://www.adpc.net/igo/contents/Training/training-schedule-event.asp?pid=756 (only description)

Format: 8-day face to face course divided into six modules incl. lectures, group exercises, scenario based simulations, peer to peer learning events, field trips, video documentaries, case studies, instructional games etc etc (curriculum is on the website)

Managing risk in the face of climate change by Wageningen University and Research Centre

http://www.wageningenur.nl/upload_mm/8/8/3/cc02f197-6987-4022-9b99-f50d19a1078e_38_02_2016_Managing_risk draft final.pdf (Brochure for 2016)

Format: 2-week face to face course divided into 5 modules (see brochure), mix of lectures, discussions, group work and field trips

Economics of Climate Resilient Development, World Bank

http://einstitute.worldbank.org/ei/course/economics-climate-resilient-development

Teaches the basics for developing economically viable climate-resilient plans.

- Introduction – science and rationale for countries to develop climate plans to move away from BAU development path
- Frame the adaptation problem and make it a challenge that can be realistically addressed;
- Identify relevant climate risks and impacts;
- Identify the range of adaptation options available;
- Estimate what it will cost to adapt to climate change;
- Prioritize adaptation measures.

Target Audience: The primary target audience are policymakers in developing countries who have been tasked with developing climate-resilient plans (at the national or regional level) or have been asked to provide estimates of how much it will cost their country to adapt to climate change. The module will also be of interest to World Bank staff who are being requested by client countries to assist them in these tasks.

CEDRIG Climate, Environment and Disaster Risk Reduction Integration Guidance by SDC

https://www.shareweb.ch/site/Climate-Change-and-Environment/toolstranings/CEDRIG/Pages/CEDRIG.aspx

Guidance to improve resilience and reduce impacts in development cooperation and humanitarian aid

3 modules:

- Module 1 - Risk and Impact Screening

- Module 2 - Detailed Assessment at Strategic and Programmatic Level
- Module 3 - Detailed Assessment at Project Level

See CEDRIG Handbook on Dropbox for more details

*Not so much training course as guidance on conducting an assessment

Integrating adaptation to climate change in disaster risk reduction in Asia by CARE

http://careclimatechange.org/tool-kits/drr_cc_emodules/

Web-based, self-directed/self-paced

- Module 1: Concepts in disaster risk reduction and climate change adaptation
- Module 2: Understanding vulnerability
- Module 3: Introduction to disaster risk reduction
- Module 4: Introduction to climate change adaptation
- Module 5: Guiding principles for integrating adaptation in disaster risk reduction

Climate Finance Essentials: Innovative Finance for the Climate Change Challenge by World Bank

http://wbi.worldbank.org/wbi/course/climate-finance-essentials

3 weeks (4-5 hrs per week), web-based

- Module 1: offers an introduction and interpretation of climate finance and familiarizes participants with the landscape of climate finance.
- Module 2: reviews the risks and barriers to private investment in climate finance, and introduces critical concepts in accessing, operationalizing and managing climate finance from both the public and private sectors.

No materials available

Climate Action Network South Asia (CANSA)/Action Aid training course

Details can be obtained from Vositha Wijenayake of CANSA.

6 Annex 3: Proposed organizational structure of the Climate Finance Centre

Table 26. Proposed Fundamental Design of Climate Finance Centre in the Kyrgyz Republic

Potential positions within the CFS	1. Head of CFC (international role) 2. Deputy Head (operational role, CFC management) 3. Policy Specialist (strategic country work programme) 4. Climate Finance Manager (climate funds requirements) 5. Programme/Project Coordinator (managing climate resilience programmes and activities) 6. M&E Specialist (developing M&E and MRV system) 7. Gender Specialist (mainstreaming gender issues) *[part-time]* 8. Communications Specialist (outreach and awareness raising) 9. Finance manager (Grant Agreement implementation, procurement) 10. Office Manager
Number of staff	• 9-10
Contract arrangements	• Duration of the contracts will depend on the annual budget required to run the CFC • funding under the Grant Agreement, thereafter additional funding will be required to ensure sustainability of CFC • It is expected that CFC staff will be contracted as Government employees (not consultants) (TBC) • PIU payscales will be a starting point for salary negotiation (TBC)
Training	• TBC depending on who is recruited
Office arrangements	• TBC pending government decision about the location of the CFC
IT requirements	• Website domain, emails, project database etc.

Figure 6. Proposed structure and reporting lines of Climate Finance Centre in the Kyrgyz Republic

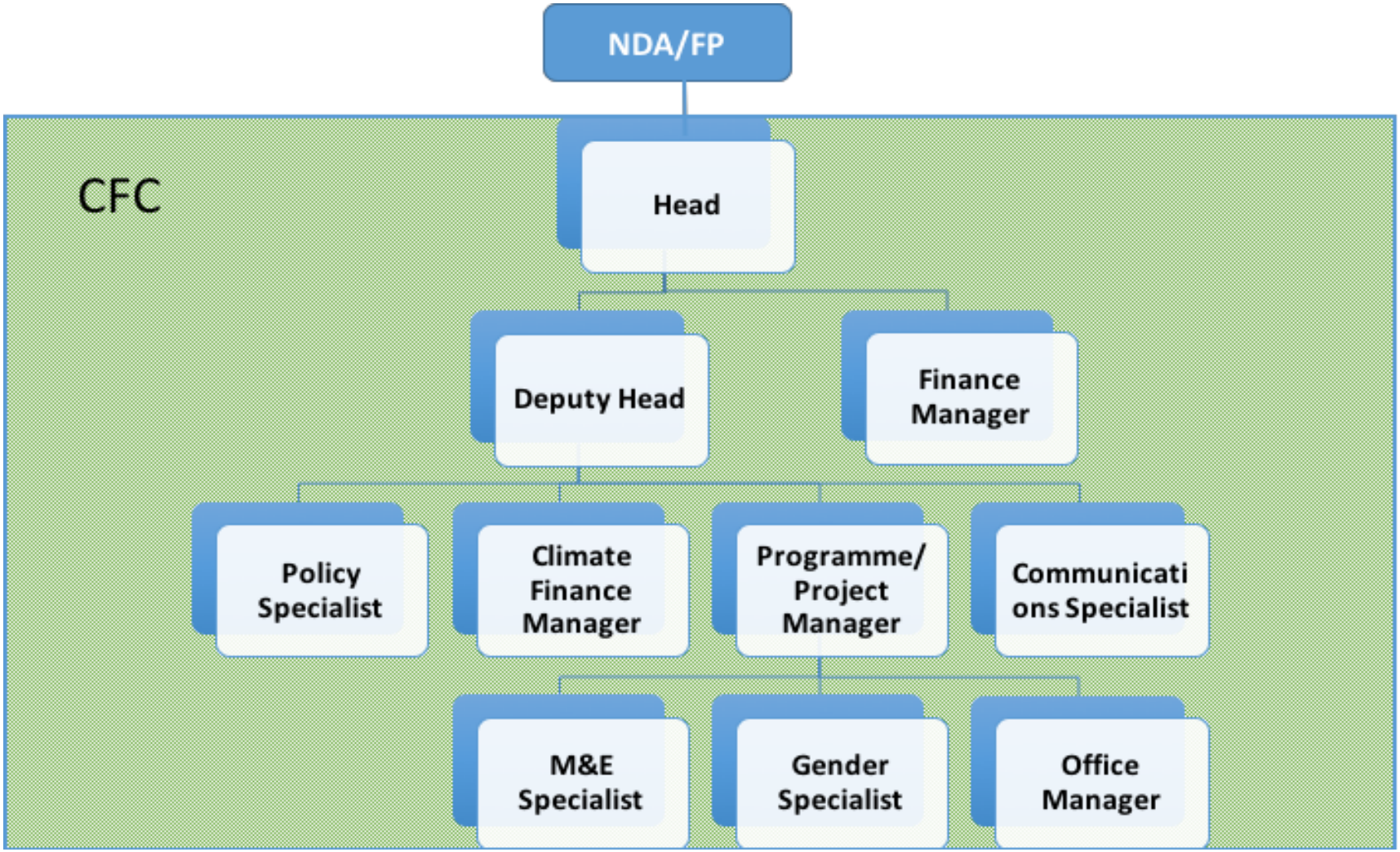


Table 27. Climate Finance Centre Staff

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
Head[120]	• Ensure a high-level understanding of operational procedures and requirements of the Climate Funds for accreditation and project funding and coordinate with the Climate Funds-NDA (GCF, AF, GEF, etc.) for detailed information. • Report to the Climate Funds NDA (GCF, AF, GEF, etc.), and serve as the main focal person of the CFC. • Review and verify associated documents and information provided by the CFC staff members. • Coordinate and build relations with different stakeholders and potential IEs; including ministries/agencies, local governments, NGOs, the private sector and development partner organizations. • Provide recommendations to the Climate Funds NDA for nominations and no-	• Good knowledge of the national and international development framework; with particular focus on climate change adaptation and mitigation. • Good knowledge of fundraising principles and proven ability to attract funds from international institutions and funds. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and stakeholders at all levels in a sensitive environment. • Experience of managing staff and others' workload. • Ability to network and form and coordinate alliances and partnerships with key senior players. • Ability to work well under pressure and meeting deadlines	• Academic qualifications: Master degree in Development Science, Management, Environment Sciences, Technical Science or related field; combined with extensive experience in similar responsible position. • Experience: At least 10 years' experience working in financing/development funds/international institutions, including experience effective liaison with government and international bodies/priorities as well as demonstrated leadership in such environment/ institutions. • Experience: At least 15 years of work experience in a field related to development, and planning or management of projects.

[120] Note: Head = person with international experience and competencies, in charge of liaising with Development Partners etc. Deputy Head = more operational focus, in charge of running the CFC. If the Head role is strong enough, the Deputy Head role can be merged with another positon e.g. policy specialist.

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	objections before passing on information to the relevant Climate Fund Secretariat. • Lead the ongoing development of the strategic country work programme (CIP). • Ensure the CFC maintains an M&E framework and retains an overview of funded programmes and of all funding proposals and facilitates available information on the projects and programmes through appropriate media and relevant networks. Review and verify M&E reports before sharing them with the high-level inter-ministerial Steering Committee for their perusal, and before presenting them to the GCF.	• Ability to represent the GCF-NDA at the GCF and other international institutions and events, including giving presentations. • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	• At least 7 years of senior management experience; including human resources supervision and management. • Previous successful involvement with, and good knowledge of government agencies is desired; ideally international development agencies and donors.
Deputy Head[121]	• Work with the CFC Head to drive the Climate Funds NDA functions, including analysis and implementation of priorities, partnerships and will serve as a senior-level partner, mentor, and liaison for the Climate Funds NDA. • Coordinate the operational work of the CFC when preparing reviews of concepts and project proposals prepared by IEs and when maintaining the M&E	• Good knowledge of the national and international development framework; with particular focus on climate change adaptation and mitigation. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and stakeholders at all levels in a sensitive environment.	• Academic qualifications: Master degree in Development Science, Management, Environment Sciences, Natural Science, Technical Science or related field combined with extensive experience in similar responsible position. • Experience: At least 10 years of work experience in a field related

[121] Note: Head = person with international experience and competencies, in charge of liaising with Development Partners etc. Deputy Head = more operational focus, in charge of running the CFC. If the Head role is strong enough, the Deputy Head role can be merged with another positon e.g. policy specialist.

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	framework.	• Experience of managing staff and others' workload. • Ability to work well under pressure. • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	to development, and planning and management of projects and programmes. • At least 5 years of senior management roles including human resources supervision. • Previous successful involvement with, and good knowledge of government agencies, nongovernment organization is desired; ideally international development agencies and donors.
Policy Specialist	• Monitor developments in and be responsible for sourcing data and information concerning national strategies and plans and review policies, decrees and decisions. • Maintain detailed information base of all relevant policies, strategies and finance sources (multilateral, bilateral, regional) working in the Kyrgyz Republic and relevant institutions and respective stakeholders (particularly donor organizations; but also private sector	• High level of understanding of, and good knowledge of Kyrgyz Republic's national sustainable development, green growth, SDG and climate change frameworks; including policy development and stakeholders. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and key senior stakeholders in a sensitive environment. • Ability to respond quickly to information needs and to write clearly and concisely	• Academic qualifications: Master degree in Development Science, Management, Environment Sciences, Natural Science, Technical Science or related field combined with extensive experience in similar responsible position. • Experience: At least 7 years of work experience in in a policy role at national level (design and/ research would be preferable).

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	actors and potential candidate IEs). • Contribute to the ongoing development of the strategic country work programme (CIP). • Ensuring mentoring and training of CFC staff members to foster capacity building on national framework conditions (such as policies), participate and provide necessary inputs for preparation of and during workshops and trainings provided to other stakeholders. • Inform CFC staff members about the latest developments and prepare required materials for updating the strategic country work programme (CIP) to be verified and used by the Head of the CFC. • Coordinate and build relations with NGOs, in the form of continuous consultations. • Coordinate the work of the CFC staff when preparing reviews of concepts and project proposals prepared by IEs and when maintaining the M&E framework.	• Understanding and experience of using a variety of research methodologies and excellent data analytical skills and interpretation and report writing skills; with an ability to develop policy sections and ideas (to be used for the NDA's strategic country work programme). • Strong interpersonal and motivational skills and the ability to work with minimal supervision. • Computer literacy in Microsoft packages (MS Word, MS PowerPoint, MS Excel, Outlook). • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	• Experience of managing and delivering specific policy, advocacy and research projects on time. • Previous successful involvement with, and good knowledge of government agencies, nongovernment organization is desired; ideally international development agencies and donors.
Climate Finance Manager	• Keep informed about access modalities and requirements of the GCF and other	• Good knowledge of GCF and other climate funds' requirements, MDBs' requirements,	• Academic qualifications: Master degree in Public Management,

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	types of funding sources available in the country. • Pre-assess potential AEs and provide recommendations to the Head of CFC for nominations and no-objections. • Review accreditation applications and prepare assessment reports of potential nominations for the Head of CFC. • Accomplish other tasks as assigned by the Head or Deputy Head of the CFC.	fiduciary standards, environmental and social safeguards, and public financial management procedures and regulations. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and stakeholders in a sensitive environment. • Ability to respond quickly to information needs and to write clearly and concisely. • Excellent data analytical skills and interpretation and report writing skills. • Strong interpersonal and motivational skills and ability to work with minimal supervision. • Computer literacy in Microsoft packages (MS Word, MS PowerPoint, MS Excel, Outlook). • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	Finance, or Business Management, or related field combined with extensive experience in similar responsible position. • Experience: At least 7 years of work experience in a field related to public financial management. • Previous successful involvement with, and good knowledge of government agencies, non-government organization is desired; ideally international development agencies and donors.
Programme/Project Manager (with technical expertise e.g. Engineer)	• Coordinate the review of concept notes and proposals submitted by AEs, request advice from experts on technical matters	• Technical knowledge and practical experience related to climate change adaptation and/or mitigation technologies.	• Academic qualifications: Master Degree in Climate Change science, Engineering, Technical

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	for the design, quality, development and completion of all assessments. • Coordinate with other CFC staff members to deliver communication with GCF Secretariat on concept/proposal assessments and no-objection statements. • Ensure M&E/MRV reporting; and facilitate available information on the projects and programmes funded. • Accomplish other tasks as assigned by the Head or Deputy Head of the CFC.	• High level of understanding of, and good knowledge of Kyrgyz Republic's national sustainable development, green growth, SDG and climate change frameworks; including policy development and stakeholders. • Good understanding of climate science as well as key economic sectors in the Kyrgyz Republic's context such as water, energy and energy efficiency, agriculture, health, transport. • Familiarity with appraisal techniques (e.g. cost benefits analysis, environmental impact assessments, financial ratios) as well as risk analysis and management procedures. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and key senior stakeholders in a sensitive environment. • Ability to respond quickly to information needs and to write clearly and concisely. • Strong interpersonal and motivational skills and the ability to work with minimal supervision. • Computer literacy in Microsoft packages	science, Agronomy, or related field, combined with extensive experience in similar responsible position. • Experience: At least 7 years of work experience in a field related to development and management of projects; ideally in the field of economic development and technology solutions; preferable climate change related. • Previous experience in proposals development and good knowledge of government agencies, nongovernment organization is desired; ideally international development agencies and donors.

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
		(MS Word, MS PowerPoint, MS Excel, Outlook). • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	
M&E Specialist	• Lead development of and oversee the maintenance of an M&E framework (including processes and templates and indicator development) and M&E database in line with GCF and other Climate Funds e.g. the GCF criteria for programme and project financing, the initial result framework and investment framework. • Be responsible for sourcing data and information for specific M&E needs directly from IEs and intermediaries, ensure quality control of M&E outputs and consolidate the results to be reported to the Head of CFC (bi-annual progress reports). • Oversee and participate in evaluations and assessments at projects/programmes implemented by IEs and prepare associated reports.	• Good knowledge of concepts and framework for M&E and Result Measurement; experience in M&E of development project activities; ideally in the field of climate change adaptation and mitigation. • Technical skills in socio-economic research and program and project performance assessment. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and stakeholders in a sensitive environment. • Ability to respond quickly to information needs and to write clearly and concisely. • Excellent data analytical skills and interpretation and report writing skills. • Strong interpersonal and motivational skills	• Academic qualifications: Master degree in Development Science, Management, Environment Sciences, Natural Science, Technical Science or related field combined with extensive experience in similar responsible position. • Experience: At least 7 years of work experience in a field related to development, and planning or project management. • At least 3 years of experience in M&E design and implementation at the project level would be preferable; including indicator development, data collection and analysis, data quality assessments, and/or performance monitoring and

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	• Ensuring mentoring and training of CFC staff members to foster capacity building on M&E knowledge and attend, participate and provide necessary inputs for preparation of and during workshops and trainings provided to other stakeholders; i.e. support other CFC staff members in disseminating key operational procedures and requirements of the Climate Funds, such as M&E requirements. • Accomplish other tasks related for monitoring, evaluation and MIS as assigned by the Head or Deputy Head of the CFC.	and the ability to work with minimal supervision. • Computer literacy in Microsoft packages (MS Word, MS Powerpoint, MS Excel, Outlook). • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	reporting. • Previous successful involvement with, and good knowledge of government agencies, non-government organization is desired; ideally international development agencies and donors.

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
Gender Specialist (part-time)[122]	• Liaise with key national authorities on gender issues. • Ensure mainstreaming of gender balance into concept notes and proposals submitted by AEs in accordance with Climate Funds gender policies and frameworks.	• High level of understanding of, and good knowledge of national and international development framework. • High level of understanding of, and good knowledge of national government structure and responsibilities. • Strong communication and facilitation skills and ability to establish good working relationships with colleagues and key senior stakeholders in a sensitive environment. • Ability to advocate and provide policy advice. • Understanding and experience of using a variety of research methodologies and excellent data analytical skills and interpretation and report writing skills, with an ability to develop policy sections and ideas. • Strong interpersonal and motivational skills and the ability to work with minimal supervision. • Computer literacy in Microsoft packages	• Academic qualifications: Master's Degree in social science especially gender studies, or relevant discipline. • Experience: At least 7 years of increasingly responsible professional experience in the substantive area, of which 5 years at the international level. • Extensive experience in research and policy-level analysis.

[122] Note: Gender Specialist can be a part-time position at least for the first 3 years.

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
		(MS Word, MS PowerPoint, MS Excel, Outlook) • Ability to promote a knowledge sharing and learning culture in the office. • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	
Communications Specialist	• Develop, Monitor and measure the impact of the communication strategy and make adjustments accordingly in consultation with Head of CFC; ensure that key results and relevant success stories are incorporated into strategic communications outreach. • Develop and implement outreach and awareness raising initiatives in relation to climate finance and climate change projects / programmes funded. • Facilitate meetings with high-level policy makers, line ministries and agencies,	• Ability to originate / edit written content for media and the general public to be disseminated through press or other online outlets. • Ability to form and maintain meaningful working relationships with various members of the media. • Ability to communicate visually and create appealing graphic products. • Ability to make decisions that align with strategy, vision, and mission of the CFC. • Fluency in English language (written and	• Academic qualification: Master's degree or equivalent in communications, PR, marketing, media relations, journalism, international relations, development or another relevant field; Bachelor's degree is acceptable with 7 years of relevant work experience. • Experience: At least 5 years of relevant experience in one or more of the following areas: public relations, communications,

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	subnational government, development partners, academia, NGOs, private sector. • Promote the work of the CFC in the country (newsletters, press-releases, progress reports). • Manage and update communication tools of the CFC (e.g. website, publications, social media) in close coordination with Climate Funds NDA and FP.	spoken). • Knowledge of Russian / Kyrgyz languages.	journalism, marketing or advocacy, of which at least 3 years at the international level required. • Demonstrated knowledge and experience in media relations and/or advocacy campaigns at the international level, using traditional and social media, multi-media and a variety of platforms required. • Previous successful involvement with, and good knowledge of, government agencies, non-government organization is desired; ideally international development agencies and donors.
Finance Manager	• Perform financial tasks in relation to procurement policies and processes for the CFC. • Perform ordinary budget management (e.g. for office/workshop-related purchases). • Ensure timely and proper preparation of	• Ability to conceptualise, elaborate and implement a client-oriented procurement management system for the CFC, including tender processing and evaluation, e-procurement, contractor appraisal, evaluation and negotiation of offers, management of the contract and contractor, legal considerations and	• Academic qualification: Master's Degree in Business, Public Administration or any development related field; specialized certification in Procurement will be an advantage.

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	procurement plans for different grants, establishment of the deadlines and monitoring of their implementation. • Prepare financial reports (monthly, bi-annual, annual) to the Donor Agency. • Manage activities and services to be outsourced. • Collect invoices for rendered services and goods.	payment conditions, risk assessment. • Knowledge of and ability to ensure full compliance of procurement activities with MDBs rules, regulations, policies and strategies including elaboration of the effective internal control, proper design and functioning. • Capacity to plan and organize work effectively, including support to design, planning and implementation of projects, management of data and reporting. • Strong analytical skills and strategic thinking, including a sound understanding of the framework of CFC' cooperation with MDBs and other development partners. • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	• Experience: At least 5 years professional experience, which includes international experience in public procurement, and supply chain management. • Experience of international organizations' procurement policies and procedures highly desirable.
Office Manager	• Perform administrative and secretarial tasks and support the CFC staff members, including communications and organization of meetings and workshops for CFC and CCCCP. • Assist to organize meetings, workshops and fieldtrips and other events (e.g. preparing materials and logistics,	• Administrative and office management skills. • Strong communication and facilitation skills and event management experience. • Detail-oriented and organized. • High level of self-motivation as well as ability to work as part of a team.	• Academic qualifications: Degree (combined with extensive experience in similar responsible position). • Experience: At least 3 years of work experience as administration officer in a public or reputable private organization

Position within CFC	Main Responsibilities	Competencies	Required qualification (academic qualification and years of work experience)
	communicating by phone, etc.) and take minutes and maintain administrative support during meetings and other events. • Fulfil in-house translation functions (e.g. translation of progress reports for the Government Office and donors).	• High Computer literacy in Microsoft packages (MS Word, MS PowerPoint, MS Excel, Outlook); including online communication experience (knowledge of content management systems and social media). • Fluency in English language (written and spoken). • Knowledge of Russian / Kyrgyz languages.	or international development agencies.

7 Annex 4: List of stakeholders consulted

Table 28. List of stakeholders consulted for the Institutional Assessment

Typology of stakeholder	Name of organization	Bilateral meeting / Interview	Institutional Assessment Questionnaire / Online Survey	Dedicated Workshop / Technical mission	Phone interview
National government institutions	Government Office	X		X	
	Ministry of Economy	X	X	X	
	Ministry of Finance	X		X	
	State Agency on Environment Protection and Forestry (SAEPF)	X	X	X	
	Ministry of Emergency Situations	X	X	X	
	KyrgyzHydromet	X	X	X	
	Ministry of Health	X	X	X	
	Ministry of Agriculture, Food Industry and Land Reclamation	X	X	X	
	Ministry of Transport and Roads		X	X	
	Ministry of Foreign Affairs	X		X	
	Ministry of Education and Science				
	State Agency for Architecture, Construction and Communal Services (Gosstroy)		X	X	
	State Agency on Local Self Governance and Interethnic Relations (SALSGIR)	X	X		
	State Committee on Industry, Energy and Mining	X			
	National Energy Holding Company JSC				
	National Electrical Grid of Kyrgyzstan (NEGK)		X	X	
	National Statistical Committee	X		X	
	National Institute for Strategic Studies (NISS)	X	X	X	
	National Academy of Science (NAS KR)	X	X		
	Business Development and Investments Council	X	X		
	National Council for Sustainable Development		X	X	
	NSK			X	
Sub-national government institutions	Bishkek Municipality	X	X		
	Osh Municipality	X			
	Osh Province territorial Department of SAEPF	X			
	Inter-Regional Department of the State Agency on Local Self Governance and Interethnic Relations (Batken, Osh and Jalal-Abad oblast)	X			
Private sector	Dialecticon LLC	X	X	X	

Typology of stakeholder	Name of organization	Bilateral meeting / Interview	Institutional Assessment Questionnaire / Online Survey	Dedicated Workshop / Technical mission	Phone interview
	MicroEnergy International (MEI)		X	X	
	National Bank of Kyrgyz Republic		X	X	
	Association of Microfinance Organizations		X	X	
	"EvrAsia Kredit" MCC, LLC		X	X	
	CJSC "Bank Kompanion"		X	X	
	"Bailyk Invest" MCC		X	X	
	"Arysh Invest" MFC, LLC		X	X	
	"First MCC" CJSC		X	X	
	IFC/HMF		X	X	
	PIU "Women's Entrepreneurship Development"		X	X	
	"EvrAsia Credit" MCC, LLC		X	X	
	Analytical Center BizEkspert		X		
	CCI		X		
	Anyk audit		X		
	Suppliers Association		X		
	The association guarantee fund of the Kyrgyz Republic		X		
	Foreign Investors Association		X		
	Akforta		X		
	ULE "Economic Chamber"		X		
	Association "educational institutions of the Union"		X		
	Association of Guilds of Compatriots		X		
NGOs	Unison Group			X	
	Climate Network of Kyrgyzstan (CNK)				
	Kyrgyz Association of Forest and Land users	X	X	X	
	Public Foundation "Camp Alatoo"			X	
	Public Association “AGROLEAD”			X	
	Public Foundation "Agency of Development Initiatives"			X	
	Public Foundation “Relascope”			X	
	Public Foundation "Ecois"			X	
	“BIOM” Ecological Movement		X		
	Rural Development Fund (RDF)		X	X	
	Public Association "Resource Centre for Elderly"		X	X	
	Public Foundation “Eco Consult”			X	
	Public Foundation of Sustainable Development "Yrystan"			X	
	Aarhus Center			X	
	SVS			X	
	“Tabiyat-Life” Environmental Movement		X	X	

Typology of stakeholder	Name of organization	Bilateral meeting / Interview	Institutional Assessment Questionnaire / Online Survey	Dedicated Workshop / Technical mission	Phone interview
	Public Foundation "AIF"			X	
	Kyrgyzstan Mountain Societies Development Support Programme (MSDSP KG)		X		
Academia	CCC	X	X	X	
	Central-Asian Institute for Applied Geosciences (CAIAG)			X	
	University of Central Asia (UCA)	X	X		
Development Partners	European Bank for Reconstruction and Development (EBRD)	X		X	
	World Bank (WB)	X		X	
	Asian Development Bank (ADB)	X		X	
	Aga Kahn Foundation (AKF)	X	X		
	Food and Agriculture Organization (FAO)	X			
	World Food Programme (WFP)	X	X		
	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	X	X	X	
	USAID	X			
	EU Delegation	X			
	EU IFCA				X
	Swiss Embassy/State Secretariat for Economic Affairs (SECO)		X		
	United Nations Development Programme (UNDP)			X	
	United Nations Environment Programme (UNEP)			X	
	KfW Bankengruppe				X
	Department for International Development (DFID)				
	Helvetas				
	Finnish Development Cooperation				

Table 29. List of stakeholders consulted during PPCCR Joint MDB Technical Mission (5-9 December 2016)

Name of Institution	Name of representative	Title
Government Office	Mukhametkaliy Abulgaziev	First Vice Prime Minister of the KR
Government Office	Sanjar Umetaliev	Deputy Head of the Government Office
Government Office	Almaz Zheenaliev	Head of the Department of Agro-Industry and Ecology

Government Office	Artem Novikov	Adviser of the First Vice Prime Minister
Ministry of Finance	Kubat Mirzaev	Head of the State Investment
Ministry of Finance	Nurbek Mamasadykov	Acting as Head of the Department of the State Investment
Ministry of Finance	Nurbek Akjolov	Acting as Head of the Department on PPP and Programme Aid
Ministry of Economy	Diniar Imanaliev	Deputy Minister
Ministry of Economy	Kubat Rahimov	Adviser
Ministry of Economy	Asel Madybaeva	Head of International Aid Coordination Division
Ministry of Economy	Nazira Jeenbekova	Head of the Management of the International Aid Coordination and donors aid
National Institute of Strategic Studies	Azamat Dikambaev	Director
State Agency on Environment Protection and Forestry	Abdykalyk Rustamov	Director
State Agency on Environment Protection and Forestry	Djyparkul Bekkulova	Head of the Department of the Ecological Strategy Policy
State Agency on Environment Protection and Forestry	Adilya Baratova	Department of the International Cooperation
State Agency on Environment Protection and Forestry	Baigabyl Tolongutov	Director of the State Regulation Centre of the Environment Protection
State Agency on Environment Protection and Forestry	Aizada Barieva	Lead Specialist of the Department of the Ecological Strategy Policy
FAO Kyrgyzstan	Cholpon Alibakieva	Representative
GIZ	Asel Uzagalieva	Manager, Economic development Programme of GIZ
GIZ	Maya Eralieva	Project specialist
List of representatives of the MDB Technical Mission and the Expert Team		
European Bank for Reconstruction and Development	Neil McKain	Director for Central Asia
European Bank for Reconstruction and Development	Craig Davies	Head of Climate Change Adaptation
European Bank for Reconstruction and Development	Marta Modelewska	Principal Manager, Climate Change Adaptation
European Bank for Reconstruction and Development	Nurgul Esenamanova	Climate Finance Officer
Asian Development Bank	Candice McDeigan	Country Director

Asian Development Bank	Nathan Rive	Climate Change Specialist
World Bank	Philippe Ambrosi	Senior Environmental Officer
Expert Team	Richenda Connell	Team Leader
Expert Team	Sara Venturini	Institutional Expert
Expert Team	Almaz Asipjanov	Institutional Expert
Expert Team	Janybek Omorov	Institutional Expert

Table 30. List of stakeholders consulted during First PPCR MDB Joint Official mission (18-22 April 2016) - Consultations on institutional arrangements and on investment prioritisation and preparation with the Kyrgyz Government

Name of Institution	Name of representative	Title
SAEPF	Bekkulova Djyparkul	Head of the Environmental Strategy and Policy Department
SAEPF	Salykmambetova Baglan	Head of the International Cooperation Department
SAEPF	Barieva Aizada	Chief specialist of Environmental Strategy and Policy Department
SAEPF	Kyazova Aizada	Leading specialist of Environmental Strategy and Policy Department
SAEPF	Stamkulov Marat	Leading specialist of International Cooperation Department
SAEPF	S. Komoldinov	Press services
NGO "ProfMed"	Kasymov O.T.	Director
Ltd. GreenEnergy	Sulaimanova A.B.	Director
Ministry of Finance of the Kyrgyz Republic	Sultanova Jibek	
Ministry of economy of the Kyrgyz Republic	Alymbek Orozbekoav	Head of Investment and Public Private Partnership Division
Ministry of Foreign Affairs of the Kyrgyz Republic	Kabaev Kuban	
Ministry of Health of the Kyrgyz Republic	Suvanalieva Sharipa	
Ministry of Health of the Kyrgyz Republic	Sharshenova Ainash	Head of Medicine Centre for Environment and Human Ecology Research and Production Center "Preventive Medicine"
Ministry of Health of the Kyrgyz Republic	Sarybaeva Gulnara	
Ministry of Emergency Situation of the Kyrgyz Republic	Spektorenko Natlia	
Ministry of emergency situation of the Kyrgyz Republic	Chernikova Tatiana	Head of hydro meteorological management, forecasting and information provision
Ministry of Emergency Situation of the Kyrgyz Republic	Kadyrova Gulshat	Head of Strategic planning and information-analytical work
Ministry of Agriculture and Land Reclamation of the	Apasov Turusbek	Acting head of the Department of External Relations and Inverstments

Kyrgyz Republic		
National institute of strategic studies of the Kyrgyz Republic	Irsakova Jamilia	Researcher
National institute of strategic studies of the Kyrgyz Republic	Orozbaeva Kanykei	Head of the statistics of sustainable development and environmental department
Climate Change Center, Coordination Committee on Climate Change	Zuhra Abaihanova	Director, Executive Secretary
Climate Change Center	Iliasov Shamil	Deputy director
National Statistical Committee of the Kyrgyz Republic	Kanykei Orozbaeva	Head of the statistics of sustainable development and the environmental department
	Temirbekov Alexander	Developer of the Adaptation Programme on Forestry and Biodiversity
Regional Mountain Center of Central Asia	Dairov Ismail	Director
List of representatives of the MDB Technical Mission and the Expert Team		
European Bank for Reconstruction and Development	Craig Davis	Head of Climate Change Adaptation
European Bank for Reconstruction and Development	Marta Modelewska	Policy Manager, Energy Efficiency and Climate Change
European Bank for Reconstruction and Development	Nurgul Esenamanova	Climate Finance Consultant
Asian Development Bank	Maria Pangiagua	Senior Portfolio management Specialist
Asian Development Bank	Almaz Asipjanov	National Environmental Safeguards Consultant
World Bank	Philippe Ambrosi	Senior Environmental Economist
World Bank	Tolkun Jukusheva	Operation Officer
Expert Team	Richenda Connell	Team Leader
Expert Team	Sara Venturini	Institutional Expert

Table 31. List of stakeholders consulted during the Second PPCR MDB Joint mission (19-22 September 2017).

Name of Institution	Name of representative	Title
Government of the Kyrgyz Republic	Abdygulov Tolkun	First Vice Prime Minister of the Kyrgyz Republic
Government Office of the Kyrgyz Republic	Sanzhar Umetaliev	Deputy Head of the Government Office
President Office of the Kyrgyz Republic	Akhmetova Nursuluu	Head of the Department on Financial and Economic Analysis and Development Monitoring
President Office of the Kyrgyz Republic	Sadykov Taaay	Expert, Department on Financial and Economic Analysis and Development Monitoring
Government Office of the Kyrgyz Republic	Abdiev Aziz	Head of the Department on Finance and Credit Policy
Government Office of the Kyrgyz Republic	Chuykov Nikolay	Head of the Department on Economy and Investment
Government Office of the Kyrgyz Republic	Sheyshekanov Daniyar	Deputy Head of the Department of Industry, Fuel and Energy Complex and Subsoil Use
Government Office of the Kyrgyz Republic	Dalbaev Taalay	Head of the Department of agro-industrial complex and ecology
Government Office of the Kyrgyz Republic	Zhundubaev Kylychbek	Deputy Head of the Department of agro-industrial complex and ecology
Ministry of Foreign Affairs of the Kyrgyz Republic	Kemelova D. A.	Deputy Minister
Ministry of Finances of the Kyrgyz Republic	Baketaev A. K.	Deputy Minister
Ministry of economy of the Kyrgyz Republic	Imanaliev D. Sh.	Deputy Minister
Ministry of economy of the Kyrgyz Republic	Amanova A.	Head of Department
Ministry of Agriculture, Food Industry and Land Reclamation of the Kyrgyz Republic	Choduev E. U.	Deputy Minister
Ministry of Transport and Roads of the Kyrgyz Republic	Mamyrkaliev E. A.	State Secretary
Ministry of Health of the Kyrgyz Republic	Gorin O. V.	Deputy Minister
Ministry of Health of the Kyrgyz Republic	Kasymov O. T.	Director of SPA “ProfMedicina”
Ministry of Health of the Kyrgyz Republic	Sharshenova A.	Head of Medicine Centre for Environment and Human Ecology
State Agency of Environment Protection and Forestry	Ryspekov A.	Deputy Director
State Agency of Environment Protection	Bekkulova J. E.	Head of Environmental Strategy and Policy Department

and Forestry		
State Agency of Environment Protection and Forestry	Салыкманбетова Б.Н.	Head of International Cooperation Department
State Agency of Architecture, Construction and Public Utilities	Kokocharov U. K.	Deputy Director
State Inspectorate for Veterinary and Phytosanitary Safety	Zhusupov A. B.	Deputy Director
State Inspectorate for Veterinary and Phytosanitary Safety	Akybaev E.	Head of Department
National Statistical Committee	Orozbaeva K. J.	Head of Department
National institute of Strategic Studies of the Kyrgyz Republic	Dikambaev A. Sh.	Director
National institute of Strategic Studies of the Kyrgyz Republic	Saparbaev A.	Researcher
List of representatives of the MDB Mission and the Expert Team		
EBRD	Craig Davies	Senior Manager, Head of Climate Change Adaptation, EBRD
EBRD	Marta Modelewska	Principal Manager, Climate Change Adaptation, EBRD
EBRD	Nurgul Esenamanova	Climate Finance Officer
ADB	Candice McDeigan	Country Director
ADB	Nathan Rive	Climate Change Specialist
WB	Philippe Ambrosi	Senior Environmental Officer
WB	Bolormaa Amgaabazar	Country Director
WB	Tolkun Zhukusheva	Specialist
Expert Team	Almaz Asipjanov	Institutional Expert

8 Annex 5: Climate Finance Project Cycle

8.1 Introduction

The Kyrgyz Republic has taken substantive steps towards the development of overarching strategies that address development and climate change, both directly or indirectly. However, in order to move from climate change policy-making to investment implementation, a coherent and coordinated mechanism is needed to identify, develop, implement, monitor and evaluate climate change projects, engaging with various governmental and non-governmental stakeholders throughout the process.

This document presents a generic climate finance project cycle that can be used by the climate finance lead organization in the Kyrgyz Republic and the CFC. Other stakeholders involved in the CFCM can also use this project cycle to ensure consistency when developing project proposals, including development partners, government ministries and agencies, Non-governmental Organizations (NGOs) and the private sector in the Kyrgyz Republic.

The proposed project cycle was prepared in the context of the Kyrgyz Republic's Pilot Program for Climate Resilience (PPCR) support for the development of the Strategic Program for Climate Resilience (CIP). It shall be further specified and elaborated by the lead climate finance organization and the CFC.

This generic climate finance project cycle was developed based on the following steps:

1. Review and analysis of the requirements and approval processes of dedicated global climate funds (Climate Investment Funds, Green Climate Fund, Global Environment Facility), Multilateral Development Banks (MDBs), bilateral and multilateral donors;
2. Review and analysis of the existing approval processes of the Government of the Kyrgyz Republic; and
3. Results of the discussions held during the 1st Joint Mission.

The climate finance project cycle has been designed to assist the Kyrgyz authorities in developing climate resilience projects, from the identification of a project or programme to implementation, completion and evaluation, through approval by the relevant government and climate fund /donor authorities. This will promote increased transparency and accountability in the development and approval of project funding proposals and in disbursement of climate finance at the country level. The climate finance project cycle captures the factors and dimensions listed in Table 32.

Table 32: Factors and dimensions relevant to the climate finance project cycle

Factor	Dimensions
Project size	Small vs large projects
Client	Public vs private projects
Project type	Investment vs technical assistance projects
Concessionality	Grant, highly concessional, slightly concessional, commercial projects
Type of financing instrument	Grant, guarantee, concessional loan, commercial loan, etc.

8.2 Existing processes and linkages between them: Overview

This section first provides an overview of existing processes and requirements from the Government of the Kyrgyz Republic and dedicated global climate funds, MDBs, and bilateral and multilateral donors, with a view to identify potential linkages/entry points for integrating the proposed climate finance project cycle.

8.2.1 Existing governmental approval processes for climate projects

There is currently no clearly defined process for the approval of climate projects in the Kyrgyz Republic, encompassing loans and grants; investments and technical assistance. The proposed project cycle presented in the next section aims to address this gap by providing a coherent and well-defined process, especially as the number and size of climate projects in the Kyrgyz republic can be expected to increase over time.

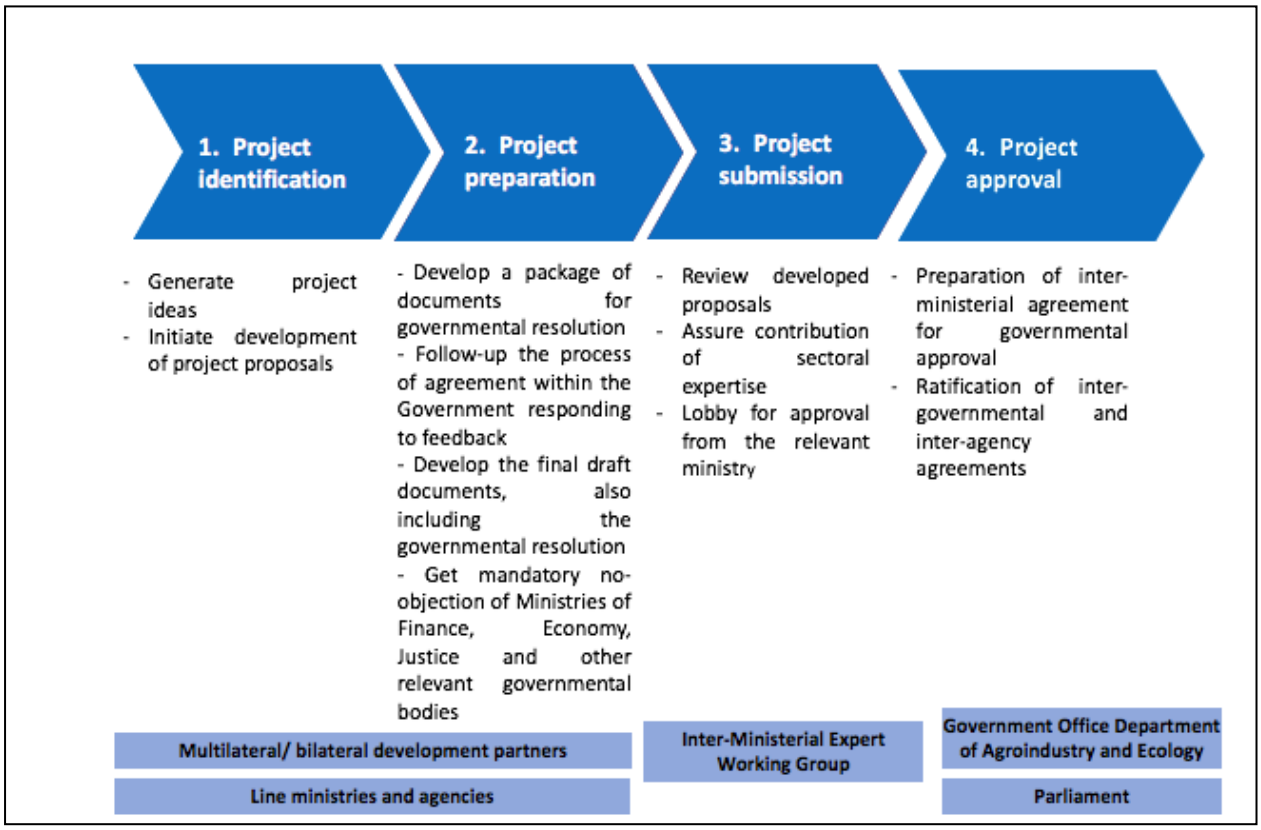
At the Government level, the project approval process is based on the Law on International Treaties/Agreements from 24 April 2014 which applies to all government bodies. This law describes the review, approval and ratification process of International Agreements including concessional loans under Overseas Development Aid (ODA). Under this law, all ODA projects, whatever their size, follow the same review and approval process. However, there are small variants in the approval process depending on the type of financial instrument (loan versus grant) and the types of projects or programmes (investment versus technical assistance). These variants are described below.

- ***Process for loan-based projects***

Projects that involve credit support (concessional loans) are developed jointly by multilateral agencies or bilateral development partners in collaboration with the corresponding line ministry and ministry of finance. A proposal for a loan-based project goes through the general Governmental Approval process, i.e. from the initiating ministry via the Department of Agro-industry and Ecology of the Government Office to obtain agreement (no objection) of other ministries' and three Parliament Committees and final Government Resolution, and finally to Parliament for approval.

First, a special justifying cover letter with a reference statement on the importance of the project activities, including benefits to the country and justifying the loan, is developed by the initiator and sent to the Government Office (Prime Minister's Office). Subsequently, an Agreement on the financial support is developed by the Government Office based on consultations with line ministries, three committees of the Parliament (Budget, International Relations and Sectoral Committee) and the Ministry of Finance. This is then agreed on by the involved International Implementing Agency and the line ministry on behalf of the government. Loan-based funding proposals are required to be agreed upon (no objection) by a minimum of half of the Government, including mandatorily the Ministry of Finance, Ministry of Economy and Ministry of Justice, with a primary role of the Ministry of Finance. In particular, the government can undertake consultations through the Coordination Council for Macroeconomic and Investment Policy (CCMIP), which prioritises and approves mid-term and long-term internationally funded investment projects and proposals (Country Operation/Assistance Plans), as well as public investment programmes under the Prime Minister. After the Government Resolution related to the Agreement is signed, the Agreement is debated in the Parliament and then ratified by the Law.

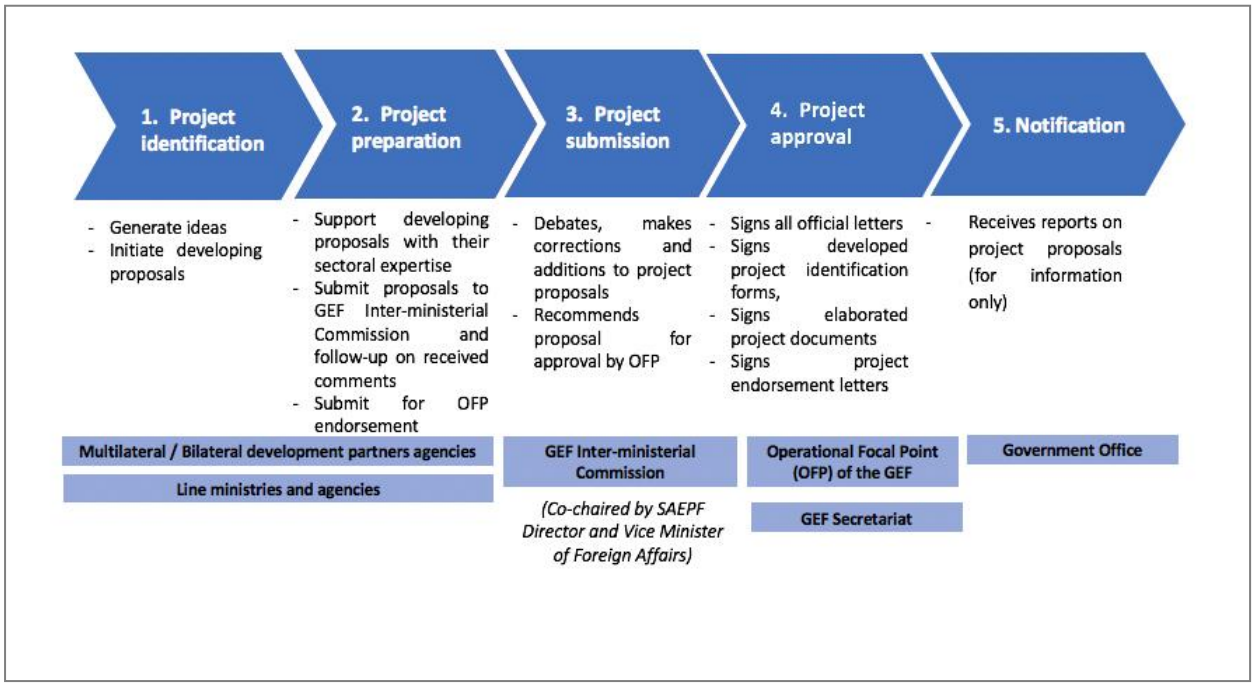
Figure 7. Existing approval process for loan-based funding and for Inter-Governmental Agreements that provide the frameworks for grant-based activities



- *Process for grant-based projects*

Until recently, the process for approval of climate change project proposals in the Kyrgyz Republic was developed with a focus on the Global Environmental Facility (GEF), which provides finance in the form of grants. Currently, among the climate-related funds, only the GEF has an especially established body within the Kyrgyz government to consider project proposals. The process is illustrated in Figure 8 below.

Figure 8: Existing approval process for GEF-funded projects



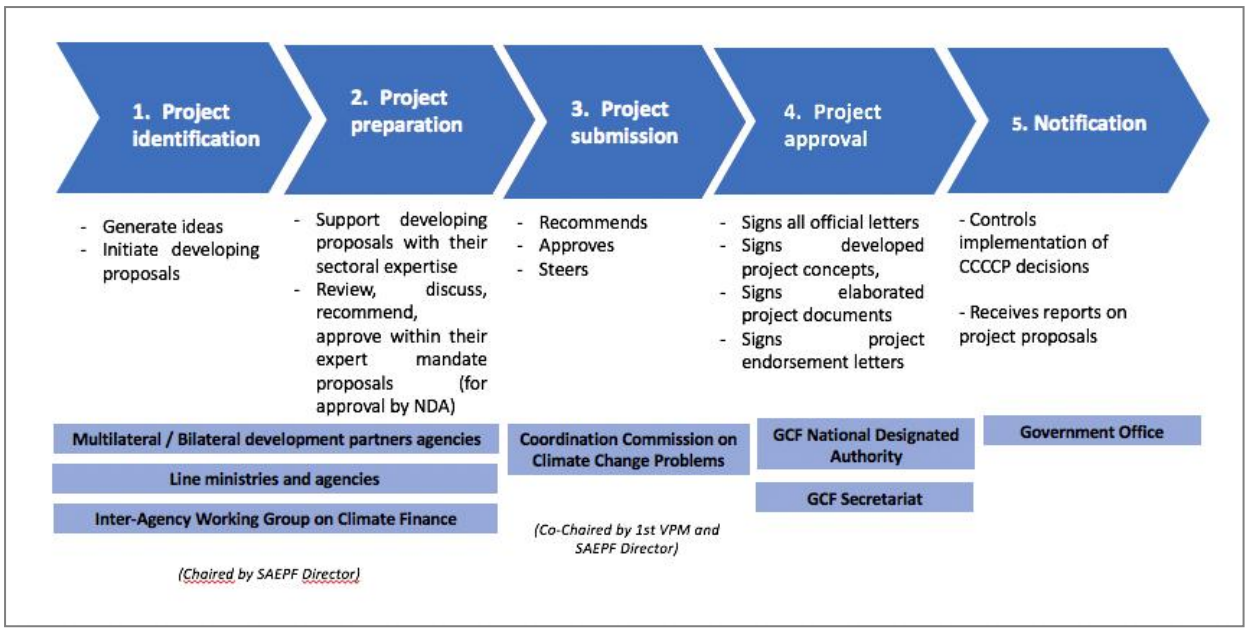
Other grant-based projects or programmes are typically allocated within existing mid-term or long-term Inter-Governmental Agreements with development partners, which provide the legal basis for them. These agreements follow the approval procedure established for Inter-Governmental Agreements which involves ratification by Parliament. Usually such agreements have a duration of several years, which gives the designated beneficiary ministry or agency the power to sign further decisions within the agreement on behalf of the Government. Thus, decisions for grants are taken directly by the designated government body or by the development partner on behalf of the government body.

For instance, agreements between UNDP and the Government of Kyrgyz Republic are established every four years, and these become the reference framework for grant-based activities. Thus, no additional agreement is needed for each subsequent grant. This is also the case with some other development partners such as SDC/SECO, GIZ, US Embassy Democratic Commission/ USAID, etc. Also, there are many climate-related grants, which are provided directly to NGOs by development partners.

The main difference between the approval process for grant-based proposals (for GEF or within existing Inter-governmental agreements) and loan-based proposals is that loan-based proposals require mandatory involvement of multiple key Government ministries / agencies with a primary role of the Ministry of Finance, and the involvement of the Parliament in ratifying every loan decision.

The GCF can provide both grant- and loan-based support to the Kyrgyz Republic. As yet (April 2017), there is no specifically-defined approval mechanism for the GCF in the Kyrgyz Republic. This approval process is part of the ongoing discussion on streamlining the existing national climate finance architecture and is likely to evolve in the near future. However, the current process is illustrated in Figure 9 below.

Figure 9: Existing climate change project proposals approval process for GCF projects (temporary arrangements)



8.2.2 Existing approval processes of dedicated global climate funds, MDBs, bilateral and multilateral donors

Global climate funds, MDBs, bilateral and multilateral donors have different access modalities, project reviews, applications and approval processes. When designing a climate finance project cycle, specific attention should be paid to the following specific aspects:

1) Project review and appraisal criteria;
2) Endorsement by a National Designated Authority (NDA) or Focal Point (FP), especially in the context of dedicated climate funds (e.g. GCF); and
3) International Monetary Fund (IMF)'s concessionality criteria for sovereign lending and limits on sovereign risk, especially in the context of MDBs.

Each of the above aspects are further presented below.

Table 33 provides further information about the global climate funds, MDBs and bilateral and multilateral donors reviewed as part of this analysis.

Table 33: Dedicated global climate funds, MDBs, bilateral and multilateral funds reviewed for this analysis

Typology	Relevant funds/donors reviewed
Dedicated global climate funds	Green Climate Fund (GCF) Global Environmental Facility (GEF) Adaptation Fund (AF) Investment Facility for Central Asia (IFCA)

	Climate Investment Funds (CIF) Pilot Program for Climate Resilience (PPCR)
MDBs	Asian Development Bank (ADB)* European Development Bank for Reconstruction and Development (EBRD)* World Bank (WB)* International Finance Corporation (IFC)*
Bilateral and multilateral donors	Department for International Development (DFID), United Kingdom Food and Agriculture Organization (FAO)* Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) * United Nations Development Programme (UNDP)* World Food Programme (WFP)*
Note: MDBs and donors marked with an asterisk (*) are GCF accredited entities	

8.2.3 Project review and appraisal criteria

Technical and financial proposals for climate resilience projects need to be developed that meet with the requirements of possible funders, who may be (1) dedicated global funds (e.g. GCF and PPCR), (2) MDBs, as well as, (3) bilateral and multilateral development partners, or a combination of those listed here (e.g. multilateral development partner seeking funding from a dedicated global fund).

- ***Dedicated global climate funds***

Dedicated global climate funds can be accessed through specific implementing partners which will vary but often overlap amongst the main global funds. Generally, endorsement or no-objection by the NDA or FP is required before submitting a funding proposal. As each dedicated climate fund will follow a different project cycle, it is recommended that project proponents consult the specific application processes. Table 34 below presents an overview of the typical requirements for selected global climate funds. For instance, a GCF proposal needs to explain how to demonstrate the project alignment with the following criteria: 1) Climate impact potential; 2) Paradigm shift potential; 3) Sustainable development potential; 4) Responsiveness to the recipient's needs; 5) Country ownership; 6) Efficiency and effectiveness. In a similar fashion, a PPCR proposal needs to demonstrate that the project will build upon existing national work to integrate climate resilience into national and sectoral development plans and/or that it finances public and private sector investments identified in national or sectoral development plans or strategies and addressing climate resilience.

The national technical review should provide an adequate screening system to ensure that only good quality proposals that (a) comply with the climate fund's requirements and (b) are in line with line with relevant national priorities and plans, laws and regulations including gender aspects and environmental and social safeguards, are put forward to the relevant National Designated Authority (NDA)/ Focal Point (FP) for endorsement.

Detailed requirements of various global climate funds are available on their websites:

- PPCR
    - Main website:https://www.climateinvestmentfunds.org/fund/pilot-program-climate-resilience
    - Guidance on project requirements: https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/ppcr_design_document_final.pdf
- GCF
    - Main website: http://www.greenclimate.fund
    - Investment criteria: https://www.greenclimate.fund/documents/20182/24943/GCF_B.07_06_-_Investment_Framework.pdf/
- GEF
    - Main website: http://www.thegef.org
    - Eligibility criteria: http://www.thegef.org/about/funding#apply-funding
- IFCA
    - Main webpage: https://ec.europa.eu/europeaid/regions/central-asia/investment-facility-central-asia-ifca_en

Table 34: Summary of requirements of selected international climate funds available to the Kyrgyz Republic

Requirement	PPCR	GCF	GEF	IFCA
Country ownership/ In line with national development and adaptation strategies	X	X	X	X
Impact potential/ Demonstration effect	X	X	X	X
Paradigm shift potential		X		
Sustainable development potential	X	X		
Needs of the recipient / Vulnerability to climate change	X	X	X	X
Efficiency and effectiveness in terms of mobilising additional funding	X	X	X	X
Private sector participation	X	X		
Robust monitoring frameworks	X	X	X	X

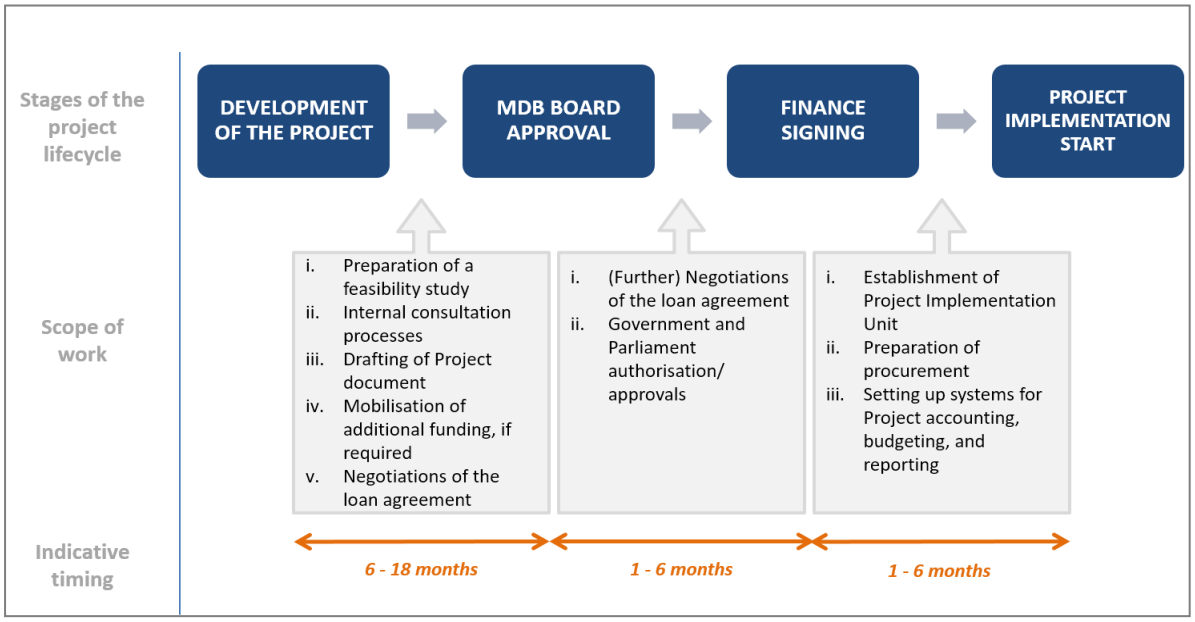
- *MDBs*

Figure 10 and Figure 11 summarise the processes used by MDBs for the two main types of support they provide, namely investment projects and technical assistance. The climate finance project cycle needs to be aligned with these processes for project proposals that involve MDB funding. Similarly, proposals seeking funding from other development partners would need to comply with their processes.

As for dedicated global climate funds, each MDBs will have different eligibility criteria and application requirements. Detailed requirements of various MDBs are available on their websites:

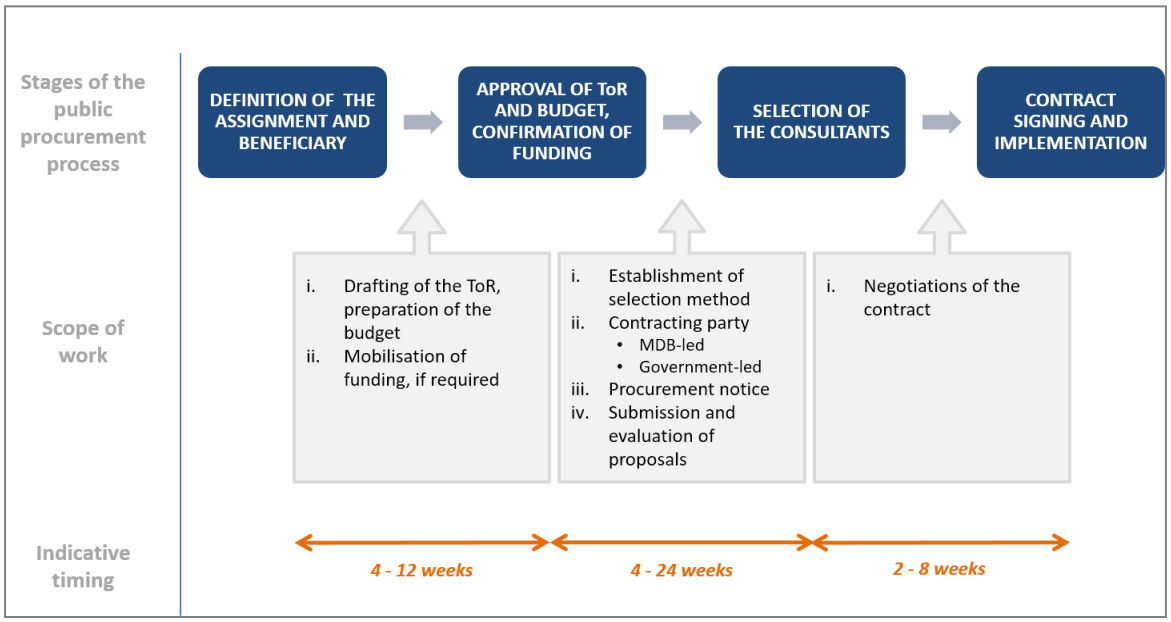
- ADB: https://www.adb.org/site/private-sector-financing/applying-assistance
- EBRD:http://www.ebrd.com/who-we-are/our-values/environmental-and-social-policy/performance-requirements.html%20
- IFC: https://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Performance_Standards.pdf?MOD=AJPERES
- World Bank: http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-policies-and-guidance

Figure 10: Typical MDB project preparation process for an investment project[123]



[123] EBRD (2015). "MDBs and CIF procedures relevant for the SPCR development and implementation." Presentation at Kyrgyz Republic – Pilot Program for Climate Resilience Joint Multilateral Development Bank Scoping Mission, 20 October 2015

Figure 11: Typical MDB public procurement process for Technical Assistance projects, based on the principles of transparency and fair competition[124]



- ***Bilateral and multilateral development partners***

Besides MDBs and dedicated global climate funds, each bilateral and multilateral will have different funding eligibility criteria and funding requirements. Detailed requirements of various bilateral and multilateral donors are available on their websites:

- FAO: http://www.fao.org/technical-cooperation-programme/eligibility-and-criteria/en/
- UNDP: http://www.undp.org/content/dam/undp/library/corporate/Programme%20and%20Operations%20Policies%20and%20Procedures/Programmes-and-Projects-20-Nov-2011.pdf
- WFP: http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp236434.pdf?_ga=2.43258789.1857513923.1496408437-53506096.1496408437

For DFID and GIZ, it is recommended to consult directly the national office or representative as information is not readily available online.

- ***Endorsement by a National Designated Authority (NDA) or Focal Point (FP), especially in the context of dedicated climate funds (e.g. GCF)***

To ensure country ownership of the project or programme, a project proposal requires formal endorsement through the NDA or FP issuing a no-objection letter to the relevant climate fund secretariats. For example, the GCF no-objection process (letter) states that the government:

- Approves the funding proposal;
- Confirms the funding proposal is in line with relevant national priorities and plans; and

[124] EBRD (2015). *Ibid.*

- Confirms the funding proposal is in line with relevant national laws and regulations including environmental and social safeguards and gender considerations.

In order to facilitate the in-country project proposals, donors are encouraging countries to develop country programming strategies to identify a pipeline of short, medium and long-term priorities for project proposals and concept notes in consultation with key stakeholders. In the Kyrgyz Republic, the CIP is expected to provide guidance on the development of a pipeline of priority adaptation projects that can be turned into fundable proposals and concept notes. As such, it is expected that the Operational framework for managing access to climate finance in the Kyrgyz Republic will allow the Kyrgyz Republic to meet other donor's guidelines on country programming, including the GCF guidelines for the GCF Country Work Programme[125] in relation to adaptation/climate resilience measures. CIP will define the strategy for the submission of project proposals to the PPCR, GCF, as well as the roles and responsibilities of the different national climate finance stakeholders and how they are consulted and coordinated.

- ***International Monetary Fund (IMF)'s concessionality criteria for sovereign lending and limits on sovereign risk, especially in the context of MDBs.***

There are several requirements that are commonly considered by MDBs when assessing project proposals. For example, project financing structures must be in line with IMF's concessionality criteria for sovereign lending and limits on sovereign risk (there is a requirement to contract the debt on concessional terms with grant element minimum at 35% in line with IMF).

8.3 Proposed climate finance project cycle

This section describes the proposed climate finance project cycle to be adopted by the Government Office, the climate finance lead institution in the Kyrgyz Republic, the CFC and other key stakeholders involved in the Climate Finance Coordination Mechanism (CFCM). As already noted, the project cycle covers the entire process from the identification of a potential project or programme, through proposal development and approval, followed by project implementation, monitoring and evaluation. It sets out where governmental and non-governmental stakeholders are engaged throughout the process.

In addition to their focus (adaptation, mitigation or cross-cutting), projects or programmes can also differ in terms of their:

- Size (in monetary terms);
- Type (i.e. investment and/or technical assistance);
- Source of funding (e.g. whether funded by dedicated multilateral climate funds, bilateral, multilateral donors or MDBs and domestic public budget).

The specific characteristics and variants of the climate finance project cycle for the above project attributes are further described below, under each of the relevant stages of the proposed project cycle.

[125] GCF/B.08/45 Annex XVII: Initial general guidelines for country programme.

The proposed project cycle is structured around 8 stages corresponding to Functions 3 to 7 of the Climate Finance Coordination Mechanism (CFCM), from the development and management of climate resilience project pipelines to the Monitoring and Evaluation (M&E) and reporting on climate resilience projects (see Figure 12).

The project cycle is further described in Figure 13, which identifies for each stage:

- the sub-steps/scope,
- key stakeholders to be engaged,
- an indicative timeline to complete each stage, and
- primary (lead) and secondary (supporting) stakeholders involved at each stage.

The timeline should be considered as indicative, as it is dependent on a number of factors such as: the climate fund's own project cycle, the level of complexity and due diligence requirements for the project, and the level of baseline information available on the project, such as technical studies (e.g. feasibility studies).

This project cycle should be further tailored to future developments in the still-evolving climate finance institutional architecture in the Kyrgyz Republic. Particular attention should also be paid to linkages with the existing approval processes by the government of the Kyrgyz Republic and the development of a GCF no-objection procedure under stage 4 of the project proposal process (approval).

Figure 12: Eight stages of the proposed project cycle showing how it relates to the corresponding CFCM functions

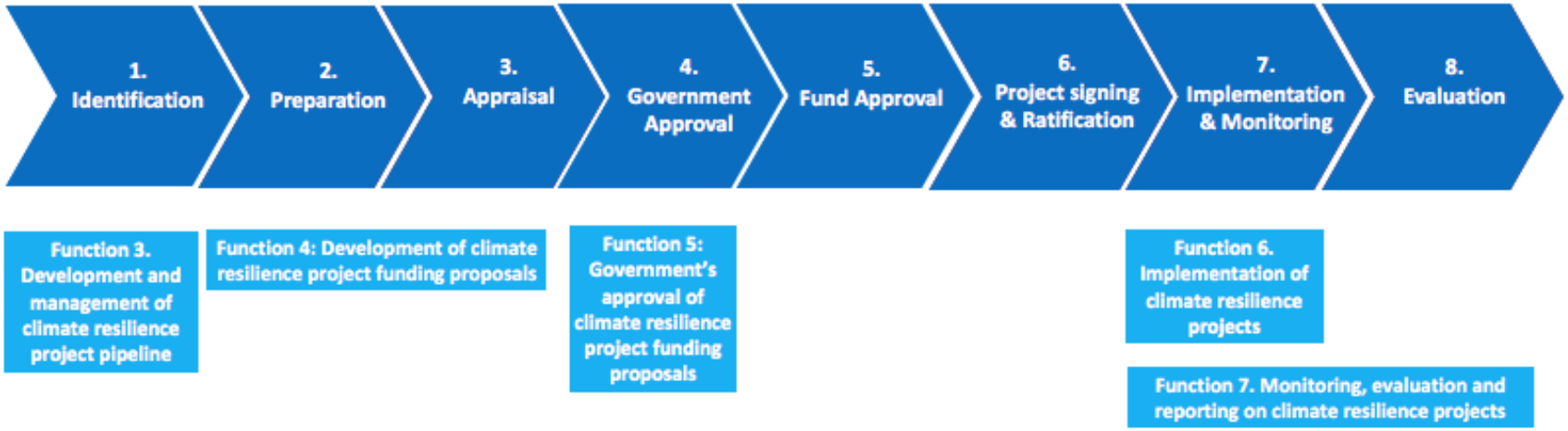
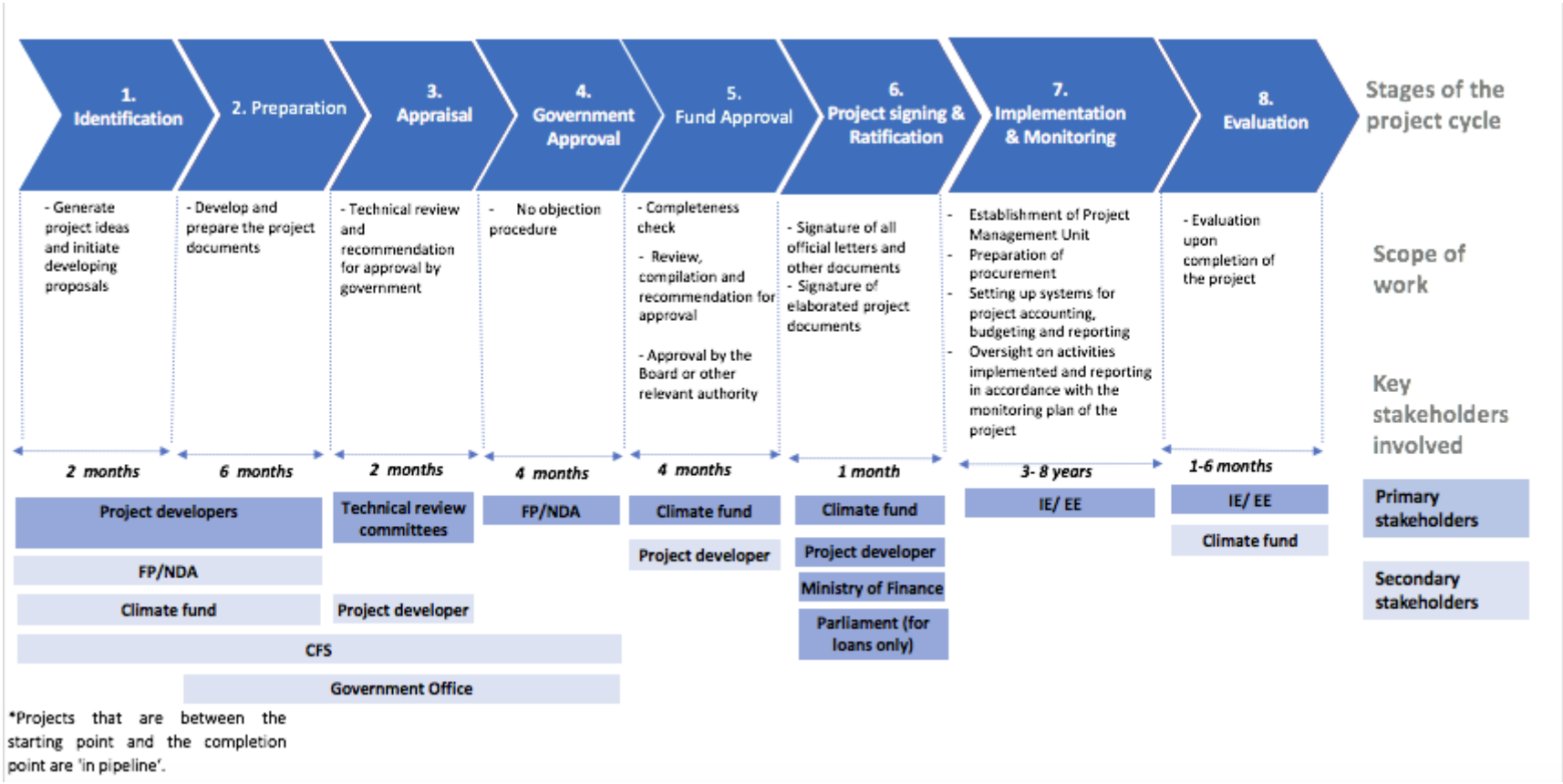


Figure 13: Overview of the climate finance project cycle, including different stages, various governmental and non-governmental stakeholders engaged and indicative timeline to complete each stage



8.3.1 Proposed stages of the climate finance project cycle

Each of the stages presented in Figure 12 and Figure 13 are further described below.

Stage 1 - Identification

The CIP sets out the climate risks facing key socio-economic sectors in the Kyrgyz Republic (Section 1 of the CIP) and the proposed investment program components to address those risks (Section 2 of the CIP). It sets out the framework for identifying climate resilience investments (Section 2.2 of the CIP) which should be applied at this stage. Using this framework, international development partners, government ministries and agencies, NGOs and private sector generate ideas and initiate developing proposals, by responding to a Request for Proposal (RFP) process from a climate fund or other donor, or preparing a spontaneous application. International development partners may also have country strategies which set out their funding and investment priorities, indicating the sectors and topics where they are more interested in developing proposals. Multilateral and bilateral development partners may also undertake consultative scoping missions in-country to discuss potential project proposals with government counterparts and other stakeholders.

Government ministries and agencies can also engage with a climate fund or donor to formally express their interest in preparing and submitting a funding application. Alternatively, the CFC could consider publishing calls for funding proposals or conducting multi-stakeholder workshops to generate proposal ideas aligned with national climate change strategies, policies, strategies and action plans.

Stage 2 - Preparation

Project developers develop and prepare the project documents (concept notes and/or full funding proposals) for submission in line with the fund's project cycle process and project requirements. Depending on the climate fund or donor's project size and cycle, project developers may have to follow a one-step (full proposal) or two-step application (concept note followed by full proposal). For instance, developing a concept note is voluntary for the GCF.

Project developers can be international development partners, government ministries and agencies, NGOs and the private sector in the Kyrgyz Republic.

Stage 3 - Appraisal

Once the funding proposal is finalised, it has to go through a technical review as part of the in-country approval processes by central planning ministries, and technical commissions following the specific process and methodology depending on the type of the project and relevant financial instruments used (grant versus loan). Further information on the national-level review, appraisal and approval process is provided in Section 8.2. Once the proposal has passed the initial review stage, the CFC provides a recommendation for the no-objection/approval to the relevant Focal Point (FP)/ National Designated Authority (NDA)[126]. A proposal may require additional clarifications from the project developer.

It should be noted that temporary arrangements are in place in the Kyrgyz Republic for the approval of GCF proposals (as described in Section 8.2). These arrangements are likely to change under the GCF

[126] A FP as the focal person (an individual) and NDA as the focal authority (an agency) are in charge of coordinating climate funds' activities in the country.

readiness support implemented by FAO, through the setup of the GCF funding proposal review/screening criteria. These criteria are required in order to ensure that the funding proposals are in conformity with national climate priorities as well as national laws and regulations. The review/screening criteria can cover technical, financial and legal aspects, as well as stakeholder involvement. The results of the review process will be presented to the relevant national working groups/ committees in order to provide recommendations for approving a no-objection letter.

Stage 4 - Government approval

Based on the outcome of country appraisal process, the Focal Point / National Designated authority (FP/ NDA) provides a no-objection letter to the Implementing Entity (IE) for submission to the climate fund alongside the full funding proposal.

Stage 5 – Fund approval

The climate fund secretariat will then undertake a review of the completeness of the funding application. This will be followed by a technical review (including through an independent assessment by technical experts), before submission for consideration to the fund's board or relevant committee.

Based on the funding package provided by the fund's secretariat, the fund's board or relevant committee will then make one of the following decisions:

- Approve funding
- Provide an approval which is conditional upon modifications to the project or programme
- Reject the funding proposal.

Following the approval of funding of the proposal, legal arrangements are negotiated and signed between the IE and the climate fund.

Stage 6 - Project signing

After the project's approval at the national and fund-levels, relevant project letters and other documents are prepared by the IE in close collaboration with the relevant fund and government authorities. This includes the Term Sheet agreed to by the all Parties - subject only to final internal approvals - setting out, in summary form, the key terms and conditions relating to the project or programme (for example, the elected holding currency for disbursements or any specific deviations, derogations or modifications). This process will differ depending on whether it is a loan-based or a grant-based project or programme, as discussed in Section 8.2.

- *Loan-based projects or programmes*

A proposal for a loan-based project or programme has to go through the general governmental approval process, i.e. from the initiating ministry via the Department of Agro-industry and Ecology of the Government Office to obtain other ministries' and three Parliament Committees agreement (no objection) and final Government Resolution, and finally to Parliament for ratification. A special justifying cover letter with a reference statement on the importance of the project activities, including benefits to the country and justifying the loan, is developed by the initiator and sent to the Government Office.

Subsequently, an agreement on the financial support is developed by the Government Office based on consultations with the line ministries, three committees of the Parliament (Budget, International Relations and Sectoral Committee) and the Ministry of Finance and agreed on by the involved

International Implementing Agency and the line ministry on behalf of the government. Loan-based funding proposals are required to be agreed upon (no objection) by a minimum of half of the Government, including mandatorily the Ministry of Finance, Ministry of Economy, Ministry of Justice, with a primary role of the Ministry of Finance. After obtaining the signed Government Resolution on the corresponding Agreement on financing the project, that Agreement is debated in the Parliament and then ratified by the Law.

- *Grant-based projects or programmes*

Grant-based projects or programmes are typically allocated within existing mid-term or long-term Inter-Governmental Agreements with development partners, which provide the legal basis for them. These agreements follow the approval procedure established for Inter-Governmental Agreements which involves ratification by Parliament. Usually such agreements have a duration of several years, which gives the designated beneficiary ministry or agency the power to sign further decisions within the agreement on behalf of the Government. Thus, decisions for grants are taken directly by the designated government body or by the development partner on behalf of the government body.

Stage 7 – Implementation, monitoring and reporting

The project then moves into the implementation period, whereby funds are transferred to the IE according to agreed tranches. Following this step, the project becomes effective and the process of monitoring and evaluation (M&E) commences and continues until the project or programme closes and exit the climate fund's portfolio.

The Executing Entity (EE) carries out the project or programme activities under the supervision and overall management of the IE, ensuring the quality, quantity and strategic orientation of measures implemented on the ground.

The IE undertakes regular monitoring under the project or programme's monitoring plan (in line with national M&E requirements, as well as those of the climate fund). This can include among other things, periodic supervision missions, audit reviews and multi-stakeholder engagement. In addition, a mid-term review may be performed by the climate fund to ensure that required oversight on activities has been performed by the IE. In addition, annual performance reports may be required.

Stage 8 - Evaluation

Upon completion of the project or programme, a final evaluation is conducted by the IE to assess the performance of the project or programme. The evaluation should be done by an independent evaluation, based on best professional ethical standards and best practice methodologies, such as the Organization for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) criteria (relevance, efficiency, effectiveness, results and sustainability). In addition, an interim evaluation may be also carried out during the project implementation phase.

8.3.2 Key stakeholders involved throughout the project cycle

Table 35 below provides an overview of the key stakeholders involved throughout the project cycle and their respective roles. As described under stage 1 of the project cycle, project developers can be a wide range of actors such as international development partners, government ministries and agencies, NGOs and the private sector in the Kyrgyz Republic. Table 36 provides further information regarding the different responsibilities of IEs and EEs. Based on the information available at the time of writing

this analysis, the NDA function in the Kyrgyz Republic and the CFC are kept separate in Figure 13 and Table 35.

Table 35: Overview of stages at which each stakeholder is engaged and their corresponding role (note: stakeholders marked as 'XX' are seen as primary whereas stakeholders marked as 'X' are seen as secondary.)

Stakeholder	Identification	Preparation	Appraisal	Government's approval	Fund's approval	Project signing & ratification	Implementation and evaluation	Evaluation
Parliament / Ministry of Finance				XX (if loans)		XX		
NDA or FP*	X	X		XX				
CFC	X	X	X	X				
Technical committees			XX				X	
NGOs	X	X						
Climate fund (Donor)	X				XX		X	
Implementing Entity						XX	XX	
Executing Entity						XX	XX	
Project developer	XX	XX		X				

Table 36: Difference between Implementing Entities (IEs) and Executing Entities (EEs)

Implementing Entity (IE)	• Develops and submits funding proposals for projects and programmes. • Oversees project and programme management and implementation • IEs can include: line ministries and agencies, NGOs, private sector, international development partners, for the GCF, AF and GEF.
Executing Entity (EE)	• Develops and submits funding proposals for projects and programmes through an IE. • Executes funding proposals working under the supervision and overall management of an IE. • EEs can include: line ministries and agencies, NGOs, private sector, international development partners

9 Annex 6: Glossary of key terms

Adaptation	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects.
Climate change	Climate change refers to a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods (United Nations Framework Convention on Climate Change).
Climate finance	Climate finance refers to public and private mechanisms established to help fund countries in their efforts to reduce emissions, adapt to the impacts of climate change, and reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts. (UNFCCC SCF, 2014).
Climate resilience	Capacity for a socio-ecological system to: (1) absorb stresses and maintain function in the face of external stresses imposed upon it by climate change and (2) adapt, reorganize, and evolve into more desirable configurations that improve the sustainability of the system, leaving it better prepared for future climate change impacts.
Risk	The international risk management standard (ISO31000:2009) defines risk as the effect of uncertainty on objectives and is often expressed in terms of a combination of the consequences of an event and the associated likelihood of occurrence. For example, this could be in terms of lives lost, financial cost and/or environmental impact.