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## Regional Project Document

**Project Title** Central Asian Multi-Country Programme on Climate Risk Management (CA-CRM)

**RPD Outcome(s):** RPD 2006-2010 - EUR\_OUTCOME150: Increase access to investment financing for sustainable energy and climate change adaptation, including through the Clean Development Mechanism (CDM)

**RPD Outcome(s):** RPD 2011-2013 OUTCOME 1: By 2013, national and sub-national levels in the region have improved capacity to support the transition to low-emission and climate-resilient economies

1. Technical capacity and knowledge in the area of climate risk management in Central Asia strengthened
2. Comprehensive Approaches to CRM promoted in Kazakhstan
3. Comprehensive Approaches to CRM promoted in Kyrgyzstan
4. Comprehensive Approaches to CRM promoted in Tajikistan
5. Comprehensive Approaches to CRM promoted in Turkmenistan
6. Comprehensive Approaches to CRM promoted in Uzbekistan

**Expected Output(s):**  
*(Those that will result from the project)*

**Executing Entity:** United Nations Development Programme (UNDP)

### Brief Description

The Central Asia Multi-Country Programme on Climate Risk Management (CA-CRM) will assist the five Central Asian countries to adjust their national development processes to address risks posed by current climate variability and future climate change. CA-CRM will seek to strengthen climate-related disaster risk reduction and adaptive capacity, promote early action and provide the foundation for long-term investment to increase resilience to climate-related impacts across the region. On a *national level*, in each of the five countries, the project will work to 1) strengthen institutional frameworks and technical capacity to manage climate change risks and opportunities in an integrated manner; 2) develop climate-resilient strategies, policies and legislation in priority sectors and geographic areas; 3) expand financing options to meet national climate change adaptation costs; 4) implement climate change adaptation interventions in priority sectors; and 5) disseminate knowledge on how to incorporate climate change knowledge and risks into development processes at national, sub-national and local levels. On a *regional level*, the project will focus on 1) strengthening technical capacity to manage climate-related risks and opportunities; 2) sharing knowledge on adjusting national development processes to fully incorporate climate-related risks and opportunities; and 3) synthesising and further developing knowledge on glacial melting in Central Asia.

Programme Period:	RPD 2006-2010 and RPD 2011-2013
Key Result Area (Strategic Plan)	_____
Atlas Award ID:	59476
Start date:	March 2010
End Date:	December 2014
PAC Meeting Date	21 January 2010
Management Arrangements	DEX

Total resources required	\$12,000,000
Total allocated resources:	\$5,997,000
• Regular TRAC	\$500,000
• BCPR	\$4,000,000
• Country Offices	\$1,250,000
• Other:	
o Finland through ENVSEC	\$202,000
o Government	_____
Parallel financing:	
o PEI	\$30,000
o Risk Transfer Facility	\$15,000
Unfunded budget:	\$6,003,000
In-kind Contributions:	_____

Agreed by Jens Wandel, Director, UNDP Bratislava Regional Centre



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## **Acronym List**

ADB	Asian Development Bank
ALM	Adaptation Learning Mechanism
BCPR	Bureau for Crisis Prevention and Recovery
CA	Central Asia
CACILM	Central Asia Sustainable Land Management Programme
CA-CRM	Central Asia Multi-Country Climate Risk Management Programme
CAREC	Central Asian Republics Economics Commission
Carec	The Regional Environmental Centre for Central Asia
CARNet	Central Asia Environment and Sustainable Development Network
CAWa	Water in Central Asia (Regional Research Network)
CCCC	Climate Change Coordination Centre
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO	Country Office
CRM	Climate Risk Management
CPAP	Country Programme Action Plan
DFID	Department for International Development
EEG	Environment and Energy Group
ENVSEC	Environment and Security
EWS	Early Warning System
GCM	Global Circulation Model
GEF	Global Environment Facility
GHG	Green House Gas
GLOF	Glacial Lake Outburst Flood
GTZ	German Technical Cooperation
ICARDA	International Centre for Research in Dry Areas
IMAC	Information Management Analysis Centre
ICSD	Interstate Commission on Sustainable Development
IFAS	International Fund for the Aral Sea
INC	Initial National Communication
ISDR	International Strategy for Disaster Reduction
JICA	Japan International Cooperation Agency
MCN	Multi-country Climate Network
MDG	Millennium Development Goal
MOA	Ministry of Agriculture
MPMU	Multi-country Project Management Unit
NCN	National Climate Network
NAS	National Adaptation Strategy
NEAP	National Environmental Action Plan
NPMU	National Project Management Unit
OSCE	Organisation for Security and Co-operation in Europe
PPP	Public Private Partnership
REC	Regional Environmental Centre
SDC	Swiss Development Cooperation
SGP	Small Grants Programme
SNC	Second National Communication
T21	Threshold 21
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WHO	World Health Organisation
WMO	World Meteorological Organisation
WRC	Water Resources Committee

## I. Situation analysis

### Climate change impacts in Central Asia

1. Central Asia (CA) (see Figure 1) is one of the world's most vulnerable regions to current climate variability and to the impacts of future climate change. This is as a result of a combination of factors, including: i) the region's inherent aridity; ii) existing environmental mismanagement (a remnant of the Soviet era); iii) an environmental degradation – a legacy of central planning in the region; iv) under-investment in housing and infrastructure<sup>1</sup>; v) existing developmental challenges; vi) biophysical stresses; vii) high frequency of disaster events; and viii) underlying low climate-related disaster risk reduction and adaptive capacity (see paragraph 12). Climate change is likely to manifest in CA as:

- i) increasing temperatures;
- ii) changing rainfall patterns;
- iii) increasing aridity;
- iv) an increasing frequency of extreme weather events (such as dust storms, heavy rainfall, haze, heat waves and heavy winds); and
- v) an increasing frequency and intensity of climate-related disasters (such as floods, droughts, mudslides, avalanches and landslides).



**Figure 1:** The location of the five Central Asian countries participating in the Central Asia Multi-Country Project on Climate Risk Management (CA-CRM), namely Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan.

2. Indeed, trends over the last few decades indicate that these predicted changes are already

<sup>1</sup> Infrastructure across CA is also breaking down as a result of limited maintenance since the break up of the Soviet Union.

being experienced in CA countries (see national components for more details), and current climate variability is already adversely impacting on development. Considering that both current and future variability and changes need to be addressed and adapted to, Climate Risk Management (CRM) is an appropriate response, as it includes both climate-related disaster risk reduction and climate change adaptation (see Box 1).

3. As a result of the above, climate change is likely to have serious consequences for three key sectors in CA, namely: water, agriculture and energy. Current climate variability is already impacting on these sectors, particularly where unsustainable development practices are prevalent. The current and future impacts on these sectors will have considerable implications for cross-sectoral concerns, such as water security, food security, energy security and human health (detailed below) and are subsequently likely to jeopardise many hard-won development gains. The significance of these impacts is largely due to the critical interfaces that exist between key sectors (e.g. water and agriculture or water and energy) in CA. Furthermore, although the region is prone to earthquakes, the majority of disasters are triggered by hydro meteorological hazards, including drought, floods, extreme temperatures and rainfall-related landslides; all of which are likely to increase under a changing climate. Unless timely, coordinated and sustainable CRM measures are implemented, CA is likely to experience considerable economic loss, humanitarian stresses and environmental degradation as a result of climate-related disasters, climate variability and change.

4. During the past decades, climatic variability in CA has triggered *inter alia* crop failures, malaria epidemics, and shortages in water for hydropower and irrigation, with considerable consequences for food, health, energy and water security. Recurrent drought (2000-2001 and later in the decade) has, for example, already affected hydropower generation, water supply for irrigation and household use, rainfed cropland, and pasture productivity. A 2008 United Nations Development Programme (UNDP) multi-country risk assessment indicated that electric power generation shortages in Kyrgyzstan and Tajikistan stalled industrial growth in both countries as well as deprived millions of people of access to heat and electricity in severe winter conditions, resulting in a humanitarian crisis<sup>i</sup>. To avoid this situation from reoccurring, the Kyrgyzstan government has been working to prevent reservoir water reserves from dropping to “dead levels” before winter of 2009. The increasing frequency of these events is likely to reduce the availability of irrigation water for agriculture in the downstream Central Asian countries, such as Uzbekistan and Turkmenistan. Furthermore, above-average warming and glacial melting associated with global warming are expected to elevate the level of existing climate-related risks and create new patterns of risk. The climate change-related problems likely to be experienced in each key sector are elaborated below.

#### *Water security*

5. Water is a scarce and conflict-prone natural resource in CA. Its availability limits: i) productivity of ecosystems and agriculture; ii) energy supplies; and iii) the development of human settlements. Glaciers presently contribute up to 70% of the water flow in some of the river systems during summer<sup>2</sup>. Climate change impacts and climate variability, particularly increased temperatures, changes in rainfall patterns and glacial melting, are anticipated to drastically alter the hydrological cycle in CA, and in so doing, exacerbate existing water scarcity problems and water-related conflicts. This will also, likely, aggravate energy and food insecurities across the region. For example, the rate of glacial melting is projected to increase in the short-term due to the rise in temperature, leading initially to increased river flows, flooding and soil erosion. In the long-term however (i.e. over the next 20 years), the decline in glacier volumes is predicted to reduce the flow of the Amu-Darya River and certain tributaries of the Syr-Darya and Zarafshan Rivers by 25 – 30%<sup>ii</sup>. Reductions will be particularly severe in hot, dry years when it is predicted that there will be up to a 70% reduction in river flows. Furthermore, climate variability and change combined with human activities is likely to further influence the water levels of the Caspian and Aral Seas, with consequences for water supply, agriculture, and human health in the surrounding areas.

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<sup>2</sup> TSNC - Tajikistan Second National Communication, 2009.

#### *Food security*

6. The agriculture sector is one of the most important components of the Central Asian economy because two thirds of the region's population live in rural areas and depend on agriculture. Approximately 75 – 80% of total croplands are dedicated to irrigation-dependent crops, such as cotton and rice, rendering crop production particularly vulnerable to the impacts that climate change is predicted to have on rainfall patterns<sup>iii</sup>. In addition, extreme weather events and climate-related disasters, higher temperatures and a decrease in summer rainfall, resulting in drought, desertification, soil erosion and salinisation are having marked effects on grain productivity, with potentially severe economic consequences. These impacts are likely to increase into the future, under a changing climate, particularly in the absence of any adaptation and disaster reduction measures.

7. Pastoralism is also likely to be greatly affected by climate change impacts. Grasslands, for example, are at risk of desertification due to higher temperatures and decreasing rainfall, which will directly impact on livestock productivity. Furthermore, an increase in temperature and extreme weather events, such as heat waves, will induce stress and promote livestock infectious diseases, precipitating a decline in livestock numbers across CA. The impacts of these effects on local economies and food security are likely to be severe. Modelling of the impacts has, however, to date not been undertaken and the predicted impacts in monetary terms are not known.

8. As a result of the critical interface between the agriculture and water sectors across CA, it is paramount that CRM interventions within the two sectors do not occur in isolation from one another. Unless timely CRM measures are implemented in the water and agriculture sectors, crop production in the region is expected to decrease by up to 30% by 2050<sup>3</sup>, as a result of increasing temperatures, decreasing rainfall in the spring/summer and extreme weather events such as heavy rainfalls, flooding and mudslides<sup>iv</sup>. This will substantially add to current economic losses in these sectors.

#### *Energy security*

9. The production of energy from hydro-resources is at risk from climate variability and climate change-related impacts, namely increasing temperatures, glacial melting and changing rainfall patterns. Glacial melting is likely to increase water flow in the basins used for hydropower generation in the short-term. However, this will be at the cost of significant regional water shortages in the future, which are likely to mark the end of further hydropower prospects for Kyrgyzstan and Tajikistan (90-94% and 98% of electricity in these countries, respectively, is generated by hydropower).

10. Hydropower generation is a component of the 'water-energy nexus' which requires resolution with regards to the tradeoffs between upstream countries (Kyrgyzstan and Tajikistan) and downstream countries (Kazakhstan, Turkmenistan and Uzbekistan)<sup>v</sup>, particularly if humanitarian disasters, such as that which occurred in 2008, are to be reduced. Multi-lateral agreements, however, are likely to be more difficult to reach as water shortages resulting from accelerated glacial melting increase. In particular, this heightened water scarcity is likely to have considerable negative effects on the irrigation-dependent agriculture sectors of the downstream countries. The concern facing downstream countries is that water shortages in upstream countries will cause energy shortages, leading upstream countries to operate the crucial basins of Toktogul and Nurek in full hydropower mode during winter, leaving only small amounts of water for downstream irrigation in summer<sup>vi</sup>.

#### *Human health*

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<sup>3</sup> This was the result of crop yield projections using HadCM2 (Cruz, R.V., H. Harasawa, M. Lal, S. Wu, Y. Anokhin, B. Punsalma, Y. Honda, M. Jafari, C. Li and N. Huu Ninh, 2007: Asia. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 469-506).

11. The reduced productivity of the agriculture sector as a result of climate variability and climate change is likely to translate into higher rates of malnutrition and an increased susceptibility of the population to diseases. Additionally, changing rainfall patterns may result in an increase in the frequency of flooding events, thereby exposing people to diseases such as dengue fever and diarrhoeal diseases. Furthermore, extreme weather events are likely to result in post-traumatic stress, increased poverty, compromised nutrition and interrupted livelihoods, with significant consequences for human health. For example, long-term displacement of people and permanent migration due to floods and mudslides is linked to lower living standards and increased vulnerability to diseases<sup>vii</sup>.

#### *Other vulnerabilities*

12. Further exacerbating the abovementioned cross-sectoral concerns is the incidence of poverty in the region, which significantly reduces the resilience of populations to climate variability and climate change impacts. Approximately 62% of CA's rural population is classified as living under extreme poverty conditions<sup>4</sup>. This proportion of the population lacks access to sufficient natural resources to sustain their livelihoods. The poorest members of society are often disproportionately exposed to various forms of risks, such as: i) climate-related disaster risks (e.g. flood and drought); ii) fluctuating market opportunities for their products; iii) diseases; iv) water-related risks (e.g. quality and supply); v) food scarcity; and vi) energy shortages. These risks are often not mutually exclusive and are likely to be further exacerbated by climate change impacts, thus impacting on sustainable development and humanitarian efforts such as the MDGs.

13. At present, CA is characterised by a number of underlying vulnerabilities to current climatic conditions. These vulnerabilities are caused mainly by under-investment in CRM structures (e.g. early warning analysis, risk maps, needs assessments and protection strategies) and capacity, as well as environmental mismanagement, such as: i) unsustainable irrigation methods; ii) soil contamination; iii) pollution of water resources; iv) overgrazing; and v) soil erosion. The region's vulnerability is also a function of socio-economic and environmental challenges created during the Soviet era. Central planning has been particularly detrimental to water supply, water quality and agricultural production in the region, and has greatly aggravated the vulnerability of these sectors to climate variability and climate change impacts. For example, it is estimated that CA loses US\$1.7 billion, or 3% of GDP, annually because of inefficient water resource management. Governance and decision-making is still highly centralised in CA and although most countries are progressing towards decentralization, the changes that have taken place have been rapid, placing severe strain on the capacity and finances of local governments. This vulnerability to current climatic conditions is likely to be exacerbated by projected climate change impacts unless timely CRM interventions and strategies are implemented.

14. Due to the complexity and inter-sectoral nature of climate variability and climate change impacts, CA-CRM will not be able to tackle all of the problems related to current climate variability and future climate change. For this reason, the project will focus on five key themes identified through widespread consultation with numerous stakeholders during the international consultant's mission to CA during the period July to October 2009. These key themes are presented below:

- ***Managing water resources in the face of increased glacial melting and reduced snow melt<sup>5</sup>***: Measurement of glaciers in CA started in the 1930's. Since that time, approximately one third of the glacial area has been lost as a result of melting<sup>viii</sup>. Global climate models and glacial melting models indicate that between 64% and 95% of the remaining glacial area in large parts of CA will be lost by 2100, depending on the extent of warming that takes place in the region<sup>ix</sup>. Because glacial melting provides a large proportion of the water flow in the major Central Asian rivers (e.g. Syr-Darya River and Amu-Darya River), the loss of much of the glacial area as a result of global warming will have severe consequences for ecological

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<sup>4</sup> This is defined as living on less than US\$2.15 per person per day World Bank (2009) *Adapting to Climate Change in Europe and Central Asia*.

<sup>5</sup> The impacts of glacial melting are cross-sectoral in that they will affect hydropower generation, water supply and agricultural productivity.



functioning of water bodies (e.g. rivers, lakes and the Aral Sea), as well as water, food and energy security in the region. Additional threats posed by glacial melting include an increase in glacial lake outburst floods (GLOF), landslides and mudslides. Indeed, it is well recognized within CA that glacial melting poses one of the greatest security threats to the entire region. For example, the Kyrgyzstan president, Mr Kurmanbek Bakiev, announced in his inauguration speech (on the 28th July 2009) that one of the priorities of the future for Kyrgyzstan is adapting to climate change impacts, especially with regards to glacial melting.

The agricultural demand for water is greatest in mid-summer and particularly in hot, dry summers. At present, glacial melting supplies up to 70% of the water flow during such periods. Without the water supply from glacial melting, irrigated agriculture in future hot, dry summers will largely collapse in many parts of Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan. This will not only reduce food security dramatically, it will also greatly jeopardise general security in the region. The Ferghana Valley provides a present-day example of how water shortages can contribute significantly to low-intensity conflicts between communities. The effects of glacial melting are likely to exacerbate such conflicts, but to date the ramifications of glacial melting across all sectors have not been explicitly studied.

Although a large number of studies have been conducted since the 1930's on glacial melting in CA, there remain numerous gaps in the knowledge and available databases. Many of the studies have been of an *ad hoc* nature and not conducted within a larger framework, being restricted to individual glaciers or glacial regions<sup>x</sup>. The information from such studies has to date not been comprehensively synthesised and consequently valuable data and information are scattered across the region's research institutions, line ministries and donor organisations. The lack of synthesis of existing information has greatly hampered efforts to accurately quantify the risks posed by a reduction of water flow from glaciers. In particular, there is very little information on current changes that are occurring and those which could be expected in the short term. Knowledge of the impacts in the short term are particularly critical for current development planning as well as climate-related disaster risk reduction efforts and early warning.

During a mission to CA in July and August 2009, numerous stakeholders, including hydro-meteorological institutes (hereafter referred to as hydromets), highlighted the lack of reliable data on glaciers and noted that for more than a decade very little on-the-ground data collection has been undertaken<sup>6</sup>. The studies in the past decade have largely been model-based and groundtruthing is very limited<sup>xi</sup>. The lack of synthesis of existing information and on-the-ground data is seen by the hydromets that were visited in Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan as a major impediment for effective planning. The CA-CRM will play a critical role in bolstering primary glacier research and using the results to facilitate more effective regional water management. Additionally, the CA-CRM will partner with the initiatives underway in CA (such as the regional research network "Water in Central Asia" – CAWa) in this regard to build synergy between different initiatives and to synthesise findings.

- **Climate-related disaster management:** The main climate-related disasters (e.g. drought, mudslides, landslides, floods and GLOFs) affecting CA countries are intrinsically linked to climate variability and are likely to be exacerbated by climate change. This highlights the strong link between climate-related disaster mitigation efforts and adaptation interventions, and the need for a holistic CRM approach. For this reason, there is potential for synergy between the CA-CRM and the existing disaster reduction initiatives in CA. This synergy will for example, be facilitated by bolting onto the existing Information Management Analysis Centres (IMAC) in Tajikistan<sup>7</sup> in order to prevent duplication of efforts, promote data sharing and build on the foundations the IMAC has established. Furthermore, the project will draw the

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<sup>6</sup> This was highlighted also by the Ministry of Water in Kyrgyzstan; Professor Abdulhamid Kayumov of the Tajikistan Ministry of Environment Protection; Ministry of Agriculture in Tajikistan; and staff in the Japan International Cooperation Agency (JICA) in Kazakhstan.

<sup>7</sup> An IMAC is also planned for Kyrgyzstan.

climate-related disaster risk reduction and adaptation communities together in their common efforts to address climate risk management needs in Central Asia.

- **Reforestation:** A general consensus exists within governments in CA that reforestation efforts are particularly advantageous in the region for numerous reasons. For example, reforestation serves as a barrier to climate-related disasters, such as mudslides and landslides. Reforestation also stabilises soils, thereby reducing erosion and siltation of dams. Reducing erosion is also beneficial because dust content in the atmosphere (which increases in eroded regions) has the negative effect of increasing snow and glacial melting rates<sup>8</sup>. Additionally, reforestation improves the productivity of the landscape and provides shade for livestock and wood for timber/fuel. Consequently, reforestation is seen to be a worthwhile climate risk management measure to undertake on a large scale. However, reforestation efforts to date have been undertaken on only a small scale and on an *ad hoc* basis. Additionally, there is little synergy or flow of information between reforestation efforts. The CA-CRM will undertake a synthesis of lessons-learned and assist in the development of multi-country and national strategies to guide future efforts.
- **Livestock management:** The majority of agricultural land in CA is dedicated to livestock farming, a sector which contributes significantly to the economies of Central Asian countries and is of central importance to the livelihoods of a large proportion of their populations. However, this sector at present receives very little extension support, guidance and funding. Climate variability and climate change is likely to result in a reduction in pasture productivity (through increased evapotranspiration rates and reduced grass growth), which will have a significant impact on livestock productivity. A focus of CA-CRM will consequently be to analyse the impacts of climate on pasture and livestock productivity and use the results to promote appropriate changes in livestock farming methods (e.g. using remote pastures and developing alternative livelihoods).
- **Improved water management in the agriculture sector:** The predicted increase in temperature across CA as a result of climate change requires adaptation in the agricultural sector to mitigate looming food security crises. Diversifying crops and/or planting drought-resilient cultivars and installing drip irrigation systems are important adaptation methods, but may not be sufficient on their own. Policy incentives for water efficiency improvement and livelihood diversification are likely to be among the most appropriate methods of adaptation. This type of intervention is cross-sectoral as it requires careful planning with the water sector and in particular downstream water users.

15. The above key themes will be the main focus of the CA-CRM project. Each country project will prioritise interventions according to the key themes. The themes are not explicitly stated or discussed within each output, action or sub-action in this document. This is because the specific interventions within each theme will be decided upon during a planning phase of the project implementation. This planning phase will include extensive analysis and prioritisation of specific interventions.

#### Gender

16. The above key themes, if solved, can contribute greatly towards promoting gender equality and will contribute towards improving the lives of women. This is because climate change impacts and disaster risks tend to impact on women because they are the primary care-givers in families and tend to be less job-secure. In many cases, men from vulnerable households migrate to Russia and Kazakhstan, leaving women to deal with the hardships of small-scale agriculture and petty trading (as well as domestic/child care responsibilities). Thus the burden of responding to growing household water and energy insecurities is likely to be placed on women. In some areas

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<sup>8</sup> Recent literature suggests that dust content on snow and glaciers increases the amount of solar radiation absorbed, consequently accelerating melt rates. (Painter *et al.* 2007. Impact of disturbed desert soils in duration of mountain snow cover. *Geophysical Research Letters*. Vol 34, L12502, doi:10.1029/2007GL030284).

of Kazakhstan, for example, women remain the primary responsible for finding and managing water resources for households, being often forced to walk long distances to find water, which is sometimes from untreated and contaminated sources. In Kyrgyzstan, continuing energy crisis has significantly worsened living standards of the poor, especially women in rural areas. It caused an increase in expenses for heating by solid oil, as well as an increase in time that women spend for heating and cooking.

17. Despite a common role of family providers, women often experience unequal access to and control over resources (e.g. property, land, livestock, credit, etc.). For example in Tajikistan, only 1% of privatized land owners are women even though they make up approximately 70% of the agricultural workforce (90% in cotton production). As discussed above, climate change will put additional pressure on resource availability, which may further limit women's access to essential resources, such as water, and in turn increase their vulnerability to climate change. Drought, deforestation, and erratic rainfall cause women to work harder to secure these resources. They, therefore, have less time to earn income, get an education, or provide care to families.

18. On the other hand, women can be key agents of adaptation to climate change. Their responsibilities in households, communities, agriculture, local trade, etc. position them well to develop strategies for adapting to changing environmental realities.

**Box 1: Climate Risk Management**

The CA-CRM will take a holistic approach to addressing climate variability and change through the use of Climate Risk Management (CRM). CRM integrates both elements of climate change adaptation and climate-related disaster risk reduction. It aims to manage societal vulnerability associated with firstly short-term climate variability and secondly long-term climate change. This dual approach is critical for preventing disasters and protecting development both in the short and long term.

CRM assesses existing and future patterns of risk stemming from climate variability, including those deriving from climate change and integrates them into development strategies, policies, plans, and projects. CRM is aimed at:

- Providing climate information for decision support in climate-affected sectors;
- Improving sustainable development outcomes in the face of present climate variability;
- Providing the capacity required to cope with both current and future variability and change;
- Reducing socioeconomic vulnerability to extreme climate events, combined with strategies to enable communities to capitalize on favourable climate conditions.

## **Barriers**

19. There are a number of barriers hindering the effective implementation of CRM measures across CA, detailed below<sup>9</sup>. These barriers will be addressed by the CA-CRM (see Strategy section).

***Technical capacity, data, information and knowledge of tools for CRM planning are limited within CA.***

20. There is limited knowledge of CRM among key decision-makers, particularly of: i) the cross-sectoral nature of the impacts of climate change and thus of potential CRM options; and ii) the difference between mitigation and adaptation, and the necessity of both. For example, one of the barriers to climate change adaptation in Tajikistan is poor disaster risk reduction capabilities, which has implications for future adaptation capabilities. This is despite the fact that Tajikistan is

<sup>9</sup> These barriers have been identified primarily through National Communications and the International Consultant's mission visit to the five Central Asian countries.

one of the most disaster-prone countries in the wider region of CIS and climate-related disaster risk management is still at the nascent stage. There is also a considerable lack of data in certain key sectors (such as data on glacial melting rates) and in general, existing data is difficult to source and not easily obtained from central databases. For example, glacial modelling data in CA is largely based on data from the 1980s, which currently underpins water resource management in the region. There is thus a considerable need for more up-to-date data. Another example of data deficits stems from the Soviet era, when information on environmental management and disasters was classified and often retained by the military. In many cases, the military still holds this information, and there are consequently difficulties in obtaining the information<sup>10</sup>. The lack of data in some cases is attributable to technology or financial gaps. Hazard warning and monitoring systems, hydro-meteorological systems and glacier monitoring stations, for example, are also inadequate.

21. Importantly, there is little incentive to share data across institutions or ministries due primarily to the limited knowledge of the importance of climate data for development planning in key priority sectors. In some cases, the amount of data is immense but they are stored in an unusable manner e.g. mapped data is often stored in paper format rather than digital format. Many projects, non-governmental organisations or consultancies also hold important databases but these are not widely shared. These barriers are largely attributed to capacity deficits. For example, in Kazakhstan, certain ministries are unable to perform their mandated functions because it is difficult to retain experts because of the low pay in the government sector<sup>11</sup>.

22. Institutions in CA are not aware of available decision-making support tools and adaptation planning methods. There are a number of research centres and analytical think-tank organisations which have established solid technical capacity and a credible reputation in CA. However, these organisations are still not familiar with various methods of adaptation planning (e.g. participatory scenario development). Even though there is a demand for tools such as economic scenarios, climate change is not considered an important driver for development planning. Analogue scenarios<sup>12</sup> and other scenario-based planning are not widely practiced.

23. The second round of national communications have considerably improved the overall understanding of current vulnerabilities and anticipated impacts, based on various emission scenarios that may materialise. However, the Second National Communications (SNC) are not tailored for the needs of decision-makers. Robust socio-economic impact assessments are missing and thus limit the scope of policy influence that the SNCs might achieve. The CA-CRM will overcome this barrier by continually improving climate change databases and consolidating data and analysis and adjusting national economic scenarios under different climate change scenarios. Furthermore, the exchange of results at the multi-country level to help compare, harmonise and adjust climate change scenario outputs in the region is critical for addressing current biases as well as uncertainties surrounding the climate change-related disaster risks and probabilities of incremental change. The up-to-date and accurate data generated can be used to inform decision-making support tools.

***CRM-related interventions are frequently implemented in an ad hoc manner.***

24. There is a lack of synergy between CRM initiatives that limits the scope for upscaling and policy impacts. Furthermore, sporadic and *ad hoc* disaster risk reduction and adaptation prevent the identification of gaps (such as overlooking critical interventions or areas/regions) and result in inefficient use of resources. Projects within and among the two areas are not well coordinated,

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<sup>10</sup> This was identified as a barrier by Brian Donaldson of the UNDP's Early Recovery Programme during the International Consultant's mission visit on 30 July 2009 in Bishkek, Kyrgyzstan.

<sup>11</sup> Information provided to the International Consultant during the mission visit with KAZNIEK in Almaty on the 29 July 2009.

<sup>12</sup> Analogue scenarios involve the use of past warm climates as scenarios of future climate (temporal analogue scenario), or the use of current climate in another location (usually warmer) as a scenario of future climate in the study area (spatial analogue scenario).

and there is no regional institution that is presently capable of bringing them together. By establishing a Multi-Country Climate Network (MCN) of experts from all relevant fields, the CA-CRM will improve coordination and effective information and knowledge exchange by supporting and linking all CRM initiatives across CA. Importantly, a climate change registry will be included on the web-based knowledge management platform, which will allow related projects/programmes or projects/programmes with a CRM-related component to “register” on the site (see paragraph 33). In this way, the extent of CRM across CA will be clearly visible to interested parties which will facilitate coordination of efforts, complementarities and partnerships across the initiatives. Each country within CA will have its own page on the website. By bringing together key experts of the region as part of the multi-country climate network the project will enhance the knowledge exchange, facilitate cross-country dialogue and cooperation at technical and scientific level.

25. CRM is also often treated as an ‘environmental problem’ and is not considered as a core development related problem. This has implications both for funding of CRM measures and efforts as well as governance over CRM. For example, less than 1% of Kyrgyzstan’s national budget goes towards disaster management<sup>13</sup>. The Environmental Agency is the lead agency in climate change matters, but it does not exert sufficient political influence at present<sup>14</sup>. Furthermore, in Kyrgyzstan inter-agency and inter-sectoral communication on climate change is not occurring at a high political level which prevents the mainstreaming of climate change adaptation<sup>15</sup>.

***The critical tradeoffs associated with particularly important CRM interventions are often overlooked.***

26. Climate-related interventions at present do not occur at a multi-country level, but are rather undertaken in isolation even within the broader context of development at a national level. This is of particular concern given the tradeoffs that are associated with many CRM interventions in CA. As previously discussed, water is a conflict-prone, shared resource throughout the region. Hence, CRM measures to improve water availability in one country may jeopardize water availability in “downstream” countries. The CA-CRM will address this barrier by strengthening technical capacity and cooperation at the multi-country level to manage climate change risks and opportunities in an appropriate manner. To facilitate this, the MCN will be assembled (see paragraph 21). By mobilising such technical capacity, critical tradeoffs associated with CRM interventions will be analysed and interventions that minimise the tradeoffs will be considered for implementation.

## **II. Proposed Response**

27. The CA-CRM will take a programmatic approach to CRM. The methodology to be used is briefly summarized as follows:

- Analysis of historical variability, current trends and future climate change scenarios;
- Identification of climate impacts on development sectors e.g. water, energy, health, agriculture, shelter, at the multi-country, national and local levels<sup>xii</sup>;
- Elaboration of risk management decision-support options and needs for adaptation;
- Assessment of institutional and policy implications;
- Determination of capacity development requirements; and
- Creation of evidence-based CRM strategies, policies, plans, and programmes that adopt a dynamic and coherent approach for both the short- and long-term.

<sup>13</sup> This barrier was presented to the International Consultant by Brian Donaldson of the UNDP’s Early Recovery Programme on 30 July 2009.

<sup>14</sup> It is likely to be converted to a department during 2010, however, where it should exert a greater political influence.

<sup>15</sup> This barrier was identified during the International Consultant’s meeting with the key agencies operating in Kyrgyzstan, on 30 July 2009.

28. To achieve the kind of transformational change that is required, climate change risks need to be routinely considered as part of poverty reduction and sectoral strategies, policies and measures. Without such consideration, the management of climate change risks is unlikely to be catalytic, strategic or cognisant of the numerous links across sectors and administrative levels.

29. CRM is a key strategic cross-practice area for UNDP. Its focus upon climatic variability in both the present and the future, provides immediate benefits in protecting MDGs and strengthens the capacity of governments and societies to manage long-term risks. CRM also maximizes the comparative advantages of UNDP, through creating synergy between the capacities of the Energy and Environment Group's (EEG) climate change adaptation know-how and the risk reduction expertise of the Bureau of Crisis Prevention and Recovery (BCPR), as well as benefiting from UNDP's significant country presence.

30. A key aspect of the project will be to assist CA to reduce the maladaptive costs that result from duplicative, *ad hoc*, delayed and under-sized efforts. This will entail significant engagement of related programmes and projects. The project will also play a facilitating role in catalysing the raising of additional finance in a timely and predictable manner to meet the full costs of CRM.

### **REGIONAL COMPONENT- TECHNICAL SUPPORT AND KNOWLEDGE SHARING**

31. It is of critical importance that the national projects are not developed and implemented in isolation from one another. Although isolated national projects can potentially be effective in their own right, their efficacy is likely to increase substantially if developed after taking into consideration the most up-to-date and relevant information on similar endeavours from across CA and the rest of the world. The multi-country approach is particularly important because i) the impacts of climate variability and change will be experienced across political borders particularly in terms of water and energy resources and the water-agriculture interface; ii) multi-country responses to current challenges may be constrained by prevailing political interests; iii) CRM strategies of each country should be conflict-sensitive and avoid undermining the CRM needs of neighbouring countries; iv) multi-country institutional arrangements are few, and state sovereignty concerns often reduce the strength of multi-country cooperation<sup>16</sup>; v) some regional cooperation at scientific and technical levels exists but it is not systematic - improved scientific cooperation is therefore essential for better understanding of the complex dynamics and impacts of climate change in the region and particularly in "upstream" and "downstream" countries; and vi) collective lobbying for international funding to address climate challenges is more likely to be successful where there are greater possibilities for achieving economies of scale than might be possible through individual country efforts. Furthermore, a multi-country approach will decrease the likelihood of maladaptive development decisions occurring.

32. The multi-country approach will facilitate the outputs of each country project by: i) supporting institutional development in a manner responsive to the unique circumstances and needs of each country; ii) identifying best practices, experiences and technologies on implementing climate-resilient policies in priority sectors and exchanging them among countries; iii) identifying innovative financing options and facilitating key partnerships at the national and multi-country levels; and iv) supporting the implementation of CRM measures in priority sectors in each country. In pursuit of this objective, the multi-country component of the project will deliver the following output and activity results:

### **Output 1: Technical capacity and knowledge in the area of climate risk management in Central Asia strengthened**

<sup>16</sup> At present the most relevant regional institutions are 1) the International Fund for the Aral Sea, which is presently building capacity for the implementation of the Aral Sea Basin Program-3, 2) the Central Asian center for Disaster Response and Risk Reduction, which is yet to be established, and 3) the Central Asia Regional Economic Cooperation Program (CAREC), which lacks implementation capacity at present, but does provide a forum for the Central Asian states to discuss cross-border cooperation. CA-CRM will work with all of the organizations to achieve synergies and build capacity, where appropriate.

**Activity Result 1.1 Technical capacity to manage climate change risks and opportunities in an integrated manner at the multi-country level strengthened.**

33. *Who will be targeted?* National experts, analytical think-tanks, the national hydromets, disaster management agencies, other relevant government bodies, and the broader scientific community will be targeted. It will be ensured that both women and men can equally benefit from the capacity development interventions. Donors and IFIs will also be invited to participate in the meetings of the MCN.

34. *What will be done?* A Multi-country Climate Network (MCN) will be formed with multi-sectoral technical experts to conduct all technical aspects of the multi-country project, whilst a Multi-country Project Management Unit (MPMU) will conduct project management tasks and facilitate the establishment of the MCN and provide other support to it, as needed. The MPMU will consist of a project manager and an administrative assistant. The MPMU will be based within the UNDP regional office. The MCN will consist of various specialists including *inter alia* climate change modellers, climatologists, agronomists, hydrologists, agrometeorologists, economists (with resource economics experience), sociologists, ecologists (e.g. rangeland and freshwater), glaciologists, adaptation and climate-related disaster reduction experts. Women will be specifically encouraged to join the MCN.

35. The MCN, a 'virtual' network of experts, under the guidance of the technical coordinator, will be responsible for: i) delivering technical expertise to the national projects; ii) providing training and tools to countries as their climate risk management approach develops; and iii) facilitating the implementation of national interventions; iv) coordinating CRM projects within CA; v) synthesising and processing information received from the national projects teams; vi) undertaking the biophysical assessments and cost-benefit analyses and providing the results to the national project teams, this will be done in an iterative process and national level teams will be able to assist in refining these products; vii) strengthening multi-country and national CRM capacity; viii) facilitating bilateral and multilateral knowledge exchange sessions; ix) developing and maintaining a multi-country web-based knowledge management platform (this includes finding a sustainable host for this in the future); x) synthesising and processing lessons-learned and best practices from the national project teams and publishing them on the multi-country web-based knowledge management platform; and xi) producing multi-country publications. Importantly, the MCN will play a central role in harmonizing the CRM measures already in place and those to be implemented in the future. It will assist in the early analysis and design of national projects by facilitating access to the best data available and information on climate variability and impacts. It will also help to establish region-wide knowledge and learning mechanisms to raise awareness, engage stakeholders, inform decision-makers, and promote exchange and cooperation between countries.

36. Importantly, the MCN will create economies of scale in terms of developing CRM expertise for the region. The inter-sectoral links and complexity of CRM requires input from a wide range of specialists in order to undertake, for example, scenario-based planning and cost-benefit analyses. Assembling a network of this nature is most cost-effective by taking a centralised approach. National projects (largely executed by National Climate Networks) will work closely with the MCN, providing data and information for the analyses required, and importantly, receiving the results of these analyses for use/dissemination at a national level. At the national level, analyses may be further refined and fed back into the MCN, thereby establishing an iterative process to constantly improve assessments.

37. The MCN will collect and archive socio-economic and biophysical data and information provided by the five national projects. Although climate change modelling has been undertaken for the national communications of the individual countries, there are several contradictions among them, which complicate the assessment of impacts at the river basin level. The MCN will bring together experts from across the region to analyze past climate data, reconcile differences in methodology related to climate change projections, and (as feasible and necessary) support

the refinement of existing projections at multi-country, national, and river basin scales. Analogue approaches can also be introduced. Climate analogues could provide useful estimates of uncertainties and help identify most cost-effective climate risk management and adaptation strategies. Up-to-date and extensive data collection and management will inform biophysical assessments (e.g. impacts upon *inter alia* water, soils and desert pastures) and socio-economic cost-benefit analyses (particular attention will be paid to impacts on women) of climate change that are fully tailored for national circumstances leading to national actions. The costs of climate variability and change and the costs and benefits of potential CRM interventions will be determined through the actions under this activity<sup>17</sup>.

38. Biophysical and socioeconomic assessments will be complemented by assessments of the enabling environment, networks and systems, organizational entities, and human resources available for CRM (including gender-disaggregated data), which will be utilized to identify the policy, institutional, and capacity development needs for CRM. These will be conducted at the national and regional levels. Areas in which regional dialogue is needed, such as sustainable management of natural resources and disaster risk management, will be identified.

39. Due to the complexity of the potential impacts of climate change, analyses of complex systems are required to undertake effective socio-economic cost-benefit analyses. This should also include methods on investment and financial flows assessment.

40. Analyses on specific CRM interventions will be conducted at a national level for each country, as well as at the regional level. Each national project will provide lists of potential CRM interventions to the MCN for analysis<sup>18</sup>. This will include both soft interventions (e.g. CRM policy measures) and hard interventions (e.g. specific technology interventions such as the introduction of drip irrigation and reforestation on slopes). No-regret intervention options<sup>19</sup> will take priority. Results and information from these analyses will be disseminated back to the national projects for implementation of pilot interventions, and information will be packaged for various target audiences such as policy-makers, decision-makers or local communities. These interventions will be introduced in order to attract additional funding or redirect existing financing towards climate-sensitive solutions, catalyse learning and inform national- and/or multi-country-scale interventions. As national and community level interventions are executed under CA-CRM, the MCN will seek to derive and disseminate lessons learned from them, thereby strengthening the community of practice among experts and decision-makers from the five countries. For the purpose of facilitating regional CRM interventions, the MCN will engage in evidence-based advocacy to governments and donors in the relevant sectors.

41. The MCN will be created from members of National Climate Networks. These will be established in the initial stages of the project, beginning with a series of inception workshops. The MCN (or relevant portions of it) will meet on an as-needed basis to implement programme and project activities, review outputs and plan next steps for CRM interventions under the programme. An Advisory Committee will be comprised of selected members of the MCN. It will meet on a quarterly basis to work with the technical coordinator in providing guidance to and facilitating programme and project activities. The initial meeting(s) of the Advisory Committee will be devoted to creating a simple charter for the MCN (to be approved by it). Advisory Committee members will also form a part of the Project Board (see below under Management Arrangements). The Advisory Committee will also conduct consultations and create a strategic plan for the functioning of the MCN beyond the life of the programme.

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<sup>17</sup> Due to the complex nature of climate change and its impacts on almost all sectors it is recommended that tools such as dynamic systems modelling (e.g. Threshold 21 [T21] see [www.threshold21.com](http://www.threshold21.com)) and cost-benefit analyses are used.

<sup>18</sup> Studies such as the Stern Review and the analysis of investment and financial flows to address climate change prepared by the United Nations Framework Convention on Climate Change (UNFCCC) have shown that the economic benefits of effective early action significantly outweigh the costs (Climate Change at UNDP: Scaling up to meet the challenge, 2008, UNDP EEG).

<sup>19</sup> No-regret options are those that are justified by current climate conditions and further justified when climate change is considered, e.g. pollution reduction in water supplies will be beneficial if water supplies decrease because of climate change. (Lim, B, and E. Spanger-Siegfried. 2004. Adaptation policy frameworks for climate change: developing strategies, policies and measures. Cambridge University Press, Cambridge, UK pp 253.)



42. The MCN will work in close cooperation with the regional hydromets, disaster management agencies, and other relevant government agencies throughout CA, as well as the following: i) the UNDP-BCPR programme; ii) Environmental Security (ENVSEC); iii) the International Strategy for Disaster Reduction (ISDR); iv) Office for Security and Co-operation in Europe (OSCE); v) World Meteorological Organisation (WMO); and vi) the World Bank (WB); vii) UN Office for the Coordination of Humanitarian Affairs (OCHA); viii) UNDP-UNEP Poverty and Environment Initiative; ix) UNDP Central Asia Integrated Water Resources Management Project. In addition, the MCN will link with relevant projects implemented/funded by other organisations, including *inter alia*: i) Swiss Development Cooperation (SDC); ii) Japan Cooperation Agency (JICA); iii) the Central Asia Environment and Sustainable Development Network (CARNet); iv) Asia Development Bank (ADB); v) German Technical Cooperation (GTZ); vi) Central Asia Sustainable Land Management Programme (CACILM); vii) the Regional Environment Centre for Central Asia (Carec); viii) International Centre for Research in Dry Areas (ICARDA); ix) Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRM); x) Central Asia Disaster Response Centre. CA-CRM will also be executed under the umbrella of the International Fund for the Aral Sea's (IFAS) Aral Sea Basin Program-3.<sup>20</sup> Linkages will also be investigated with the Central Asia Regional Economic Cooperation (CAREC) Program. Furthermore, numerous other organisations and projects will be worked with on specific topics and issues of national or region multi-country interest. Many of these are discussed within each country project. Cooperation will concern mainstreaming climate risk management into development activities, incorporating a climate risk management approach into studies and assessments (as hydrological modelling), and facilitating regional and national dialogue concerning key issues that will be affected by climate variability and change, such as resource scarcity and management solutions.

43. Technical capacity will be strengthened in CA through multi-country level training, which will be aimed specifically at enabling the implementation of CA-CRM activities. Multi-country training under this project of CA-CRM will be designed to complement and/or reinforce training conducted under the national projects. Training materials will be produced for national experts, including the key ministry and research institute staff, as well as staff of relevant regional organizations. Additionally, training materials will be produced for specifically identified capacity building interventions, including: training of policy-makers, decision-makers and legislators. Workshops will be held to facilitate multi-country training on specific technical topics. These workshops will include the use of socio-economic impact results and learning-in-action exercises utilising tools such as participatory scenario development. For example, dynamic systems modelling is a tool used to support participatory scenario development and integrated cross-sectoral development planning and could be used to model the impacts of climate change and climate-related disasters on the economy and different sectors. An example of such a dynamic systems modelling tool is Threshold 21 (T21)<sup>21</sup>, developed by the Millennium Institute, which supports the analysis of different policy options. Such exercises will enable policy-makers and decision-makers to have first hand experience with the methodologies underlying CRM. This will also create ownership over the process and the results of the training. In organization of the trainings and technical workshops the project will partner wherever possible with local organizations that would be enabled to do such training events in the future. The project will evaluate training activities at the end of each event, and then plan for a follow-up to the training/workshop in about 6 months to see if the skills are being used by the trainees.

44. A further measure to increase capacity and collaboration within CA will be through the use of bilateral and multi-country knowledge exchange sessions aimed at technical experts. These sessions will facilitate discussions and analyses of topics such as *inter alia* managing water resources in the face of increased glacial melting, climate-related disaster management,

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<sup>20</sup> Although CA-CRM will be executed directly under UNDP auspices (as specified below under Management Arrangements) it will be included into and coordinated with other components of ASBP-3, as it covers two of the ASBP-3's key focus areas (climate change adaptation and disaster risk management). Inclusion into ASBP-3 will 1) provide high level political support from national governments and 2) contribute to the achieving synergy among the MCN and the International Fund for the Aral Sea, national institutions, and other donor projects involved in ASBP-3.

<sup>21</sup> see [www.threshold21.com](http://www.threshold21.com)

reforestation, livestock management and improved water management in the agriculture sector water. Links can be sought with USAID and GTZ, who are proposing to bring the water/energy debates under one umbrella programme. This will utilise electronic discussions (CARNet can be employed to facilitate this action).

45. *What is the benefit of having a MCN?* Having such technical capacity mobilised at a multi-country level will optimise costs for necessary expert inputs, introduce methods for the stipulated assessments and train the experts that will assist all of the Central Asian countries. The MCN will be a multidisciplinary team of experts from the countries of Central Asia, but will also include some international experts on a part-time basis, as necessary. It will comprise in particular, national experts who will also be engaged in the national projects and will bring both national and multi-country perspectives in the risk assessments and CRM responses. Adopting this approach will also help identify the existing critical tradeoffs pertaining to various CRM options at the multi-country level. This is of particular importance in the context of management of water bodies shared between countries within the region. CRM interventions in one country (e.g. increasing water storage capacity), for example, may jeopardize CRM interventions and water availability in a neighbouring country. It is anticipated that the MCN will ensure that CRM does not occur in isolation at a national level, without taking into account the needs and interests of neighbouring Central Asian countries, but rather occurs through countries working together in order to achieve multi-country resilience to climate variability and change.

46. A project review exercise will be undertaken for CA, at both multi-country and national levels. At present, there are numerous projects (both those that are specifically focused on climate change and those that do not have a climate change focus but are in many cases unknowingly contributing to CRM). This review will be undertaken to inform the activities of the MCN climate change coordinator, who will seek synergies between projects, promote resource sharing and avoid duplication of activities.

47. *How will it progress CRM?* The establishment of a MCN will provide a platform for information dissemination, multi-country awareness raising and collaboration between countries within CA. It will maximize on the benefit from multi-country expertise and reduce the costs that would have been involved in replicating the same analyses and database management in five countries. The MCN will also be critical for assessing CRM from a multi-country perspective, which is particularly necessary in CA, where a large proportion of water resources are shared. Increased knowledge, capacity and up-to-date baseline data and information will enable improved and informed decision-making at a national level to take place through the use of appropriate planning tools.

***Activity Result 1.2: Knowledge on adjusting national development processes to fully incorporate climate change risks and opportunities shared across national, multi-country and global levels.***

48. *Who will be targeted?* i) The national projects and their counterparts from Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan; and ii) the regional and the international community through web-based information services. Links with CARNet will be sought, as well as other information sharing networks. All organisations and bodies involved or related to CRM will be targeted through this activity, as it aims to bring knowledge, information and data onto one easily accessible platform.

49. *What will be done?* The MCN will be responsible for developing a CRM database management system in order to archive multi-country and national level information, data, lessons-learned, documents, project progress and best practices received from the national projects. Data and information will also be collected from regional institutions (such as IFAS, Interstate Commission for Water Coordination, and the Central Asian Center for Disaster Response and Risk Reduction). This information and data will be available for use by a wide-range of stakeholders and partner organisations, and it is anticipated that this database will be added to by partner organisations. Ideally, this will form the basis for a multi-country CRM database that will be used and further developed into the future. This database will also provide

the critical data and information required for the analyses to be conducted by the MCN.

50. The above-mentioned information will be synthesised and displayed on the multi-country web-based knowledge management platform. This platform will be developed and maintained and updated by the MCN. In this way, lessons-learned on adjusting national development processes to take climate change into account will be shared with multi-country stakeholders and the international community. Regional level information and lessons-learned will also be disseminated via Adaptation Learning Mechanism (ALM).

51. The web-based knowledge management platform will also provide a partnership programme page displaying related organisations, donors and NGO information. Furthermore, this platform will contain a CRM registry where all CRM-related projects and projects with relevant components can be registered. This will enable potential funders, donors and organisations to assess what is being implemented within each country, where there are gaps in implementation, and how best to partner with other organisations and projects.

52. The MCN will also produce a knowledge publication “Central Asia: Climate Change Impacts and Climate Change Adaptation Solutions”<sup>22</sup>. This will be based on the programme results and key lessons. It will be published both online and in hard copy to enable national, multi-country and global access to the document. Among potential issues, that the publication could specifically look into is the role of water and energy tariffs in Central Asia.

53. Lastly, the MCN will be responsible for ensuring the sustainability of the database and website into the future. It is likely that a funding strategy will be required to enable this activity to be achieved. An organisation such as CARNet may house the database and website.

54. *How will it progress CRM?* To date, limited awareness of the impacts of climate variability and change has been a barrier preventing adequate climate management response across CA. Additionally, a lack of easily accessible data and information has hampered efforts to analyze climatic variability, vulnerabilities, and impacts, as well as identify appropriate risk reduction measures. Furthermore, this lack of data and information has been a barrier to creating political traction on the importance of early CRM action. This activity will enable numerous stakeholders to gain access to critical information and data, and will promote forward momentum across CA on CRM.

***Activity Result 1.3: Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers***

55. *Who will be targeted?* The following will be targeted: i) the MCN; ii) the five Central Asian hydromets, disaster management agencies, and national CRM projects; iii) technical experts and scientists from institutions and organisations and projects working on glacial melting within the Central Asian region.

56. *What will be done?* There is an urgent need for synthesising the glacial melting information that is available and identifying knowledge and data gaps. This is because data has not been shared in the past, and currently there are a number of initiatives underway which are gathering new data but are not collaborating with each other. For this reason, a comprehensive analysis of the glacial melting problem will be undertaken. This will include: i) reviewing all projects that have been or are being undertaken; ii) collecting information/data from these projects; and iii) forging collaboration with existing projects. This should include information from Afghanistan where relevant to the water of supply of Central Asian countries. It will be particularly important to facilitate the development of working networks of technical experts and to improve data flow. Where gaps in data (e.g. measurements of certain key glaciers) need to be filled urgently, and can be obtained within a 6 month time frame, the project will finance the on-the-ground field work, if feasible, or remote sensing analysis. The project will attempt to play a facilitating role in

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<sup>22</sup> The title of the knowledge publication may change during project implementation.

mobilization of funds and programming for further glacier observation and analysis, as well as the incorporation of the results into the analysis of present and future scenarios through hydrological modelling. This will build on/be done in collaboration with initiatives such as CAWa.

57. Lastly, awareness will be raised and the findings of the analyses and the range of recommendations will be presented to decision-makers in the water sector in CA. This component will be achieved by collaborating with relevant programmes and projects in the following tasks: i) holding round tables/workshops; ii) establishing a web-based platform that presents all project results; iii) facilitating an e-discussion within the region; iv) conducting technical training within the hydromets of the region for furthering the glacial research; and v) presenting the results of the study to an appropriate body. Stakeholders other than decision-makers will be targeted through the web-based platform. These activities will likely be done in close collaboration with/build on the activities of CAWa.

58. *How will it progress CRM?* Glacial melting poses a significant threat to water, energy and food security, as well as to political relationships across CA. At present, small changes in the timing of seasonal glacial melting are already having impacts on these sectors, increasing current vulnerability. The development of a robust baseline database on glacial melting will be used to better inform decision-makers and stakeholders on the impacts of current and future glacial melting, thus improving their capacity to propose and put in place the appropriate CRM measures to reduce vulnerability to this particular climate change impact.

## **NATIONAL COMPONENTS**

59. Five national components (one for each of the five CA countries) are designed according to the same basic structure, each consisting of five Activity Results, but modified according to national circumstances. Annexes 1-5 contain detailed national project documents and below general proposed response at a national level is presented.

60. The national components of the CA-CRM will address the main institutional capacity, policy and financial barriers preventing the adoption of systematic CRM in five Central Asian countries. To achieve this, the CA-CRM will enhance the CRM capacity in countries, promote timely CRM action and provide guidelines for sustainable financial solutions. In so doing, the programme will increase resilience to climate variability and change across the country. It will also ensure that the countries capitalise on potential opportunities presented by climate change. Importantly, the CA-CRM will draw on the knowledge and analyses generated by the regional component of the programme.

### **Output 2, 3, 4, 5, 6: Comprehensive Approaches to Climate Risk Management promoted in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan**

#### **Activity Result 2.1, 3.1, 4.1, 5.1, 6.1: Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened**

61. *Who will be targeted?* Key line ministries, key policy- and decision-makers, local NGOs, farmers associations and farmers unions, research institutes, national experts and the national hydromets.

62. *What will be done?* A 'national climate network' (NCN), the national arm and constituent part of the Multi-Country Climate Network, will be established. The NCN will include various specialists, including *inter alia* climate change modellers, climatologists, agronomists, hydrologists, agrometeorologists, economists (with resource economics experience), sociologists, ecologists (e.g. rangeland and freshwater), glaciologists, adaptation and climate-related disaster reduction experts. The NCN will undertake various key activities, including *inter alia*: i) facilitating the revision of the institutional mandates of key sectoral and central ministries to engage in CRM;

ii) conducting an in-depth review of previous and current CRM-related projects in each country; iii) collecting national-level socio-economic and biophysical data pertaining to CRM from key line ministries and research institutions; and iv) developing a detailed climate change country profile for each country. The NCN will represent the key institutions (including research institutions and think tanks) that will assist in consolidating existing in-house knowledge as well as act as interlocutors for needs identification and institutional capacity development (representing not only their own organisations but wider constituencies).

63. Active institutions dealing with climate variability and change such will be assessed and strengthened particularly in respect to climate change cooperation within and across governmental ministries and agencies. Existing partnerships will be further developed and integrated into a broader institutional framework managing climate variability and change risks.

64. A review of previous and current CRM-related projects and programmes will be undertaken in order to use lessons-learned and best practices to guide the programme. Once synthesised, this information will then be disseminated to the multi-country climate network (MCN) for dissemination on the regional web-based knowledge management platform.

65. Socio-economic and biophysical data will also be collected and disseminated to the MCN for analyses. This data will be used to perform a complete climate analysis (e.g. the historical climatic trends, current trends and future scenarios) and assess the impacts climate variability and change and climate-related disasters are likely to have on key affected sectors (including *inter alia* energy supply, irrigated agriculture, water resources, shelter and infrastructure).

66. The MCN will also use planning tools such as participatory scenario development (e.g. dynamic systems modelling) and cost-benefit analyses to: i) determine the costs climate variability and change pose to each of the country in different sectors; and ii) the cost and benefits of particular high priority climate risk management interventions. Dynamic systems modelling is a tool used to support integrated cross-sectoral development planning and could be used to model the impacts of climate change and climate-related disasters on the economy and different sectors. An example of such a tool is Threshold 21 (T21)<sup>23</sup>, developed by the Millennium Institute, which supports analysis of different policy options. The NCN will also produce a climate change country profile for each of the country based on available information and data. The climate change country profile may help to refine analyses made by the MCN. Corrections or refinements can be fed back into the overall regional analysis, thereby establishing a dynamic iterative process to be continued for the duration of the programme, as better data, tools, and models become available.

67. Existing weather forecasting and Early Warning Systems (EWS) will be analysed to determine appropriate interventions for improved weather forecasting, early warning services and response preparedness related to climate-related disaster risk reduction, which are critical for protecting people and assets from risks. The national hydromets will be critical partners in these activities. As part of the assessment of weather forecasting and EWS(s), a vulnerability mapping exercise will be conducted. This will also be used to assist in the prioritization of potential pilot sites for interventions.

68. A national capacity inventories will be undertaken in order to guide training needs for the CA-CRM and for future country capacity. Training of NCN staff, key line ministry staff and research institutions will be conducted (at both regional and national levels) and data, information and equipment needs will be identified to assist countries in filling critical capacity gaps.

69. *How will it progress CRM?* Increased coordination between ministries and updated assessments on the progress and success of existing programmes and collaborations will assist five countries in developing and formulating climate-proof national strategies, policies and legislation in order to minimize the countries' vulnerability to climate variability and change

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<sup>23</sup> see [www.threshold21.com](http://www.threshold21.com)

impacts. By establishing the capacity (technical and physical) to provide up-to-date assessments of vulnerability to climate-related impacts, the countries will be better able to determine appropriate adaptation measures. In addition, more adaptation measures will become available with the development of long-term planning tools informed by an up-to-date knowledge base, and in response to the comprehensive identification of adaptation requirements in the social, economic and environmental risk assessments. A strengthened EWS will further guide and inform appropriate adaptation.

***Activity Result 2.2, 3.2, 4.2, 5.2, 6.2: Climate-resilient strategies, policies and legislation in priority sectors and geographical areas strengthened***

70. *Who will be targeted?* Key line ministries, key policy- and decision-makers, local NGOs, research institutes and the hydromets.

71. *What will be done?* A review of existing strategies, policies and legislation will be undertaken in the key priority sectors (e.g. energy, water, agriculture, disaster risk management, and development planning). This review will be informed by the results from Output 1 of the regional component. A multi-sectoral approach will be adopted in order to ensure that CRM is not incorporated in an isolated manner, but rather that it is mainstreamed into national development through these strategies, policies and legislation.

72. Based on the outcomes of Activities 2.1, 3.1, 4.1, 5.1, 6.1 and the review of existing strategies, policies and legislation, a package of measures for key affected sectors will be identified. This package of measures depend on: i) how the sector is affected by climate; ii) the key stakeholders/institutions involved; iii) the plans, policies and legislative amendments required for reducing climate-related vulnerability; and iv) the measures (e.g. policy adjustments, institutional realignment and/or capacity development) required to improve climate-related outcomes in that particular sector. A number of key policy and legislative entry points which have the potential to significantly improve climate-related outcomes will be selected. This will assist with identifying priorities and creating a more climate-resilient institutional and policy environment.

73. Training will be undertaken at a national level in order to capacitate decision- and policy-makers to make informed changes. 'No-regret' CRM policy measures will be identified, prioritized and piloted for future integration into strategies, policies and legislation (e.g. revised spatial and land-use plans may be required for enhanced disaster risk reduction). At the regional level, the MCN will work to facilitate exchange of experiences and establish a community of practice to work toward improving approaches in strengthening and (when appropriate and feasible) harmonizing the enabling environment for CRM.

74. *How will it progress CRM?* To achieve the kind of transformational change that is required, climate change risks need to be routinely considered as part of poverty reduction and sectoral and cross-sectoral strategies, policies and measures. Without such consideration, the management of climate change risks is unlikely to be catalytic, strategic or cognisant of the numerous links across sectors and administrative levels. Policies, strategies and legislation related to CRM are currently fragmented and isolated. By incorporating priority CRM concerns into strategies, policies and legislation the development of the country can be steered towards a 'no-regrets' future in terms of managing climate variability and change. The use of a cross-sectoral and a multi-stakeholder approach will also ensure that CRM is comprehensively mainstreamed into the national development process.

***Activity Result 2.3, 3.3, 4.3, 5.3, 6.3: Financing options to meet national climate risk management costs expanded at the local, sub-national, and national levels.***

75. *Who will be targeted?* Ministries of Finance and Economy and key-line ministries, policy- and decision-makers at national, sub-national as well as local levels. Additionally, the programme should work closely with community organisations, specialised associations (such as water user associations and extension services) and research institutes.

76. *What will be done?* A robust structure for coordinating and ensuring long-term financing for national CRM will be developed. The results of the analyses of key CRM priorities, undertaken in Activity 1.1, will be used to guide budget alterations to facilitate long-term financing of CRM measures.

77. To achieve this, innovative financial instruments and mechanisms will be identified, developed, tested and introduced, as part of a strengthened CRM financing strategy, to finance adaptation at all scales (national, sub-national and local) in the short- and long-term. The MCN will conduct analyses, whilst the NCN will disseminate information and data to the MCN to enable the analyses. Capacity to design and implement financing options will be developed to ensure sustainability of adaptation financing at all levels.

78. Although it is important to engineer financial instruments locally, there are a number of funding opportunities which CA countries can also benefit from to assist in the financing of CRM interventions, particularly those which may require piloting before achieving government buy-in. The Adaptation Fund and the Cool Earth Partnership are some of the examples.

79. The potential for financing climate variability and change through the carbon credit market will be researched in detail. This should include a focus on carbon sequestration and restoration of forests and degraded land, which could earn revenues from the carbon market, as well as provide socio-economic and environmental benefits.

80. *How will it progress CRM?* CRM at all levels (national, sub-national and local) will require large financial resources. The utilisation of innovative financial instruments and mechanisms at all levels will increase the resources available for CRM measures and lead to sustainability of adaptation initiatives.

***Activity Result 2.4, 3.4, 4.4, 5.4, 6.4: Climate risk management interventions in priority sectors implemented***

81. *Who will be targeted?* Key line ministries, as well as decision-makers in government, the private sector, civil society, and NGOs. Additionally, other organisations and programmes conducting interventions will be targeted, such as the World Bank, UNDP Poverty and Environment Initiative (PEI), UNDP-GEF Small Grants Programmes, UNDP Communities Programmes, UNDP Disaster Risk Management Programmes, German Technical Cooperation (GTZ), etc.

82. *What will be done?* On-the-ground CRM interventions identified as high priority through the analysis of key priority sectors by the NCN will be implemented on a small-scale basis in vulnerable areas (using the vulnerability mapping). Importantly, the analysis undertaken by the NCN will incorporate the needs and perspectives of local communities most affected by climate risks and will prioritise interventions in terms of: i) future climate change hotspots; ii) cost-effectiveness; iii) contribution to the livelihoods of vulnerable communities; iv) ability of the measure to reflect progress/success over a relatively short time period (i.e. within the duration of the CA-CRM); v) probability of adoption of the measure by vulnerable communities; vi) potential for national upscaling; vii) involvement of women in the implementation of the measure (to ensure gender equality); viii) key themes<sup>24</sup> (see the Situation Analysis section); ix) their ability to reduce the risk of climate-related disasters; and x) whether they are addressing cross-sectoral climate variability and change impacts (e.g. address the interface of agriculture-water and water-energy). Importantly, identified interventions should have a particular focus on employment guarantee schemes for CRM public works (e.g. strengthening river banks, reforestation and de-silting irrigation canals).

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<sup>24</sup> Namely: management of water resources in the face of glacial melting; climate change-related disaster management; reforestation; livestock managements; and improved water management in the agriculture sector.

83. The CRM interventions will be piloted to demonstrate effective adaptation measures and to stimulate the mobilisation of funds for upscaling. Barriers to the upscaling of on-the-ground CRM interventions will be identified and addressed in order to facilitate the widespread adoption of interventions across Central Asian countries.

84. Interventions could include those that develop local response capacity to manage climate-related disasters in rural communities (such as mudslides, landslides and avalanches caused by increasing temperatures, changing rainfall patterns and extreme weather events). Such climate-related disasters are likely to be associated with the increasing likelihood of crop failures and risks to sustainable food production.

85. As national and community level interventions are executed under CA-CRM, the MCN will seek to derive and disseminate lessons learned from them, thereby strengthening the community of practice among experts and decision-makers from the five countries. On the basis of interventions in the five countries, a toolkit will be developed for local level climate risk management

86. *How will it progress CRM?* Implementing CRM interventions at a local level will help to reduce countries' vulnerability to the impacts of climate variability and change and of climate-related disasters. Furthermore, it will provide tangible evidence and data that will be used to further create political traction on CRM. The interventions will be used to catalyze further financial investments in adaptation.

***Activity Result 2.5, 3.5, 4.5, 5.5, 6.5: Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national level disseminated***

87. *Who will be targeted?* The NCN; government (national, sub-national and local); the public and private sector; communities across five countries. Links with the Regional Environmental Centre for Central Asia (Carec) will be sought, as well as other information sharing networks. All organisations and bodies linked to CRM will be targeted through this output, as it aims to bring knowledge, information and data onto one easily accessible platform.

88. *What will be done?* The NCN will be responsible for disseminating all information, data, lessons-learned and best practises to the MCN. The MCN will develop a CRM database, web-based knowledge management platform, a CRM in CA publication and a CRM registry in order to archive information, data, lessons-learned and best practices received from the NCNs. Furthermore, the NCN will conduct an awareness-raising campaign, which will share important climate variability and change information and also lessons-learned. The use of easily accessible communication tools are to be used to ensure access by all, including newspaper segments, information boards, radio, television, seminars and rural advisory services.

89. *How will it progress CRM?* To date, limited awareness of climate impacts has been a barrier preventing adequate CRM response in Central Asia. This Activity (coupled with Activity 1.2) will enable numerous stakeholders to gain easy access to critical information and data, and will promote political momentum with regards to CRM.

### **III. Strategy**

**Goal:** To increase Central Asia's resilience to climate-related disaster and climate change impacts and in so doing secure development gains.

**Objective:** To promote reduction of climate-related disasters and adaptation to climate change in Central Asia and to integrate climate risk management into core development policy and



strategies of the five countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan).

## OUTPUTS AND ACTIVITY RESULTS

### **Output 1: Technical capacity and knowledge in the area of climate risk management in Central Asia strengthened**

**Baseline:** 1. Baseline data and information pertaining to climate change impacts in CA requires strengthening. At present, climate change-related data is not synthesised. The costs of climate change and of potential adaptation interventions have not been extensively studied or reported, often resulting in the implementation of maladaptive interventions, which can have considerable negative economic impact. 2. CRM technical capacity within CA is currently underdeveloped. Regional awareness and knowledge of climate variability, climate change impacts and CRM are limited. 3. Understanding of glacial melting is restricted to isolated geographic areas and is regionally incomplete.

**Indicator 1:** Improved access to data and analysis on climate change impacts in Central Asia

**Indicator 2:** Skills and knowledge improved as a result of targeted training and workshops (monitored through surveys)

**Indicator 3:** Improved information and analysis on glacier retreat dynamics are accessible to stakeholders

### **Activity Result 1.1: Technical capacity to manage climate change risks and opportunities in an integrated manner strengthened at the regional level**

**Action 1.1.1:** Establish a multi-country climate network for: i) analysing climate impacts; ii) synthesising and disseminating climate variability and climate change information; and iii) coordinating CRM projects (details are contained within paragraphs 24-26).

**Action 1.1.2:** Collect and archive national-level socio-economic and biophysical data and information pertaining to climate change adaptation from the five project teams.

- Produce a list of country-specific data needs for the scenario adjustments, socio-economic cost-benefit analyses and biophysical assessments of climate change impacts.
- Send the lists of data needs to each national project team.
- Organise expert consultations on national scenarios and needs for adjustments.

**Action 1.1.3:** Conduct a comprehensive climate risk assessment / baseline study, based on collated data and analysis.

- Document data gaps for each country and regionally and send to each project team for incorporation into national research strategies.
- Establish climate risk assessment framework and define appropriate methodologies.
- Deliver the training on analogue approach in scenario planning and assessments of uncertainties.

**Action 1.1.4:** Utilise planning tools such as participatory scenario development and socio-economic cost-benefit analyses to i) assess the costs associated with climate variability and change, and ii) the costs and benefits of a range of CRM interventions at a multi-country as well as national level for each of the countries.

- Decide on appropriate assessment methods and planning tools (the MCN will undertake this sub-action) e.g. participatory scenario development and cost-benefit analyses.
- Conduct multi-country training sessions to utilise the planning tools. Here and below the training sessions will be followed by immediate assessment of the training and a follow-up assessment in about 6 months after the training to assess extent of application of acquired skills and/or knowledge.
- Conduct analyses of complex systems using the chosen tool(s).

- Conduct sectoral and cross-sectoral socio-economic climate change impact assessment using the chosen tool(s).
- Package results for different audiences. Appropriate audiences include: i) scientists and technical experts; ii) policy-makers and decision-makers and legislators; iii) project developers and implementers; and iv) civil society.
- Package participatory scenario development exercises and socio-economic data for training purposes (Action 2.1.8, 3.1.8, 4.1.8, 5.1.8, 6.1.8).
- Disseminate country-specific results to project teams, using the web-based knowledge management platform and training, to inform national action.
- Disseminate results onto the multi-country web-based knowledge management platform.

**Action 1.1.5:** Produce training materials for national project teams and stakeholders (such as policy-makers, decision-makers and legislators, resource centres and teachers) involved in implementation of CA-CRM activities. This will be based on national capacity inventories (Actions 2.1.7, 3.1.7, 4.1.7, 5.1.7, 6.1.7).

**Action 1.1.6:** Conduct bilateral and multi-country knowledge exchange sessions for targeted groups of *inter alia* hydro-meteorologists, agro-meteorologists, disaster risk reduction practitioners, researchers, development planners, and decision-makers on specific priority topics.

**Activity Result 1.2: Knowledge on adjusting national development processes to fully incorporate climate change risks and opportunities shared across national, multi-country and global levels**

**Action 1.2.1:** Develop a CRM database management system.

**Action 1.2.2:** Develop a multi-country web-based knowledge management platform for CA-CRM. This is to include: i) a climate change action registry; ii) a multi-country section; iii) a section for each of the five countries.

**Action 1.2.3:** Collect and upload: i) lessons learned; ii) best practise guidelines; and iii) documents and data onto the database management system, regional web-based knowledge management platform and CRM action registry. Lessons learned will be also uploaded to UNDP's ALM.

**Action 1.2.4:** Produce a knowledge publication "Central Asia: Climate Change Impacts and Climate Change Adaptation Solutions".

**Action 1.2.5:** Identify and engage with a regional agency to host the database management system, regional web-based knowledge management platform and CRM action registry.

**Activity Result 1.3: Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers**

**Action 1.3.1:** Conduct multi-country meetings in order to create contact and facilitate information flows between national CA hydromets. This action should: i) enable data exchange across the countries and create incentive for data and expert knowledge exchange; ii) include field visits to glaciers to collect data where appropriate.

**Action 1.3.2:** Synthesise the information presently available on glacial melting in CA.

- Review all projects on glacial melting that have been or are being undertaken.
- Collect information and data from these projects.
- Forge collaboration with these projects.

**Action 1.3.3:** Model the impacts of a range of climate change scenarios on glacial melting on water supply in the major river basins in CA for the period 2009-2100 using the best available information.

**Action 1.3.4:** Identify the gaps in knowledge, data, observation capacity and finances, and facilitate the research required for filling these gaps.

- Indicate budgetary needs based on this assessment.

**Action 1.3.5:** Provide a range of cost-effective recommendations to improve data availability and glacier observation capacity in the region.

**Action 1.3.6:** Raise awareness amongst decision-makers in key water user sectors.

- Hold round tables/workshops
- Facilitate an e-discussion within the region
- Present the results of the study to an appropriate body such as the Executive Committee of the Interstate Coordination Water Commission (ICWC) and/or Interstate Commission on Sustainable Development (ICSD) under the International Fund for the Aral Sea (IFAS).

**Action 1.3.7:** Conduct technical training within the hydromets for furthering glacial research.

**Action 1.3.8:** Establish a web-platform that presents all project results.

**Output 2, 3, 4, 5, 6: Integrated and Comprehensive Approaches to Climate-Related Disaster Reduction and Climate Change Adaptation supported in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan**

**Baseline:** 1. There is a limited CRM institutional framework and CRM technical capacity and baseline data (Indicators 1, 2). 2. Strategies, policies and legislation do not fully take climate variability and change risks into account and institutions and their key stakeholders (including policy-makers, decision-makers and legislators) lack a CRM focus (Indicator 3). CRM financing options are limited in extent and CRM interventions are ad hoc, localised and lacking finance for up scaling and further research (Indicator 4). General public awareness of climate variability and change impacts and CRM measures is limited (Indicators 5, 6).

**Indicator 1:** Number of individuals and institutions signed up for membership of the NCN, committing to information exchange and coordination

**Indicator 2:** Number of experts that use skills and knowledge acquired at trainings

**Indicator 3:** Number of CRM measures/demonstration projects supported

**Indicator 4:** Amount of financial resources mobilized for CRM measures (US\$)

**Indicator 5:** Number of lessons-learned, case studies and best practices disseminated

**Indicator 6:** An awareness campaign undertaken

**Activity Result 2.1, 3.1, 4.1, 5.1, 6.1: Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened**

**Action 2.1.1, 3.1.1, 4.1.1, 5.1.1, 6.1.1:** Establish a NCN to undertake CRM assessments and implementation.

- Develop a robust communication strategy for disseminating knowledge generated by the NCN and MCN. This will include the development of a feedback mechanism to enable information flow from the sectors involved to/and from the NCN.
- Undertake an institutional mapping exercise to inform the development of the communication strategy.

**Action 2.1.2, 3.1.2, 4.1.2, 5.1.2, 6.1.2:** Review and propose a revision to the institutional mandates of the key sectoral and central ministries to engage in CRM. This action is to involve the alignment of the mandates of key central ministries (such as planning and finance) and critical sectoral agencies (such as energy, agriculture, water or climate-related disaster risk reduction) in order to address CRM.

- Identify focal point(s) within relevant ministries and committees to liaise with experts in the NCN.

**Action 2.1.3, 3.1.3, 4.1.3, 5.1.3, 6.1.3:** Conduct an in-depth review of previous and current CRM-related projects in the country.

- Assess to what extent CRM is already inadvertently being financed.
- Compile lessons-learned, best-practices and other relevant data from projects and programmes and incorporate them into the CA-CRM.
- Send findings of review to the MCN for dissemination via the web-based knowledge management platform and to relevant national stakeholders (in hard copy or electronic format) and to the project managers of the projects reviewed.
- Identify those projects that are potentially maladaptive.

**Action 2.1.4, 3.1.4, 4.1.4, 5.1.4, 6.1.4:** Collect national-level socio-economic and biophysical data pertaining to CRM from key line ministries and research institutions. This action should, for example, utilise socio-economic data collected by the Central Asian Sustainable Land Management Programme (CACILM) and Communities Programme.

- Identify data gaps for the national CRM research strategy.
- Provide data to the multi-country team for the development of regional assessments<sup>25</sup>.

**Action 2.1.5, 3.1.5, 4.1.5, 5.1.5, 6.1.5:** Develop a detailed climate change country profile for the country. This action is to be informed by assessments undertaken at the multi-country level, National Communications to UNFCCC and other risk assessment and DRR studies; CLIMSAT's satellite images and geo-referenced data and maps (to improve existing assessments).

- Develop a mechanism for updating the climate change country profile, and assign this function to a ministry.

**Action 2.1.6, 3.1.6, 4.1.6, 5.1.6, 6.1.6:** Strengthen weather forecasting and existing EWS(s).

- Conduct assessment of strengths and weaknesses of existing weather forecasting and EWS(s).
- Propose and implement changes or improvements to weather forecasting and EWS, based on the assessment undertaken.
- Package and disseminate weather forecasting information appropriately.
- Conduct climate change vulnerability mapping exercises (including poverty) in order to select areas to pilot and improve EWS(s).

**Action 2.1.7, 3.1.7, 4.1.7, 5.1.7, 6.1.7:** Undertake a national capacity inventory for climate risk management.

- Identify gaps in CRM capacity.
- Produce a list of specific capacity, data, information and equipment needs to enable implementation of the CA-CRM.
- Prioritise and justify needs in order to enable purchasing according to the available budget.
- Produce a capacity inventory for long-term climate risk management.

**Action 2.1.8, 3.1.8, 4.1.8, 5.1.8, 6.1.8:** Undertake training of staff from the NCN, key line ministries and research institutions to enable implementation of the CA-CRM. This action is to be based on national capacity inventory and to involve learning-in-action, by conducting data analyses and scenario-based planning exercises.

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<sup>25</sup> The assessments and analyses conducted by the multi-country team should include the historical, current and future climate impacts likely to be experienced by key sectors.

- Prioritise training needs based on national capacity inventory.

**Action 2.1.9, 3.1.9, 4.1.9, 5.1.9, 6.1.9:** Prioritise data, information and equipment needs for long-term CRM based on national capacity inventory.

- Produce a funding strategy to enable the provision of necessary equipment/data in the long-term.

***Activity Result 2.2, 3.2, 4.2, 5.2, 6.2: Climate-resilient strategies, policies and legislation in priority sectors and geographical areas strengthened***

**Action 2.2.1, 3.2.1, 4.2.1, 5.2.1, 6.2.1:** Produce a list of key policies, strategies and legislation (in order of priority) that require revision in order to take climate change and climate-related disaster risk management considerations into account.

- Conduct a comprehensive review of policies, strategies and legislation that are relevant to building resilience to climate change, climate variability and climate-related disasters in priority areas<sup>26</sup>.
- Prioritise and identify current strategy, policy and legislation adjustment processes, which can serve as key entry points for intervention.

**Action 2.2.2, 3.2.2, 4.2.2, 5.2.2, 6.2.2:** Provide comprehensive training to policy-makers, decision-makers and legislators on integrating CRM into core development policy, strategy and legislative planning.

- Prioritise key personnel for CRM training.
- Use learning-in-action activities and programmes to train key policy-makers, decision-makers and legislators to assess, prioritise and incorporate climate variability and change risks into strategies, policies and legislation.

**Action 2.2.3, 3.2.3, 4.2.3, 5.2.3, 6.2.3:** Support current and ongoing strategy, policy and legislative intervention amendments

- Develop revisions for the top priority sectoral and cross-sectoral strategies/policies/legislation.
- Present CRM revisions to appropriate key stakeholders, policy- and decision-makers to be institutionalised in strategies, policies and/or legislation.
- Hold round tables to discuss and agree on revisions and table them for the appropriate political body.
- Present findings to the appropriate political body for approval and adoption.
- Develop a long-term strategy detailing the timelines for the rest of the revisions.

**Action 2.2.4, 3.2.4, 4.2.4, 5.2.4, 6.2.4:** Produce a list of no-regret, CRM policy measures (in order of priority) for regulating key sectors (water, energy, agriculture and forestry).

- Conduct a comprehensive review of CRM policy measures for promoting CRM activities.
- Submit above list to MCN for prioritisation based on analyses.

**Action 2.2.5, 3.2.5, 4.2.5, 5.2.5, 6.2.5:** Implement no-regret prioritised CRM policy measures on a pilot level.

***Activity Result 2.3, 3.3, 4.3, 5.3, 6.3: Financing options to meet national climate risk management costs expanded at the local, sub-national, and national levels***

**Action 2.3.1, 3.3.1, 4.3.1, 5.3.1, 6.3.1:** Produce a list of appropriate financial instruments and mechanisms (in order of priority) to finance CRM in the country.

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<sup>26</sup> Priorities areas include those areas or sectors that are particularly vulnerable to climate variability and/or change and climate-related disasters. These areas will include, for example, energy supply, irrigated agriculture, water resources, shelter and infrastructure.

- Identify and review appropriate financial instruments and mechanisms through consultations with stakeholders and through a comprehensive literature review.
- Investigate examples from other countries which could be emulated.

**Action 2.3.2, 3.3.2, 4.3.2, 5.3.2, 6.3.2:** Establish demonstration projects to field-test and refine selected prioritized financial instruments and mechanisms.

**Action 2.3.3, 3.3.3, 4.3.3, 5.3.3, 6.3.3:** Strengthen the capacity of key stakeholders in financial and planning institutions to mobilise additional sources of funding to support nation-wide CRM.

- Identify key gaps, in consultation with key stakeholders, for: i) expanding or re-aligning existing funds; and ii) designing climate-resilient investment plans.
- Build capacity for key stakeholders to develop proposals that will diversify funding sources for CRM activities, including through training on writing proposals for the above investment plans.
- Submit proposals to raise financing for CRM.

**Action 2.3.4, 3.3.4, 4.3.4, 5.3.4, 6.3.4:** Develop a CRM financing strategy. The strategy should take into account: i) the potential for the private sector (e.g. farming, tourism, forestry) to finance CRM; ii) appropriate national budget changes; iii) the expected income from international CRM funds; and iv) revenue from innovative financing options.

***Activity Result 2.4, 3.4, 4.4, 5.4, 6.4: Climate risk management interventions in priority sectors implemented***

**Action 2.4.1, 3.4.1, 4.4.1, 5.4.1, 6.4.1:** Produce a prioritized list of community-based CRM measures.

- Prioritise interventions in terms of: i) future climate variability and change hotspots; ii) cost-effectiveness; iii) contribution to the livelihoods of vulnerable communities; iv) ability of the measure to reflect progress/success over a relatively short time period (i.e. within the duration of the CA-CRM); v) probability of adoption of the measure by vulnerable communities; vi) potential for national upscaling; vii) involvement of women in the implementation of the measure (to ensure gender equality); viii) key themes (see multi-country component, paragraph 13); ix) the ability to reduce the risk of climate-related disasters; and x) cross-sectoral nature of the intervention (e.g. interface of agriculture-water and water-energy).
- Produce a set of CRM measures which are supported by the UNDP's Community-Based Adaptation Facility.

**Action 2.4.2, 3.4.2, 4.4.2, 5.4.2, 6.4.2:** Implement priority CRM measures.

- Implement measures with assistance from NGOs, community groups, appropriate research institutions and government organisations, UNDP's Community Based Adaptation Facility.

**Action 2.4.3, 3.4.3, 4.4.3, 5.4.3, 6.4.3:** Identify and prioritize existing CRM-related projects in the country that CA-CRM could potentially upscale nationally.

**Action 2.4.4, 3.4.4, 4.4.4, 5.4.4, 6.4.4:** Support and/or upscale prioritized existing CRM-related projects.

***Activity Result 2.5, 3.5, 4.5, 5.5, 6.5: Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national level disseminated***

**Action 2.5.1, 3.5.1, 4.5.1, 5.5.1, 6.5.1:** Disseminate lessons-learned through the regional web-based knowledge management platform and other means.

- Compile a list of stakeholders to whom lesson learned, best practices and other programme knowledge will be disseminated.
- Disseminate lessons-learned from CA-CRM to previous and current CRM interventions reviewed.
- Document examples of best practices and lessons-learned.
- Disseminate all of this knowledge and programme findings to the multi-country component.
- Assign an organisation to disseminate all CA-CRM lessons nationally.
- Integrate all knowledge generated by CA-CRM into the next UNDP programming framework.

**Action 2.5.2, 3.5.2, 4.5.2, 5.5.2, 6.5.2:** Review and document case studies of demonstration projects and training programmes undertaken during the course of the CA-CRM project.

**Action 2.5.3, 3.5.3, 4.5.3, 5.5.3, 6.5.3:** Produce a monthly newsletter describing CA-CRM project activities and progress in the country.

- Send newsletter out to stakeholder list.
- Disseminate all of this knowledge and programme findings to the multi-country component in order to inform the knowledge publication “Central Asia: Climate Change Impacts and Climate Change Adaptation Solutions”.

**Action 2.5.4, 3.5.4, 4.5.4, 5.5.4, 6.5.4:** Undertake a public awareness campaign on CRM.

- Lobby government to continue with public broadcast announcements on CRM after the CA-CRM has ended.

## IV. Results and Resources Framework

<b>Intended Outcome as stated in the Regional Programme Results and Resource Framework:</b>
<b>EUR_OUTCOME150:</b> Increased access to investment financing for sustainable energy and climate change adaptation, including through the Clean Development Mechanism (CDM)
<b>Outcome indicators as stated in the Regional Programme Results and Resources Framework, including baseline and targets: Indicators:</b> 1. Amount of resources mobilized by BRC from GEF, carbon finance and adaptation funds to governments and private sector in RBEC countries; 2. Number of RBEC countries with improved policies and institutional structures to facilitate carbon market development and investments in clean energy. Baselines 2006: 1. Lack of and poor access to resources for sustainable energy and climate change adaptation; 2. Weak capacities and poor enabling environment for clean energy financing and adaptation to climate change. Targets: 1. 40 mln \$ mobilized for sustainable energy & climate change adaptation projects. Development of 6 projects for MDG Carbon Facility supported; 2. In at least 7 RBEC countries policies and institutional structures improved to facilitate carbon market development, investments in clean energy and adaptation to climate change.
<b>Applicable Key Result Area (from 2008-11 Strategic Plan):</b> Managing energy and the environment for sustainable development
<b>Partnership Strategy:</b> Partnership between EEG and BCP
<b>Project title and ID (ATLAS Award ID):</b> Supporting Integrated and Comprehensive Approaches to Climate Change Adaptation in Central Asia.

INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS
<p><b>Output 1:</b> Technical capacity and knowledge in the area of climate risk management in Central Asia strengthened</p> <p><u>Baseline:</u> 1. Baseline data and information pertaining to climate change impacts in CA requires strengthening. At present, climate change-related data is not synthesised. The costs of climate change and of potential adaptation interventions have not been extensively studied or reported, often resulting in the implementation of maladaptive interventions, which can have considerable negative economic impact. 2. CRM technical capacity within CA is currently underdeveloped. Regional awareness and knowledge of</p>	<p><b>Targets (year 1):</b> -The MCN establishment is initiated. -Training materials are produced. - At least 1 bilateral and multi-country knowledge exchange sessions conducted. - Regional meetings are held to create contact and collaboration. - Gather and synthesise available data on glacial melting in CA. -A web-platform is designed. - At least 1 CRM intervention supported.</p> <p><b>Targets (year 2):</b> - RPMU is in place - Cost-benefit analysis of the costs associated with climate change is conducted in five countries. - At least 5 CRM interventions have their costs and benefits assessed. - At least 4 training events take place. - At least 2 bilateral and multi-country knowledge exchange sessions</p>	<p><b>Activity Result 1.1.</b> Technical capacity to manage climate change risks and opportunities in an integrated manner at the multi-country levels strengthened.</p> <p>Action 1.1.1: Establish a multi-country climate network.</p> <p>Action 1.1.2: Collect and archive national-level socio-economic and biophysical data and information pertaining to climate change adaptation from the five project teams.</p> <p>Action 1.1.3: Conduct a comprehensive climate risk assessment / baseline study, based on collated data and analysis.</p> <p>Action 1.1.4: Utilise planning tools such as participatory scenario development and socio-economic cost-benefit analyses to i) assess the costs associated with climate variability and change, and ii) the costs and benefits of a range of CRM interventions at a regional as well as national level for each of the countries.</p> <p>Action 1.1.5: Produce training materials for national project teams and stakeholders involved in implementation of CA-CRM activities.</p> <p>Action 1.1.6: Conduct bilateral and multi-country knowledge exchange sessions for targeted groups.</p> <p><b>Activity Result 1.2.</b> Knowledge on adjusting national development process to fully incorporate climate change risks and opportunities shared across national, multi-country and global levels.</p> <p>Action 1.2.1: Develop a CRM database management system.</p> <p>Action 1.2.2: Develop a multi-country web-based knowledge management platform for CA-CRM.</p>	<p>- RPMU, MCN. - UNDP BRC.</p> <p>- RPMU, MCN. - UNDP BRC.</p>	<p>-International and national consultants. -Workshops, surveys, training programmes, knowledge exchange sessions. -training materials. -UNDP staff time. - Equipment and office space for RPCU.</p> <p>Cost: US\$400,000</p> <p>-Development of database and website. -production of knowledge publication.</p>



Supporting Integrated and Comprehensive Approaches to Climate Risk Management in Central Asia

INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBL	INPUTS	
<p>climate variability, climate change impacts and CRM are limited.</p> <p>3. Understanding of glacial melting is restricted to isolated geographic areas and is regionally incomplete.</p> <p><u>Indicators:</u></p> <p><u>Indicator 1:</u> Improved access to data and analysis on climate change impacts in Central Asia</p> <p><u>Indicator 2:</u> Skills and knowledge improved as a result of targeted training and workshops (monitored through surveys)</p> <p><u>Indicator 3:</u> Improved information and analysis on glacier retreat dynamics are accessible to stakeholders stakeholders.</p>	<p>conducted.</p> <p>-Information is uploaded onto the database and website at least quarterly.</p> <p>- Model complete.</p> <p>- Gaps in knowledge, data and observation capacity are identified.</p> <p>- Web platform is updated at least quarterly.</p> <p><b>Targets (year 3)</b></p> <p>- At least 2 bilateral and multi-country knowledge exchange sessions conducted.</p> <p>-At least 5 CRM interventions have their costs and benefits assessed.</p> <p>-Information is uploaded onto the database and website at least quarterly.</p> <p><b>Targets (year 4)</b></p> <p>- At least 1 bilateral and multi-country knowledge exchange session conducted.</p> <p>-Information is uploaded onto the database and website at least quarterly.</p> <p>-A host is identified to continue hosting the database and web-based platform post UNDP project implementation.</p> <p><b>Targets (year 5)</b></p> <p>-By the end of the project at least 10 institutions signed up for MCN membership.</p> <p>-At least 5 CRM interventions have their costs and benefits assessed.</p> <p>- At least 1 bilateral and multi-country knowledge exchange session conducted.</p> <p>-Information is uploaded onto the database and website at least quarterly.</p> <p>-Knowledge publication is produced and disseminated.</p> <p>- By the end of the project at least 100 users benefited from KM platform.</p>	<p>Action 1.2.3: Collect and upload: i) lessons learned; ii) best practise guidelines; and iii) documents and data onto the database management system, regional web-based knowledge management platform and CRM action registry.</p> <p>Action 1.2.4: Produce a knowledge publication “Central Asia: Climate Change Impacts and Climate Change Adaptation Solutions”.</p> <p>Action 1.2.5: Identify and engage with a regional agency to host the database management system, regional web-based knowledge management platform and CRM action registry.</p> <p><b>Activity Result 1.3.</b> Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers.</p> <p>Action 1.3.1: Conduct multi-country meetings in order to create contact and facilitate information flows between national CA hydromets.</p> <p>Action 1.3.2: Synthesise the information presently available on glacial melting in CA.</p> <p>Action 1.3.3: Model the impacts of a range of climate change scenarios on glacial melting on water supply in the major river basins in CA for the period 2009-2100.</p> <p>Action 1.3.4: Identify the gaps in knowledge, data, observation capacity and finances, and facilitate the research required for filling these gaps.</p> <p>Action 1.3.5: Provide a range of cost-effective recommendations to improve data availability and glacier observation capacity in the region.</p> <p>Action 1.3.6: Raise awareness amongst decision-makers in key water user sectors.</p> <p>Action 1.3.7: Conduct technical training within the hydromets for furthering glacial research.</p> <p>Action 1.3.8: Establish a web-platform that presents all project results.</p>	<p></p> <p>- RPMU, MCN. - UNDP BRC. -ENVSEC.</p>	<p>- UNDP staff time.</p> <p>Cost: US\$100,000</p> <p>- Web-based platform. - Round tables/workshops, e-discussions; surveys. -Training, - UNDP staff time.</p> <p>Cost: US\$ 266,000</p>	
			<p><b>Activity Result 1.4.</b> Project efficiently and effectively coordinated and managed</p>	<p>- RPMU - UNDP BRC</p>	<p>- UNDP staff time.</p> <p>Cost: US\$ 1,234,000</p>
	<p><b>Output 2, 3, 4, 5, 6:</b> Integrated and Comprehensive Approaches to Climate-Related Disaster</p>	<p><b>Targets (year 1):</b></p> <p>- PMU is established</p> <p>- Inception w/shop conducted</p>	<p><b>Activity Result 2.1, 3.1, 4.1, 5.1, 6.1:</b> Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened</p>	<p>UNDP Kazakhstan, UNDP</p>	<p>-International and national consultants. -Workshops,</p>

INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBL	INPUTS
<p>Reduction and Climate Change Adaptation supported in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan</p> <p><u>Baseline:</u> 1. There is a limited CRM institutional framework and CRM technical capacity and baseline data (Indicators 1, 2). 2. Strategies, policies and legislation do not fully take climate variability and change risks into account and institutions and their key stakeholders (including policy-makers, decision-makers and legislators) lack a CRM focus (Indicator 3). CRM financing options are limited in extent and CRM interventions are ad hoc, localised and lacking finance for up scaling and further research (Indicator 4). General public awareness of climate variability and change impacts and CRM measures is limited (Indicators 5, 6).</p> <p><u>Indicator 1:</u> Number of individuals and institutions signed up for membership of the NCN, committing to information exchange and coordination</p> <p><u>Indicator 2:</u> Number of experts that use skills and knowledge acquired at trainings</p> <p><u>Indicator 3:</u> Number of CRM measures/demonstration projects supported</p> <p><u>Indicator 4:</u> Amount of financial resources mobilized for CRM measures (US\$)</p> <p><u>Indicator 5:</u> Number of</p>	<p><b>Targets (year 2):</b></p> <ul style="list-style-type: none"> <li>- The NCN is established and functioning.</li> <li>- At least 4 training workshops/seminars held.</li> <li>- Climate change country profile developed.</li> <li>- At least 4 prioritized CRM interventions supported.</li> <li>- Financial instruments and mechanisms to be promoted are identified.</li> <li>- The implementation of an awareness campaign has begun.</li> </ul> <p><b>Targets (year 3)</b></p> <ul style="list-style-type: none"> <li>- Stakeholders are using information from the NCN.</li> <li>- At least 4 training workshops/seminars held.</li> <li>- Climate change country profile developed.</li> <li>- At least 8 prioritized CRM interventions supported.</li> <li>- Climate change adaptation financing strategy is developed.</li> <li>- At least 2 funding proposals submitted.</li> <li>- Lessons-learned are disseminated to the regional knowledge platform.</li> <li>- The awareness campaign is being implemented.</li> </ul> <p><b>Targets (year 4)</b></p> <ul style="list-style-type: none"> <li>- Stakeholders are using information from the NCN.</li> <li>- Long-term strategy developed.</li> <li>- At least 8 prioritized CRM interventions supported.</li> <li>- At least 2 funding proposals submitted.</li> <li>- At least 4 presentations to redirect national budget flows made.</li> <li>- Lessons-learned are disseminated to the regional knowledge platform.</li> <li>- The awareness campaign is being implemented.</li> </ul>	<p>Action 2.1.1, 3.1.1, 4.1.1, 5.1.1, 6.1.1: Establish a NCN to undertake CRM assessments and implementation.</p> <p>Action 2.1.2, 3.1.2, 4.1.2, 5.1.2, 6.1.2: Review and propose a revision to the institutional mandates of the key sectoral and central ministries to engage in CRM.</p> <p>Action 2.1.3, 3.1.3, 4.1.3, 5.1.3, 6.1.3: Conduct an in-depth review of previous and current CRM-related projects in the country.</p> <p>Action 2.1.4, 3.1.4, 4.1.4, 5.1.4, 6.1.4: Collect national-level socio-economic and biophysical data pertaining to CRM from key line ministries and research institutions.</p> <p>Action 2.1.5, 3.1.5, 4.1.5, 5.1.5, 6.1.5: Develop a detailed climate change country profile for the country.</p> <p>Action 2.1.6, 3.1.6, 4.1.6, 5.1.6, 6.1.6: Strengthen weather forecasting and existing EWS(s).</p> <p>Action 2.1.7, 3.1.7, 4.1.7, 5.1.7, 6.1.7: Undertake a national capacity inventory for climate risk management.</p> <p>Action 2.1.8, 3.1.8, 4.1.8, 5.1.8, 6.1.8: Undertake training of staff from the NCN, key line ministries and research institutions to enable implementation of the CA-CRM.</p> <p>Action 2.1.9, 3.1.9, 4.1.9, 5.1.9, 6.1.9: Prioritise data, information and equipment needs for long-term CRM based on national capacity inventory.</p> <p><b>Activity Result 2.2, 3.2, 4.2, 5.2, 6.2:</b> Climate-resilient strategies, policies and legislation in priority sectors and geographical areas strengthened</p> <p>Action 2.2.1, 3.2.1, 4.2.1, 5.2.1, 6.2.1: Produce a list of key policies, strategies and legislation that need a revision to integrate CRM.</p> <p>Action 2.2.2, 3.2.2, 4.2.2, 5.2.2, 6.2.2: Provide training to decision-makers on integrating CRM into core development policy, strategy and legislative planning.</p> <p>Action 2.2.3, 3.2.3, 4.2.3, 5.2.3, 6.2.3: Support current and ongoing strategy, policy and legislative intervention amendments</p> <p>Action 2.2.4, 3.2.4, 4.2.4, 5.2.4, 6.2.4: Produce a list of no-regret, CRM policy measures for key sectors.</p> <p>Action 2.2.5, 3.2.5, 4.2.5, 5.2.5, 6.2.5: Implement no-regret prioritised CRM policy measures on a pilot level.</p> <p><b>Activity Result 2.3, 3.3, 4.3, 5.3, 6.3:</b> Financing options to meet national climate risk management costs expanded at the local, sub-national, and national levels</p> <p>Action 2.3.1, 3.3.1, 4.3.1, 5.3.1, 6.3.1: Produce a list of financial instruments and mechanisms to finance CRM.</p>	<p>Kyrgyzstan, UNDP Tajikistan, UNDP Turkmenistan, UNDP Uzbekistan, UNDP BRC</p> <p>UNDP Kazakhstan, UNDP Kyrgyzstan, UNDP Tajikistan, UNDP Turkmenistan, UNDP Uzbekistan, UNDP BRC</p> <p>UNDP Kazakhstan, UNDP Kyrgyzstan, UNDP</p>	<p>surveys, training programmes, knowledge exchange sessions. -training materials. -UNDP staff time. - Equipment and office space for NPCU.</p> <p>- Training, workshops and round tables. - UNDP staff time.</p> <p>- Demonstration projects. -Training. - UNDP staff time.</p>

INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBL	INPUTS
<p>lessons-learned, case studies and best practices disseminated</p> <p><u>Indicator 6</u>: An awareness campaign undertaken</p>	<p><b>Targets (year 5)</b></p> <ul style="list-style-type: none"> <li>- Stakeholders are using information from the NCN.</li> <li>- At least 10 prioritized CRM interventions supported.</li> <li>- At least 4 presentations to redirect national budget flows made.</li> <li>-At least 2 funding proposals submitted.</li> <li>- Lessons-learned are disseminated to the regional knowledge platform.</li> <li>- At least 4 peer-reviewed publications are produced.</li> <li>- The awareness campaign completed.</li> </ul>	<p>Action 2.3.2, 3.3.2, 4.3.2, 5.3.2, 6.3.2: Establish demonstration projects to field-test and refine selected prioritized financial instruments and mechanisms.</p> <p>Action 2.3.3, 3.3.3, 4.3.3, 5.3.3, 6.3.3: Strengthen the capacity of key stakeholders to mobilise additional sources of funding for CRM.</p> <p>Action 2.3.4, 3.3.4, 4.3.4, 5.3.4, 6.3.4: Develop a CRM financing strategy.</p>	<p>Tajikistan, UNDP Turkmenistan, UNDP Uzbekistan, UNDP BRC</p>	
		<p><b>Activity Result 2.4, 3.4, 4.4, 5.4, 6.4:</b> Climate risk management interventions in priority sectors implemented</p> <p>Action 2.4.1, 3.4.1, 4.4.1, 5.4.1, 6.4.1: Produce a prioritized list of community-based CRM measures.</p> <p>Action 2.4.2, 3.4.2, 4.4.2, 5.4.2, 6.4.2: Implement priority CRM measures.</p> <p>Action 2.4.3, 3.4.3, 4.4.3, 5.4.3, 6.4.3: Identify and prioritize CRM-related projects for upscaling.</p> <p>Action 2.4.4, 3.4.4, 4.4.4, 5.4.4, 6.4.4: Support and/or upscale prioritized existing CRM-related projects.</p>	<p>UNDP Kazakhstan, UNDP Kyrgyzstan, UNDP Tajikistan, UNDP Turkmenistan, UNDP Uzbekistan, UNDP BRC</p>	<ul style="list-style-type: none"> <li>- Training.</li> <li>-intervention inputs.</li> <li>- UNDP staff time.</li> </ul>
		<p><b>Activity Result 2.5, 3.5, 4.5, 5.5, 6.5:</b> Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national level disseminated</p> <p>Action 2.5.1, 3.5.1, 4.5.1, 5.5.1, 6.5.1: Disseminate lessons-learned</p> <p>Action 2.5.2, 3.5.2, 4.5.2, 5.5.2, 6.5.2: Review and document case studies of demonstration projects and training programmes in CA-CRM project.</p> <p>Action 2.5.3, 3.5.3, 4.5.3, 5.5.3, 6.5.3: Produce a monthly newsletter describing CA-CRM project activities and progress in the country.</p> <p>Action 2.5.4, 3.5.4, 4.5.4, 5.5.4, 6.5.4: Undertake a public awareness campaign on CRM.</p>	<p>UNDP Kazakhstan, UNDP Kyrgyzstan, UNDP Tajikistan, UNDP Turkmenistan, UNDP Uzbekistan, UNDP BRC</p>	<ul style="list-style-type: none"> <li>- Newsletter materials.</li> <li>-public awareness campaign materials (pamphlets, public broadcasts, newspaper).</li> <li>-Training.</li> <li>- UNDP staff time.</li> </ul>
		<p><b>Activity Result 2.6, 3.6, 4.6, 5.6, 6.6:</b> National component managed efficiently and effectively</p>	<p>UNDP Kazakhstan, UNDP Kyrgyzstan, UNDP Tajikistan, UNDP Turkmenistan, UNDP Uzbekistan, UNDP BRC</p>	<ul style="list-style-type: none"> <li>- UNDP staff time.</li> </ul>

## V. Total and Annual Work Plan (2010-2014)

EXPECTED OUTPUTS	PLANNED ACTIVITIES	TIMEFRAME					RESPONSIBLE PARTY	FUNDING SOURCE	PLANNED BUDGET		
		Y 1	Y 2	Y 3	Y 4	Y 5			Budget Description	Amount (\$)	
										2010	Total
<b>Output 1: Technical capacity and knowledge in the area of climate risk management in Central Asia strengthened</b>	1.1. Technical capacity to manage climate change risks and opportunities in an integrated manner at the multi-country level strengthened						UNDP BRC	Regional TRAC, BCPR	71200 – International Consultants	76,250	200,000
		X	X	X	X	X			71300 – Local Consultants	40,750	100,000
									71600 – Travel	12,000	60,000
									72100 – Contractual services	10,000	10,000
									72000 – Equipment & Operations	0	20,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>139,000</b>	<b>400,000</b>
	1.2. Knowledge on adjusting national development processes to fully incorporate CC risks and opportunities shared						UNDP BRC	Regional TRAC, BCPR	71200 – International Consultants	30,000	30,000
		X	X	X	X	X			71300 – Local Consultants	0	5,000
									71600 – Travel	5,000	5,000
									72100 – Contractual services	50,000	50,000
									72000 – Equipment & Operations	0	10,000
						<b>Sub-Total</b>	<b>85,000</b>	<b>100,000</b>			
	1.3. Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers						UNDP BRC	Regional TRAC, BCPR, Finland (through ENVSEC)	71200 – International Consultants	61,000	120,000
		X	X						71300 – Local Consultants	18,000	40,000
									71600 – Travel	26,729	27,000
									74200 – Audio, Visual, Print Prod	42,000	42,000
									75700 – Training, Workshop,	15,000	15,000
									74500 – Miscellaneous	20,000	22,000
						<b>Sub-Total</b>	<b>182,729</b>	<b>266,000</b>			
1.4 Project efficiently and effectively coordinated and managed						UNDP BRC	BCPR	71200 – International Consultants	17,000	1,020,000	
	X	X	X	X	X			71300 – Local Consultants	2,000	150,000	
								71600 – Travel	0	25,000	
								72100 – Computers	4,000	4,000	
								72000 – Equipment & Operations	0	30,000	

									74500 – Miscellaneous	0	5,000
									<b>Sub-Total</b>	<b>23,000</b>	<b>1,234,000</b>
									<b>Total Output 1</b>	<b>429.729</b>	<b>2,000,000</b>
<b>Output 2: Comprehensive Approaches to Climate Risk Management promoted in Kazakhstan</b>	2.1 Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened	X	X	X	X	X	UNDP Kazakhstan	Regional TRAC, BCPR	71200 – International Consultants	10,000	80,000
									71300 – Local Consultants	10,000	70,000
									71600 – Travel	5,000	20,000
									72800 – IT equipment	60,000	60,000
									74200 – Audio, Visual, Print Prod	5,000	10,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>90,000</b>	<b>250,000</b>
	2.2 Climate-resilient strategies, policies and legislation in priority sectors and geographic areas developed	X	X	X	X	X	UNDP Kazakhstan	BCPR	71200 – International Consultants	10,000	120,000
									71300 – Local Consultants	0	100,000
									71600 – Travel	0	20,000
									74500 – Miscellaneous	0	10,000
	<b>Sub-Total</b>	<b>10,000</b>	<b>250,000</b>								
	2.3 Financing options to meet national climate risk management costs expanded at the local, sub-national and national levels	X	X	X	X	X	UNDP Kazakhstan	BCPR	71200 – International Consultants	10,000	150,000
									71300 – Local Consultants	0	70,000
									72100 – Contractual Services	0	40,000
									71600 – Travel	0	30,000
									74500 – Miscellaneous	0	10,000
	<b>Sub-Total</b>	<b>10,000</b>	<b>300,000</b>								
	2.4 Climate risk management interventions in priority sectors implemented	X	X	X	X	X	UNDP Kazakhstan	BCPR	71200 – International Consultants	0	500,000
									71300 – Local Consultants	10,000	250,000
71600 – Travel									0	80,000	
74500 – Miscellaneous									0	20,000	
<b>Sub-Total</b>	<b>10,000</b>	<b>850,000</b>									
2.5 Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national levels disseminated	X	X	X	X	X	UNDP Kazakhstan	BCPR	71200 – International Consultants	0	70,000	
								71300 – Local Consultants	7,000	50,000	
								71600 – Travel	2,000	20,000	
								74500 – Miscellaneous	0	10,000	
<b>Sub-Total</b>	<b>9,000</b>	<b>150,000</b>									

	2.6 National component managed efficiently and effectively	X	X	X	X	X	UNDP Kazakhstan	BCPR	71300 – Local Consultants	0	160,000	
									71600 – Travel	0	20,000	
									75700 – Training, Workshop,	10,000	10,000	
									72000 – Equipment & Operations	0	4,000	
									74500 – Miscellaneous	6,000	6,000	
									<b>Sub-Total</b>	<b>16,000</b>	<b>200,000</b>	
									<b>Total Output 2</b>	<b>145,000</b>	<b>2,000,000</b>	
<b>Output 3: Comprehensive Approaches to Climate Risk Management promoted in Kyrgyzstan</b>	3.1 Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened	X	X	X	X	X	UNDP Kyrgyzstan	BCPR	71200 – International Consultants	0	80,000	
									71300 – Local Consultants	20,000	70,000	
									71600 – Travel	0	20,000	
									72800 – IT equipment	0	60,000	
									74200 – Audio, Visual, Print Prod	0	10,000	
									74500 – Miscellaneous	0	10,000	
		<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>								
	3.2 Climate-resilient strategies, policies and legislation in priority sectors and geographic areas developed	X	X	X	X	X	UNDP Kyrgyzstan	BCPR	71200 – International Consultants	20,000	120,000	
									71300 – Local Consultants	0	100,000	
									71600 – Travel	0	20,000	
									74500 – Miscellaneous	0	10,000	
		<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>								
	3.3 Financing options to meet national climate risk management costs expanded at the local, sub-national and national levels			X	X	X	X	UNDP Kyrgyzstan	BCPR	71200 – International Consultants	0	150,000
										71300 – Local Consultants	0	70,000
										72100 – Contractual Services	0	40,000
										71600 – Travel	0	30,000
										74500 – Miscellaneous	0	10,000
		<b>Sub-Total</b>	<b>0</b>	<b>300,000</b>								
	3.4 Climate risk management interventions in priority sectors implemented			X	X	X	X	UNDP Kyrgyzstan	BCPR	71200 – International Consultants	0	500,000
										71300 – Local Consultants	0	250,000
71600 – Travel										0	80,000	
74500 – Miscellaneous										0	20,000	
	<b>Sub-Total</b>	<b>0</b>	<b>850,000</b>									
3.5 Knowledge on how to incorporate climate variability and change knowledge and risks into			X	X	X	X	UNDP Kyrgyzstan	BCPR	71200 – International Consultants	0	70,000	
									71300 – Local Consultants	0	50,000	
									71600 – Travel	0	20,000	
									74500 – Miscellaneous	0	10,000	

	development processes at local, sub-national and national levels disseminated									<b>Sub-Total</b>	<b>0</b>	<b>150,000</b>
	3.6 National component managed efficiently and effectively	X	X	X	X	X	UNDP Kyrgyzstan	BCPR	71300 – Local Consultants	5,000	152,000	
71600 – Travel									0	20,000		
75700 – Training, Workshop, Conferences									10,000	10,000		
72200 – Equipment & furniture									10,000	10,000		
74500 – Miscellaneous									4,000	4,000		
72100 – Computers									4,000	4,000		
<b>Sub-Total</b>									<b>33,000</b>	<b>200,000</b>		
<b>Total Output 3</b>										<b>73,000</b>	<b>2,000,000</b>	
<b>Output 4: Comprehensive Approaches to Climate Risk Management promoted in Tajikistan</b>	4.1 Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened	X	X	X	X	X	UNDP Tajikistan	BCPR	71200 – International Consultants	0	100,000	
									71300 – Local Consultants	20,000	70,000	
									71600 – Travel	0	20,000	
									72800 – IT equipment	0	30,000	
									74200 – Audio, Visual, Print Prod	0	20,000	
									74500 – Miscellaneous	0	10,000	
									<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>	
	4.2 Climate-resilient strategies, policies and legislation in priority sectors and geographic areas developed	X	X	X	X	X	UNDP Tajikistan	BCPR	71200 – International Consultants	10,000	120,000	
									71300 – Local Consultants	10,000	100,000	
									71600 – Travel	0	20,000	
									74500 – Miscellaneous	0	10,000	
	<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>									
	4.3 Financing options to meet national climate risk management costs expanded at the local, sub-national and national levels	X	X	X	X	X	UNDP Tajikistan	BCPR	71200 – International Consultants	40,000	150,000	
									71300 – Local Consultants	0	70,000	
									72100 – Contractual Services	0	40,000	
									71600 – Travel	0	30,000	
									74500 – Miscellaneous	0	10,000	
									<b>Sub-Total</b>	<b>40,000</b>	<b>300,000</b>	
	4.4 Climate risk management interventions in priority sectors implemented	X	X	X	X	X	UNDP Tajikistan	BCPR	71200 – International Consultants	0	500,000	
									71300 – Local Consultants	10,000	250,000	
71600 – Travel									0	80,000		

									74500 – Miscellaneous	0	20,000
									<b>Sub-Total</b>	<b>10,000</b>	<b>850,000</b>
	4.5 Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national levels disseminated	X	X	X	X	X	UNDP Tajikistan	BCPR	71200 – International Consultants	0	70,000
									71300 – Local Consultants	10,000	50,000
									71600 – Travel	0	20,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>10,000</b>	<b>150,000</b>
	4.6 National component managed efficiently and effectively	X	X	X	X	X	UNDP Tajikistan	BCPR	71300 – Local Consultants	10,000	153,000
									71600 – Travel	0	17,000
									75700 – Training, Workshop,	10,000	10,000
									72200 – Equipment & furniture	10,000	10,000
									74500 – Miscellaneous	6,000	6,000
									72100 – Computers	4,000	4,000
									<b>Sub-Total</b>	<b>40,000</b>	<b>200,000</b>
									<b>Total Output 4</b>	<b>140,000</b>	<b>2,000,000</b>
<b>Output 5: Comprehensive Approaches to Climate Risk Management promoted in Turkmenistan</b>	5.1 Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened	X	X	X	X	X	UNDP Turkmenistan	BCPR	71200 – International Consultants	10,000	80,000
									71300 – Local Consultants	10,000	70,000
									71600 – Travel	0	20,000
									72800 – IT equipment	0	60,000
									74200 – Audio, Visual, Print Prod	0	10,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>
	5.2 Climate-resilient strategies, policies and legislation in priority sectors and geographic areas developed	X	X	X	X	X	UNDP Turkmenistan	BCPR	71200 – International Consultants	20,000	120,000
									71300 – Local Consultants	10,000	100,000
									71600 – Travel	0	20,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>30,000</b>	<b>250,000</b>
	5.3 Financing options to meet national climate risk management costs expanded at the local, sub-national and national		X	X	X	X	UNDP Turkmenistan	BCPR	71200 – International Consultants	20,000	150,000
71300 – Local Consultants									0	70,000	
72100 – Contractual Services									0	40,000	
71600 – Travel									0	30,000	



	levels								74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>20,000</b>	<b>300,000</b>
	5.4 Climate risk management interventions in priority sectors implemented	X	X	X	X	X	UNDP Turkmenistan	BCPR	71200 – International Consultants	0	500,000
									71300 – Local Consultants	10,000	250,000
									71600 – Travel	0	80,000
									74500 – Miscellaneous	0	20,000
									<b>Sub-Total</b>	<b>10,000</b>	<b>850,000</b>
	5.5 Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national levels		X	X	X	X	UNDP Turkmenistan	BCPR	71200 – International Consultants	0	70,000
									71300 – Local Consultants	0	50,000
									71600 – Travel	0	20,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>0</b>	<b>150,000</b>
	5.6 National component managed efficiently and effectively	X	X	X	X	X	UNDP Turkmenistan	BCPR	71300 – Local Consultants	10,000	153,000
									71600 – Travel	0	17,000
									75700 – Training, Workshop,	10,000	10,000
									72200 – Equipment & furniture	0	10,000
									74500 – Miscellaneous	6,000	6,000
									72100 – Computers	4,000	4,000
									<b>Sub-Total</b>	<b>30,000</b>	<b>200,000</b>
									<b>Total Output 5</b>	<b>110,000</b>	<b>2,000,000</b>
<b>Output 6: Comprehensive Approaches to Climate Risk Management promoted in Uzbekistan</b>	6.1 Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened	X	X	X	X	X	UNDP Uzbekistan	BCPR	71200 – International Consultants	0	80,000
									71300 – Local Consultants	20,000	70,000
									71600 – Travel	0	20,000
									72800 – IT equipment	0	60,000
									74200 – Audio, Visual, Print Prod	0	10,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>
	6.2 Climate-resilient strategies, policies and legislation in priority sectors and geographic areas developed	X	X	X	X	X	UNDP Uzbekistan	BCPR	71200 – International Consultants	20,000	120,000
									71300 – Local Consultants	0	100,000
									71600 – Travel	0	20,000
								74500 – Miscellaneous	0	10,000	

Supporting Integrated and Comprehensive Approaches to Climate Risk Management in Central Asia

									<b>Sub-Total</b>	<b>20,000</b>	<b>250,000</b>
6.3 Financing options to meet national climate risk management costs expanded at the local, sub-national and national levels			X	X	X	X	UNDP Uzbekistan	BCPR	71200 – International Consultants	0	150,000
									71300 – Local Consultants	0	70,000
									72100 – Contractual Services	0	40,000
									71600 – Travel	0	30,000
									74500 – Miscellaneous	0	10,000
									<b>Sub-Total</b>	<b>0</b>	<b>300,000</b>
6.4 Climate risk management interventions in priority sectors implemented	X	X	X	X	X	UNDP Uzbekistan	BCPR	71200 – International Consultants	0	500,000	
								71300 – Local Consultants	10,000	250,000	
								71600 – Travel	0	80,000	
								74500 – Miscellaneous	0	20,000	
								<b>Sub-Total</b>	<b>10,000</b>	<b>850,000</b>	
6.5 Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national levels			X	X	X	X	UNDP Uzbekistan	BCPR	71200 – International Consultants	0	70,000
								71300 – Local Consultants	0	50,000	
								71600 – Travel	0	20,000	
								74500 – Miscellaneous	0	10,000	
								<b>Sub-Total</b>	<b>0</b>	<b>150,000</b>	
6.6 National component managed efficiently and effectively	X	X	X	X	X	UNDP Uzbekistan	BCPR	71300 – Local Consultants	10,000	153,000	
								71600 – Travel	0	17,000	
								75700 – Training, Workshop,	10,000	10,000	
								72200 – Equipment & furniture	10,000	10,000	
								74500 – Miscellaneous	6,000	6,000	
								72100 – Computers	4,000	4,000	
								<b>Sub-Total</b>	<b>40,000</b>	<b>200,000</b>	
									<b>Total Output 6</b>	<b>90,000</b>	<b>2,000,000</b>
									<b>TOTAL</b>	<b>987,729</b>	<b>12,000,000</b>

## **VI. Management Arrangements**

90. The project will be implemented under the Multi-country project arrangement with the Bratislava Regional Centre (BRC) as the lead office and UNDP Kazakhstan, UNDP Kyrgyzstan, UNDP Tajikistan, UNDP Turkmenistan and UNDP Uzbekistan as participating Country Offices. BRC will be responsible for an overall coordination and reporting requirements on behalf of the other Country Offices and based on inputs from them. The multi-country project setup will allow for a very close coordination of the regional component and five national components. In Atlas, one Project Award will be established with Multiple (six) Project IDs.

91. The project will be implemented by the UNDP Energy and Environment Team (Climate Change Adaptation Team) in collaboration with the UNDP Bureau for Crisis Prevention and Recovery (BCPR) and Environment and Security Initiative (ENVSEC). Opportunities for collaboration with the Gender Team and the Capacity building Team will be explored.

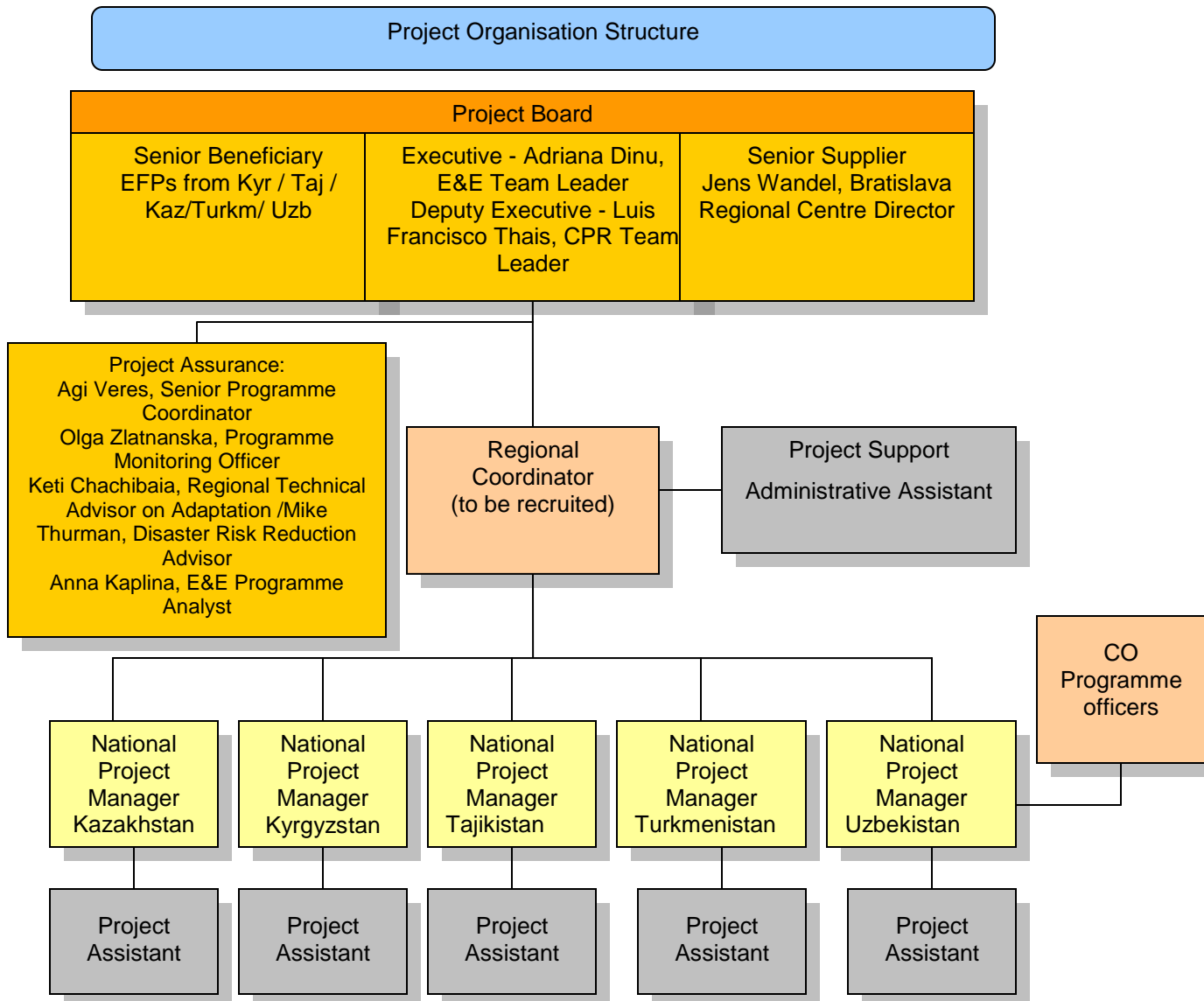
92. Project Board (PB) will be responsible for making strategic decisions with regards to the project. The PB will be chaired by the EE practice leader of UNDP-BRC with the support from the CPR practice leader of UNDP-BRC. The Terms of Reference for the Project Board is presented in Annex 3. The E&E Programme Analyst will fulfil the role of project assurance, with backstopping from the BRC Senior Programme Coordinator, BRC Programme Monitoring Officer, Regional Technical Advisor for climate change adaptation and Regional Disaster Risk Reduction Advisor.

93. There will be a Multi-country project coordination unit housed within the UNDP Almaty Regional Hub, which will comprise of a Regional Project Coordinator and an Administrative Assistant.

94. The Multi-country project will be coordinated by the Regional Project Coordinator, who will also manage the regional project component. The Regional Project Coordinator will oversee implementation of the five national project components and will have an overall responsibility for Multi-country project implementation and expenditure. S/he will report to the Project Board. The Regional Project Coordinator will delegate an authority to spend funds to each Country Office. The Regional Project Coordinator will be also ensuring that the multi-country adaptation network (MCN) is functioning and drawing in the necessary expertise for project implementation. The Regional Project Coordinator and Administrative Assistant will ensure efficient running of the project, disbursement of funds and monitoring and evaluation (see Terms of Reference in Annex 3).

95. Each of the five national project components will be managed by a National Project Manager, who will have matrix reporting lines to the Regional Project Coordinator and to the respective Country Office. Supported by National Project Assistants, National Project Managers will be responsible for day-to-day execution of the various project activities at the national level.

96. Figure below presents the project's organizational chart.



## VII. Monitoring Framework and Evaluation

### Global/Regional-Level

97. In accordance with the programming policies and procedures outlined in the UNDP User Guide, the Project will be monitored through the following:

#### Within the annual cycle

- On a quarterly basis, a quality assessment shall record progress towards the completion of key results, based on quality criteria and methods captured in the Quality Management table below.
- An Issue Log shall be activated in Atlas and updated by the Project Coordinator/National Project Managers to facilitate tracking and response of potential problems or requests for change.
- Based on the initial risk analysis submitted, a risk log shall be activated in Atlas and regularly updated by reviewing the external environment that may affect the project implementation.
- Based on the above information recorded in Atlas, a Project Progress Report (PPR) shall be submitted by the Project Coordinator to the Project Board, using the standard report format available in the Executive Snapshot.
- A Project Lesson-learned log shall be activated and regularly updated to ensure on-going learning and adaptation within the organization, and to facilitate the preparation of the Lessons learned Report at the end of the project.
- A Monitoring Schedule Plan shall be activated in Atlas and updated to track key management actions/events.

#### Annually

- *Annual Review Report.* An Annual Review Report shall be prepared by the Project Coordinator and shared with the Project Board and the Project Managers and shared with the Regional Project Board. As minimum requirement, the Annual Review Report shall consist of the Atlas standard format for the Quarterly Progress Report (QPR) covering the whole year with updated information for each above element of the QPR as well as a summary of results achieved against pre-defined annual targets at the output level.
- *Annual Project Review.* Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan (AWP) for the following year. In the last year, this review will be a final assessment. The national review is driven by the Project Board and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcome(s). The regional review is driven by the Project Board.

#### Evaluation

- *Mid-term Evaluation.* An evaluation will be scheduled during the third quarter of the second implementation year. The aim will be to look back on the achieved results, lessons learned, the project overall status vis-à-vis the plans, established project partnerships, and links to other initiatives, as to generate forward-looking recommendations in terms of the overall project relevance, strategy and approach, and the ahead activities in particular. The evaluation will suggest possible changes that would be required in the overall project architecture, and/or on certain activities in order to fulfill the objectives. The evaluation will also examine project management in terms of efficiency, effectiveness and delivery, the project's deliverables in terms of timeliness, quality and applicability, will review the specific monitoring and reporting tools, and will formulate recommendations towards improvement, as required.

- *Final Evaluation.* A final independent evaluation will be scheduled during the last quarter of the project. The aim will be to look back on the overall achievement of results, the project's (actual or expected) impact, established project partnerships and links to other relevant initiatives, as well as the (foreseen) sustainability (strategy). The evaluation will also review the overall project management, reports and materials produced in terms of relevance, quality and applicability.

#### **LEARNING AND KNOWLEDGE SHARING**

98. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- i. The project will participate, as relevant and appropriate, in UNDP-GEF sponsored networks, organized for senior personnel working on projects that share common characteristics. The **Adaptation Learning Mechanism (ALM)** and WikiADAPT will function as key electronic platforms to capture project learning and adaptation impacts generated by the project. The ALM lessons learned template currently used by UNDP will be adapted for use by the project. To support this goal, adaptation-related activities from the project will contribute knowledge to the ALM, such as the following:
  - Best practices in integrating adaptation into national and local development policy, and project design and implementation mechanisms.
  - Lessons learned on removing the most common barriers to adaptation, with special attention to the roles of local and international partners, in designing policy, institutional and financial incentives for climate risk management.
  - The conditions for success (or failure), including replication and scaling up.
- ii. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned.
- iii. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identification and analysis of lessons learned is an ongoing process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. To this end a percentage of project resources will need to be allocated for these activities.

## VIII. Quality Management for Project Activity Results

<b>Output 1:</b> Technical capacity and knowledge in the area of climate risk management in Central Asia strengthened		
<b>Activity Result 1.1</b>	Technical capacity to manage climate change risks and opportunities in an integrated manner at the multi-country levels strengthened	Start Date: 2010 End Date: 2014
<b>Purpose</b>	To improve technical capacity to address climate risks and to seize climate change - related opportunities	
<b>Description</b>	<p>Action 1.1.1: Establish a multi-country climate network.</p> <p>Action 1.1.2: Collect and archive national-level socio-economic and biophysical data and information pertaining to climate change adaptation from the five project teams.</p> <p>Action 1.1.3: Conduct a comprehensive climate risk assessment / baseline study, based on collated data and analysis.</p> <p>Action 1.1.4: Utilise planning tools such as participatory scenario development and socio-economic cost-benefit analyses to i) assess the costs associated with climate variability and change, and ii) the costs and benefits of a range of CRM interventions at a regional as well as national level for each of the countries.</p> <p>Action 1.1.5: Produce training materials for national project teams and stakeholders involved in implementation of CA-CRM activities.</p> <p>Action 1.1.6: Conduct bilateral and multi-country knowledge exchange sessions for targeted groups.</p>	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
A MCN is established and functioning	Yes/no; Assessment reports.	End of each Year.
Climate risk assessment completed	Yes/no, Project progress report.	Second quarter of Year 2.
Number of bilateral and multi-country knowledge exchange sessions conducted and number of persons engaged	Project progress report; Survey.	End of each Year.
Number of assessments/analyses conducted that i) detail the costs and benefits associated with particular adaptation interventions; ii) detail the costs associated with climate change	Project progress report.	Every 6 months and of Year 5
<b>Activity Result 1.2</b>	Knowledge on adjusting national development process to fully incorporate climate change risks and opportunities shared across national, multi-country and global levels.	Start Date:2010 End Date: 2014
<b>Purpose</b>	To strengthen databases pertinent to CRM activities and knowledge in order to facilitate effective CRM.	
<b>Description</b>	<p>Action 1.2.1: Develop a CRM database management system.</p> <p>Action 1.2.2: Develop a multi-country web-based knowledge management platform for CA-CRM.</p> <p>Action 1.2.3: Collect and upload: i) lessons learned; ii) best practise guidelines; and iii) documents and data onto the database management system, regional web-based knowledge management platform and CRM action registry.</p> <p>Action 1.2.4: Produce a knowledge publication "Central Asia: Climate Change Impacts and Climate Change Adaptation Solutions".</p> <p>Action 1.2.5: Identify and engage with a regional agency to host the database management system, regional web-based knowledge management platform and CRM action registry.</p>	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>

Climate change adaptation database management system is developed.	Project progress report.	Second quarter of Year 2.
A multi-country web-based knowledge management platform is developed.	Project progress report.	Second quarter Year 2.
Information is regularly uploaded onto the database and website.	Online survey; Project progress reports.	Every 6 months and of Year 5.
Knowledge publication is produced and disseminated.	Project progress report.	End of Year 5.
A host is identified for the database management system and web-based knowledge platform.	Project progress report; signed MOU.	Second quarter of Year 4
<b>Activity Result 1.3</b>	Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers.	Start Date: 2010 End Date: 2012
<b>Purpose</b>	To improve existing research on glacial melting and to improve understanding related to glacial melting rates and impacts.	
<b>Description</b>	<p>Action 1.3.1: Conduct multi-country meetings in order to create contact and facilitate information flows between national CA hydromets.</p> <p>Action 1.3.2: Synthesise the information presently available on glacial melting in CA.</p> <p>Action 1.3.3: Model the impacts of a range of climate change scenarios on glacial melting on water supply in the major river basins in CA for the period 2009-2100.</p> <p>Action 1.3.4: Identify the gaps in knowledge, data, observation capacity and finances, and facilitate the research required for filling these gaps.</p> <p>Action 1.3.5: Provide a range of cost-effective recommendations to improve data availability and glacier observation capacity in the region.</p> <p>Action 1.3.6: Raise awareness amongst decision-makers in key water user sectors.</p> <p>Action 1.3.7: Conduct technical training within the hydromets for furthering glacial research.</p> <p>Action 1.3.8: Establish a web-platform that presents all project results.</p>	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Research gaps identified and budgets planned.	Project progress report.	End of Year 2.
Recommendations provided to decision-makers.	Project progress report; survey.	End of Year 2.
Number of persons attending round tables/ workshops and e-discussions (disaggregated).	Project progress reports; Attendance registers.	End of Year 2.
Number of round tables/ workshops and e-discussions held.	Project progress reports.	End of Year 2.
Results presented to the Executive Committee of the IFAS (yes/no).	Project progress reports.	End of Year 2.
Web-platform is established and updated with results.	Project progress reports;	End of Year 1.
<b>Activity Result 1.4.</b>	Project efficiently and effectively coordinated and managed	Start Date:2010 End Date: 2014
<b>Purpose</b>	To ensure highly efficient and effective project management	
<b>Description</b>	Day-to-day project management	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Project delivery rate	Atlas CDR	End of each year
Achievement of yearly targets and of	Project progress reports.	End of each year.



overall project objective	Final evaluation.	End of Year 5.
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**Output 2, 3, 4, 5, 6: Integrated and Comprehensive Approaches to Climate-Related Disaster Reduction and Climate Change Adaptation supported in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan**

<b>Activity Result</b> 2.1, 3.1, 4.1, 5.1, 6.1:	Institutional frameworks and technical capacity to manage climate-related risks and opportunities in an integrated manner at the local, sub-national and national levels strengthened	Start Date: 2010 End Date: 2014
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<b>Purpose</b>	To improve institutional frameworks for climate risk management
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<b>Description</b>	<p>Action 2.1.1, 3.1.1, 4.1.1, 5.1.1, 6.1.1: Establish a NCN to undertake CRM assessments and implementation.</p> <p>Action 2.1.2, 3.1.2, 4.1.2, 5.1.2, 6.1.2: Review and propose revision to the institutional mandates of the key sectoral and central ministries to engage in CRM.</p> <p>Action 2.1.3, 3.1.3, 4.1.3, 5.1.3, 6.1.3: Conduct an in-depth review of previous and current CRM-related projects in the country.</p> <p>Action 2.1.4, 3.1.4, 4.1.4, 5.1.4, 6.1.4: Collect national-level socio-economic and biophysical data pertaining to CRM from key line ministries and research institutions.</p> <p>Action 2.1.5, 3.1.5, 4.1.5, 5.1.5, 6.1.5: Develop a detailed climate change country profile for the country.</p> <p>Action 2.1.6, 3.1.6, 4.1.6, 5.1.6, 6.1.6: Strengthen weather forecasting and existing EWS(s).</p> <p>Action 2.1.7, 3.1.7, 4.1.7, 5.1.7, 6.1.7: Undertake a national capacity inventory for climate risk management.</p> <p>Action 2.1.8, 3.1.8, 4.1.8, 5.1.8, 6.1.8: Undertake training of staff from the NCN, key line ministries and research institutions to enable implementation of the CA-CRM.</p> <p>Action 2.1.9, 3.1.9, 4.1.9, 5.1.9, 6.1.9: Prioritise data, information and equipment needs for long-term CRM based on national capacity inventory.</p>
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<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
A NCN is established.	Yes/no; Project progress reports.	First quarter of Year 1.
Socio-economic and biophysical data is collected and disseminated to the MCN.	Yes/no, Project progress report.	Second quarter of Year 1.
Climate change country profile developed (yes/no).	Yes/no, Project progress report.	End of Year 1.
Weather forecasting and EWS is strengthened	Project progress report; Survey.	End of Year 5.
Inventory of existing national capacity for CRM undertaken.	Yes/no; Project progress report; Inventory report.	Third quarter of Year 1.
Number of stakeholders attending training workshops/seminars.	Project progress report; Survey.	Every 6 months and end of Year 2.

<b>Activity Result</b> 2.2, 3.2, 4.2, 5.2, 6.2	Climate-resilient strategies, policies and legislation in priority sectors and geographical areas strengthened	Start Date: 2010 End Date: 2014
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<b>Purpose</b>	To strengthen legislative and regulatory framework for CRM and to mainstream CRM into core development activities
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<b>Description</b>	<p>Action 2.2.1, 3.2.1, 4.2.1, 5.2.1, 6.2.1: Produce a list of key policies, strategies and legislation that need a revision to integrate CRM.</p> <p>Action 2.2.2, 3.2.2, 4.2.2, 5.2.2, 6.2.2: Provide training to decision-makers on integrating CRM into core development policy, strategy and legislative planning.</p> <p>Action 2.2.3, 3.2.3, 4.2.3, 5.2.3, 6.2.3: Support current and ongoing strategy, policy and legislative intervention amendments</p>
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	Action 2.2.4, 3.2.4, 4.2.4, 5.2.4, 6.2.4: Produce a list of no-regret, CRM policy measures for key sectors.	
	Action 2.2.5, 3.2.5, 4.2.5, 5.2.5, 6.2.5: Implement no-regret prioritised CRM policy measures on a pilot level.	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Number of policy- and decision-makers who have received training in incorporating CRM into strategy, policy and legislation.	Project progress report; Survey.	End of Year 2.
Revisions developed for top priority sectoral and cross-sectoral strategies/policies/legislation.	Project progress reports; Revised documents.	Every 6 months and of Year 4.
Long-term strategy developed	Project progress report; Strategy report.	End of Year 4.
Number of prioritized CRM policy measures implemented.	Project progress report; Pilot reports.	Every 6 months and end of Year 5.
<b>Activity Result 2.3, 3.3, 4.3, 5.3, 6.3:</b>	Financing options to meet national climate risk management costs expanded at the local, sub-national, and national levels	Start Date:2010 End Date: 2014
<b>Purpose</b>	To improve upon the number of available options for sourcing of financing for CRM, particularly through increasing political traction to shift budgets	
<b>Description</b>	Action 2.3.1, 3.3.1, 4.3.1, 5.3.1, 6.3.1: Produce a list of financial instruments and mechanisms to finance CRM. Action 2.3.2, 3.3.2, 4.3.2, 5.3.2, 6.3.2: Establish demonstration projects to field-test and refine selected prioritized financial instruments and mechanisms. Action 2.3.3, 3.3.3, 4.3.3, 5.3.3, 6.3.3: Strengthen the capacity of key stakeholders to mobilise additional sources of funding for CRM. Action 2.3.4, 3.3.4, 4.3.4, 5.3.4, 6.3.4: Develop a CRM financing strategy.	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Financial instruments and mechanisms are identified and sent to the MCN.	Project progress reports.	Second quarter of Year 2.
Demonstration projects are conducted.	Project progress reports; Survey.	Every 6 months and end of Year 5.
Number of presentations to redirect national budget flows made.	Project progress reports; Surveys.	Every 6 months and end of Year 5.
CRM financing strategy is developed (yes/no).	Project progress reports; financing strategy.	End of Year 3.
Number of funding proposals submitted.	Project progress reports; funding proposal documents.	Every 6 months and end of Year 5.
<b>Activity Result 2.4, 3.4, 4.4, 5.4, 6.4:</b>	Climate risk management interventions in priority sectors implemented	Start Date:2011 End Date: 2014
<b>Purpose</b>	To demonstrate successful interventions at a local level, and thus to increase CRM capacity at a local level. To further support existing CRM projects and programmes and to upscale successful initiatives	
<b>Description</b>	Action 2.4.1, 3.4.1, 4.4.1, 5.4.1, 6.4.1: Produce a prioritized list of community-based CRM measures. Action 2.4.2, 3.4.2, 4.4.2, 5.4.2, 6.4.2: Implement priority CRM measures. Action 2.4.3, 3.4.3, 4.4.3, 5.4.3, 6.4.3: Identify and prioritize CRM-related projects for upscaling. Action 2.4.4, 3.4.4, 4.4.4, 5.4.4, 6.4.4: Support and/or upscale prioritized existing CRM-related projects.	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Number of priority CRM measures implemented/ upscaled.	Project progress report; Survey.	Every 6 months and end of Year 5.
Number of communities learning from demonstration activities and implementing	Project progress report; Survey.	Every 6 months and end of Year 5.

new CRM techniques (disaggregated).		
<b>Activity Result 2.5, 3.5, 4.5, 5.5, 6.5:</b>	Knowledge on how to incorporate climate variability and change knowledge and risks into development processes at local, sub-national and national level disseminated	Start Date:2010 End Date: 2014
<b>Purpose</b>	To disseminate information, particularly lessons learned and best practices, widely in order to improve implementation in other countries and regions. To improve public awareness and understanding of CRM challenges within the broader general public.	
<b>Description</b>	Action 2.5.1, 3.5.1, 4.5.1, 5.5.1, 6.5.1: Disseminate lessons-learned Action 2.5.2, 3.5.2, 4.5.2, 5.5.2, 6.5.2: Review and document case studies of demonstration projects and training programmes in CA-CRM project. Action 2.5.3, 3.5.3, 4.5.3, 5.5.3, 6.5.3: Produce a monthly newsletter describing CA-CRM project activities and progress in the country. Action 2.5.4, 3.5.4, 4.5.4, 5.5.4, 6.5.4: Undertake a public awareness campaign on CRM.	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Number of lessons learned disseminated to the multi-country knowledge platform.	Project progress report; Regional progress report.	Every 6 months and end of Year 5.
Number of case studies documented.	Project progress report; online survey of web based platform.	Every 6 months and end of Year 5.
Number of peer-reviewed publications.	Project progress report; Publications.	End of Year 2 and end of Year 5.
Bi-monthly newsletter distributed.	Project progress report; monthly newsletter.	Every 6 months and End of Year 5.
An awareness campaign undertaken.	Project progress report; Survey.	From End of Year 2 to End of Year 5- Every 6 months.
Number of communication interventions.	Project progress report; Survey.	Every 6 months and end of Year 5.
<b>Activity Result 2.6, 3.6, 4.6, 5.6, 6.6:</b>	National component managed efficiently and effectively	Start Date:2010 End Date: 2014
<b>Purpose</b>	To ensure highly efficient and effective project management	
<b>Description</b>	Day-to-day project management	
<b>Quality Criteria</b>	<b>Quality Method</b>	<b>Date of Assessment</b>
Project delivery rate	Atlas CDR	End of each year
Achievement of yearly targets and of overall project objective	Project progress reports. Final evaluation.	End of each year. End of Year 5.

## **IX. Legal Context**

This regional project document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the Governments participating and the United Nations Development Programme.

## **X. Annexes**

**Annex 1. Climate Risk Management in Kazakhstan<sup>27</sup>**

**Annex 2. Climate Risk Management in Kyrgyzstan**

**Annex 3. Climate Risk Management in Tajikistan**

**Annex 4. Climate Risk Management in Turkmenistan**

**Annex 5. Climate Risk Management in Uzbekistan**

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<sup>27</sup> Attachments 1-5 are presented in separate MS Word documents

## Annex 6: Response to pre-LPAC comments

Comments	Response	Revisions to document
<b>Situation Analysis</b>		
It's not clear to me how (ii) and (iii) are different. If the broader point is that Central Asia continues to Soviet-era legacies of environmental mismanagement, many of which (e.g., the Aral Sea's desiccation) have worsened in the past two decades, then perhaps this should just be stated.	Text revised to reflect that in (iii) we are talking about environmental degradation as a baseline for project interventions	p.4
The broader point is that the end of the 2008 drought has not brought about perceptible improvements in energy security in the region (winter electricity use continues to be rationed in Tajikistan and Kyrgyzstan). The same can apparently be said for continuing food insecurity (primarily because of high global food prices).	We fully recognize the complexity of energy security in Central Asia. Climate variability and change is only one variable in the complex problem, however the project is focused on this particular issue.	
The utility of such statements depend critically on <u>when</u> these anticipated shortfalls in river flow occur. The upstream countries' current hydropower generation assets are increasingly depreciated; if they are not replaced in the next 2-3 decades, energy insecurity in Central Asia will increase significantly. This is one of the main reasons behind the drive to build Roghun and Kambarata today. If significant reductions (due to climate change) in river flow along the Vakhsh and Naryn cascades don't kick in for 50 or 75 years, if world energy prices remain high, and if electricity tariffs rise toward cost-recovery levels, big investments in new hydro generation capacity could still pay off big time. Indeed, since glacier melt increases the short- and medium-term risks of flooding, the flood control (adaptation) benefits of such investments could likewise be significant in the short and medium term. This is the view of the upstream country governments and most of UNDP's CAREC partners. I think this document might be more credible with them if it reflected a more sophisticated understanding of the real-time policy dilemmas imposed by the water/energy nexus.	Please refer to para 5 for information on projected reduction in river flows taken from the National Communications to UNFCCC, which are the key official documents for such type of information. Additionally, glacial melting will not necessary transform into higher volumes in river flows. For example, some studies say that in fact, most of 'additional' water will be lost due to soil infiltration. Further study of the subject is required and current initiative proposes some steps in this direction.	
This is not so "current": trade-offs implicit in using the upstream countries' water resources for hydro (winter) versus irrigation (summer) have been present in principle since the construction of the Naryn and Vakhsh river cascades in the 1960s and 1970s. The trade-offs have been quite explicit now for two decades, since the collapse of the integrated Soviet-era water/energy regime.	Text revised to address the comment	p. 6
I would suggest that: (1) the focus should be on food security, not just on animal husbandry/meat production; (2) changes in the relationship between cotton cultivation versus the production of edibles (crops as well as meat products) is more important for rural poverty reduction than livestock/animal husbandry; and (3) the issues mentioned here (e.g., lack of extension support) apply to (edible) crop as well as food production. "It's about cotton,	The selected themes, including livestock management, are part of broader issues of food, energy and water security that the project intends to address within feasible scope (please refer to pp.5-6 for details). These themes were selected based on consultations held in each of the CA	

<p>not about meat”—particularly in Uzbekistan and Turkmenistan, but also in Tajikistan, where cotton dominates agriculture and irrigated water use, where land remains state-owned, and where centralized government management of/support for cotton production remains in place (largely obviating the need for extension services, etc).</p>	<p>countries. Other topics suggested in the comment come across in other selected themes, such as Improved water management in agriculture, glacial melting, etc.</p>	
<p><b>Proposed Response</b></p>		
<p>Arguments about the project’s abilities to develop capacity for adaptation via inter-state cooperation would to me be more persuasive if the prodoc would at least mention: (1) the inter-governmental Central Asian disaster prevention center that has been established in Almaty; and (2) on-going related (and better-funded) efforts conducted by UNDP’s CAREC partners (i.e., World Bank, ADB) and the ISDC within the framework of the Central Asia/Caucasus Disaster Risk Management Initiative.</p>	<p>The section to which this comment refers is justifying the rationale for multi-country approach in addressing complex issues of energy, water, and food security. The section does not refer to inter-state/ regional cooperation.</p>	
<p>The absence of references to cooperation with: (1) UNDP’s CAREC partners (World Bank, ADB) and ISDC under the on-going CAC DRI initiative; (2) the UNDP-UNEP Poverty and Environment Initiative; and (3) OCHA is to me a matter of concern.</p>	<p>Please see para 36 for reference to cooperation with the WB, ADB. Text revised to include reference to intended cooperation with CAC DRI initiative, PEI and OCHA.</p>	<p>p.15</p>
<p><b>Financial Resources</b></p>		
<p>Considering that 1.8 million are un-funded, it is suggested to have a section on resource mobilisation within the project document (maybe after the "Proposed Response". In the risk section, the funding issue is indicated, as well as the need for a joing fund-raising strategy. However, following Copenhagen, it may now be possible to indicate more precisely which avenues will be pursued to mobilise funds, so that the PAC could be re-assured about the viability of the project, and its sustainability over 5 years. The RM strategy should also highlight which component(s) should be funded in order of priority, should the funding gap be not entirely met.</p>	<p>1. Since the submission of the document for LPAC in early December, situation with funding has improved and currently funding sources are identified for over 60% of funding needs. 2. The fundraising strategy for the project has been included in the E&amp;E Business Plan for 2010 and since the current document is considered to be an external document it is not deemed desirable to include fundraising strategy in the document.</p>	<p>Cover page</p>
<p>Without resource mobilization, this project would seem to have uncertain prospects. To make the project more credible, it may be desirable to devote more attention to explaining: ** what can/would be done at first, using the initial seed funding available; and ** which donors might be approached in order to obtain the requisite non-core funding, both public and private sector. Insurance companies in the region, which could face significant contingency risks associated with adaptation, might be a possibility.</p>		
<p>On the cover page, the name of the Donor providing 170k should be mentioned.</p>	<p>The name of the Donor included</p>	<p>Cover page</p>
<p>In the RRF, Act Result 3 is said to be financed by ENVSEC for 150K. Can ENVSEC, which is another project, be considered as a donor? Does this mean that funds will be transfered from ENVSEC to this new project</p>	<p>Discrepancy is due to an error – commitment from Finland through ENVSEC increased and was not</p>	<p>RRF</p>

(and managed by this new project), or will they remain parallel? Is this similar to the 170K contribution mentioned in the cover page? And if so, why is there a discrepancy?	changed in the RRF	
<b>Results</b>		
Page 18-21: the narrative could be removed. The same text is repeated in the RRF and in the AWP. Overall, the entire section called "Strategy" could be deleted, because your earlier section "Proposed Response" starting page 12 is actually the project strategy, and there is duplication.	We agree that there is duplication; however, we would prefer to leave both sections. This project is going to be submitted to different donors for funding and often donors request detailed description of activities and sub-activities, therefore it is convenient to have such ready-to-go section in the document.	
In the table, page 23, Outcome Indicator 2 is actually the target for Indicator "Number of RBEC countries with improved ..." as indicated in the current Development Plan (ERBM platform). The current indicator should be quoted. Same for the Outcome Targets.	Outcome Indicator 2 changed	RRF
In the table, page 23, Why would we expect carbon markets to finance adaptation activities? If this project is to finance mitigation activities, then how does it build on/differ from MDG carbon and other UNDP carbon finance activities already on-going in Central Asia?	This target is in fact the target for the EUR_OUTCOME 150 (as per requirements of the template), therefore simply copied from ROAR to the prodoc. In fact, carbon markets do finance adaptation activities. For example through Adaptation Fund which is filled in with proceeds from CDM projects (2% of certified emission reductions (CERs) issued for a CDM project activity).	
In the RRF table, you may wish to remove the Means of Verification columns for activities. It is not crucial at the level of the RRF, and this information is repeated in the subsequent tables on Quality Management. This would make the RRF less heavy on text.	The Means of Verification columns for activities removed	RRF
Output 1: the output statement should clarify whom technical capacity will be strengthened.	The target groups are listed in para 31.	p. 13
Regarding performance measurements, I do not see a clear correspondence between some of your indicators and yearly targets. Indicator 1.4: skills and knowledge of whom, and on what? there is no target for this indicator. Indicator 1.3 # of expert/institutions ... , there is no yearly target attached to this indicator. At the same time, I do not see clear indicators for any targets in year 2 and 3. You may want to revisit your indicators 1.1 and 1.2, as they are to my view not so relevant at that level and limited to # of membership and access to online resources. They should demonstrate how technical capacity will be strengthened.	Indicators and targets revised to address the comment. Targets in year 2 and 3 correspond to I2 and I4. With regards to I1 and I2, technical capacity will be strengthened by i) membership in the MCN, which is an expert network and will provide for knowledge exchange and direct technical support to the members; ii) access to data and analysis on climate	RRF



	change impacts, which is essential for decision-making; and iii) capacity strengthening of the MCN members by doing the actual climate impact analysis.	
Your baseline should also be elaborated and linked to your indicators.	Baseline elaborated to address the comment	RRF, AWP
Output 2: 600K to develop a web site and one publication seems rather high, and would have to be better justified. On which basis this budget estimation has been made? Furthermore, this output has only one activity, and there seems to be some overlap with some of the activities under Output 1. Wouldn't it be feasible to merge Outputs 1 and 2 into one single output? There is no clear match between indicators and targets. Most targets are also defined at a very low level, and would rather be relevant to measure activities. Both the indicators and targets do not provide enough information on how to measure progress in relation to the output statement. I would need a bit more time to come up with suitable alternatives, but we could also have a working session on the overall RRF with your colleagues.	This is an expert estimate of the costs. The intention is not to develop a web-site only but rather a KM Platform that would include climate risk management (CRM) data management system, which will have to be maintained and updated constantly. So the costs of such platform would be higher than that of a typical web-site. With regards to publication, just for the reference, regional report currently produced by the Poverty Practice has a budget around US\$700,000. Having said that, we believe that that costs distribution between outputs could be somewhat adjusted at a later stage. Targets reviewed and revised to address the comment. Output 1 is dedicated to the technical capacity development and Output 2 intends to be the knowledge management vehicle, therefore we believe they should be separated.	
Output 3: Knowledge being developed, as a statement, does not really qualify as an Output. This result would require a re-definition, and it could also be covered by the working session proposed above.	Output statement revised: Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers.	Across the document
<b>Management Arrangements</b>		
A diagram, similar to the one proposed in the prodoc template, may help clarify roles and responsibilities among the various constituents.	Diagram included	p.46
Para 54: Suggest to replace first sentence by "the project will be implementing by BRC under the direct execution modality, in accordance to the management arrangements pertaining to the RBEC Regional Programme"	Suggested change implemented	p.45
Para 55: if the Steering Committee is equivalent to the project board, who shall serve as Executive for the project, i.e. the primary owner who is ultimately responsible for the project? Joint management with equal responsibilities between 2 practices/units can present potential problems	This is a joint project between E&E and CPR and therefore, it is important that both practices have equal	p.45

<p>in terms of decision making and accountability.</p>	<p>responsibilities and ownership. Project SC changed for PB</p>	
<p>Para 55: the Project Manager cannot fulfill the role of Project Assurance. Project Assurance shall ensure oversight, and this is a responsibility of the project board members which can be delegated, but not to the Project Manager, otherwise this will constitute a conflict of interest.</p>	<p>Text revised to reflect that the Regional Technical Advisor with backstopping from the DRR Advisor will be fulfilling the role of Project Assurance.</p>	<p>pp.45</p>
<p>Para 56: It seems that the Technical Advisor is in fact the Project Manager. The Project Manager, as described in the TOR, has rather a support function. Who is actually responsible for the day-to-day management of the project?</p>	<p>The Technical Advisor is not the Project Manager (PM), but i) Advisor to the project on technical issues; ii) Project Assurance. PM is responsible for the day-to-day management of the project, the TOR is adjusted to reflect this.</p>	<p>p.61</p>
<p><b>Gender</b></p>		
<p>I would suggest that more important, Central Asian-specific gender dimensions of the issues discussed here reflect the: (1) gender dimensions of migration in the sub-region, under which more men (than women) from vulnerable households migrate to Russia and Kazakhstan, leaving women to deal with the hardships of small-scale agriculture and petty trading (as well as domestic/child care responsibilities); (2) fact these responsibilities <i>de facto</i> place the burden of responding to growing household water and energy insecurities on women (who walks to and from the well or public standpipe to draw water when water pumps fail? Who gathers firewood for cooking and winter heat?); and (3) the fact that these hardships are occurring within a context of the “retraditionalisation” of gender relationships, potentially threatening or reversing gains in women’s access to education and the job market that occurred during the Soviet period.</p>	<p>Text revised to include suggested issues</p>	<p>p 10</p>
<p>1.) Strengthen/integrate a gender analysis, highlighting how gender matters for climate change In a separate gender section in the background/analysis part, for example, one could - among others - elaborate on women's higher vulnerability to external shocks and their more constrained adaptive capacity -Without secure access to and control over resources such as land, water, trees and livestock, women will be less able to cope with permanent climatic change. Women are also less likely to have access to information, such as early warning or available assistance. Also, while many men in CA, faced with the dessication of the Aral Sea have been able to migrate in search of new income oppoertunities, women are often left behind to take care of the household and having to care with the increasing impact of the dying sea. On the other hand, women's involvement in agriculture,</p>	<p>The existing section on Gender extended to address the comment.</p>	<p>pp. 9-10</p>



	<p>mobilized at regional level will optimize the costs for necessary expert inputs in the implementation of the national adaptation activities. One of the Outputs in each of the national components is fully dedicated to 'Linking national policies on climate change adaptation to macroeconomic policy frameworks (national development strategies, medium term expenditure frameworks) that would provide both the overall policy context and the financing for national adaptation activities'.</p>
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## Annex 7: Risk log

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response
1	Delays/obstacles to project implementation due to the regional nature of the project and involvement of 5 countries (there are examples of failed cooperation between CA countries in the past)	Concept development	Political	This may affect implementation of the multi-country component  P = 2.5 I = 2	- the programme will be positioned as a multi-country programme rather than a regional initiative - each of the five countries will have a national project with a separate project document, which will allow for national initiatives to move forward fairly independently of each other and irrespectively of potential delays/obstacles in other countries
2	The project may not be able to mobilize sufficient funding	Concept development	Financial	This may affect implementation of the whole initiative. However, climate change is currently high on the international agenda and many donors are interested to fund climate related activities, especially prior to the meeting in Copenhagen in December 2009. Therefore risk probability is graded as relatively low. P = 2 I = 5	- the programme will develop a joint fundraising strategy with the partners (ENVSEC, BCPR) - the programme will leverage support of the UNDP management for fundraising - the programme will be designed in a way that will allow to start implementation of separate components and even activities as soon as funding for these will be available
3	There will be difficulties in achieving integration of disaster reduction and climate change adaptation efforts at the national level	Concept development	Institutional	This will be a central challenge which the project will seek to address P=5 I=5	-the integrated climate risk management approach adopted by the project, which will actively involve the institutional actors supported respectively by UNDP's CPR and EEG practice areas at the national level. is intended to help bridge this divide and promote integrated climate risk management institutional development and policy formulation and strengthening in the participating countries.

## Annex 8: Terms of Reference for Project Board and key project personnel

- a. Project Board
- b. Regional Coordinator
- c. Database/website Manager
- d. Administrative Assistant

### a. The Project Board (PB)

**Composition:** EE practice leader of UNDP-BRC, the CPR practice leader of UNDP-BRC, Project Manager, Regional Technical Advisor for climate change adaptation, Regional Disaster Risk Reduction Advisor, at least one Environmental Focal Point from a beneficiary Country Office.

**Role and responsibility:**

- The PB is responsible for making by consensus strategic decisions, including the approval of project revisions (i.e. changes in the project document);
- The PB will approve Annual Work Plans and visibility strategy;
- The PB will approve quarterly and annual reports. The minimum requirements of the quarterly and annual reports will be defined by the PB;
- The PB will meet at least once a year to review the project strategy, management risks and most relevant issues;
- In addition the PB will meet, during the running of a project or as necessary, when raised by the Regional Coordinator;
- The PB is consulted by the Regional Coordinator for decisions when project management tolerances (in terms of time and budget as per work plan) have been exceeded. The PB defines the tolerances;
- The statute of the PB shall be approved by PB within the first month of the project implementation. The meeting of the PB can be held also virtually – via teleconference, videoconference, and email debate.

### b. Regional Coordinator

I. Position Information	
<p><b>Post Title</b> Regional Programme Coordinator for Central Asia Climate Risk Management Programme</p> <p><b>Post Number:</b></p> <p><b>Organizational Unit:</b> Bratislava Regional Centre, Environment &amp; Sustainable Development Unit (outposted)</p> <p><b>Supervisor/Grade:</b> UNDP/GEF Regional Technical Advisor on Climate Change Adaptation, Bratislava Regional Centre, P4 and Regional Disaster Risk Reduction Advisor, Bratislava Regional Centre, P5</p> <p><b>Post Status:</b> <i>Non-Rotational</i></p> <p><b>Duty Station:</b> Almaty, Kazakhstan (UNDP Bratislava Regional Center regional sub-office in Central Asia)</p>	<p><b>Current Grade:</b> N/A</p> <p><b>Proposed Grade:</b> P4</p>

II. Organizational Context
<p>UNDP is increasing its capacity and operations in the climate risk management in Central Asia. A new Central Asian Climate Risk Management (CA-CRM) programme, launched in March 2010, will</p>

assist the five Central Asian countries to adjust their national development processes to address risks posed by current climate variability and future climate change. CA-CRM will seek to strengthen climate-related disaster risk reduction and adaptive capacity, promote early action and provide the foundation for long-term investment to increase resilience to climate-related impacts across the region.

In order to achieve these aims, CA-CRM will build intellectual capital in the region to address the complex and multi-disciplinary problem that climate variability and climate change poses. Accordingly, CA-CRM proposes to form a "multi-country climate network" (MCN). A primary task of the MCN will be to provide tools, methods and expertise for in-depth socio-economic and biophysical analyses of the climate change impacts and cost-benefit analyses of potential CRM interventions for the region. This will be preceded by a thorough review of a wide-range of previous as well as ongoing CRM interventions in each country. The cost-benefit analyses will be used to prioritise interventions and to sensitize policy-makers and decision-makers to the risks posed by climate variability and climate change and the benefits associated with appropriate CRM interventions. Leadership capacity in the fields of climate-related disaster risk reduction and climate change adaptation within the region will be strengthened, where required, throughout the CA-CRM programme. Additionally, CA-CRM will address the main institutional, policy and financial barriers to catalyzing systematic CRM and cost-effective adaptation across the region. Importantly, lessons-learned and results achieved through CA-CRM and already existing CRM initiatives will be disseminated on a web-based knowledge management platform to inform future adaptation endeavors.

The CA-CRM Programme Coordinator, located in the sub-regional Central Asia office managed by the UNDP Bratislava Regional Center (Almaty), will be responsible to manage the regional component of the programme and to coordinate and support all programme activities, overall monitoring and reporting, and to oversee staff and operations in five national Project Implementation Units (PIU) in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

The position requires a high degree of technical and contextual knowledge of climate risk management and its linkages with development trends in Central Asia. Understanding of how climate change affects human development, as well as how climate risks can be reduced through the development processes will be essential for this assignment.

### **III. Functions / Key Results Expected**

The CA-CRM Programme Coordinator, reporting to the Adaptation RTA and the DRR Adviser (UNDP/BRC), will be an integral part of the UNDP Practice architecture and will provide advisory support to stakeholders including donors, UNDP/UN Offices, and government and national institutions in Central Asia.

S/he will be responsible for the day-to-day management, co-ordination and supervision of the activities implemented under the programme 'Central Asian Multi-Country Project on Climate Risk Management (CA-CRM)', leading to the project outputs as outlined in regional and national project documents.

The specific tasks can be grouped into 4 main areas:

- Project implementation (coordination, oversight, management, team leadership, monitoring and reporting);
- Advisory support and capacity building on climate risk management in Central Asia;
- Partnership building, stakeholder involvement, knowledge management support;
- Fundraising for the programme (regional and national components).

#### **1. Project implementation (management, team leadership, monitoring, evaluation, and reporting), 40%**

- In the framework of the project document for the regional component of the programme

“Supporting Integrated and Comprehensive Approaches to Climate-Related Disaster Reduction and Climate Change Adaptation in Central Asia (Central Asian Multi-Country Project on Climate Risk Management (CA-CRM)”, ensure effective and efficient project management, including:

- Develop a detailed work plan for the project at inception phase and monitor progress against the initial quality criteria.
  - Monitor financial resources, control expenditures and ensure an adequate management of the resources provided for the project.
  - Prepare quarterly and annual progress reports, interim and final reports and financial reports.
  - Ensure timely delivery of results and outputs in all activities.
  - Manage and oversee all procurement processes.
  - Provide high-quality reporting (including on-line – in “Atlas”) periodically and on demand.
  - Monitor and evaluate project outcomes and results for 1) adopting corrective measures in project implementation, when necessary, to ensure timely delivery of required inputs and achievement of results and 2) deriving lessons learned to increased knowledge among stakeholders concerning CRM and inform future programming.
  - Keep comprehensive risk and issues logs updated, alert the project board and suggest management responses as needed.
  - Make and execute all necessary and suitable organizational arrangements.
  - In line with UNDP’s rules and regulations and the prevailing project implementation arrangements, draft TORs for staff and consultants, identify candidates, and manage the recruitment and hiring process.
  - Mobilise the initiation of the Project Board, and other relevant working groups.
  - Organize project related meetings, including PB meetings and regional and national project inception workshops. Prepare the background materials for these meetings and their minutes.
  - Coordinate between the international and national experts, ensuring the national staff receives all necessary training, templates, methodologies and support to undertake their data collection functions.
- Coordinate and oversee the work of PIUs and all teams and task forces at regional and national levels, and assure timely and quality implementation of all national project activities, including quality control of all produced outputs.
  - Lead the process of fine-tuning and specification of regional and national project documents during the inception phase.
  - Other tasks to ensure proper project implementation, as adequate and requested by the supervisors.

**2. Advisory support, capacity building and regional and national CRM activities, 20%**

- As leading UNDP climate risk management expert in Central Asia, and in the framework of the programme:
  - Provide advisory services to the regional and national CA-CRM projects and lead strategic thinking on the overall programme.
  - Conduct targeted research, develop briefing papers, prepare and/or hold presentations on related issues, or fulfill other services upon request.
  - Continuously and pro-actively monitor the relevance and strategic approaches of the programme to address the overall development objective, alert the project board, and develop mitigation proposals, as required.
  - Initiate and lead identification of the specific needs and demands of the countries in the region in the area of climate risk management, and serve as a broker in harnessing regional and global support (through EEG/BCPR) to respond to such needs.
  - Proactively liaise with other UN(DP) colleagues, particularly the conflict prevention and recovery and the climate change team.



- Organize targeted capacity building and training activities, including develop, coordinate with partners, and conduct trainings, workshops, stakeholder roundtables, etc.
- Facilitate coordination with capacity building activities of partners and other relevant projects, which may include development and implementation of joint capacity building strategies and programmes.
- Lead the preparation of national and regional evidence to support increased integration of climate change into development strategies and plans and increased investment in climate risk management.
- Advise on key policy issues pertaining to climate risk management; engage in and contribute to policy dialogues on all levels, including the national level.
- Facilitate internal advocacy efforts related to mainstreaming climate risk management into UNDP supported development initiatives in the region.
- Develop increased climate risk management capacity in UNDP Country Offices including through training.
- Facilitate regional cross-practice collaboration between BDP and BCPR in the area of energy and environment and gender, especially as pertaining to the management of climate-related risks.

### **3. Partnership building and advocacy, knowledge management support, 20%**

- Lead public relations for the programme, identifying collaborative opportunities and promoting project results, to ensure project remains relevant and linked to UNDP processes, including but not limited to:
  - Design of the project visibility strategy.
  - Implement the project visibility strategy.
  - Prepare marketing materials, ensure regular website updates and press releases.
  - Ensure adequate outreach, communication, P/R and project visibility.
  - Manage the production and dissemination of both regular and occasional reports on UNDP activities in climate risk management in the region.
- Represent the project vis-à-vis UNDP projects and country offices, governments, and stakeholders.
- Support regional advocacy efforts related to the promotion, adoption and endorsement of national and regional climate risk management strategies.
- Regularly liaise with project partners and supporters.
- Identify and directly liaise with potential new partners in Central Asia, including research institutions, NGOs, bi- or multilateral donors, IFI's or others as adequate.
- Promote and facilitate partner and donor-coordination efforts.
- Mobilise the initiation of the institutional framework and communications between key programme stakeholders.
- Initiate the establishment of and facilitate the multi-country climate network.
- Facilitate and promote exchange of data and information, codification and replication of experience and cutting-edge knowledge in the respective areas in the region.
- Advise and support the UNDP colleagues as adequate, in strategic positioning of UNDP and its operations in the area of climate change in Central Asia.
- Contribute to the generation of lessons learned from the programme and prepare lessons learned briefs on the regional and national programme components.
- Other ad-hoc tasks, within the ability of the incumbent, as appropriate and requested by the supervisor or project board.

### **4. Resource Mobilization, 20%**

- Develop and implement a fundraising strategy and plan to mobilize resources for the regional and national programme components to first fill current budget gaps and then upscale the

programme.

- Assist UNDP Country Offices in resource mobilization efforts for climate risk management activities in Central Asia.
- Prepare funding proposals and briefings in support of UNDP resource mobilization efforts.
- Manage the organization of donor briefings and presentations, regularly liaise with donor representatives in the region for resource mobilization purposes.
- Undertake working level negotiations with counterparts in multi and bilateral agencies located in the region.
- Represent UNDP and the CA-CRM programme on policy, strategy and technical matters in inter-agency, regional and international meetings. Present UNDP position on climate risk management in workshops, seminars and conferences.

#### **IV. Impact of Results**

##### **Project implementation / capacity building :**

- Analysis of the costs associated with climate change conducted for each of the five countries and findings are used by governments in decision making and planning.
- Knowledge on adjusting national development process to fully incorporate climate change risks and opportunities shared across national, multi-country and global levels.
- Technical capacity in the area of climate risk management strengthened in the region.
- Evidence-based analysis on glacial melting in Central Asia conducted and disseminated to decision-makers.
- Key stakeholders involved in major decisions, and the general public informed about climate change risks and opportunities in Central Asia.
- PIUs, Ministries, and key national/local organizations adequately supported and/or trained, as to manage project task development and implementation.
- Financial resources to cover the funding gap for the regional and national programme components mobilized.
- The multi-country climate network is fully functional and its sustainability beyond the programme life ensured.
- Overall programme and specific project activities fully coordinated with relevant key partner activities, the regional programme serves as an umbrella initiative for the climate risk management activities in the region.
- Quality advisory services are delivered and high ratings and positive feedback are provided by clients, including UNDP COs and governmental counterparts.

##### **Advocacy, coordination, knowledge management:**

- Enhanced partner and donor coordination, with adequate tools, regular meetings and/or continuous exchange of knowledge.
- Strategic positioning of the UNDP CA-CRM project in Central Asia.
- Replication of good practice, lessons learned, and avoidance of duplication, overlap or continuation of unfavorable practices.

#### **V. Competencies**

### **Corporate Competencies**

- Demonstrates commitment and integrity in line with UN values and ethical standards.
- Promotes the vision and mission of UNDP.
- Displays cultural, gender, religious, ethnic, nationality and age sensitivity and adaptability.

### **Technical/ Functional**

- Thorough understanding of national policies and programmes in Central Asia, as they relate to climate change.
- Demonstrated understanding of donor-funded national climate change programmes and projects.
- Demonstrated knowledge, analytical skills and relevant experience in climate change.
- Sound, practical understanding of market economics and how regulatory and fiscal policies can help to allocate resources equitably, applying this in particular to the agricultural, livestock and water sectors.
- Ability to pick up new terminology and concepts easily and to turn information from various sources into a coherent project document.
- Knowledge of vulnerability and risk assessment theory and practice.
- Experience in disaster risk assessment and in its application to risk management decision-making.

### Knowledge Management and Learning

- Promotes a knowledge sharing and learning culture in the office.
- Understands development issues.
- Able to advocate and provide policy advice.
- Actively works towards continuing personal learning and development in one or more Practice Areas, acts on learning plan and applies new acquired skills and is able to draw lessons from professional/personal experience and integrate new learning into overall approach to work.

### Management and Leadership

- Focuses on result for the client and responds positively to feedback.
- Consistently approaches work with energy and a positive, constructive attitude.
- Good team player, self starter, has ability to work under minimum supervision and maintain good relationships.
- Demonstrated programme and team leadership skills.
- Demonstrated ability to develop strategies and work plans to accomplish objectives, empower others to translate visions into results, identify strategic issues, opportunities and risks and devise timely and effective responses.
- Strong oral and written communications skills.
- Ability to develop innovative solutions - encourages and contributes creative solutions to address challenging situations.

### Partnerships

- Maturity and confidence in dealing with senior and high-ranking members of international, regional and national institutions.
- Builds strong relationships with clients, focuses on impact and result for the client and responds positively to feedback.

### **Development and Operational Effectiveness**

- Demonstrated advanced social skills, including team building and coaching.
- Experience with organizing and giving lectures and trainings.
- Prince 2 concept knowledge.
- Experience and understanding of Atlas, especially reporting tools.
- General knowledge of UNDP POPPs.

<b>VI. Recruitment Qualifications</b>	
Education:	Master`s or equivalent degree in the field of environment, preferably with focus on climate change and/or disaster risk reduction
Experience:	<ul style="list-style-type: none"> <li>▪ At least 7 years of relevant working experience</li> <li>▪ Demonstrated solid knowledge of climate change adaptation, disaster risk reduction and development</li> <li>▪ Experience in the policy development process associated with environment and sustainable development an asset</li> <li>▪ Experience in working and collaborating with governments an asset</li> <li>▪ Demonstrated experience in resource mobilization</li> <li>▪ Demonstrated experience with multi-country project or programme management, preferably related to climate change, including supervision of staff</li> <li>▪ Experience in reporting to donors and associated monitoring and evaluation activities</li> <li>▪ Communications experience and advocacy skills an asset</li> <li>▪ Work experience in an international organization, knowledge of UNDP policies and procedures, and experience in working and collaborating with governments and UNDP Country Offices is desirable</li> <li>▪ Willingness to travel as appropriate</li> </ul>
Language Requirements:	Excellent knowledge of English and Russian, including writing, presentation and communication skills

**c. Database/website Manager**

**d. Administrative and Financial Assistant**

The Administrative and Financial Assistant provides assistance to the Project Manager in the implementation of day-to-day project activities. He/she is responsible for all administrative (contractual, organizational and logistical) and all accounting (disbursements, record-keeping, cash management) matters under the project.

- Provide general administrative support to ensure the smooth running of the project management unit;
- Project logistical support to the Project Manager and project consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.);
- Arrange duty travel. During the visits of foreign experts, bear the responsibility for their visa support, transportation, hotel accommodation etc.;
- Organize control of budget expenditures by preparing payment documents, and compiling financial reports;
- Organize and coordinate the procurement of services and goods under the project;
- Maintain the project's disbursement ledger and journal;
- Establish document control procedures. Keep files with project documents, expert reports;
- Control the usage non expendable equipment (record keeping, drawing up regular inventories);
- Keep regular contact with project experts and consultants to inform them about the project details and changes;

- Draft correspondence and documents; finalize correspondence of administrative nature; edit reports and other documents for correctness of form and content;
- Act on telephone inquiries, fax, post, e-mails and co-ordinate appointments;
- Perform any other administrative/financial duties as requested by the Project Manager;
- Administer Project Board meetings;
- Administer project revision control;
- Compile, copy and distribute all project reports;
- Provide support in the use of Atlas for monitoring and reporting.

## **Annex 9: Additional information for the Multi-country Component**

There are numerous *ad hoc* projects and publications that relate to glacial melting in CA. Some examples are provided below.

- 1) A multivolume edition of the atlas of satellite images of global glaciers is being developed by the US Geological Service. Volume F, which covers CA, is in press and comprises data on glaciers and glacial change in the region. The publication of this data will present an opportunity for refining the present models on the effects of glacial melting on river flow under different climate change scenarios.
- 2) OSCE in Kyrgyzstan has recently approached INTESDE (International Centre of Science and Technology) to research climate change, particularly in respect to glaciers.
- 3) JICA is in the process of establishing a project to assess water resources, including glaciers, groundwater and surface waters in Kazakhstan.
- 4) The Minister of Energy in Kyrgyzstan recently presented a study on modelling of glacial melting.
- 5) A range of organisations are undertaking research on GLOF, including SDC, Department For International Development (DFID), GTZ and FOCUS.
- 6) Tajikistan has initiated a study on the impact of glacial melting on the lowlands of the Amu-Darya River.
- 7) The regional CAREWIB programme focuses on calculating water availability in key water basins.
- 8) The Humanitarian Futures Programme is developing a project that analyses satellite imagery of glaciers in Tajikistan.

## Annex 10. Response to Virtual LPAC comments

Comments	Response	Revisions to document
Patrick Gremillet: I think the proposed revision is in line with the requirements for Multi-Country projects. Just a couple of comments:		
paragraph 92 and diagram page 43: whenever possible, having 2 executives should be avoided. This is to ensure that ultimately there shall be only one decision-maker in case of conflict/disagreement between various parties	Adjusted as per comment. Since this is an important collaboration between EEG and BCPR, we cannot have only one executive. In revised version there is an executive (EEG TL) and deputy executive (CPR TL).	Page 42-43
De facto, Agi V. and Olga Z. should also be project assurance	Agi and Olga included in the project assurance	Page 42-43
Paragraph 91: the sentence should read, the project will be implemented in collaboration with... (not "jointly by")	Changed	Page 42
Olga Zlatnanska: I believe this new arrangement is very clear and will contribute to better understanding of the future achievements of the projects so just few technical notes from me.		
Title page: <ul style="list-style-type: none"> <li>· to add also a respective Outcome from the new RPD 2011 – 2013</li> <li>· to add also Programme period RPD 2011-13 as the project will run till 2014 and will encompass the entire next programming cycle</li> <li>· to add award ID – this is a revision so ID is known</li> <li>· to add PAC mtg date</li> </ul>	Revised accordingly	Title page
RRF page 31 Please change applicable Key Results Area (from 2008-11 Strategic Plan): to Managing energy and the environment for sustainable development	Changed	Page 31
I would recommend using this chance to improve RRF and number baselines, indicators and targets so linkage between them is clearer to the readers especially as you have different # of targets each year.	Each of the national projects will have an inception w/shop end of 2010 – early 2011. At the inception w/shops project managers, regional project coordinator and project stakeholders will revisit the RRF once again with the view of further specifying project activities/actions and making sure that situation analysis and project activities are up to date and any significant changes in the baseline that may have happened between project design and beginning of the project implementation are taken into consideration. This process will also help to further improve clarity of baselines, indicators and targets and linkages between them. In the current version, baselines were numbered and alignment with indicators improved to address the comment	Page 24, 31, 32, 33
Total and Annual Workplan (2010-2014) page 35 This AWP is quite detailed and ready for entering to Atlas but please include the Funding Source if possible.	A column with funding sources added	Page 35 - 41

## Annex 11. Endnotes

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- <sup>i</sup> UNDP (2009) Central Asia Regional Risk Assessment: Responding to Water, Energy and Food Insecurity.
- <sup>ii</sup> IFAD (2009) Climate Change Impacts - CA.
- <sup>iii</sup> World Bank (June 2009) Adapting to Climate Change in Europe and Central Asia.
- <sup>iv</sup> National Human Development Report (NHDR) (2008) Climate change and its impacts on Kazakhstan's human development.
- <sup>v</sup> Biddison, J.M. 2002. The Study on Water and Energy Nexus in Central Asia. Asian Development Bank.
- <sup>vi</sup> UNDP (2009) Central Asia Regional Risk Assessment: Responding to Water, Energy and Food Insecurity.
- <sup>vii</sup> EACH-FOR (2009) Environmental Change and Forced Migration Scenarios.
- <sup>viii</sup> Tajikistan Second National Communication, 2009.
- <sup>ix</sup> Kyrgyzstan Second National Communication, 2009.
- <sup>x</sup> Uzbekistan Second National Communication, 2009.
- <sup>xi</sup> Uzbekistan Second National Communication, 2009.
- <sup>xii</sup> Cruz, R.V., H. Harasawa, M. Lal, S. Wu, Y. Anokhin, B. Punsalma, Y. Honda, M. Jafari, C. Li and N. Huu Ninh, 2007: Asia. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 469-506.