

Joint Mission Report 12 to 22 October 2009













List of acronyms

ADB Asian Development Bank

CACILM Central Asian Countries Initiative for Land Management, of the ADB

CAREC Central Asia Regional Economic Cooperation

DFID Department for International Development of the United Kingdom

DRM Disaster Risk Management

EBRD European Bank for Reconstruction and Development

FAO Food and Agriculture Organisation

GFDRR Global Facility for Disaster Reduction and Recovery of the United

Nations

GLOF Glacial Lake Outburst Flood GoT Government of Tajikistan

IFC International Finance Corporation
IFIs International Financial Institutions

IMAC Information Management and Analytical Centre

JM Joint Mission

NGOs Non Governmental Organisations
PPCR Pilot Programme for Climate Resilience

PRS-3 Third Poverty Reduction Strategy of the Republic of Tajikistan

REACT Rapid emergency assessment and coordination SPCR Strategic Programme for Climate Resilience UNDP United Nations Development Programme

WB World Bank

WHO World Health Organisations









Joint Mission Report – 12 to 22 October 2009



Pilot Program for Climate Resilience - Tajikistan

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Executive Summary

This report summarises the findings of the first Joint Programming Mission (JM) to Tajikistan under the Pilot Program for Climate Resilience (PPCR), which took place from 12th to 22nd October 2009. The aim of the JM was to take stock of the range of climate change related activities in Tajikistan, and reach agreement with the Government of Tajikistan (GoT) on the process and the broad scope of potential activities of the PPCR.

The JM was carried out by four International Financial Institutions (IFIs): the World Bank (WB; overall PPCR coordinating institution), Asian Development Bank (ADB), International Finance Corporation (IFC), and European Bank for Reconstruction and Development (EBRD). The mission also benefitted from significant engagement with major bilateral donors such as the UK Department for International Development (DFID - Associate Member)¹, and the United Nations Development Program. Mission members are listed in Annex 3.2.

Broad consultation underpinned the approach adopted by the JM to identify key climate change vulnerabilities, priority needs and notional ideas for potential PPCR themes. A two-day workshop was held on 13th -14th October, and five field trips were carried out over a three-day period (15th - 18th October) involving visits to a number of sites and stakeholders. During these activities, the Joint Mission consulted with a large number of government ministries and departments, donor agencies, international organisations and civil society.

The Joint Mission confirmed that Tajikistan is highly vulnerable to climate variability and change, with a very low capacity to cope. Whilst it was clear that the policy analysis, investments and capacity-building components of the PPCR would not be able to address all challenges, the PPCR's added value was recognised in at least the following elements:

- Provide the opportunity to move further away from a reactive type of assistance to a more proactive approach by expanding the time horizon to assess the impact of government-financed and donor-supported investments on socioeconomic and environmental issues facing the country;
- Be a catalyst for coordination amongst relevant ministries and policy departments in the GoT, and with multilateral and bilateral donors operating incountry and in the region;
- Provide a framework to consider climate change as a crosscutting issue across several sectors of Tajikistan's economy, including agriculture and food security, water resource management, energy security, and transport;
- Identify opportunities to facilitate private investment in activities that may increase the climate change resilience of the country and that complement state actions and limited public financial resources;
- Contribute to building institutional and human capacity in areas relevant to climate resilience; and

¹ DFID's financing and management of the AEA consulting team - to support the IFIs JM and Phase 1 of the PPCR - is gratefully acknowledged











 Support the creation of a solid evidence base for adaptation-related policy making.

The consensus emerging from the consultations was that, for the PPCR to be truly "transformational" (given its limited time and budget), interventions would have to be carefully targeted and selective. Despite this constraint, it is envisaged that interventions could reach all levels of governance – from national to sectoral to local. The following emerging themes and issues were identified as key priorities for the PPCR in Tajikistan:

1. Country - level actions

- a) Strengthening the capacity of the country to produce and utilise better climate data and climate science;
- Improving governance and line ministry institutional structures to facilitate inter-sectoral dialogue and manage climate risks in country; and
- c) Building stronger linkages between overarching goals of poverty reduction and human development through technical interventions that respond to climate change threats.

2. Sector - level actions:

- Reducing the vulnerability of the energy sector to climate shocks and longer term climate variability;
- Improving country capacity to deal with climate-related disasters, particularly those affecting the most vulnerable groups and sectors; and
- c) Building resilience of the agricultural sector and rural economy to reduce its vulnerability to climate change threats.

3. Project - level actions:

- Advancing screening of projects to assess climate risks, and piloting transformational approaches to increase climate resilience and support longer-term sustainability of existing and future investments;
- b) Ensuring that local (especially traditional environmental) knowledge and adaptation initiatives are considered and integrated into project design and implementation practices.

4. Local and community - level actions:

 a) Ensuring consideration of the needs and participation of vulnerable groups, particularly the rural poor, women, children and minority groups.

These priority areas and themes are also reflected in Tajikistan's Second National Communication to the UNFCCC², are consistent with aims of the National Development Strategy³ and Joint Country Partnership Strategy (JCPS)⁴, and are likely to be consolidated in the third Poverty Reduction Strategy (PRS-3) currently under development.

⁴ www.adb.org/Tajikistan









http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

http://www.untj.org/principals/files/nds/nds_first_draft.pdf



The PPCR process received full political backing from the Prime Minister's office and the line Ministries. However, the Joint Mission identified a number of risks and barriers that need to be addressed in order to ensure a transformational impact as a result of the PPCR interventions, and reduce Tajikistan's vulnerability to climate change. Key risks identified to date are highlighted below:

- Managing stakeholders' expectations The PPCR cannot address all the social and environmental challenges that Tajikistan faces. Recognising the financial and policy limitations of the PPCR, it will be important to ensure that interventions are targeted and coordinated. In a country desperately in need of investments in all areas, from governance and institutional frameworks to physical infrastructures drawing a line may prove difficult and will require careful management. It is vital that the PPCR consider synergies with other complementary financing options such the Adaptation Fund, the GEF and new financial mechanisms likely to emerge from a new post-2012 international agreement on climate change.
- Continuing to advance on broad ownership Cooperation with a range of development partners in the early stages of the PPCR has already proven to be extremely valuable. This cooperation needs to continue and expand throughout the development and implementation of the PPCR in order to build synergies amongst approaches, broad support and ownership. It will be important to ensure meaningful and sustained engagement of key stakeholders, including government ministries, UN agencies, bilateral and regional development agencies, NGOs & CBOs, and the private sector. Transformational adaptation projects must be formulated with community buy-in to genuinely meet the needs of vulnerable populations and sectors in especially sensitive areas of Tajikistan, and ensure social dimensions are captured in the PPCR programming.
- Enhancing awareness and understanding of climate change risks and possible interventions in Tajikistan Ultimately, the effectiveness of the PPCR interventions will depend on the level of understanding of climate risks in the country. This is currently very limited. Understanding climate change in Tajikistan is not only about better data or better modelling but also about the development of a more comprehensive climate change evidence base, expert human capital, and education and outreach both inside and outside government. The PPCR will therefore need to explore issues of: 1) technical infrastructure and capacity to measure, monitor and make use of climate-related and socio-economic data; 2) institutional capacity and 'insight' to translate data into impartial evidence and advice that can be used to inform policy; and 3) structures and institutions that enable long term integration of the resulting evidence into national and sub-regional policies, plans and programmes, and international negotiations.
- Remaining open to changes in the international architecture of assistance on climate change The JM took place before COP-15⁵ in Copenhagen, which made limited progress on international commitments and assistance mechanisms to respond to climate change mitigation and adaptation needs. It is possible that as the PPCR moves forward, international assistance mechanisms will be advanced on such key issues as providing better linkages

⁵ The 15th Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) took place from the 7th to the 19th of December 2009 in Copenhagen, Denmark.











between mitigation and adaptation programs in forestry and agriculture (e.g. Reducing Emissions from Deforestation and Forest Degradation) or scaling up energy efficiency investments in smaller GHG-emitting countries. The PPCR team will be alert to assisting the GoT on understanding these changes and realizing opportunities for support.

Effort in the coming months will focus on:

- Continuing to refine and carry out Phase 1 analytical tasks and consultations along with associated funding requirements for the government-executed grant, mindful of time restrictions on overall PPCR implementation;
- Defining the roles and responsibilities of key stakeholders, including key line Ministries, UNDP, bilateral donors and civil society, in the development of Phase 1 and Phase 2;
- Defining a process for the formulation and the implementation of the Strategic Programme for Climate Resilience.









Introduction

In preparation for the joint programming mission, a preliminary scoping mission with representatives from the ADB, EBRD and the World Bank took place in April 2009 to refine the Government of Tajikistan's approach to participation in the PPCR following the receipt of their initial letter of acceptance by the PPCR Steering Committee. A consulting team of international and local experts was then tasked by DFID, in cooperation with the IFIs, to provide technical assistance to the GoT to advance preparations for the Joint Mission. The team of experts visited Tajikistan from September 27 to October 3, 2009 to consult with core government stakeholders, international organisations and development agencies on preparatory issues, including institutional options for designing and implementing the PPCR.

The objectives of the Joint Mission were to take stock of the range of climate change related activities in Tajikistan and agree with the Government of Tajikistan on the broad scope of potential PPCR activities. The Joint Mission programme comprised four main steps:

- Stocktaking of ongoing activities on climate change science, impacts and vulnerability assessment, and integration of climate risk in development plans and programmes. A two-day stakeholder consultation was held with a broad cross-section of national actors, including government ministries and agencies, development partners, non-government organisations and private sector representatives. A list of stakeholders met during the two-day consultation is provided in Annex 3.2; the stakeholder consultation programme is enclosed at Annex 3.4;
- Mission field trips aimed at understanding the socio-economic situation of Tajikistan, seeing potential investments that could be scaled up to build climate resilience, and meeting stakeholders on the ground. The programme of field visits is provided in Annex 3.3;
- 3. PPCR Planning phase aimed at identifying priority areas for PPCR investments, based on the consensus emerging from the mission activities and consultations; and
- 4. Dissemination of initial findings, including a further consultative meeting with international organisations and bilateral donors and a media event, aimed at the initial dissemination of the PPCR objectives in Tajikistan. The news articles that followed the media event are enclosed in Annex 3.5.

The Office of the Deputy Prime Minister was the main government contact for the Joint Mission and led the arrangements for the stakeholder consultation with a wide range of officials from the Government of Tajikistan (GoTJ). The mission acknowledges with gratitude the hospitality and cooperation extended by the Government of Tajikistan.

This report was prepared by the Consulting Team and reflects input from the IFIs and the GoT as discussed during the mission and subsequent meetings in London and Dushanbe.

The report is divided into two main parts:











- Part 1 provides a brief background on the climate change challenges that Tajikistan faces, the institutional arrangements and the current integration of climate change in national and sectoral policies, plans and programmes. Part 1 also describes the key findings of the Joint Programming Mission, introduces the development themes and activities for further elaboration, and discusses some of the key risks to the success of the PPCR in Tajikistan.
- Part 2 provides further discussion on key themes that are candidates for potential PPCR analytical or investment support, based on mission activities and consultations, and GoT/MDB investment portfolios.









1 Part 1 - Joint Mission findings

1.1 Background – Climate Vulnerability and Institutional Framework for Response in Tajikistan

Tajikistan is one of the least developed economies in Central West Asia⁶. Over the last two decades, the country has experienced sharp increases in the intensity and frequency of climate-induced extreme events. Less predictable precipitation poses a direct threat to the nation's already vulnerable economy and livelihood security, especially in rural areas. Expected extreme events include dramatic fluctuations in the hydrological cycle - especially from glacial retreat and unseasonal flash floods - and the consequential downstream impacts on water resources for hydro power, potable water, irrigation, food security, and rural livelihoods.

Tajikistan is a mountainous country with numerous settings especially vulnerable to climate hazards. These include: glacier-dependent river basins supplying hydro power and water resources for irrigation; fragile mountain ecosystems and isolated forest stands that protect watersheds, and mountainous and riverine terrain prone to land-slides and extremes in land degradation. Effective management of these eco-system-based risks to resource-dependent critical sectors will increase the demand for adaptation policy reform, capacity building, and incremental adaptation investments at the national level⁷.

In terms of institutional arrangements, responsibilities related to climate change are spread over a number of government agencies and departments. A schematic in Annex 3.6 shows the interdependencies of different government entities with responsibility for climate change. The Committee of Environment Protection is the state planning and regulatory entity for natural resources management and environmental protection. The State Organisation for Hydrometeorology Institute under the Committee for Environment Protection is a coordinating state entity for weather and climate, as well as the implementing authority of the UN Framework Convention on Climate Change (UNFCCC).

In terms of national policies, plans and programmes, the appointment of a Committee with specific responsibility for environmental protection in April 2008 has contributed to raising the profile of environmental issues in the GoT's political agenda. The GoT has adopted more than 30 laws and bylaws in the area of nature protection, and developed a number of national environmental programmes and national action plans. However, climate change does not seem to be taken into account in most of Tajikistan's national development policies, plans and programmes⁸. According to the consulted stakeholders, national and sectoral plans do not provide a strategy for dealing with

⁸ See for example the National Development Strategy (NDS) for 2006-2015, the National Environmental Action Plan (NEAP), the National Sustainable Development Strategy – forthcoming, the National Disaster Risk Management Strategy and Action Plan, and the Second Poverty Reduction Strategy (PRS 2) for 2007-2009. The Third Poverty Reduction Strategy (PRS-3) currently under development is likely to address climate change.









⁶ Tajikistan's GDP per capita (current US\$) is \$751 (2008 estimate), GDP per capita PPP (current international \$) is \$PPP 1,906 (2008 estimate) and poverty headcount ratio (using \$2 per capita per day poverty line, PPP) is 51% (2204 estimate). Source: World Development Indicators (WDI), September 2009.

⁷ Further background information can be found in the Second National Communication of the Republic of Tajikistan http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php



existing climate change stresses, nor do they address increased severity and frequency of climatic extreme events. It is thus unlikely that existing programmes are sufficient in scope and scale to meet the challenges indicated by climate projections.

1.2 **Joint Mission Findings on Institutional Situation**

The Joint Mission confirmed that Tajikistan faces significant threats from climate change. Field visits and stakeholder consultations highlighted that there are socioeconomic and environmental weaknesses (legacies of the Soviet system) that will exacerbate climate risks. With a legacy of environmental mismanagement, under investment in infrastructure and limited institutional capacity, the country has already been impacted by recent current climate variability. Because of its "adaptation deficit", and without additional capacity, targeted strategies and informed action plans, the country's vulnerability can only increase with projected climate change.

Through the Joint Mission and follow-on efforts by the consulting team (in cooperation with UNDP and several bilateral agencies), an initial stock-taking of donor activity in Tajikistan identified a number of projects and programmes that are relevant in the context of climate change adaptation in the country. A range of activities is taking place in Tajikistan in the areas of Disaster Risk Management, water resource management, energy security, agriculture, land management and health. Some of the most relevant initiatives identified are described in Annex 3.7.

The IFIs and consulted stakeholders agree that a valuable contribution from the PPCR would be to scale-up the most relevant existing initiatives and learning from their successes and set -backs. The Joint Mission begun to identify and develop synergies between some of these current activities in the country. For example, the team has examined relevant and related issues of land management, rural development and disaster risk reduction. These, and other issues, will be fully explored in the coming months with the aim of selecting those interventions that have the potential to be scaled up under the PPCR

However, it is also becoming evident that there is a real need to widen the net of climate change related activities in the country, and that the need for co-ordination and collaboration will increase as the scope of interventions broadens. A number of additional gaps in the basic institutional framework were identified, including:

- Severe weakness in national systems for acquiring and managing basic data on meteorology and hydrology, with severe implications for assessing near and longer term climate trends, and limited access to climate change information;
- Key gaps in the science base, especially on the implications of changes in hydrology, glacial melt and climate impacts in mountainous terrain;
- Low awareness of government officials, business circles, and the public on the adverse risks and impacts of climate change;
- Lack of qualified personnel in government, academia and education system;
- Low understanding of key socio-economic vulnerabilities, and the consequences of climate variability and change to the key sectors of the economy;
- Lack of integration of climate change impact assessments and risk management in national development strategies and sectoral investment plans.

The Joint Mission confirmed the need to formulate a national road map to mainstream climate adaptation into government policies. This would include guidance to line





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Ministries in their efforts to reduce risks to the vulnerable resource-dependent sectors, help bolster the resilience of core economic sectors, and reduce poverty risks attributed to climate hazards. Such institutional analysis and strengthening could be included in Phase 1 and Phase 2 of the PPCR, but recognising that, to be most effective, the core of Phase 2 will be focused on a selected number of concrete actions that can be scaled up to introduce adaptation responses and embed 'good practice' into a number of key economic sectors.

1.3 Potential areas for further consideration under the PPCR

The consensus emerging from the consulted stakeholders is that Tajikistan would benefit from a programmatic approach to climate change with selective interventions being implemented at different levels of governance, from national to sectoral to community-based activities. Adaptation to climate change is not a "stand-alone" agenda⁹. It cannot be developed and implemented successfully in isolation, especially as the core issue of climate change itself is multifaceted and multidimensional. In Tajikistan, climate change will have lasting impacts on various aspects of human life. This includes livelihoods and incomes, health and food security, transport and infrastructure, human security, and social and economic development of the people. Hence, it is crucial to examine climate change in Tajikistan as not just an environmental challenge, but rather a development, institutional and national concern of extreme importance for the country and its people.

Whilst the PPCR will not be able to address all the needs identified by the Joint Mission, the consulted stakeholders recommended that the PPCR could provide a framework for coordination of activities at different levels of governance, and that the proposed PPCR investments could be channelled to the following emerging priorities:

1. Development themes at the national level should be aimed at addressing climate change at the cross-sector and national policy level. This could include how basic weather and climate impact data are acquired and shared, how multi-year development plans are structured, and how resources (government and donor-supported) are allocated. At present, there is very little consideration for incorporation of climate change into national and sectoral plans of the Government of Tajikistan, despite it presenting a significant threat to development.

Potential topics for further consideration at the national level include:

- Improving the quality and access of basic climate and weather information systems through a top-to-bottom rehabilitation of national data acquisition and management systems, thereby providing stronger capability for near-term and longer term reduction of climate-induced risks;
- Improving governmental structure to better address climate hazards, and implement adaptation and risk management measures;
- Modifying environmental regulations and building codes to reflect current and anticipated climate impacts and associated risks, and incorporate resilience measures in existing and future critical infrastructure;

⁹ OECD (2006); Declaration on Integrating Climate Change Adaptation into Development Co-operation. Paris











- Building institutional and technical capacity on climate change in the GoT: and
- Raising awareness on climate change risks and adaptation responses in government department and agencies, private businesses, civil society and vulnerable groups.
- 2. Development themes at the sectoral level should be aimed at reducing the vulnerability of key economic sectors to climate change impacts and resulting risks through analytical support and selective and targeted investments. Climate change in Tajikistan is mainly about water availability and management. The impacts of climate change on water resources are going to be felt across a number of economic sectors. Water should be seen as a cross-cutting issue for energy security, agriculture and food security. Improved coordination between Ministries will clearly be required to meet the cross-sectoral challenges of climate change, especially in terms of linkages between water, agriculture, energy and livelihood security. Ministries need to improve the 'climate awareness and resilience' of their sectoral strategies. This could include riskscreening within individual sectors. Government experts need to continue to engage with wider regional planning and development bodies to ensure that best practice climate assessments and adaptation approaches developed elsewhere in Central and South Asia can be applied in Tajikistan.

Potential topics for further consideration at the sectoral level include:

- Energy security there is a clear need to assess the vulnerability of the hydropower sector (small and large facilities) to climate variability and extremes, given the significance of this energy source for the country (over 96%). This could be examined more closely in Phase 1, or supported as a technical assistance project in Phase 2. It is recognised that considerable work is already ongoing and planned in Central Asia so national efforts supported under the PPCR would need to be carefully selected, and closely co-ordinated with existing initiatives. Fostering further hydropower investments and improving the regulatory framework is needed but further investigation is required to identify the most appropriate support structure;
- Agriculture, land degradation and food security The Joint Mission noted that numerous activities are ongoing in Tajikistan and that a critical piece of analytical work in Phase 1 would be to review existing activities in this area prior to recommending the most promising for scale-up. Investment support in Phase 2 could potentially be aimed at addressing issues of land degradation, inefficient irrigation, access to drought-tolerant seeds, and other measures to diversify livelihoods in rural communities.
- **Disaster Risk Management** DRM and climate change adaptation in Tajikistan needs to be further integrated into national policies, plans and programmes, including the Programme for the Development of Emergency Situations and Civil Defence Systems of the Republic of Tajikistan for 2009 – 2014, in relation to preparedness to respond, early warning, and contingency planning. The Tajikistan Disaster Risk Management Strategy and Action Plan 2010 - 2015 is currently under development, and offers an excellent entry point for the PPCR. A number of analytical products and activities have been suggested,











including investment support for transformational scale-up of flood protection and forecasting systems. Opportunity for such activities will need to be investigated further during Phase 1.

 Critical infrastructure – The Joint Mission did not explore this area in detail. However, one potential theme suggested concerned road works, and the need to conduct an assessment of the overall vulnerability and possible climate resilience measures to minimise hazards to road infrastructure corridors.

From a cross-sector perspective, the PPCR should ensure that advances in one sector do not lead to mal-adaptation (implicit or explicit barriers to adaptation) in another. Constraining policy instruments (distorting subsidies, lack of property rights, etc.) that encourage mal-adaptation need to be removed and policy drivers (regulatory and legislative) need to be introduced and strengthened at the country and line ministry level. Civil society and the private sector can play an important role in influencing this policy reform process as well. To support cross-sector consideration, the PPCR will consider developing: (i) replicable risk management tools incorporating Geographic Information Systems (GIS) to help visualize risks; (ii) screening tools to characterize risks at the project or sub-regional level; and (iii) various forms of "road maps" or guides to advance public awareness and planning for vulnerable communities. Wherever practical (given the time-frames involved with climate change and emerging practice), cost-benefit calculations of intervention options will be included in PPCR analytical support.

3. Development themes at the community level should be aimed at increasing the resilience of key vulnerable groups and regions, and where appropriate ensuring bottom-up ownership of risk management strategy development and actions. The PPCR should take into account the needs and participation of vulnerable groups, particularly rural poor, women, children and minority groups. To be transformational, adaptation projects will need to be formulated with community buy-in to ensure that the social dimensions of climate change are captured in the PPCR.

Potential topics for further consideration at the community level include education and awareness raising, as well as the identification and promotion of coping skills to respond to climate impacts at the community/village level. PPCR project information must be packaged in a user-friendly format. This information needs to flow from government agencies to businesses, rayon districts, and community-based NGOs; from public utilities to rural communities and farmers; and from the scientific community, academia, and international agencies to vulnerable communities, located in key climate sensitive sectors. In the future, recommendations within the *Strategic Program for Climate Resilience* may also need to review, monitor and assess their objectives to ensure that the proposed outcomes are tangibly pro-poor and do not inadvertently result in elite capture or anti-poor outcomes.

4. Development themes at the project level should aim to increase climate resilience, protect development investments and ensure that local knowledge and adaptation initiatives are considered and integrated (if appropriate) into project design protocols, project implementation, and operations and maintenance practices. This could be supported by assessments at the PPCR-











project level and/or more broadly by sector to reduce vulnerability of natural and human systems at specific project sites to climate change, and prevent maladaptation.

The Joint Mission had the opportunity to learn about the gaps and the priorities needs in the above-mentioned themes during the consultations. The level of detail of information presented at the consultations differed significantly. The case for support in some key areas, for example reinforcing climate data acquisition and management systems, was self-evident. Other candidate areas, for example energy, water and food security would require further stock taking and assessment work during Phase 1 to enhance the current evidence base for the design of effective PPCR interventions. The emerging areas and themes will be further elaborated and the emerging potential activities prioritised during the Phase 1 of the PPCR process.

Additional discussion on thematic areas identified by the Joint Mission is provided in Part 2 of this report.

1.4 Key risks

The PPCR in Tajikistan has received full political backing from the Prime Minister's office and the line Ministries. However, the Joint Mission identified a number of risks and barriers that will need to be addressed to ensure that transformational impact is garnered from the PPCR interventions, and Tajikistan's vulnerability to climate change is reduced. The key risks identified to date are highlighted below:

- Managing stakeholders' expectations The PPCR cannot address all the climate-related social and environmental challenges that Tajikistan faces. Recognising the financial and policy limitations of the PPCR, it will be important to ensure that interventions are targeted and coordinated. In a country desperately in need of investments in all areas, from governance and institutional frameworks to physical infrastructures managing expectation is essential. It is vital that the PPCR should also consider synergies with other complementary financing options such the Adaptation Fund, the GEF and if possible, new financial mechanisms expected to emerge from a new post-2012 international agreement on climate change.
- Creating broad ownership Cooperation with a range of development partners throughout the development and implementation of the PPCR is crucial to achieve a transformative shift to a climate resilience development path, to avoid duplication and ensure coordination, and to create broad support and ownership. It will be important to ensure meaningful and sustained engagement of key stakeholders, including government ministries, UN agencies, bilateral and regional development agencies, NGOs, and the private sector.
- Understanding and responding to climate change risks in Tajikistan Ultimately, the effectiveness of the PPCR interventions will depend on the level of understanding of climate impacts and risks in the country. While information is available from global and regional analytical work, climate change forecasts in the most recent (Second) National Communications to the UNFCCC were based on very limited country-specific modelling¹⁰. Further "downscaling" (if supported by sufficient HydroMet data) can help strengthen the efficacy of recommended interventions. Better data and modelling systems are needed, but planning for

¹⁰ As described in Section 3.1.6











- climate response must continue on a parallel track. There will never be "enough science," and balancing these deficiencies in science with advancing a "no regrets strategy" aimed at immediate action to improve policies and institutions adaptive capacity will be reflected as the PPCR is developed further.
- Remaining open to changes in the international architecture of assistance on climate change The JM took place before COP-15 in Copenhagen, which made limited progress on international commitments and assistance mechanisms to respond to climate change mitigation and adaptation needs. It is possible that as the PPCR moves forward, international financial mechanisms will be advanced on such key issues as providing better linkages between mitigation and adaptation programs in forestry and agriculture (e.g. Reducing Emissions from Deforestation and Forest Degradation) or scaling up energy efficiency investments in smaller GHG-emitting countries. The PPCR team will be alert to assisting the GoT on understanding these changes and realizing opportunities for support.

1.5 Next steps

Effort in the coming months will be focussed on the following milestones:

- 1. Identify, prioritise and select activities to be undertaken in Phase 1 and associated funding requirements for the government-executed grant (application in early 2010);
- 2. Conduct a mid-term review joint mission with the twofold aims of disseminating and discussing activities that will take place under Phase 1, and making progress on the design of specific activities to be undertaken in Phase 2 (March 2010);
- 3. Development and preparation of the *Strategic Programme for Climate Resilience* (February to May 2010);
- 4. Conduct a second Joint Mission to develop agreement with stakeholders on, and finalise the *Strategic Programme for Climate Resilience* (May 2010);
- 5. Identify other complementary financing options such as Adaptation Fund and the GEF (throughout);
- 6. Continue to engage with a wide range of stakeholders in Tajikistan (throughout).

A list of key milestones is provided in Annex 3.8.





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2 Part 2 - Further discussion on notional ideas for PPCR development themes

2.1 Introduction

This section of the report aims to highlight thematic areas for potential review by the PPCR. These areas and themes will be further elaborated and the emerging potential activities prioritised during the first phase of the PPCR process.

The themes identified for further elaboration are divided into those that can be developed: 1) at the country level; 2) at the sectoral level; and 3) at the community and local level. While these were the main areas of interest and discussion during the Joint Mission, it is important to point out that this list is neither exhaustive nor final. Rather it should be reviewed as a fluid list and considered to be a work in progress. In addition, local stakeholders and mission members clearly identified water availability and management as a key issue across a wide range of thematic and subject areas. Therefore a concerted effort will be made to look at water as a cross-cutting issue for future actions. Where relevant, this intention has been reflected in the following sections.









2.2 Development themes at the country level

2.2.1 Restructuring the Hydro-Meteorological Data Systems

Joint Mission's findings

The State Service for Hydrometeorology (Tajikhydromet) participated in the Joint Mission, both at the stakeholder workshop and by hosting an extremely informative day-long field visit to river gauging and meteorological monitoring stations in the Varzob basin from immediately north of Dushanbe up to the HydroMeteoStation (HMS) Anzob at 3372 m alt. It was apparent that the current Hydromet's facilities were poorly equipped and had a limited ability to collect, monitor and interpret hydro climate and other key data.

The mission was favourably impressed with the strong measure of support amongst international organizations and bilateral aid groups (e.g. Swiss Government and US AID) to improve the collection and utilization of good hydrologic and meteorological data. While the mission could not evaluate the specific recommendations of the GFDRR/World Bank report, the statement in that report that "In view of the above, one can conclude that the data collection and dissemination system at Tajikhydromet is inefficient and requires fundamental restructuring" certainly seems supportable. There is little belief amongst Government or donors that Tajikistan would be in a financial position to take out a loan for capital investments, and that the grant option of the PPCR is very attractive. Nevertheless, even with a grant, it is clear that for a revitalized system to be sustainable, the Government would need to increase its allocation of national budget to cover regular operational costs (including for staff, database management, modelling, equipment maintenance, etc).

Up to 300 major weather-related events occur in Tajikistan in any given year, and the numbers have been steadily climbing. While this is largely due to greater extremes in climate variability, resulting socioeconomic impacts are also on the upswing, exacerbated by a breakdown of the national system to acquire and manage hydrometeorological (HydroMet) data over the last two decades. This breakdown has ramifications not only for near-term forecasting of weather and disaster risk management, but for improving the confidence of climate impact projections and sectoral vulnerability and risks over the coming decades. As Tajikistan is in a subregion where current climate and impact models are particularly inconsistent, such deficiencies severely limit national ability to understand climate impact scenarios, and design adaptation measures. There are very serious regional implications given Tajikistan's position as the "roof" of the Central Asia water system. HydroMet strengthening had been already identified in the April 2009 exploratory mission on the PPCR as perhaps the most immediate and obvious need for attention under the investment portion of the program. According to a detailed survey report on this topic¹¹, investment needs of at least \$5-7 million are required in this area.

Main gaps and limitations

- In some of the simple river gauging stations, discharge measurements have not been calibrated for nearly 20 years (thus possibly quite unreliable) and data recording is done by pencil in paper notebooks that are not computer-compatible;
- Automated basic meteorological equipment provided by donors is not functioning

¹¹ Improving Weather, Climate and Hydrological Services Delivery in the Republic of Tajikistan, World Bank, 2009.











from lack of spare parts, power cuts and lack of technician training. Only the very simplest of weather gauges, function reliably albeit with only crudest of measurements is possible. Dependence on manual measurements by technicians even in the poorest of weather conditions is a challenge to good climate assessment:

- Transmission of data is sporadic and unreliable;
- Measurements of snowpack are severely constrained by poor transport and logistical support, especially during the long winter months; and
- Field technicians are motivated to do well, but are paid poorly and need to endure harsh working conditions that are not conducive to good measurements.

Potential topics for further elaboration

- Further assessment of needs for HydroMet revitalization, taking the GFDRR report as a basis whilst pursuing with Government the means to assure operational funding.
- Investment in technical and institutional measures to strengthen the acquisition and use of climate-related hydro-meteorological data
- Integration of Tajikistan's investments into broader initiatives for climate and weather forecasting in Central Asia.

Key relevant activities and potential entry points

programmes

The Programme of the hydro meteorological stations and posts' reconstruction for 2007-2016

National policy, plans and Relevant programmes of MDBs, bilateral donors and international organisations

- Improving Weather, Climate and Hydrological Services Delivery in the Republic of Tajikistan (World Bank), 2009.
- Initiative for Improving Weather, Climate and Hydrological Service Delivery in the Countries of Central Asia and the Caucasus (multiple partners; coordinated by the World Bank)











2.2.2 Enhancing the climate change evidence base

Joint Mission Findings

Snowpack and glaciers comprise the major source of water supply for all sectors in Tajikistan. Over 90% of energy generation in Tajikistan is supplied by large hydropower plants, with agricultural irrigation comprising the major consumptive use of water and of critical importance to downstream riparian countries. Apart from gaps in monitoring snowpack and glacial meltwater, there are major deficiencies in understanding glacial dynamics both in country and regionally. Moreover, Tajik Hydromet has very limited capability for basic climate forecasting and climate impact projections, though the country is to be commended for making the most of limited data to produce (with UNDP support) a very credible Second National Communication to the UNFCCC.

The mission did not examine the need for expanded national capabilities in climate modelling in detail. It was however suggested that partnership with international centres of expertise (e.g. Japan, Germany and England) could be a worthy option. It was recognized that while the PPCR could serve as a viable investments opportunity to develop climate data, funding to improve climate science might best be obtained through other sources.

Main gaps and limitations

- Current global circulation models have several limitations for application to Tajikistan. Many uncertainties still remain regarding glacier melt and climate impacts. Advancement in global climate science, and improved capability to downscale global climate projections will benefit the prediction of downstream impacts
- There are gaps in monitoring snowpack and glacial melt water, as well as major deficiencies in understanding glacial dynamics both in country and regionally.
- Tajik Hydromet has very limited capability for basic climate forecasting and climate change projections though the country is to be commended for making the most of limited data to produce (with UNDP support) a very credible Second Communication to the UNFCCC.

Potential topics for further elaboration

- Pilots on risk and vulnerability mapping, risk management strategies, and project risk screening measures.
- Support the establishment and activities of a small working group of stakeholders tasked to review options for climate science and modelling in Tajikistan, with the aim of improving downscaled climate impact projections toward formulation of concrete adaptation measures.
- GIS-based high-resolution downscaled modelling data (produced in cooperation with international experts) to provide Hydromet, academia and other end-users with more reliable sectoral-climate impact data for adaptation planning. If data allow projections at the sector, river/glacier basin, or project level, this would inform impact assessments, and support sectoral risk and vulnerability mapping, and adaptation planning. Possible alternative approaches such as dynamical (DDSM), statistical (SDSM), and/or integrated assessment (IAM) downscaled modelling could be considered based on data needs and institutional capabilities. Impact modelling should be seen as a means (not an end) to inform consideration of incremental adaptation investments in critical infrastructure and priority sectors. Because predictive modelling on climate impact scenarios takes time to assess and interpret results, modelling realizations should be done in











tandem with no-regret projects.

- Partnerships with global centre of expertise to provide tailored products for climate projections in Tajikistan, and Collaboration and sharing of experience on sectoral impact assessment from work in the Andes, Himalayas (India & Nepal) and other PPCR pilots
- Potential to improve human resource development through training activities, and exchange programmes with institutions and partners in their countries' of origin, such as training of Tajik Hydromet staff in Russia, Japan, Germany and the UK

Key relevant activities and potential entry points

National policy, plans and programmes

Tajikistan's Second National Communication to the United Nations Framework Convention on Climate Change

Relevant programmes of MDBs, bilateral donors and international organisations

- Government of Tajikistan's Development of State Administration for Hydrometeorology Programme (2007-2016);
- Under the umbrella of the Focus project on Remote Geo-Hazards Monitoring and Capacity Building, Prof Schneider and his team from the University of Vienna have carried out field research to document and assess the level glacial activity and retreat in the GBAO region;
- International specialists in Japan, Germany, the UK and other countries have developed several downscaled impact projection models (in cooperation with PPCR MDBs), which could be applicable to Tajikistan.











2.2.3 National Policy Analysis and Needs Assessment

Joint Mission Findings

Tajikistan is considered to be the least developed economy in Central West Asia. With anticipated sharp increases in the intensity and frequency of climate-induced extreme events from atmospheric temperature change and less predictable rain regimes, these extremes pose a direct threat to the nation's already vulnerable economic interests, and livelihood security especially in rural areas.

Various state and non-state actors in Tajikistan raised concerns on the developmental impacts of climate change, and how best to reduce threats from climate change impacts. It was also widely recognised that climate change will not be treated as a potential threat by the state or citizens unless it is framed within other aspects of routine life such as farm land management, irrigation water, livestock health, etc. In addition, one of the PPCR objectives is to mainstream climate change into national policies and plans. Therefore the Mission has identified some national level frameworks that can be used as a starting point for adaptation to introduce adaptation policy and practice.

Main gaps and limitations

Although the GoT has developed an impressive assessment of climate impacts in its Second National Communication, nevertheless, the institutional capacity to manage current and future climate risks are virtually non-existent. Over the long-term, there is a need to formulate a sub-national and national climate change road map (climate adaptation policy and planning mechanisms). This road map will help mainstream climate adaptation and disaster risk reduction in government policy to guide line Ministries in their efforts to: reduce risks to their fragile resource-dependent sectors; help bolster the resilience of core economic sectors; and reduce poverty risks attributed to climate hazards. In the immediate and short-term, it is possible to look at policy processes that are currently underway such as the *Poverty Reduction Strategy Paper* (PRSP), and the *National Disaster Risk Management Strategy* (NDRMS), and new legislation around land reform. It is understood that climate adaptation measures form part of the broader developmental process.

Potential topics for further elaboration

- Build the capacity of national climate change institutions. Tajikistan would benefit through an overarching climate governance framework allowing coherent policymaking and strengthened adaptation planning at the central and local (provincial, district, Jamoat) institutional level. This would also help increase the climate resilience of strategic government and private sector investments, thereby contributing to better national development planning and budgeting.
- Facilitate collaboration with Central and Provincial/District Government to: (i) formulate a climate adaptation and risk management road map supporting the development of adaptation policy; and, (ii) integrate climate and disaster risk management considerations into its national development and poverty reduction strategy, and line Ministry sector-based programmes.¹²
- Support integration of climate change risks and adaptation measures into Central Government policy dialogue, government capacity-development activities, investment pipeline, and communication plan.
- Develop synergies between energy security, GHG emissions reductions,

¹² Within the Framework of the Action Plan on Implementing the National Disaster Risk Management Strategy











renewable energy initiatives and risk management priorities in response to extreme weather events.

Key relevant activities and potential entry points

National policy, plans and programmes

- 2nd Poverty Reduction Strategy (PRS – 2)
- 3rd Poverty reduction Strategy (PRS-2, currently under development)
- National Development Programme
- Programme for the
 Development of
 Emergency Situations
 and Civil Defence
 Systems of the
 Republic of Tajikistan –
 2009 2014 National
 Strategy for Disaster
 Risk Management

Relevant programmes of MDBs, bilateral donors and international organisations

- UNDP-UNEP Poverty Environment Initiative
- Communities Progamme (UNDP)
- Report and Action Plan on Building National Capacity to Implement Commitments of the Republic of Tajikistan on Global Environmental Conventions¹³ (UNDP)

¹³ Available at http://www.undp.tj/index.php?option=com_content&task=view&id=188











2.2.4 Raising awareness on climate change (government, education and outreach)

Joint Mission Findings

A certain degree of uncertainty about climate change and the extent to which it will impact people's lives was observed in the pre-mission interviews and during mission activities. The discussion with the media also illustrated that there was a lot of interest around understanding the PPCR process better, especially in the ways that it will impact the lives of ordinary Tajik citizens. In order to ensure country ownership and sustainability of PPCR projects it is imperative that a wide range of stakeholders, including civil society and the general public, are fully aware of the threats emerging from climate change and the urgency of the problem.

At the government level there is definite political will to want to move forward on the issue of climate adaptation and resilience, however there is also very obviously a lack of understanding of the issue at an institutional level. A recognition that some thing needs to be done, but that government officials are not sure what that is. Various lines ministries wanted to know how their particular sectors were vulnerable to climate change and what they needed to be doing differently.

International and local aid agencies working with communities were also of the opinion that people's traditional and indigenous coping strategies were failing (especially in areas outside of the urban centres), as climatic events were becoming more extreme and unpredictable. They require more institutional and formalised responses from a well informed and appropriately trained government.

Main gaps and limitations

While a number of climate change activities are currently taking place in Tajikistan, there is not much that is focused on raising awareness especially at an institutional level. Ministries and government officials are keen to know more about the issue and respond to challenges that they face, however they are not clear on what these are and how climate change is likely to affect their particular area of work.

Potential topics for further elaboration

- Training and short courses on climate change and its potential impacts for Tajikistan should be developed for the GoT officials as a priority but also for staff of multi-lateral, bi-lateral and international organisations working in related sectors such as water, agriculture, environment and disaster risk management. Aspects of this could potentially be delivered as a Phase 1 activity.
- Study tours can also be organised for government officials to industrialised countries with well-established governance mechanisms to deal with climate change, but also to other developing/regional countries that are implementing government and public awareness campaigns on climate change relatively successfully and also face a number of challenges on capacity building similar to Tajikistan.

Key relevant activities and potential entry points





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National policy, plans and programmes

Knowledge management systems such as the IMAC – Information Management and Analytical Centre and REACT REACT – Rapid emergency assessment and coordination.

Relevant programmes of MDBs, bilateral donors and international organisations

Remote geo-hazards capacity building and monitoring project (DFID/SDC)











2.3 Development themes at the sectoral level

2.3.1 Enhancing energy security

Joint Mission Findings

Hydropower currently provides 98% of Tajikistan's energy needs and is a major export to neighbouring countries. According to the Tajikistan's *Second National Communication* to the UNFCCC, 64% of water resources in Central Asia originate in Tajikistan. However, most climate models predict that Tajikistan's glaciers (on which hydropower depends) may shrink dramatically or even disappear within 30 to 50 years, with obvious consequences for river flows.

As substantial upstream glacial melt is expected to cause significant changes in the downstream hydrological cycle, altered water flows (short-term acceleration and medium-term reduction) are expected to result in seasonal flash floods, longer term dwindling of water resources, heavy siltation and sedimentation loads around dam structures, and increased transmission line exposure to extreme events, all contributing to reduced power generation reliability. Future scarcity of glacier-fed water resources, coupled with extreme events, presents a significant environmental, energy and economic risk.

Investment is urgently needed to assist Tajikistan's hydropower sector in meeting the challenges of providing power for a growing and highly dispersed population, serving as the country's main export, and adapting to the expected changes in climate. Forecasts of investment needs in the hydropower sector are currently being made in the absence of any evidence of how the sector may be affected by the potentially dramatic changes in glacial extent and river flows that are expected to occur over the coming decades.

Main gaps and limitations

To date, there is virtually no installed capacity in Government to properly assess glacial melt acceleration and downstream impacts and risks to water resources, hydro power dams and generation, transmission lines, water supply (for potable water, irrigation, and sanitation) and human security issues. Forecasts of investment needs in the hydropower sector are currently being made in the absence of any evidence of how the sector may be adversely affected by climate-induced glacial melt over the coming decades.

Destabilized hydrological resources will likely reduce the capacity of the Tajikistan power utility to export its energy for foreign exchange earnings, and possibly induce a return to high carbon-based technology by the power sector as countries consider returning to fossil fuel-dependent thermal power plants to compensate for unpredictable hydropower potential. Conversely, this scenario may also open up opportunities for renewable energy developments to replace lowered electricity utilization rates.

Potential topics for further elaboration

- Analysis of the climate vulnerability of the power sector in Tajikistan and the implications for investment needs (public and private)
- Possible development of mountain glacier & energy risk management framework/adaptation guide for policymakers and practitioners, and downscaled hydro-climate modelling capacity.





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- Development of an appropriate climate-oriented regulatory framework governing the introduction of adaptation measures in critical energy and water infrastructure
- Exploration of opportunities for climate resilient pilot investment projects e.g. climate impact and resilience strategies for hydro-power and water sectors
- Explore and formalise partnerships with national and regional institutions outside Tajikistan involved in energy and water sectors

Key relevant activities and potential entry points

National policy, plans and programmes

National programme on hydro-power sector growth and investments

Relevant programmes of MDBs, bilateral donors and international organisations

- Promotion of Renewable and Sustainable Energy use for Development of Rural Communities in Tajikistan (UNDP)
- Tojikistani HameshaSabz Green Initiative For Tajikistan – (UN agencies: FAO, WFP, UNDP)
- Nurek 500kV Switchyard Reconstruction Project (ADB)
- Regional Power Transmission Interconnection Project – Afghanistan/Tajikistan (ADB)











2.3.2 Agriculture, land degradation and food security

Joint Mission Findings

Climate change will have a severely destabilising impact on Tajikistan's fragile rural economy by making farming more risky. Increased environmental pressures coupled with extreme climatic events such as floods and drought may make continued farming untenable in the longer term and out-migration the most sensible option. Agricultural yield decreases in Tajikistan's rural highlands are also likely to increase the disparity in food production and food security.

The agricultural economy is struggling and there are limited opportunities for most people to increase their incomes or make their livelihoods more secure. In some areas the likelihood of increasing drought, combined with severe floods as rivers burst their banks may mean that it is untenable to continue farming. In the medium to longer term, out-migration may be the most sensible response to climate change for some communities.

Water use in Tajikistan is dominated by agriculture, with much agricultural production being dependent on irrigation. Climate change, in the form of reduced water availability and increased temperatures, is expected to put increased stress on agricultural water use. However, irrigation services in Tajikistan face numerous challenges and are in need of reform. Water users often do not pay for the water they use for irrigation (or do not pay prices that reflect true costs). Consequently, water infrastructure is often in a poor state of repair and water availability is often unreliable.

Improving rural households' resilience to climate change will require investments to: repair, refurbish and expand infrastructure that has degraded since the end of the soviet system; reverse the degradation of land and forest resources; improve access to and markets for agricultural inputs and outputs.

Main gaps

There are obvious areas requiring further work and investigation such as irrigation infrastructure, crop improvement and rangeland management. But these encompass extremely broad and complex issues. Each of these (and possibly some others that may emerge from further analysis) will need more research to identify the most appropriate focus and scope of individual investments. In addition, to be effective it is probable that direct investments will need to be augmented with technical assistance to look at a range of economic, social, governance, and knowledge issues that will be needed to ensure investments provide value of money and genuinely increase productivity and strengthen the resilience of rural peoples' livelihoods.

For example, investments in new irrigation pipes and canals may also require a range of complementary initiatives to ensure users are able to obtain the highest benefits from the investment. Complementary activities could include actions such as reviews of water pricing; support to water users associations on water management; training for framers on crop water requirements; advise on crop varieties; providing improved information on and or supply of agricultural inputs; providing improved market information.

Potential topics for further elaboration

 Analysis of on-going MDB initiatives in the country, with the aim of identifying those with potential to be scaled up





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- As examples, scaling up most promising activities to prevent / minimise land degradation and improving efficiency of irrigation
- Explore opportunities for maximising "value for water" in agricultural use in communities that suffer from a scarcity of water for irrigation
- Examine the potential for the development of seeds for changing climatic conditions
- Further stocktaking of current activities to scope priorities and further PPCR work in these areas
- Consideration of integrated ecosystem management approaches to combat land degradation, reduce poverty, and restore dryland ecosystems
- Combating desertification via adaptive land use and water conservation measures, and adaptive tillage and cropping practices, thereby enhancing food security.

Key relevant activities and potential entry points

National policy, plans and programmes

- National Poverty Reduction Strategy
- National Environmental Action Plan
- National Poverty Reduction Strategy
- National Environmental Action Plan
- Legislation on land reform is currently being amended and updated

Relevant programmes of MDBs, bilateral donors and international organisations

- CAWMP Community Agriculture and Watershed Management Project (World Bank)
- Emergency Food Security and Seed Imports Project (World Bank)
- CACILM Central Asian Countries Initiative for Land Management (ADB)
- Sustainable Cotton sub-sector Project (ADB)
- Tajik Agricultural Finance Facility (EBRD)
- Tajikistan Food Security Programme (EU)
- Natural Resource Management and Strategic Crop Production (SIDA)
- Sustaining Agricultural Biodiversity in the face of Climate Change (UNDP)











2.3.3 Linking Disaster Risk Management (DRM) and Adaptation to Climate Change

Joint Mission findings

Disaster Risk Management is a relatively well developed work area in Tajikistan. The Mission members were introduced to a number of currently functioning large scale projects. At the same time however given the scale and frequency of natural and environmental disasters in Tajikistan, there is a need to provide much more support to the government for improved disaster resilience.

The most common and frequent natural disasters the country has to deal with are avalanches, mudslides and floods, while more sustained problems in this area include the impact of droughts on crops - all of which are likely to be impacted by climate change. It was possible to observe direct linkages between DRM and climate change adaptation in Tajikistan, yet there are structural issues that make it very difficult to build on these synergies within the country.

Taiikistan is a disaster risk prone country, and faces a growing threat from a changing climate, particularly through the impact of more frequent and extreme events, resulting in significant risks to livelihoods and infrastructure, as well as economic losses. There is significant overlap between DRM and climate change adaptation to extreme events and climate variability. DRM can deal with current climate variability and be the first line defence against climate change, being therefore an essential part of adaptation. Conversely, for DRM to be successful, it needs to take account of the shifting risks associated with climate change, and ensure that measures do not increase vulnerability to climate change in the medium to long-term. So far there has been very little integration of DRM and adaptation despite the two agendas sharing similar goals, both struggling to be mainstreamed into regular development planning. The fact that under current institutional structures climate change adaptation falls under the Committee for Environmental Protection, while DRM is handled by the Committee on Emergency Situations (headed by a military personnel) speak volumes in terms of the disconnect between the two agendas.

The UNDP is supporting the Government of Tajikistan in developing a *Tajikistan Disaster Risk Management Strategy and Action Plan for 2010 - 2015*. However, the current draft of the action plan does not contain any reference to climate change. There is a definite need to work with the authors of this strategy to identify where and how climate change considerations can effectively be taken on board within DRM framework. This is an opportunity for the PPCR to contribute to policy coherence and effective use of resources, as well as prevent duplication of efforts.

Main gaps

- Limited technical capacity for anticipating and responding to natural disasters caused by climate change.
- Lack of disaster risk screening in policy making and development planning
- Lack of human capacity, skills and incentives for retaining experts in the country

Potential topics for further elaboration

- Identify entry points for synergies between DRM and PPCR adaptation interventions, to ensure greater project resilience from climate impacts, in line with the Hyogo Framework for Action (HFA) 2005–2015
- Promote integration of near-term DRM and longer-term climate change adaptation considerations in Tajikistan national policies, plans and programmes











- for preparedness, early warning, and contingency planning, etc.
- Support institutional integration of risk assessment in critical infrastructure
- Identification of vulnerable flood control, and irrigation infrastructure (risk map) for adaptive design assessment and reinforcement; Improved flood plain, and flood simulations and hazard mapping
- Consideration of linkages between PPCR and expanded early warning systems for regional climate-induced disasters, including floods, GLOFs, droughts and dust storms.
- Costs benefit analysis (e.g. avoided damages and cost-savings) of recommended climate risk reduction and adaptation measures coupled with DRM actions, supporting GoT investment portfolio. Build capacity on and raise awareness to climate change and DRM in relevant government bodies (i.e., Committee for Emergency Situation).
- Support network building to strengthen links with relevant institutions in China, India, Pakistan and Central Asia

Key relevant activities and potential entry points

National policy, plans and programmes

- Tajikistan Disaster Risk Management Strategy and Action Plan 2010 -2015
- REACT Rapid emergency assessment and coordination
- IMAC Information Management and Analytical Centre
- Programme for the Development of Emergency Situations and Civil Defence Systems of the Republic of Tajikistan – 2009 – 2014 National

Relevant programmes of MDBs, bilateral donors and international organisations

- Tajik Hydromet support proposed as part of Regional Disaster Management Programme (World Bank)
- Flood Risk Management Project Khatlon Province (ADB)
- Community Participatory Flood Management project (ADB)
- Agricultural Rehabilitation Project Khujand Province (ADB)
- Foreign Disaster Assistance (USAID)
- Disaster Risk Management Programme (UNDP)
- Remote Geo-Hazards Capacity Building and Monitoring Project (DFID/SDC)

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2.3.4 Building climate resilient infrastructure¹⁴

Mission Findings

Tajikistan economy is heavily reliant on domestic and regional transport to ensure the steady and reliable flow of trade, goods and people. However, the transportation sector is particularly vulnerable to climate extremes, being exposed to frequent washouts and recurrent land-slides across much of this very arid and disaster-prone mountainous countryside. With increasing eco-system and land degradation, and destabilized mountain slopes and land-slides from climate hazards, roads investments are increasingly vulnerable.

Main gaps

There is a real need for a long-term strategy to make critical infrastructure, (such as roads) more climate resilient in Tajikistan. Current infrastructure management systems are inadequate to deal with future climatic and environmental challenges. Road works that are damaged by extreme events are made partially functional through stop-gap maintenance and repair programs. However, no provisions are in place within the Ministry of Transport, either at the policy or design and development stage, to account for increased occurrence of temperature extremes and subsequent road surface deterioration, nor flash floods, wash-outs and mudslides that are causing extensive damage to road ballast and drainage systems. As such, transportation corridors must be protected through climate-proofing measures.

Potential topics for further elaboration

- Downscaled modelling and sectoral hazard mapping of priority transportation corridors, especially adjacent to sensitive eco-systems and hazard-prone areas (for example, vulnerability assessment of the CAREC Transport Corridors connecting Afghanistan, Kazakhstan, the Kyrgyz Republic, the People's Republic of China, Tajikistan, and Uzbekistan);
- A scoping study to assess appropriate risk-resilience maintenance and repair techniques on vulnerable transport corridors;
- Cost-benefit analysis of maintenance strategies (traditional approach compared to adaptation techniques). This can then be utilized in a Phase II for investments in road resiliency upgrades;
- Develop adaptation-oriented engineering specifications and/or guidelines for best practice, and conduct full-scale pilot field trials;
- Conduct full-scale pilot field trials.

Key relevant activities and potential entry points

National policy, plans and programmes

National Action Plan for Climate Change Mitigation

Relevant programmes of MDBs, bilateral donors and international organisations

- CAREC Regional Road Corridor Improvement Project (ADB)
- Dushanbe-Kyrgyz Border Rehabilitation Project (ADB)

¹⁴ Though the Joint Mission had limited discussions around physical infrastructures, it was widely acknowledged that transportation was a key area that needed to be examined further.











2.4 Development themes at the local and community level

2.4.1 Local and community level resilience of vulnerable groups

Joint Mission findings

The Mission was introduced to some very successful environment and climate change related projects that were being implemented at local community levels. Experiences of various donor agencies have shown that getting communities involved in environment related initiatives and helping them understand how these initiatives are aiming to improve their lives and livelihood earning abilities has in the past led to success and long-term sustainability as well. The UNDP in particular has managed to use community level structures effectively, and their experience can be valuable in this area.

Acknowledging the positive outcomes achieved by employing such an approach and given the strong focus of the PPCR to be a participatory process, this pilot programme could examine community level projects and programmes in Phase I for potential scale-of existing initiatives in Phase II.

Additionally, no real efforts have been made to include populations' most economically and socially at risk to climate change¹⁵ into adaptation discourse and debate in the country. This is especially true at more formalised decision-making stages and institutions. Hazard maps, more detailed climate and impact modeling, adaptation knowledge products (to mainstream climate risk management practices); will, along with practical participatory coping skills, help empower disadvantaged groups to reduce their vulnerability to impacts.

Using participatory approaches to understand the key challenges faced by vulnerable groups can assist the PPCR process in targeting such populations, and assist in building their resilience and adaptive capacities.

Main gaps and limitations

- Need for coping skills at the community/village-level to respond to climate impacts
- Identification of most climate vulnerable groups and targeted interventions to reach them
- Local level institutional capacity building to deal with most immediate threats and challenges

Potential topics for further elaboration

- Involve more civil society agencies such as micro-level NGOs and indigenous populations (for traditional environmental knowledge, civil defence and disaster response groups, and micro-enterprise) in adaptation mainstreaming to reduce community vulnerability and ensure bottom-up ownership of risk management actions financed by the PPCR.
- Developing a participatory tool to assess the vulnerability of people and systems to climate change¹⁶. Responses based on such assessments are more likely to meet the needs of vulnerable populations and sectors in high-risk areas.
- Well functioning local level and informal coping mechanisms need to be

¹⁶ Examples in this area include Care International's Climate Vulnerability and Capacity Assessment (CVCA) or ActionAid's Participatory Vulnerability Assessment (PVA)









¹⁵ For example, women and children in impoverished communities, indigenous groups, and cultural minorities



understood with the aim of up-scaling them to regional or national levels.

Establish a Challenge type fund to build forward / scale up local level projects

Key relevant activities and potential entry points

National policy, plans and programmes

Programme for the Development of Emergency Situations and Civil Defence Systems of the Republic of Tajikistan – 2009 – 2014 National

Relevant programmes of MDBs, bilateral donors and international organisations

- Community Agriculture and Watershed Management Project (World Bank)
- Flood Risk Management Project Khatlon Province (ADB)
- Community Participatory Flood Management project (ADB)
- Agricultural Rehabilitation Project Khujand Province (ADB)
- Communities Progamme (UNDP)
- Adaptation to Climate Change in Tajikistan (CARE International, funded by CIDA)
- Tojikistani HameshaSabz Green Initiative For Tajikistan – (UN agencies: FAO, WFP, UNDP)









3 Annexes

3.1 List of Joint Mission participants

International Financial Institutions						
Name Role Affiliation						
Ron Hoffer	Environment and Water Advisor Europe and Central Asia Region	World Bank				
Kseniya Lvovsky	Climate Change Program Manager	World Bank				
Salman Zaidi	Senior Economist, Europe and Central Asia Region	World Bank				
Simon Croxton	Hd, Regional Cooperation at World Bank, Central Asia Regional Office, Almaty, Kazakhstan	World Bank				
Vladimir Tsirkunov	Senior Environmental Engineer for Europe and Central Asia	World Bank				
Takhmina Mukhamedova	Research Analyst Tajikistan Country Office	World Bank				
Bobojon Yatimov	Rural Development Officer Tajikistan Country Office	World Bank				
Joji Tokeshi	Principal Portfolio Management Specialist	Asian Development Bank				
Peter J. Hayes	Senior Climate Change Specialist, Country Coordination and Regional Cooperation Division	Asian Development Bank				
Keldibaeva Dinara	Central Asian Countries Initiative for Land Management (CACILM)	Asian Development Bank				
Kelgenbaeva Kamilya	Central Asian Countries Initiative for Land Management (CACILM)	Asian Development Bank				
Craig Davies	Principal Environmental Adviser Environment and Sustainability Department	European Bank for Reconstruction and Development				
Bakhtiyor Faiziev	Associate Banker, EBRD Resident Office Tajikistan	European Bank for Reconstruction and Development				
Wendy Werner, CFA	Country Officer and BEE Project Manager (Tajikistan)	International Finance Corporation				
Others						
Amanda Duff	Infrastructure and Environment Adviser	UK Department for International				
	Country Operations Group	Development				









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	(COG) - Central Asia	
Cinzia Losenno	Lead International Consultant	AEA group, UK
Ayesha Siddiqi	International Consultant	AEA Group, UK
Ilhomjon Rajabhov	National Consultant	Climate Change Center, Tajikistan











3.2 List of stakeholders

	Ministries and Departments		
Nº	Name	Organization	
1	Kabutov Kobirjon	Academy of Science	
2	Ahmedova	Agency of Geology	
3	Saidov	Committee on Env. Protection	
4	Sulton Rakhimov	Executive Office of the President	
5	Safarov M.	Hydromet	
6	Kayumov A.	Hydromet	
7	Alimurdon	Deputy Prime Minister	
8	Kamolov J.	Ministry of Emergency Situations	
9	Kurbonov A.	Ministry of Energy	
10	Olimbekov K.	Ministry of Energy	
11	Salohiddinov	Ministry of Energy	
	Zairov A	Ministry of Melioration	
	Nasirova	MoA	
14	Sharipov	State Committee of investments	
15	Karshibaev N.S.	Tajik Branch of Executive Office	
		r Organizations	
16	Joshi Tokeshi	ADB	
	Peter J. Hayes	ADB	
17	Keldibaeva Dinara	ADB CACILM	
18	Kelgenbaeva Kamilya	ADB CACILM	
19	Jumaeva S.	CCDR	
20	Amanda Duff	DFID	
21	Bakhtiyor Fayziev	EBRD	
22	Craig Davis	EBRD	
23	Olimbekov K.	FOCUS	
24	Zeiji Kaiho Davlatbibi Imomberdieva	JICA	
25		OSCE	
26	Jamshed Hasanov Consultant (policy)	SIDA SIDA (Seed project)	
	Mahmudov A	UNDP	
29	Khoshmukhamedov S	UNDP	
30	Sharipov Kh	UNDP DRMU	
31	Bhaskar R	WHO	
32	Simon Croxton	World Bank	
33	Salman Zaidi	World Bank	
34	Ronald Hoffer	World Bank	
35	Kseniya Lvovsky	World Bank	
36	Vladimir Tsirkunov	World Bank	
37	Bobojon Yatimov	World Bank	
38	Takhmina Mukhammedova	World Bank	
NGO & Media			
39	Latifi Alikhon	Club of Eco NGO	
40	Saidov	Committee on Env. Protection	
41	Blagoveshenskay S	Fund "Kuhiston"	
42	BBC	Iskander Firuz	









Joint Mission Report – 12 to 22 October 2009



Pilot Program for Climate Resilience - Tajikistan

43	Yatimov Olim	NBCC
44	Safarov N.M	NCBB
45	Alihanova T.H.	Network of Central Asia
46	Partoev D	NGO "Cooperation for development"
47	Novikova T.M.	NGO "Noosphere"
48	Khakimov N	NGO"Tarakkiet"
49	Mechenceva Alla	Tajik Socio-Ecological Union
50	Норов Георгий	Tribun Tj











Programme of the field visits 3.3











THE SECOND PHASE OF MISSION – FIELD TRIPS – UNDERSTANDING THE SOCIO-ECONOMIC SITUATION OF TAJIKISTAN				
Thursday, October 15, 2009				
07.20	Group I			
07:30	Meeting of the members of Group I at the Hyatt Hotel, Dushanbe			
08:00	Departure to Norak- Power Plant and further visit of forests in Saed rayon			
14:00	Visit of Disaster Risks Mitigation (DDRM) projects implementing in Vosse rayon			
	Arrival to Chubek rayon, located on the border with Afghanistan			
19:00	Arrival to the World Bank Country office, Dushanbe			
	PARTICIPANTS			
	 Peter Hayes/ ADB mission Leader 			
	 Dinara Keldibaieva / ADB CACILM 			
	Kamilya Kelgenbaeva / ADB CACILM			
	Simon Croxton/WB			
	 Kseniya Lvovsky/CIF WB 			
	Craig Davis/EBRD			
	Ayesha Siddiqi/International Consultant			
	 Representative of the GoT 			
	• Interpreter			
	Group II			
08:30	Meeting of the members of Group II at the World Bank Country office, Dushanbe			
09:00	Departure of the Group II to the site of hydrometeorological services in Varzob rayon			
17:00	Arrival to the World Bank Country office, Dushanbe			
	PARTICIPANTS			
	Ron Hoffer/WB			
	 Ilhom Radjabov/ Local Consultant 			
	Vladimir Tsirkunov/WB			
	Salman Zaidi/ WB			
	Cinzia Losenno/ International Consultant			
	Amanda Duff/DFID			
	 Representative of the GoT (optional) 			
	Representative of Hydromet			
	• Interpreter			
	Friday, October 16, 2009			
	Group I			
07:30	Meeting of the members of Group I at the Hyatt Hotel, Dushanbe			
	Trip to Kulyab – IFC activity (TBC)			
	Visit of dehkan farms and individual private enterprises			
	Trip to Kurgan-Tube – EBRD activity (TBC)			
	Visit to EBRD Project sites			
18:00	Arrival to Dushanbe			
	PARTICIPANTS			
	Craig Davis/EBRD			
	Kseniya Lvovsky/CIF WB			
	Salman Zaidi/WB			
	Cinzia Losenno/ International Consultant			
	 Ayesha Siddiqi/International Consultant 			
	Adham Ergashev/ IFC			

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3.4 Stakeholder consultation programme

Tuesday, October 13 2009 STAKEHOLDER WORKSHOP Conference Hall - Kohi Vahdat		
08:30- 09:00	Registration	
09:00 -09:30	Opening	
	Chair: Sultan Rahimov	
	Presentation of the participants	
9:30- 11:00	30- 11:00 Climate science, climate variability and change in Tajikistan – main findings, key risks and opportunities	
	Chair: Ron Hoffer	
	Presenter: Tajikhydromet	
	Facilitator:Cinzia Losenno	
	Discussions	
	Stocktaking of adequacy and accessibility of existing data on climate change impacts, vulnerabilities and adaptation in the country	
	 Theoretical aspects, research, findings and recommendations of the experts on climate change in Tajikistan 	
	 Impacts and vulnerability of climate change and key risks and opportunities in Tajikistan and the role of indigenous knowledge 	
	Hydromet technical capacity for climate change forecasting	
11:00-11:30	Coffee - break	
11:30- 13:00	Disaster Risk Management	
	Co-Chairs: Committee on Emergency Situations and Civil Defense Panel: WB, ADB, UNDP	
	Presenter: Committee on Emergency Situations and Civil Defense Presenter: Remote Geo-Hazards Capacity Building and Monitoring Project - Focus Humanitarian Assistance Presenter: Khusrav Sharifov on the UNDP DRM activities	
	Discussions Lessons learnt from DRM in Taiikistan	
	 Lessons learnt from DRM in Tajikistan Synergies between climate change and Disaster Risk Management 	
13:00-14:30	Lunch	
14:30-16:00	Multilateral Development Agencies' activity to assist the government of Tajikistan in enhancing climate resilience	
	Chair: WB Panel: World Bank (WB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD)	
	Presenter: UNDP Consultant on the current Environmental Initiatives in Tajikistan	
	 Discussions Current and prospective activities on climate change by MDBs Coordination of the donor community in Tajikistan 	
16:00-16:20	Coffee – break	
16:20-17:00	Final discussion: Recommendations and results of the first workshop day Chair: Chair: Sultan Rahimov, Ron Hoffer	











Wednesday, October 14, 2009 STAKEHOLDER WORKSHOP		
09.20 00.00	Conference Hall - Kohi Vahdat Registration	
08:30- 09:00 09:00 -09:15	Opening Chair: Sultan Rahimov, Ron Hoffer	
9:15- 10:30	Energy security in Tajikistan – implications of climate change and the energy deficit	
	Chair: Ministry of Energy and Industry of Tajikistan Panel: ABD, EBRD	
	Presenter: Ministry of Energy and Industry of Tajikistan Presenter: Barki Tojik State Enterprise - TBC	
	Discussions	
10:30-11:00	Coffee – break	
11:00 -1300	Availability, quality and management of water resources	
	Chair: Ministry of Melioration and Water Resources Management Panel: EBRD, FAO and WB-PMU	
	Presenter: Ministry of Melioration and Water Resources Management Discussions	
13:00-14:30	Lunch	
14:30-16:00	Land management, agriculture and food security	
	Chair: Ministry of Agriculture Panel: USAID, WB and Swiss Cooperation	
	Presenter: Ministry of Agriculture Presenter: ADB Presentation on Rural Development Project and Central Asian Countries Initiative for Land Management (CACILM). These two projects cover the overarching thematic areas of food security, agriculture, irrigation, water resource management and ecosystems.	
	Discussions	
16:00-16:20	Coffee - break	
16:20-17:00	Health & Social development, poverty and livelihoods	
	Co-Chairs: Ministry of Health Ministry of Economic Development and Trade of Tajikistan	
	Panel: WHO, UNDP and GTZ	
	Presenter: Ministry of Health	
	Ministry of Economic Development and Trade of Tajikistan Presenter: WHO representative on Environmental Health Programme Presenter: Nassim Jawad on the Green Initiative Tajikistan	
	Discussions	
17:00-17:30	Final discussion: Conclusions and recommendations based on the findings of the workshop	
	Panel: Sulton Rahimov, WB, ADB, and EBRD	











3.5 Media articles

Tajikistan will receive 30 million for the maintenance of climate http://www.khovar.tj/index.php?option=com_content&task=view&id=15010&Itemid

The government of Tajikistan was selected for taking part in Pilot program for sustainable environment PPCR, As the member of this program will be support for development action, will contribute to transformation changing climate through the integration of its impact and risk management into national development policies, planning invests and programs said the council of environment and water resources Ron Hoffner last Wednesday.

During the last years the climate on the planet begins changing, it is difficult to say something with confidence what is waiting for us in the future said Sulton Rakhimov, the representative deputy of the President Apparatus. The changing of the climate one of the problem it affects almost in all spheres of person life. It is one of the main aspects for future development in Tajikistan said S. Rakhimov. One of reasons of changing the climate it is throwing out oxide and carbons. That is why we must solve this problem now said Hoffer. The program fulfill donors for finance supporting of this program. Ten countries of two regions of the planet getting finance International aid. Tajikistan as the member of this program will be support. The program includes several tasks. The main task of this program the widening the volume of invests which will be directed to the info structure. The main goal of invests sustainable climate during the next years.

The Pilot program will act in two phases. During first phase Tajikistan will have technical supporting for analytical works and capacity building to strengthen cross-sector coordinating and will include measure to ensure the stability of climate and into national development, planning and processes financing. During first phase the government of Tajikistan must work out strategic program for sustainable climate and at the end of this phase must represent program with plan of financing under comity PPCR. At the second phase will be grants and concession amount to 30 million dollars for financing sustainable climate. During second phase Tajikistan must realize the program of invests during the next 4-5 years said Ron Hasser.

We note the government of Tajikistan joint the mission and conducted a wide two days Seminar with thematic Session of the working group.

Tajikistan party Pilot program PPCR - "Vechernii Dushanbe" newspaper

The government of Tajikistan was selected for taking part in Pilot program for sustainable environment PPCR, As the member of this program will be support for development action, will contribute to transformation changing climate through the integration of its impact and risk management into national development policies, planning invests and programs – said the coordinator of the joint mission PPCR the World Bank, Asian Development Bank, Development European Bank for reconstruction and development, Ron Hasser 21 October at the Press Briefing on the result of the Conference on the Sustainable Development. PPCR will act in two phase.





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During first phase Tajikistan will have technical supporting for analytical works and capacity building to strengthen cross- sector coordinating and will include measure to ensure the stability of climate and into national development, planning and processes financing. During first phase the government of Tajikistan must work out strategic program for sustainable climate and at the end of this phase must represent program with plan of financing under comity PPCR. At the second phase will be grants and concession amount to 30 million dollars for financing sustainable climate. During second phase Tajikistan must realize the program of invests during the next 4-5 years said Ron Hasser.

It is very important to note that the government of Tajikistan joint the mission and conducted a wide two days Seminar with thematic Session of working group with the participation of civil institutions Society of the privet sector and other development partners.

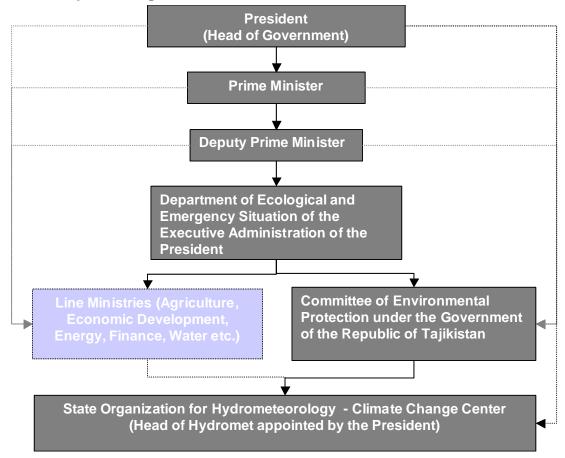








3.6 Responsible government entities













3.7 Stock taking of relevant activities

This section summarises some of the relevant activities currently underway in Tajikistan, which informed the consultation of the Joint Mission. This list is meant to illustrate the current effort of international organisations, bilateral donors and IFIs in assisting the Government of Tajikistan to address a number of environmental and socio-economic challenges. The list provided in the following section is not meant to be an exhaustive review of all relevant activities taking place in Tajikistan.

Adaptation to Climate Change in Tajikistan (CARE International, funded by CIDA)

The CARE project used a participatory process to determine how climate-related risks were affecting residents' well-being. The major changes observed by surveyed households included increasing snow pack, a shifting and lengthening of the winter season, and increasingly erratic rainfall. Armed with a clear understanding of climate impacts on household livelihoods, the project identified those household-level adaptation strategies most likely to reduce the impact of climate-related shocks and stresses. When designing adaptation strategies, we focused on women, because of their vital contribution to family well-being, and their greater vulnerability.

Cold frames were distributed to especially vulnerable households in the target communities. These simple wood and glass-frame structures act as small-scale greenhouses for growing herbs and vegetables. They are ideal for parsley, basilica, green onions, radishes, carrots, peppers, tomatoes, cucumbers, cabbages and turnips—even strawberries. By sheltering seedlings from inclement weather, cold frames help community members start seedlings earlier in the spring and increase the growing season. Some households are successfully growing cold-hardy vegetables such as greens all year round, achieving up to four harvests per year. The result is increased food security for vulnerable households during the difficult winter season.

AKF: Mountain Societies Development Support Programme (MSDSP)

MSDSP started out as the Pamir Relief and Development Programme in 1993 supporting the Gorno-Badakshan Autonomous Oblast increase their food self-sufficiency. In 1997 it expanded its geographical scope and moved from purely relief work to more sustained rural development.

The four areas that the MSDSP focuses on are:

- Component 1) Supporting community development, through a Community Development Unit (CDU) that strengthens local civil society and creates links between district and sub-district level local government and community based groups.
- Component 2) MSDSP works on constructing and rehabilitating water and sanitation projects, irrigation projects, road and bridge projects, health facilities, school and mini hydels.
- Component 3) Strengthening and developing the private sector. MSDSP supports micro and small enterprises by facilitating access to business development services and capital, with the ultimate aim of increasing rural income and employment.
- Component 4) MSDSP has been Supporting Natural Resource Management; working to improve agricultural production and productivity in its programme areas. Achieving greater food security has been a principle focus of the Natural Resource











Management Unit that has been critical to the enhancement of rural incomes and levels of nutrition in the years after the Tajik Civil War¹⁷.

CACILM – Central Asian Countries Initiative for Land Management (ADB)

The main objective of the project is the restoration, maintenance, and enhancement of the productive functions of land in Central Asia leading to improved economic and social well-being of those who depend on these resources while preserving the ecological functions of these lands in the spirit of the UNCCD. CACILM implements a comprehensive and integrated approach to sustainable land management that would produce benefits at the local, national, and global levels.

Community Agriculture and Watershed Management Project (World Bank)

The aim of this project is to improve productivity and generate income for rural communities in specific mountain watersheds while at the same time curtailing degradation of fragile lands and ecosystems. The CAWMP was initiated in 2004 and has been extended for a second term closing by May of 2011. It is implemented at a community level through Jamoat (municipal) Development Councils and follows participatory approaches to development. Its various components include improved farm productivity and land resource management. A large number of land resource management subprojects are also directly addressing land degradation.

Communities Programme (UNDP)

Communities Programme (CP) is a flagship multi-year and multi-focus programme of UNDP that brings together critical partnerships with the government and the donors (mainly DFID, EU, SDC etc.). It supports implementation of Tajikistan's Poverty Reduction Strategy (2007-2009) and National Development Strategy to 2015. Starting in 1997 with a community-based approach to promoting rural development, the CP is increasingly supporting and working with local governments. Over the three year duration from (2008-2010) CP will by working to deepen local ownership and partnership between government and communities; building local and regional capacity; strengthening participatory planning and budgeting mechanisms; and supporting community advocacy and participation in decision-making. CP has 5 area offices in Sughd, Khatlon, and the Rasht and Zeravshan Valleys.

Disaster Risk Management Programme (UNDP)

The UNDP Disaster Risk Management Project was introduced in 2004 as a collaborative endeavour designed to address the serious and chronic problems faced by Tajikistan and its regional neighbours with regard to natural disaster management — comprising preparedness, response, and most importantly mitigation and prevention by three UN agencies (UN ISDR, OCHA and led by UNDP). The strategy chosen that is one which is more cost-effective by building upon existing relationships and incountry expertise — taking a national approach to disaster risk management DRMP worked to support and deepen the government's capacity to implement disaster reduction policies, strengthen governmental coordination mechanisms, take advantage of new technologies for assessments and monitoring (allowing for greater predictability and shorter response times) increase public understanding of risk, vulnerability and disaster reduction, enhance commitment to and stimulate interdisciplinary and intersectoral partnerships, locally, nationally and regionally.

¹⁷ AKDN in Tajikistan Website: http://www.akdn.org/tajikistan_rural.asp











The second phase of the Disaster Risk Management Programme aims to reduce the impact of natural disasters on vulnerable communities by strengthening national capacity to prevent, coordinate and respond to natural disasters. ¹⁸

Dushanbe-Kyrgyz Border Road Rehabilitation (Supplementary - ADB)

This US 20 million involves development of a flagship road in Tajikistan, as part of the CAREC Transport Corridors connecting Afghanistan, Kazakhstan, the Kyrgyz Republic, the People s Republic of China, Tajikistan, and Uzbekistan.

Dushanbe Solid Waste Management Project (EBRD)

The Project objectives are to assist the City of Dushanbe to: rehabilitate the existing landfill site and collection points, supply new landfill equipment; and supply new collection vehicles, containers and equipment. Other objectives include assisting the City to re-organise and improve solid waste collection and disposal in Dushanbe. Transition impacts include:

- Technical co-operation to help the City of Dushanbe to consolidate the existing waste collection departments into a single municipal corporation and to develop a business and corporate development plan for the new municipal corporation;
- New tariffs will be implemented to enable the waste collection service provider to cover its costs while protecting low-income families from hardship; and
- Skills and knowledge transfer will take place during project preparation and implementation plus training and new skills will be provided directly by the technical co-operation programmes.

The operation will have a demonstration effect as the first example of co-operation between the EBRD and a Tajik municipality to finance a solid waste project.

Emergency Food Security and Seed Imports Project (World Bank)

The objective of the project is to increase domestic food production and reduce the loss of livestock to help at least 77,000 poorest households in a timely manner to reduce the negative impact of high and volatile food prices. This objective will be realized with the provision of agricultural inputs to the poorest farmers and female-headed households, to support their immediate food security as well as to recover their production losses and livelihoods. The project consists of the following components:

Component 1) Support for Agricultural Inputs (US\$2.7 million equivalent). This component would support the Food and Agriculture Organization of the United Nations (FAO) administered program providing agricultural inputs in Tajikistan. The support would be provided in standard packages composed of high quality seed for winter wheat and fertilizer.

Component 2) Improvement of Livestock Health and Husbandry (US\$1.80 million equivalent). The funding from this component would support the purchase of a package of fodder crop seeds (alfalfa) to be provided to the farmers in Rasht valley.

Component 3) Project Management (US\$ 500,000 equivalent) will be allocated for project management costs incurred by FAO. This funding will also cover expenses such as program audit, the hiring of additional specialists, as well as for farmers training, and monitoring and evaluation.

Ferghana Valley Water Resources Management Project (World Bank)

¹⁸ UNDP Tajikistan website: http://www.undp.tj/index.php?option=com_content&task=view&id=342











This \$13 million project is implemented through the Ministry of Water Resources in the Ferghana Valley region of Tajikistan. The long-term objectives of the initiative are twofold; to improve the capacity for increased irrigated agriculture productivity in the Ferghana Valley by improving land and water management and to improve safety and regulation of the Kayrakum Dam and Reservoir. The project consists of the following components:

Component 1) will finance design and works for rehabilitation of pumped and gravity irrigation and drainage systems serving some 30,000 ha of farm land in the Kanibodom and Bobojon Gufarov rayons.

Component 2) will fund (i) design and works related to rehabilitation of the Kayrakum Reservoir dykes in Kanibodom and Bobojon Gufarov raions, and (ii) technical studies, dredging and other equipment and instrumentations, and minor works to increase operational performance and improve management of the Kayrakum Dam and Reservoir. Component 3) will fund the necessary institutional capacity building for (i) establishment of Water Users Associations (WUAs), (ii) improving agricultural productivity and achieving more efficient water use patterns, and (iii) ensuring proper environmental impact mitigating measures. Component 4) will fund assistance to the central Project Management Unit (PMU) and to the regional Project Implementation Unit (PIU) established for project implementation 19.

Foreign Disaster Assistance and Food for Peace (USAID)

USAID targets improving food security in some of the most vulnerable countries in the world. It builds agricultural productivity through research and technology development; increases access to finance, inputs, markets, and trade; and targets emerging threats, including climate change. Increasing opportunities for smallholder farmers, especially women, and other very poor people is a priority. USAID works with a variety of partners including other donors, foundations, universities, and for-profit firms to increase food security in developing countries. Methods for delivering emergency food aid complement long-term food security goals.

Under this broad mandate USAID has provided health services and relief commodities in Tajikistan after disasters and longer term humanitarian support under the Food for Peace programme.

Global Facility for Disaster Reduction and Recovery (GFDRR) of the United Nations.

Following the PPCR mission in April 2009, a detailed survey report on this topic was completed by the World Bank (with a number of partners) under the auspices of the Global Facility for Disaster Reduction and Recovery (GFDRR) of the United Nations. The report assesses the breakdown of the system at all stages -- from measuring stream flow to transmitting data to assessing and reporting results. Recommendations for investment needs of at least \$6 million are outlined in the report.

Compelling statistics include, for example: "Before the 1990s, hydrological observations were carried out at 11 stations and 138 gauges; at present, observations are carried out at 5 stations and 96 gauges, 15 of which are closed for the time being.

²⁰ Improving Weather, Climate and Hydrological Services Delivery in the Republic of Tajikistan, World Bank, 2009.









¹⁹ World Bank Armenia website:

http://www.worldbank.org.am/external/default/main?pagePK=64027221&piPK=64027220&theSitePK=301579&menuPK=301612&Projectid=P084035



The number of hydrological gauges measuring water flow equals 42; data is submitted by 18 gauges. Routine snow surveys were performed in 18 river basins at 61 snow gauges; at present these operations are carried out in 10 basins." Regarding the crucial role of agricultural meteorology, the report mentions "observations were carried out at 37 stations (2 of them being special-purpose ones) and 14 observation sites; however, by 2007 their number decreased to 20 stations and 8 sites... Aerial visual and route surveys of pasture vegetation have not been performed for the past 17 years. Only 2 sites measure soil humidity." Further, albeit similarly disturbing observations on data recording, transmission and use for decision-making are fully outlined in the report.

IMAC – Information Management and Analytical Centre

As part of the on-going UN Disaster Risk Management Project being implemented in Tajikistan, it is planned to develop the capacity of the Ministry of Emergency Situations (MoES) with regard to the management of disaster related information and data. An Information Management and Analytical Centre (IMAC) has been established in MoES in Dushanbe and five regional offices to achieve that objective. The IMAC is the first of its kind in Tajikistan, and external consultancy has been sought to ensure that the new centre is in line with international best practises.

The outcomes of the project are:

- Information Management and Analytical Centre established by law as a unit under MoES, and its Terms of References prepared;
- The centre physically established within MoES in Dushanbe and five regional offices;
- Intranet-based information management system established in MoES;
- Specialist Government agencies involved in disaster management and regional MoES offices able to share data via MoES information management system;
- Reports on disaster events and risk collected and analysed;
- Central MoES able to communicate and share data electronically with key specialised government institutions in Dushanbe and regional field offices.

Irrigation Rehabilitation Project (ADB)

The Ministry of Water Resources and Land Reclamation of the Republic of Tajikistan is implementing this ADB project worth \$22.7 million. The objectives of the Project are: to improve living standards of the project area farming community; and institute measures to the improvements implemented under the Project. The Project has the following components: (i) rehabilitation of irrigation and drainage systems, and related institutional support; (ii) agriculture support services for dehkan farms; (iii) improvement of the rural potable water supply systems; and (iv) project management, monitoring, and evaluation.

Khatlon Province Flood Risk Management Project (ADB)

The main outcome of this US 22 million initiative will be a comprehensive investment project aimed at minimizing risks from flooding to the lives and livelihoods of rural communities along the Pyanj River in Khatlon Province.

Khujand Water Supply Improvement Project II (EBRD)

The project began in early 2008 and is a second phase following the Khujand Water Supply Improvement Project Phase I, which comprised water supply priority investments. Phase I has been almost fully implemented. The Khujand Water Supply Improvement Project Phase II aims to fund additional water supply improvements,











including continuation of the network rehabilitation program, rehabilitation and capacity increase of the existing pumping stations, procurement of machinery and equipment and continuation of the metering program. In addition to the physical investments, the project comprises institutional development.

Natural Resource Management and Strategic Crop Production (SIDA)

Under this broad initiative SIDA has implemented four projects:

- Strengthening the Seed Sector
- Seed Quality Control (Swedish Seed Control Agency)
- Genetic Resource Conservation and Management (Nordgen)
- Higher Education (Swedish Agricultural University)

The first of these is by far the largest and the only project which maintains an office in Dushanbe. All of these projects were started in 2004, and they are managed in association with a similar portfolio in Kyrgyzstan, where there has been much longer experience in seed activities. A part of the logic of Sida's expansion to Tajikistan in 2004 was to benefit from the experience gained in Kyrgyzstan and to transfer 'lessons learned'. In addition to seeds it was decided to include plant breeding as an additional component because new varieties are a key driver for the seed industry. The Sida projects are currently the only donor support targeted directly at genetic resources, plant breeding, seed production and marketing which in fact form a continuum of closely linked issues and activities, ultimately supporting crop production. The projects are now concentrating their efforts on leaving a sustainable system after closure.

Nurek 500kV Switchyard Reconstruction Project (ADB)

This US 54.7 million project will mitigate any risk of catastrophe from natural disasters disabling the switchyard, and will enable stable flow of electricity coming from Nurek HEPP. The electricity produced is approximately 75% of the total electricity supply of Taiikistan.

Promotion of Renewable and Sustainable Energy use for Development of Rural Communities in Tajikistan (UNDP)

This UNDP-GoT initiative has been implemented under the umbrella of the much larger Communities Programme of the UNDP. The unreliable supply of electricity in Tajikistan is resulting in environmentally damaging activities such as cutting of forests, loss of biodiversity, degradation of soils, and deterioration of indoor air quality. This is putting further pressure on rural communities in Tajikistan, which are already among the poorest in the world. At the same time, the attempts to develop significant incomegenerating activities and to raise living standards in rural communities have largely failed in part due to the absence of a reliable energy supply. Recognising the acute problems with energy availability and security the UNDP along with the GoT has initiated this \$3,500,000 project spanning over 4 years with the overall development objective of reducing widespread poverty in Tajikistan by enhancing socio-economic development and increasing household incomes through the promotion incomegenerating end-use applications of renewable sources of energy in areas with either unreliable and limited power supply or no supply at all.

Protecting Health from Climate Change (WHO)

This project funded by Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Germany is part of a larger seven-country initiative "Protecting health from climate change in southeast Europe, central Asia and the Russian north". The project will span over 24 months, beginning in January 2009 and ending in





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December of 2010. The intervention aims to strengthen Tajikistan's capacity to understand the health risks of climate change and respond, by developing a national health adaptation plan, with particular emphasis on:

- Assessing the health impacts;
- Assessing the capacity of the local health system to respond to climate change;
- Developing contingency plans for health facilities in close cooperation with other sectors;
- Building capacity of the local health system including provision and response to early warning;
- Improving water security for health care institutions through cost-effective technologies.

The Ministry of Health appointed the focal point to coordinate the project implementation from the Government side. The steering committee has been formed. The committee includes representatives from Ministry of Health, State committee for environment protection under the GoT, State Committee of Emergency Situation Control, international organizations and other relevant partners and stakeholders.

REACT - Rapid emergency assessment and coordination (led by GoT)

Rapid Emergency Assessment and Coordination Team - REACT - was established in 2001 by UN OCHA initially to coordinate disaster response and comprised of 12 DRM stakeholders. REACT has now grown to a fully-fledged Disaster Management partnership and currently includes around 40 member organizations, led by the Tajik Committee of Emergency Situations (CoES) as a Chair of REACT. Leading role of the CoES - the Chair of REACT - in DRM coordination is supported by the REACT Secretariat - UNDP's Disaster Risk Management Programme - and other REACT members. REACT Secretariat serves as a liaison body between the CoES and other DRM stakeholders in the country. Following the global cluster approach, established by the UN Inter-Agency Standing Committee, five sectoral groups were created within REACT, covering Non-food items and Shelter, Food, Water and Sanitation, Health and Education. Regional REACT groups have also been established by other DIPECHO partners covering specific geographical areas (Rasht and Zerafshan Valleys, Kulyab region and Sughd).

Regional Power Transmission Interconnection Project – Afghanistan/Tajikistan (ADB)

The outcome of the Project will be (i) increased power export and income generation capacity of Tajikistan by increasing the capacity of its south grid hydropower generation; (ii) restored power supply and reduced cost for consumers in Afghanistan; (iii) improved capacity of the utility operation of Afghanistan Electricity Authority (DABM), and (iv) improved commercial operation of Barki Tajik (BT).

Remote Geo-Hazards Capacity Building and Monitoring Project (DFID/SDC)

The Remote Geo-Hazards Capacity Building and Monitoring Project is worth US \$ 1.47 million and is being implemented by FOCUS in collaboration with the Government of the Republic of Tajikistan. DFID and SDC are joint funders. The project is also supported by the Aga Khan Development Network and FOCUS. The aim of the initiative is to reduce the risk of communities to glacial lake outburst floods in Tajikistan as well as build the capacity of communities and institutions in Tajikistan to assess and monitor these risks. It specifically addresses the need to strengthen the capacity of government institutions, namely the Tajik Hydrometeorology Agency, Head Agency of Geology and the Committee of Emergency Situations and Civil Defence under the





PPCR - Tajikistan







Government of Tajikistan to monitor remote geo-hazards in mountainous regions of the country.

Sustainable Cotton Sub-sector Project (ADB)

The project consists of two components: farm debt resolution and cotton market development. Under farm debt resolution there are three subcomponents: (i) farm-by-farm analysis and debt resolution, (ii) focused policy support for the Independent Commission, and (iii) public outreach and information activities. There are four subcomponents of the market development project component: (i) Tajik standard upgrade, (ii) joint venture on cotton grading, (iii) export facilitation methods including facilitation of bonded warehouse establishment for cotton, and (iv) training and cotton upgrading awareness.

Sustainable Management of Natural Resources in Gorno-Badakhshan (GTZ)

The project is being implemented in collaboration with the German Development Service (DED) and the Gorno-Badakhshan State Land Use Committee, the State Forestry Authority of Gorno-Badakshan and various other local organisations. It consists of two components:

Component 1) aims to promote energy efficiency measures in order to reduce pressures on renewable energy resources. It is supporting a micro-finance organisation Madina to widen the scope of a microfinance product intended to encourage private households to install insulation. Efficient cooking and heating stoves, adapted to local conditions, are being developed, and the use of solar water heaters promoted. From mid 2009 a water component has been added to the project. This aims to promote manufacturing by local enterprises, and the widespread use of energy-neutral hydraulic ram pumps, which effectively power themselves by exploiting the water's own energy, and other adapted technologies for using water more efficiently.

Component 2) aims to restore the flood plains in Gorno-Badakhshan. Reforestation is being achieved with the support of the forestry authorities, by introducing a forest management system that also involves the local forest users. The local, formerly illegal users are receiving long-term property and usage rights based on lease contracts and management plans that have been developed with their own participation. This in turn motivates them to invest in the restoration of the forest resources. This component is being carried out in close collaboration with a similar project financed by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), in order to achieve better results²¹

Sustaining Agricultural Biodiversity in the face of Climate Change (UNDP)

This UNDP-GEF project will use local pilot activities, covering approximately 1.5 million hectares, to test and demonstrate replicable ways in which rural farmers and communities can benefit from agro-biodiversity conservation in ways that also build their capacities to adapt to climate change. It will feature three inter-linked complementary processes. The first focuses on strengthening existing policy and regulatory frameworks in support of agro-biodiversity conservation and adaptation to climate change, with emphasis on local level implementation. The second focuses on developing community, institutional, and system capacity to enable farmers and agencies to better adapt to climate risks through the conservation and use of agro-

²¹ GTZ Tajikistan Website: http://gtz.de/en/weltweit/europa-kaukasus-zentralasien/tadschikistan/27834.htm











biodiversity. The third focuses on the development of agro-enterprises that support the conservation and production of agro-biodiversity friendly products, with a view to providing farmers and communities with alternative sources of income to offset the negative impacts and shocks related to climate change.

Tajik Agricultural Finance Facility (EBRD)

This project supports the restructuring of Tajikistan's agricultural sector by providing revolving credit lines to Tajik financial intermediaries (banks and non-bank financial institutions) who lend funds to farmers for seasonal finance. The objective is to provide alternative finance to small farmers and support the freedom to farm concept whilst employing best farming practice particularly with respect to environmental and labour issues. Through coordination with other donor programmes, farm yields are expected to increase thereby improving profitability. In parallel the Bank will support the establishment of a Warehouse Receipts Programme.

Tajik Hydromet support - proposed as part of Regional Disaster Management Programme (World Bank)

The program incorporates three focus areas: (i) disaster mitigation, preparedness, and response; (ii) financing of disaster losses, reconstruction and recovery, and disaster risk transfer instruments such as catastrophe insurance and weather derivatives, and (iii) hydro-meteorological forecasting, data sharing and early warning. The initiative focuses on both non-structural measures and structural investments aimed at protecting assets, lives and livelihood of communities, including adaptation to climate change and streamlining risk reduction activities into countries' development programs. The main objective of the programme is to increase the accuracy of weather, hydrological and climate forecasts provided to people and economy by modernizing key elements of the Hydromet's technical base and strengthening its capacity to deliver products.

Tajikistan Food Security Programme (EU)

The overall objective is to support food security in all its dimensions preventing crises and contributing to achieving the Millennium Development Goal 1 (MDG-1) in Tajikistan. The purpose is to increase food security and rural incomes, particularly in rural areas, so that beneficiary communities' are better prepared, capable and resilient to cope with recurring "lean seasons" as well as with external shocks. The expected results of the programme are to food availability, food accessibility, stability of food supply and utilization.

The main focus of the interventions will be on the most food insecure areas, communities and groups in subsistence households, principally in the Northern and Southern of uplands. Activities that contribute to improved quantity and quality of food production, along with increased reliability of food production systems, for subsistence households in the most vulnerable communities, principally in upland areas of Tajikistan; and/or

- Activities that contribute to increased sustainable rural income generation and improved access to markets; and/or
- Activities that contribute to improved food use and nutrition, the establishment or strengthening of
- social safety nets, and reduction of other debilitating factors, especially for the most vulnerable.











 Activities that contribute to local capacity building both at local governmental level and, especially, at community level in order to help villagers to look for development opportunities by themselves.

Tajikistan Micro & Small Enterprise Finance Facility-TMSEFF (EBRD)

The objective of the Tajik MSE Finance Facility is to develop the necessary skills and capacity in the Tajik financial system/banking sector to provide access to finance to creditworthy Micro and Small Enterprises (MSEs) nationwide.

The EBRD will extend credit lines directly to selected Tajik partner banks (PBs), which will use the funds to lend exclusively to MSEs. Credit lines will be disbursed in tranches to the PBs depending on their sub-loan portfolio growth. PBs will provide finance to MSEs from US\$ 50 up to US\$ 100,000 in compliance with the EBRD's standard eligibility criteria for MSE sub-loans. The credit lines will be accompanied and supported by Technical Assistance.

Tojikistani HameshaSabz - Green Initiative For Tajikistan – (UN agencies: FAO, WFP, UNDP)

A large environmental programme budgeted at \$23 million spanning over 6 years. Still at the conceptual stage, the GIFT programme framework consists of four objectives. The first objective envisages scaling up large scale tree planting programme through the provision of a significant support to build community based infrastructure necessary for re-greening all categories of land requiring tree cover. The second objective focuses on enhancing environmental awareness through launching of a "Go Green Tajikistan" campaign. This campaign will build on the ongoing national campaign and reorient it after a thorough review of the current performance in terms of its content, coverage, and impacts. The third objective centres on achieving fuel efficiency and introduction of alternative energy sources in the rural areas. Finally the fourth objective envisages strengthening the capacity of the State Environmental Protection Committee (SEPC), key Government Ministries, and Departments, Research Institutes, related District bodies and other field infrastructure to support community based forestry development initiatives. All of which will be implemented within a participatory framework combined with a well trained decentralized extension network.

UNDP-UNEP Poverty Environment Initiative

Poverty and Environment Initiative (PEI) is a global joint UNDP – UNEP initiative supporting country-level efforts to mainstream environmental management into national and sub-national planning processes through financial and technical assistance and capacity development. To foster change in institutions, policies and investments, PEI focuses on mainstreaming P-E issues into national plans, sectoral strategies, environmental policies, economic decision-making and sub-national planning. PEI works closely with planning and finance ministries and provides a sustained operational support for country-led P-E mainstreaming programmes through its three phase approach. A three year PEI Country Programme for Tajikistan is at its initial stages of development, with Phase I covering the period 2009-2010. Its four priority areas are: (i) poverty reduction and governance, (ii) food and nutrition security, (iii) clean water, sustainable environment and energy, and (iv) quality basic services in health, education and social welfare for the most vulnerable 22.

²² UNDP-UNEP (2009); "Tajikistan Country Programme Concept Note". *UNDP-UNEP Poverty Environment Initiative*









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3.8 Workplan

3.8.1 Key milestones

Key milestones	Schedule
First Joint Missions	12 to 22 October 2009
Mission follow on consultative meetings	October to December 2009
Mid-term review mission	4 to 11 March 2010
Grant Proposal	April 2010
Second Joint Mission	14 to 24 May 2010 (provisional)
Strategic Programme for Climate Resilience	June 2010







