PILOT PROGRAM FOR CLIMATE RESILIENCE **Summary - Project/Program Concept Note for the Use of Additional PPCR Resources**			
1. **Country/Region**:	Nepal	2. **CIF Project ID#**:	XPCRNP025A
3. **SPCR endorsement date:**	*28 June 2011*		
4. **Project/Program title:**	*Component 1: Building Climate Resilience of Watersheds in Mountain Eco-Regions*		
5. **Type of PPCR investment**	*Private: No*	*Public: Yes*	*Mixed: No*
6. **Funding request (in USD million total) (including preparation grant)**:	*Grant: $5 million*	*Loan:*	
7. **Financing will be used for:**	a – adding to an approved PPCR project/program ☐ b – adding to a PPCR project/program in preparation for Sub-Committee approval X c- a new PPCR project/program[1] ☐		
8. **Implementing MDB:**	*Asian Development Bank (ADB)*		
9. **National executing agency[2]:**	*Department of Soil Conservation and Watershed Management (DSCWM) under Ministry of Forests and Soil Conservation*		
10. **MDB PPCR focal point and project/program task team leader (TTL)**:	*Headquarters-PPCR Focal Point: Dr. Charles Rodgers, Regional and Sustainable Development Department*	*TTL: Ms. Cindy Malvicini, South Asia Department*	
11. **Project/Program Description** (including objectives and expected outcomes)**:**			

Rationale

The project is one of the five components in Nepal's Strategic Program for Climate Resilience (SPCR), which was endorsed in June 2011. It responds to as well as the Government of Nepal's (GON) National Adaptation Programme of Action (NAPA) in response to climate change, which was finalized in September 2010. The NAPA promotes a watershed and landscape-level approach to deal with issues related to food security, biodiversity loss, water scarcity, energy use, settlements, disease outbreak, and governance.

[1] Same as above.
[2] Can be Government agency or private sector firm

The selected watersheds (project area) are in the West Seti Sub-basin of the Karnali River basin. The sub-basin originates from the snow fields and glaciers around the twin peaks of Api and Nampa in the south facing slopes of the main Himalayas. The Lower West Seti and Budhi Ganga watersheds have been selected for the project, and their population is estimated as 496,205. Annual precipitation in the sub-basin varies from 743 mm to 3351 mm under current climate. The mean per capita income level based on a household-level survey is NRs 21,934/year. More than 85% of households in these watersheds live in scattered dwellings close to natural springs and patches of sloping land. They have subsistence lifestyles based on mixed agriculture, grazing activity and collection of non-timber forest products. Water scarcity is a significant and widespread problem among these communities, occurring every year in the dry season.

The watershed areas are steep mountainous country with average slopes of almost 30 degrees, narrow valleys with perennial streams. There is limited cultivatable land in river flats and on the hillsides where there is some land with a slope of less than 20 degrees. Transport and other services are severely limited; most settlements have foot track access only; each of the six districts in the two watersheds has a small town with road access but these roads may be blocked during monsoon periods by washaways and landslips. There are agricultural markets only in the district centers; and the towns have electric supply but generation shortages limit its provision to between 5 and 10 hours a day depending on the location and season. Villages generally do not have access to electricity except possibly for light supplied by solar photo-voltaic panel. In villages, water mills are commonly used.

Observed climate data from 1981 to 2010 and downscaled projections for 2030 to 2061 from 8 combinations of global and regional climate models were analyzed during project design. A temperature rise of about 0.2°C per decade is projected to affect the hydrological cycle, which in turn will have an impact on water availability, runoff and the discharge regime of rivers. In general, climate change projections show that precipitation will slightly increase in the West Seti sub-basin. Precipitation will increase in pre-monsoon months and decrease in the monsoon, whereas a mixed trend (both increasing and decreasing) is projected in the project sub-watersheds in the winter and post-monsoon. Both increasing and decreasing tendencies in annual water yield and actual evapotranspiration are projected. In general, climate change projections show that annual flow volume will slightly decrease. However, it is difficult to make conclusions regarding precipitation and flow trends. Uncertainty is the main risk that can be attributed to climate change. Storage development is an effective way to cope with temporal and spatial variability in water resources.

The proposed project is based on experience and techniques developed by DSCWM, on lessons from international NGOs and research organizations, and on international and national experience in watershed management. It aims to link in with work by Nepal's Local Adaptation Plans for Action on climate change[3].

[3] Under the Nepal Climate Change Support Programme.

Impact and Outcome

The expected impact (long-term goal) will be that climate resilience in Nepal mountain communities is improved. The project's outcome (to be achieved by Project end) will be that communities significantly vulnerable to climate change have improved access to and enhanced reliability of water supply for domestic, livestock and irrigation uses. The Project is expected to be implemented in sub-watersheds of the Lower West Seti and Budhi Ganga watersheds in the West Seti Sub-basin of the Karnali River basin. These are within the districts of Accham, Bahjung, Baitadi, Bajura, Dadeldhura, and Doti. The cumulative effect of Project interventions is expected to result in (i) increases of dry season domestic water amount water per person per day; (ii) reduction in amount of time women/children spend waiting to collect domestic water at the source during the dry season (iii) availability of irrigation water during the dry season increased by at least 0.3 lps/ha; and (iv) incidence of disputes linked to water stress reduced.

Outputs

Three main outputs are envisaged: (i) communities have increased water supply during the dry season through implementation of water source catchment management and storage interventions; (ii) the capacity of communities and Government to manage integrated water and land management is improved; and (iii) lessons for improving access to and reliability of water resources in climate vulnerable sub-watersheds are generated and used by Government stakeholders in strengthening its management of Nepal's watersheds.

Water source catchment management and storage interventions. Communities in participating sub-watersheds will identify springs and streams that can be made more reliable through catchment management measures such as afforestation, fencing, erosion control, and land use management practices. For drinking water, storage tanks may be constructed at the spring or stream intake to capture water for use over longer periods of time, thus sustaining use of the source during the dry season. Where there is potential to develop or enhance irrigated agricultural area and water sources can be identified, a pond or series of ponds may be constructed to store the water close to farm fields. Associated land treatment measures downstream of the water storage facilities may also be implemented if they directly threaten the area that will receive the water (i.e., the area of influence of the project's primary interventions). The Project will also provide participating communities with education and facilitate programs on water conservation practices (including micro-irrigation), methods for maintaining soil moisture in agriculture, grazing and fodder management, and ways to regenerate vegetative cover. Implementation of subprojects will particularly address water shortage issues that result in additional labor for women and difficulties for Dalits and other disadvantaged groups who are often required to subordinate their water needs when there is water shortage.

Watershed planning for improved water security. Sub-watershed management plans to improve water security and enhance watershed resilience will be prepared. They will describe the watershed bio-physical and socio-economic conditions and challenges, and build a GIS database of existing water infrastructure and water-related development interventions. The identified community-driven interventions for water source catchment management and enhancement will be included, and the time-based action plan will primarily consist of the interventions to be financed under the Project. Through the watershed planning process, DSWCM's capacity to determine and monitor priority interventions will be strengthened, and the department can use the GIS database in planning its future programs.

Lessons for improving access to and reliability of water resources. Training will increase capacity for watershed planning and particularly for identifying and designing options for enhancing water availability. The lessons learned through Project implementation will be transferred to others in DSCWM through strategic and targeted technical assistance. A knowledge management plan will be implemented, with activities to document and incorporate lessons learned into country programs and foster knowledge sharing among country stakeholders and in international climate change forums. DSCWM's capacity to monitor the impacts of Project interventions will be strengthened through preparation of a management information system and expertise in benefit monitoring and evaluation. Other evaluations will be conducted on appropriate topics such as changes in hydrology due to catchment management measures, how communities negotiate water allocations, behavioral change in collective management of interventions, and demand management. Project experiences, impact assessments and lessons learned will be shared globally as part of the SPCR's global learning support program.

12. **Activities to be financed from the additional resources:**

Civil works and associated technical assistance for implementation of community-driven water source catchment management and storage measures will be financed through the additional resources. The additional funds will enable the Government and ADB to extend the project to more watershed communities, resulting in benefits of improved water supply to more people affected by climate change. The project will be administered through numerous subprojects whereby communities who meet selection criteria petition for project benefits. The additional $5 million will go directly to implementation of more subprojects, the exact number of which will be known at the end of the project preparation phase (scheduled for end July 2013).

13. **Briefly summarize how the proposed project/program further advances the objectives of the endorsed SPCR:**

The proposed project is Component 1 of the endorsed SPCR. One of the SPCR's objectives is improved access to and enhanced reliability of water resources. As indicated in the Impact and Outcome description in section 11 above, the project's expected outcome is the same as the SPCR objective. The additional resources will be used to provide additional beneficiaries with water supply (for drinking and irrigation) during the dry months.

14. **Expected Key Results from the use of the new resources**[4]

Result	**Indicators (consistent with approved PPCR Results Framework)**

[4] If the request is for adding resources to an already approved PPCR project/program, list relevant results of approved project/program and/or additional results the additional resources will contribute to and the relevant indicator and revised target.

(a) domestic water for xx,xxx project beneficiaries during dry season increased by x% (baseline: x liters per person per day)	Number of people supported by the PPCR to cope with effects of climate change
(b) 75% of DSCWM staff trained adopt the new planning approach	Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience
(c) Communities adopt effective and enhanced water use practices for agriculture and other uses that are responsive to the specific needs of women and disadvantaged groups	Extent to which vulnerable households, communities, businesses and public sector use improved PPCR-supported tools, instruments, strategies, activities to respond to CV&CC
(d) 12 new knowledge products are produced from project outcomes, 4 of which focus on gender and social inclusion	Quality of and extent to which climate responsive instruments/investment models are developed and tested
(e) Lessons, including those derived from a gender and social inclusion perspective, fed into DSCWM, DWSS[5], and DOI[6] guidelines	Degree of integration of climate change in national, including sector, planning
(f) New model for climate-responsive watershed management interventions developed and agreed	Quality of and extent to which climate responsive instruments/investment models are developed and tested

15. **Expected Co-Financing for the project or program[7]:**

	Amount (USD million):	*Type of contribution:*
• Government	2.0	Cash and in-kind
• MDB	0	
• Private Sector (please specify)	0	
• Bilateral (please specify)	0	
• Others: Nordic Development Fund	4.0	Grant, parallel
Total	6.0	

16. **Expected Project/Program Timeframe**

Expected Sub-Committee approval date[8]: The project appraisal document is expected to be submitted to the PPCR Sub-Committee for consideration on or about 28 August 2013.

17. **Other Information:**

The Government of Nepal decided and advised ADB on 12 February 2013 that the financing plan for the proposed project should not include concessional resources, as had been earlier decided when the Government submitted its SPCR to the PPCR Sub-Committee for endorsement. In order to ensure that the project goes forward, they have decided that the $5 million in additional PPCR grant should be applied to the proposed project (SPCR Component 1).

[5] Department of Water Supply and Sewerage
[6] Department of Irrigation
[7] This includes: in-kind contributions (monetary value), MDB loan or grant, parallel financing, etc.
[8] Only for new projects or projects in preparation for Sub-Committee approval