

CLIMATE INVESTMENT FUNDS

PPCR/SC.8/CRP.1

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**STRATEGIC PROGRAM FOR CLIMATE RESILIENCE
NEPAL**

INDEPENDENT TECHNICAL REVIEW AND RESPONSE

Title of Investment Plan: Nepal: Strategic Program for Climate Resilience
Program under SCF Pilot Program for Climate Resilience (PPCR)
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Date of Submission: 23 June 2011

This independent technical review (ITR) involved the examination of documents (Annex A and Annex B) and a number of one-on-one meetings with key government officials and representatives of the World Bank, Asian Development Bank and International Finance Corporation. The draft findings were discussed in a meeting on 20 June. The review lasted from 7 to 22 June, 2011.

Part I: General

Strengths

- The Strategic Program for Climate Resilience (SPCR) is a well-written and comprehensive document. It builds off on the National Adaptation Program of Action (NAPA) process, employing the same thematic working groups (TWG) formed under NAPA as well as its GIS-based vulnerability assessments, desk reviews, extensive public consultations, and transect walks (NAPA, 2010). The components identified in the SPCR are based on NAPA suggested profiles (Annex C). Funding for the SPCR totals US \$ 110 million. (Annex D)
- The SPCR uses existing knowledge, about trends in temperature and rainfall, climate change scenarios, and analyses of various developmental contexts in Nepal, to assess climate risks. It reviews existing national development plans and programs, as well as institutional contexts.
- The document identifies temperature rise, prolonged dry spells, changes in form, intensity and timing of precipitation as direct observations of climate change. Upward shifting agro-ecological belts and tree/snow lines, increased frequency and severity of flooding, increasing risks of glacial lake outburst floods, the encroachment and rapid growth and distribution of exotic species, change in flowering behaviour of some plant species, and increased prevalence of diseases and pests observed on forest and food crop species are other identified impacts.
- For each of the five components, there is an implementation plan which identifies both governmental and private sector mechanisms for implementation and procurement processes.
- The SPCR approach uses existing knowledge and institutions, building on various donor-funded programs currently being implemented. It broadly discusses Nepal's earlier five-year development plans, as well as the first (and current) three-year interim plan, its climate change policy, and other policies related to the environment and development.
- It identifies programs that can build resilience by addressing the most critical risks associated with the quality and quantity of water, food security and eco-system health. Specific interventions include improving the health of natural habitats, park management, and boosting the information, knowledge plus the capacity building of government agencies regarding climate change impacts and resilience measures.
- The SPCR acknowledges the drudgery that women face due to water scarcity and the feminisation of agricultural labour as more and more males migrate to global labour markets. It highlights gender differentials and emphasises that gender action plans will be developed to address constraints on the participation of women and to reduce gender disparity. Women, it stresses, will be specifically targeted by its programs, including when community-based early warning systems are being established.¹ It identifies small farmers and rural populations as the other particularly vulnerable groups to place greater focus on.
- The document recognises that poverty alleviation is a priority of the government and aims to help meet this goal by making development plans climate change-resilient. It acknowledges that poverty alleviation objectives are to be met by conducting social analyses and introducing interventions which ensure that the poor and vulnerable clusters within communities benefit from the proposed actions.
- The SPCR recognises the foundational role water plays in building resilience and fostering adaptation: in both drought and flood conditions, individuals and households with access to reliable supplies of water generally tend to do well.² It also recognises the role forests play in preserving ecosystems, sequestering carbon, maintaining healthy upstream and downstream linkages, and supporting rural needs and livelihoods.
- The fourth IPCC report (2007) labelled the Himalayan region a "white spot," meaning that it lacks robust data sets. In fact, the lack of data severely constrains our ability to improve understanding of the relation between the South Asian monsoon and the Himalayan region so as to assess characteristics of the emerging climate dynamics. By filling this gap, through its second component, the SPCR can play a key role in generating robust regional climate information, and by making it accessible to end users it can also assist in improving understanding.
- The SPCR identifies existing programs which address climate-related issues, such as: the Joint Consortium Disaster Risk Management Flagship program, the Finnish-Nepalese Project for Improved Capability of the Government, the Government of India's support for a single radar system, etc. (pp 35) to plan its work, complement them and thereby avoid duplication.

- The SPCR recognises that establishing baseline conditions is crucial, and has developed program indicators for monitoring and evaluation purposes.
- The SPCR can be a pragmatic approach to address economic needs. For example, a key output of Component 5 mentions the need to create alternative livelihoods for communities dependent on natural resources, while Component 4 recognises the need to add value to agriculture products by establishing linkages with markets.
- Component 3 recognises that the government of Nepal (GoN) will safeguard its development programs, policies and projects from the effects of climate change through transformational interventions. Transformations will occur if and when the proposed activities, like supporting the Ministry of the Environment in developing a community-based tool for vulnerability analysis, revising the education curriculum and documenting local knowledge and best practices addressing climate change impacts, are carried out.

Gaps

- The SPCR does not elaborate what it means by transformational change. Nor does it analyse how different stakeholders in Nepal may perceive that concept and respond. These various perceptions will have significant implications for the proposed programs.³ If transformational change is to be the cornerstone of building adaptive capacity, then how this capacity was assessed in Nepal's political transition needs further elaboration. The SPCR does not thoroughly assess the effectiveness of service delivery mechanisms, and does not derive lessons from past efforts.⁴
- The risks associated with climate change under development planning in key sectors (water, agriculture, and physical planning) and modalities for climate integrated planning processes have not been incorporated into sectoral plans, but these are expected to come through the climate resilient plan that the National Planning Commission is currently preparing⁵ and through Component 3 which covers integrated climate risk planning and management in key sectors through risk screening, training and other associated activities.
- The SPCR does not specify how the program will reach the local beneficiaries, leaving these details to be worked out during the project preparation stage. The method to identify vulnerable individuals, households and communities is not sufficiently grounded in the local contexts where vulnerabilities occur. The SPCR offers no method to identify the geographic regions (districts, VDCs and wards) most likely to be exposed to climate change, and those within that region likely to be most vulnerable to the impending changes. Who is vulnerable, why and where are questions that remain unanswered in the SPCR. As such, how the vulnerable within women, youth, small farmer or indigenous populations (page 14, 15) will be identified remains unclear.⁶
- The document provides an exhaustive framework for work within the government and the private sector, but does not suggest mechanisms to ensure quick and effective delivery of finance, services and knowledge to grassroots level, which is the key for transformational change and does not conceptualise such change within an institutional framework.
- The SPCR proposes to deliver service and finance through the existing mechanisms of the government. Climate vulnerable groups are in need of urgent and immediate services. Unless innovative, fast and effective service delivery mechanism(s) are put in place, the 'business as usual' approach will increase risks rather than help those vulnerable to climate change. Until programs support informal systems together with making the natural resource base on which livelihoods of the climate vulnerable groups rely more resilient, any initiatives will not help develop pro-poor actions.
- The document acknowledges that men are migrating to cities and abroad, but scarcely touches on the issue of remittances, even though they constitute one-fifth or more of Nepal's GDP⁷ and its contribution to enhancing adaptive capacity, especially given that remittances have reduced poverty in Nepal by almost 10% in the last few years according to a recent Nepal Living Standard Survey (NLSS).⁸ On the flip side is the fact that this money is contingent on there being 2.5 million Nepalese—almost a tenth of the population—out of Nepal. Neither the informal sector nor the autonomous responses within it are adequately addressed. In fact, the SPRC under-emphasises the role resilience planning can play to promote autonomous adaptation by individuals, households, communities and businesses to respond to the opportunities and constraints climate change is likely to present. It only cursorily recognises the change processes currently underway in Nepal.⁹
- The SPCR proposes arrangements for coordination among different levels of government, MDBs and donors, but, except for a general statement about the need for coordination, it does not mention the mechanisms within which NGOs, civil society groups, community groups, and other stakeholders can work together. For resilience planning and actions to be effective, coordination should ensure that no duplication occurs and that continuous learning catalyses transformations in the real sense. Coordination is a multi-scale effort that needs to balance many overlapping and competing initiatives. In many cases, implementing agencies lack analytical capacity, are reluctant to embrace and disseminate emerging knowledge, and provide poor-quality support.
- The adaptive capacity assessment (pp. 13) identifies capacity gaps and needs and risk assessment of prioritised districts and municipalities, but information on capacity is presented at an aggregate level, whether national, regional, district and community, but falls short of locating

gaps and needs within households.¹⁰ Except in Component 5, there is no discussion of the need to make alternative livelihoods a cornerstone of a climate-resilient future.

- The SPCR does not analyse how climate change-related impacts will ripple through human-built systems and exacerbate vulnerabilities. Water is a case in point. While the document recognises that stress levels will increase with the decrease in the availability of water, it does not adequately articulate linkages with drinking water and irrigation systems, and challenges of governing and managing these systems through user groups in order to achieve transformative changes.
- The SPCR identifies learning as a key element, but under-emphasises the importance of mechanisms providing systematic learning by multiple actors at different scales, which are crucial for building climate resilience. It contends that the government will do everything and accords less space for different views, challenges, critiques and peer reviews, and plural platforms.
- Component 4 of Investment Project 1 does not consider "conservation of agro-biodiversity" (pp. 46) while implementing the project, despite the dual stress agro-biodiversity already faces due to climate change and the promotion of exotic seeds by private companies.
- The document has used different data that need to be reconciled (For example, contribution of agriculture to GDP: 35% pp 2 and 33% pp 10).

Part II: Compliance with the investment criteria or business model of the relevant program¹¹

Climate risk assessment: The SPCR uses existing knowledge, particularly recent trend analyses and climate change scenarios for risk assessments to identify entry points for interventions. However, its treatment of uncertainties is limited, and no attempt is made to communicate those uncertainties in the document. In addition, neither the kinds of climate models and scenarios are used to make risk assessments, nor assumptions about their validity are made explicit. Because climate change is a dynamic process, changes may occur quickly and dramatically over the course of the program period. A one-time risk assessment will not be enough to assess emerging risks. The SPCR makes no provisions to evaluate future and changing risks.

The SPCR falls short of capturing vulnerabilities that may result from systemic weaknesses and institutional failures. Assessments based on one-time climate risks can be maladaptive if larger social processes, which may lead to new vulnerabilities, are not examined. For example, during the 2010 Pakistan floods, systemic failure exacerbated the hardship that the unprecedented climate event brought about. The breach of the Koshi embankment which resulted in floods that affected 3.5 million people in Nepal and Bihar is another similar signature event.¹²

Institutions and coordination: The SPCR addresses the coordination of efforts among different levels of government and donors well. It sets up appropriate sectoral and cross-sectoral mechanisms to manage and coordinate its program with the government. However, vertical coordination with different scales, especially with vulnerable communities, is still missing. Since many civil society organisations and national NGOs do possess expertise and skills that potentially complement the initiatives of the government, they can deliver services at grass-root level. At the same time their involvement can raise voice and create counterbalance to minimise risks of irregularities, fiduciary as well as redirecting program focus areas and communities – a form of gerrymandering practiced for political gains.

The aim of the SPCR is to allow the government of Nepal to make investments that can bring about transformative changes which it would not have been able to make on its own. The SPCR document is silent on how the existing institutional capacity will be able to deliver additional services effectively and quickly when the existing GoN employees are already fully engaged and occupied with their normal defined duties. The SPCR document does not examine whether GoN will be able to sustain these efforts without the continued assistance of donors.

Prioritisation of projects: The SPCR includes five different components (see Annex D) based on climate risks assessments and extensive consultations across the country. Cost effectiveness is fostered by planning activities that complement the many existing donor-led and government initiatives designed to address climate-related issues. The focus on water, for example, is foundational as it is central to building resilience and fostering adaptation to climate change. While most of the programs are well thought out, a few require a more in-depth analysis. For example, the analysis of the investment projects of Component 4: Building Climate-Resilient Communities through Private-Sector Participation (pp.50-51) is not appropriately grounded in the dynamics of regional hydrology and geomorphologic processes, or technological suitability and in making linkages with climate vulnerable communities tangible¹³ even though it does articulate the interlinked nature of climate risks (pp. 49). The use of the term dyke, for channelling water for irrigation and drinking purposes, for example, is inappropriate and proposal to use daily pondage in hydropower plants built by the private sector does not analyse the fact that Nepal Electricity Authority has refused to pay a higher tariff for peak energy, or that the lack of an incentive for the private sector could lead to operational dysfunction. The sedimentation risks in the Himalayan rivers need more nuanced assessment.

Stakeholder engagement and participation: The SPCR is built on wide consultations with various sections of Nepali communities that the project team held. A series of participatory workshops were conducted in order to engage representatives from the government, civil society and private sectors at the national, district and local levels. Forty percent of the participants in the community consultations were women (pp.15), and the SPCR claims to have included disadvantaged and marginalised in the consultation. The SPCR does not bring in the Ministry of Women, Children Social Welfare or the National Commission on Women in its formulations to enable the mainstreaming of gender concerns.

Part III: Recommendations

The recommendations aimed at meeting the objectives stated in the TOR¹⁴ are related to specific activities and also draw on research the reviewer is currently engaged in.

Define the resilience-planning process: Adaptation, or resilience-building, is not an end in itself, but a continuous process. Strategies should be continually revised in order to gain new insights on vulnerabilities, and priority areas must also be evaluated and re-evaluated in order to take proper and effective actions. The resilience strategy is a useful tool only to the extent it is revisited over time, thus generating revised actions. There is a need to re-evaluate risks iteratively over time. Iteration and shared learning processes are important.¹⁵

Operationalise two-way learning: Building resilience requires sharing, learning and sufficient time. Climate change is a global process, but local conditions shape its impacts; so practitioners must integrate local and global knowledge in order to identify effective responses. Sufficient time is needed to gather and/or produce reliable climate data, to share this information with different end users, and to build good-quality relationships for planning and implementing a resilience-enhancing program. Furthermore, because many of the impacts depend on interactions among sectors, across scales, and among communities of actors, communication and the development of a common understanding among diverse groups is essential. Shared learning should be embedded in the resilience-planning process so that it can transcend barriers and initiate collaboration across sectors and scales as well as help synthesise and simplify scientific knowledge for dissemination into local contexts. Such actions need to be sustained over an extended period of time in order for the program to be effective. An integrated analysis of these components is necessary if we are to understand vulnerability and to identify potential points of entry for building resilience.

Focus on building capacity: The SPCR correctly suggests, “very little knowledge exists at junior level in key government agencies and district and local levels” (pp. 13). As a new initiative, the SPCR allows for the flow of global knowledge and narratives to these different actors at the national, sub-national and local levels that cross geographic, administrative and sectoral boundaries. A number of key questions must be addressed: What is unique about resilience planning for climate change versus conventional general planning? What is adaptive capacity and adaptive strategy? What is resilience? Actors involved in climate change debates have different answers to the same questions as they understand and interpret key concepts differently. The capacity-building opportunities of Component 3 of the SPCR may provide for reformulating resilience-building policies, as well as for institutional tinkering to redefine the roles and responsibilities of ministries to achieve the objective of transformative changes. This process can and should assist in developing a common consensus.

Focus on generating knowledge for resilience planning for climate change: Knowledge about climate-resilient planning and adaptation is beginning to emerge, but resilience planning cannot wait for “perfect knowledge” to be available. Instead, it must devise methods to work within the realm of uncertainty.¹⁶ End-users of plans do not understand the uncertainties involved in the assessment of climate impacts; they misapprehend the nature of emissions scenarios, outputs from global and regional climate models and local impacts. If they do not comprehend the inherent uncertainty in climate change predictions, their inability to deal with uncertainty will debilitate their decision-making with respect to resilience planning and adaptation actions. Translations of scientific terms and concepts, and good practices for on-the-ground assessments and policy framing will be needed in order to mainstream climate considerations into planning and to enable policymakers to evaluate multiple lines of evidence and judge trade-offs among competing needs and demands.¹⁷

Define climate change vulnerability and establish a dynamic method to assess it: Systems (e.g. energy, water, food, transport, communication, finance etc.), vulnerable communities and capacity should be linked in a cohesive framework in order to achieve transformations which minimise climate change vulnerabilities. Achieving transformation requires changing structural constraints¹⁸ that impede adaptation or resilience-building. The process involves system-level reforms that remove deprivation¹⁹ and requires institutional tinkering so that the rules of the game suit the emerging constraints that climate change is likely to bring. Resilience planning should focus on developing a systematic approach to locating areas that are fragile, and identification of marginalised and disadvantaged groups most exposed to the impacts of climate change, which are key elements in defining vulnerability to climate change.²⁰ This process needs to ensure that while the vulnerable are targeted, the rest of the community are also not excluded.²¹ This method should also assess how

institutions constrain or enable adaptation. In the next stage, the SPCR should devise a flexible set of processes and activities that can assist in planning, capacity-building, implementing, and enabling continuous learning that is central to the maintenance of resilience. Such approaches need to consider the cost effectiveness of investments by exploring the capacity of a local community in terms of human resources, finances, and local knowledge.

Explore systems and their inter-linkages: The stresses from climate change are likely to be indirect, incremental, or both. They will also emerge when changes ripple through interlinked systems to specific areas. Such exposure, in combination with other stresses, can cause systems to lose their functional characteristics. The SPCR does recognise the interlinked nature of Nepal's ecological systems, thus these inter-linkages and their interaction with human-built systems need much greater unpacking in the PPTA. The framing needs to explore the indirect and cumulative effects of climate change on systems and across different spatial and temporal scales. In particular, Component 5, which focuses on endangered species, needs to be linked with the food security issues covered in Component 4.

Respond to specific local challenges: Variations in local contexts is a significant challenge for resilience planning, so strategies must be tailored according to localities. The SPCR needs to help identify issues that locals view as tangible and immediate. In the next stage, efforts need to be made to introduce more subsidiarity by integrating scales of governance and synergies between the national and local levels. Approaches that link regional and national priorities to local conditions and vice versa should be developed as they represent a tangible process for integrating global and local sources of information for use in identifying practical actions that can be implemented so as to build climate resilience.

Make the treatment of poverty explicit: The SPCR needs to make more explicit, how many of its planned activities will leverage other existing livelihood-building initiatives in the country. In fact, the SPCR should specifically focus on channelling investments into the productive sector, particularly into the diversification of livelihoods. If transformative change is to take place, pro-poor strategies for climate resilience need to be adopted at all scales.

Knowledge Management: The activities identified in Component 3 need to be linked to recent initiative involving National Academy of Science and Technology (NAST) as one of the hubs of climate knowledge management, and bringing in academic institutions and independent research organisations in the process. The proposed initiative needs to devise appropriate guidance mechanism to promote critical research related to resilience planning and adaptive actions to climate change.

Build a transparent and accountable governance mechanism: Regarding adaptation, a development-deficit nation such as Nepal, needs additional financial resources and use them effectively to implement location-specific resilience strategies. The SPCR needs to devise a transparent and accountable governance mechanism with a clear means for tracking how the investment and its learning are being used in the building of long-term climate resilience.

Create space for constructive engagement: Because no single organisation will be able to build climate resilience strategies that address the physical dynamics of systems and the social and institutional contexts of a region under consideration, multiple actors are required. Technical studies and people-centered as well as ecosystem-focused approaches are essential. The SPCR has created a space for both government agencies and the private sector to act, but it needs to make the role of civil society actors, NGOs and CBOs more explicit to create a policy space where they are constructively engaged.

Establish synergy between resilience planning and adaptation: It is possible to consider resilience-building and adaptation as synergistic in the sense that adaptation implies developing specific strategies for responding to specific projected impacts of climate change, while resilience-building is a general strategy for increasing the capacity to adjust to whatever the future brings. But there is a caveat to promoting adaptation: given the uncertainty in climate science and scenarios, we will not be able to attribute impacts to their respective causes. Uncertainty makes it essential to build resilience of the society as a whole, and to create an enabling environment that allows for adaptation to occur as climate conditions change. Resilience planning should focus on developing resilient systems which create opportunities and enable individuals, households, communities, and agencies to take adaptive actions by switching strategies to deal with whatever stresses climate change may bring. In the next phase these linkages need to be explored in greater detail.

NOTES

¹ SPCR will give "special attention . . . to areas of importance for women, indigenous communities and youth" (p.34).

2 Moench and Dixit (2004) highlight basic factors that help households affected by floods and droughts to
respond to the stress.

3 See Ayers *et al.* (2011) for analysis of different perceptions of various actors regarding resilience planning
with respect to the PPCR process in Nepal.

4 GoN implemented major watershed management programs in the past and also tried to improve the
efficiency of on-farm water use efficiency. No lessons from these efforts have been drawn.

5 These details are also available in NPC (2011).

6 See Bennett (2006) for analysis on the issue of social inclusion in Nepal, and on the challenges of making
social transformative changes in Nepal.

7 In the fiscal year 2010-2011, remittances totalled Rs. 231 billion, or 23% of the GDP, see *Kantipur*, June
13, 2011.

8 *Kantipur, ibid.*

9 These dynamics are, an increase in the number of school-going children; rapid penetration of
communication systems, including sophisticated mobile phones, radios and other information technology;
young mothers moving to road-side settlements from their rural homes; land-use patterns moving out of
agriculture, changes in assets and household food baskets; expansion of road networks; a change which
has caused people growing dependent on services outside their local ecosystems; and has fuelled
haphazard real estate development in regions likely to face flash floods and landslides. DST (2008) also
elaborates on these changing dynamics.

10 Global change vulnerability assessment methods integrate three traditions of research - impact
assessment, risk/hazards assessment and food security assessment – and include analysis of vulnerability,
together with the identification of specific options for stakeholders to reduce that vulnerability. Schroter *et al.*
propose five criteria for vulnerability assessment to satisfy: (i) the knowledge base engaged for
analysis should be varied and flexible, (ii) vulnerability assessments should be “place-based” with an
awareness of the nesting scales, (iii) the global change drivers examined should be recognised as multiple
and interacting, (iv) vulnerability assessments should allow for differential adaptive capacity and (v) the
information should be both prospective and historical. See Schroter *et al.* (2004).

11 This section evaluates the SPCR against four criteria mentioned in the Terms of Reference (TOR).

12 The cause of the breach was not a climate-related event, but an event borne out of institutional failure.
See Dixit (2009), Shrestha *et al.* (2010) and NCVST (2009) for detailed discussions on the nature, cause
and implications of the Koshi embankment breach flooding.

13 An example is in Investment Project 2, which mentions climate-proofing of selected vulnerable
infrastructures such as private hydropower stations, see Annex D.

14 The objectives include a) add value to the design process of the investment plan, 2) be part of the
country-led process of preparing an investment plan, 3) reflect the objectives and investment criteria of
the relevant programs under the SCF, and 4) provide knowledge and experience to interested
stakeholders, including the members and observers of the SCF governing bodies.

15 For a detailed discussion on shared learning processes, see Moench, Dixit *et al.* (2007).

16 Studies in selected regions of India and Nepal prone to floods and droughts propose systematic approach
to planning for adaptation to climate change see Moench and Dixit (2007) and Dixit and Moench (2010). A
more elaborate example of local planning for adaptation is found in Simon *et al.* (forthcoming). Also see
Dixit *et al.* (forthcoming) for discussions on such an approach using both natural sciences based and social
science methods to assess vulnerability to climate change impacts in Nepal. More elaborate and exhaustive
approaches to resilience planning for climate resilience for urban regions are found in Lage J., *et al.* (ed.)
(forthcoming); Moench *et al.* (forthcoming); Opitz S.S. *et al.* (forthcoming); and Reed S. O. *et al.*
(forthcoming).

17 The idea of multiple lines of evidence is based on Framing paper for climate research in South Asia DFID
(forthcoming); *Climate Research Coordination in South Asia; Issues, Opportunities and Recommendations*.
The paper brings together challenges of research and knowledge on climate change issues in South Asia.
Dr Pramod Aggarwal, Ajaya Dixit, Prof Aswin Gosain, Saleemul Huq, Dr Pradeep Mazumdar, Dr Sangeet
Srivastava, Dr Mark New, and Jaishree Srinivasan contributed to the paper. Guy Howard of DFID, India
Office coordinated its preparation and Clare Shakya provided input. Detailed discussions on adaptation
research needs in South Asia to climate change are also found in (ISET, 2008).

18 See Pelling (2010) for discussions on the challenges of making transformative changes with respect to
climate change.

19 See Bennett (2006) *ibid.*

20 Such a framework using systems, marginalised populations, agents {those involved in adaptation,
broadly: government agencies–central, regional and local; private sectors; civil society organisations; and
institutions (rules, regulations etc)} is found in Moench *et al.* (forthcoming). Also see Dixit *et al.*
(forthcoming).

21 The approaches used by NGOs such as Rural Self Reliance Centre (RSDC), LI-BIRD and SOLVE identify the
most vulnerable groups in a community without excluding other members, and the methods can be
applied in assessing vulnerability in general as well as in identifying different needs so that programmes
can be tailored to address such needs.

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Annex
A: Context

Pilot Program for Climate Resilience (PPCR)

The objective of Climate Investment Fund (CIF) is to 'pilot and demonstrate ways to integrate climate risk and resilience into core development planning, while complementing other ongoing activities' (CIF 2008). The PPCR aims to reach its objective by, "... providing incentives for scaled-up action and **transformational change in integrating consideration of climate resilience in national development planning consistent with poverty reduction and sustainable development goals**" (CIF 2008). (Emphasis added) The SPCR has proposed five components with a total outlay of 110 million dollars (Annex A).

Nepal National characteristics

Nepal is a country with a development deficit: access to foundational services such as drinking water, basic health, energy, education, transportation is inadequate. This development deficit also emanates from poor governance, weak institutional capacity, poor technical and technological capacities, lack of coordination among implementing agencies, their vertical-structuring, centralisation, and excessive dependence on donors. These factors mean the poor targeting of resources that do not bring about desirable changes. Impacts of global climate change exacerbate these challenges. Scientific evidence suggests that Nepal is likely to face numerous climate change-induced vulnerabilities.

B: Criteria for Undertaking the ITR

In undertaking the review of an investment plan, expert reviewers will assess whether the investment plan:

General

- complies with the principles, objectives and criteria of the relevant program as specified in the design documents and programming modalities
- takes into account the country's capacity to implement the plan
- has been developed on the basis of sound technical assessments
- demonstrates how it will initiate transformative impact
- provides for prioritisation of investments, stakeholder consultation and engagement, adequate capturing and dissemination of lessons learned, and monitoring and evaluation and links to the results framework
- adequately addresses social and environmental issues, including gender
- supports new investments or funding in addition to on-going/planned MDB investments
- takes into account institutional arrangements and coordination
- promotes poverty reduction
- considers cost effectiveness of investments

Specific to the PPCR

- **Climate risk assessment:** The SPCR has been developed on the basis of available information on the assessment of the key climate impacts in the country; the vulnerabilities in all relevant sectors, populations and ecosystems; and the economic, social and ecological implications of climate change impacts.
- **Institutions/co-ordination:** The SPCR specifies the coordination arrangements to address climate change: cross-sectoral; between levels of government; and including other relevant actors (e.g., private sector, civil society, academia, donors, etc.).
- **Prioritisation:** The SPCR has adequately prioritised activities, taking into account relevant climate/risks and vulnerabilities and development priorities, sectoral policies; ongoing policy reform processes and existing, relevant activities and strategies.
- **Stakeholder engagement/ participation:** The SPCR has identified and addressed the needs of highly vulnerable groups.

Annex C: SPCR and NAPA options

NAPA		SPCR	
Thematic component	Option	Thematic component	Option

Water resources and energy	<ul style="list-style-type: none"> • Implement climatically sensitive watershed and aquatic ecosystems protection, rehabilitation and management programs • Management of existing and extension of new hydrological and meteorological networks of DHM 	Building climate resilience of watersheds in mountain eco-regions	<ul style="list-style-type: none"> • Improved participatory watershed management planning taking into account the impacts of climate change
Climate-induced disaster	<ul style="list-style-type: none"> • Enhance the capacity of all the water-induced disaster related institutions and strengthen early warning systems and forecasting • Making preparation for emergency response, relief and rehabilitation measures 	Building resilience to climate –related hazards	<ul style="list-style-type: none"> • Establish early warning systems • Strengthen weather and flood forecasting information systems • Improve access to financial instruments that reduce the adverse impacts of climate induced shocks
Forests and biodiversity	<ul style="list-style-type: none"> • Capacity building for forest management • Research to control invasive species, study of life cycle of pathogens • Identification of threatened flora and fauna, establishment of corridors and connectivity and implementation of landscape level conservation plan 	Enhancing climate resilience of endangered species	<ul style="list-style-type: none"> • Build capacity, enhance knowledge and implement activities to improve climate resilience of critically endangered species by safeguarding natural habitats
Agriculture and food security	<ul style="list-style-type: none"> • Local capacity building and training on new technology 	Building climate resilient communities through private sector participation	<ul style="list-style-type: none"> • Enhanced agricultural productivity contributing to food security through capacity building of farmers and agri-supply chain members, and facilitating better access to finance
Urban settlement and infrastructure	<ul style="list-style-type: none"> • Enforcement of planning regulation, building codes in urban areas incorporating climate change dimensions 	Mainstreaming climate change risk management in development	<ul style="list-style-type: none"> • Strengthened climate change risk management capacity in Nepal’s private sector by climate proofing vulnerable infrastructure, mainly hydropower stations.
Public health	<ul style="list-style-type: none"> • Integration of health impacts of climate change into broader development plans and related activities 		

D: Components and allocation of SPCR

sn	Components	Activities	Allocation US\$ in million		
			Grant	Credit	TA

1	Building climate resilience of watershed in mountain eco-regions	<ul style="list-style-type: none"> • Improve participatory watershed management planning taking into account the impacts of climate change. • Implement watershed management plans in watersheds significantly vulnerable to climate change. • Enhance productivity of water through effective and efficient use of water in farm lands/systems. • Generation and incorporation of lessons for improving access to and reliability of water resources in country programmes. 	16	25	0.9
2	Building resilience to climate related hazards. Sub component: <ul style="list-style-type: none"> • Enhance weather forecasting capabilities and establish early warning systems giving priority to vulnerable communities. • Establish climate risk insurance/ finance programs for vulnerable community groups, namely farmers, livestock owners and women. 	<ul style="list-style-type: none"> • Strengthen weather and flood forecasting information systems • Improve access to financial instruments that reduce the adverse impacts of climate induced shocks 	16	25	0.5
3	Mainstreaming climate change risk management in development	<ul style="list-style-type: none"> • Integrate climate change risk management into development planning 	10	-	
4	Building climate resilient communities through private sector participation. Investment projects: <ul style="list-style-type: none"> • Public and private sector collaboration to enhance food security through promoting climate resilient agriculture. • Climate proofing selected vulnerable infrastructure such as private hydropower stations. • Feasibility study for low cost climate resilient housing 	<ul style="list-style-type: none"> • Enhance agricultural productivity contributing to food security through capacity building of farmers and agri supply chain members and facilitating better access to finance • Strengthen climate change risk management capacity in Nepal's private sector by climate proofing vulnerable infrastructures, mainly hydropower stations. 	3	10	0.3
5	Enhancing climate resilience of endangered species	<ul style="list-style-type: none"> • Build capacity, enhance knowledge and implement activities to improve climate resilience of critically endangered species by safeguarding natural habitats. 	5	-	-

Nepal's Proposed Strategic Program for Climate Resilience
Joint Government/MDB Response to the Independent Technical Review Report
23 June 2011

Introduction

An independent technical review was conducted by Mr. Ajaya Dixit during the period 7-23 June 2011. This document responds to the main points raised in the review report, on behalf of the Government of Nepal (GON), Asian Development Bank (ADB), International Finance Corporation (IFC), and the World Bank. ADB, IFC and World Bank will jointly be referred to as the multi-lateral development banks (MDBs).

We found the review comprehensive, well-balanced and constructive, and welcome the recommendations contained therein. We note that Mr. Dixit found the proposed SPCR consistent with the PPCR guidelines and objectives. Most of the comments and recommendations will be addressed during detailed preparation of the five SPCR components. This Response summarizes how the various suggestions have been considered.

Part I – General Review

This section lists several gaps that have not been included in the SPCR proposal.

1. *Comment:* The SPCR does not elaborate what it means by transformational change. If transformational change is to be the cornerstone of building adaptive capacity, then how this capacity was assessed in Nepal's political transition needs further elaboration.

Response: Building a climate resilient country is a new and evolving process and to-date, little by way of practical lessons and experiences have been documented. Because the future is inherently uncertain, our efforts to establish resilience will have to in themselves be adaptive. A key goal of Nepal's SPCR is to provide lessons through learning-by-doing over the next few years that demonstrate modalities for building climate resilience in water resource management and community development planning which can be replicated in other river systems and vulnerable communities. The SPCR has identified the first steps based on available knowledge and reasonable assumptions and transformation will be an iterative process. While preparing the SPCR monitoring plan and results framework, we will identify indicators to measure this paradigm shift. Additionally, Nepal's SPCR interventions will support a comprehensive program of capacity building for climate change risk management at the systematic, institutional and individual levels, at the national, sectoral, district and local level, and within the public sector and civil society that will support the integration of climate change risk management into development planning. In so doing, SPCR interventions will establish an appropriate institutional architecture and information knowledge base that will support a long term, sustainable mainstreaming of climate resilience into national development policy and planning – and thereby a major transformational change from the current approach to climate change programming is highly expected.

The way in which the SPCR has been developed has itself been transformational. The planning process moved from a "sectoral approach" to an "integrated approach" of responding to climate change by development agencies together recognizing and formulating interventions that support social and ecological adaptive capacity in the mountains. Government agencies have been working in a multi-stakeholder context and each component has been designed so that lead agencies continue to work in collaboration with other agencies and CSOs/NGOs during implementation.

SPCR will strongly encourage devolved development initiatives and will contribute to participatory and inclusive development processes. (This is especially important in light of political transitions.)

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2. *Comment:* The SPCR does not thoroughly assess the effectiveness of service delivery mechanisms, and does not derive lessons from past efforts. GON implemented major watershed management programs in the past and also tried to improve the efficiency of on-farm water use efficiency. No lessons from these efforts have been drawn.

Response: Lessons from previous watershed management programs are outlined in the SPCR Planning Process Consultation Draft (see <http://www.ppcnepal.gov.np/files-download/spcr/final%20report.pdf> at page 34). Nepal has undertaken a number of water resource management projects and recognizes that development relies upon the sound and sustainable management of water resources, but other pressing development priorities limit the Government from expanding and enhancing holistic and strategic water resource management programs with consequent impact on the country's water quality and long-term availability. Through piloting the establishment of an integrated water resource and ecosystem-based approach focusing on community-based management that combines management of mountain regions and water resources, social protection through micro-finance/insurance against climate risks, and the establishment of early warning systems, the SPCR will support, strengthen, and facilitate the scaling up of interventions that will build long-term climate resilience in Nepal. In a country where the impacts to water resources constitute the principal climate change risk and the majority of the population derives considerable benefit and livelihood from such resources, SPCR support is a critical entry point to improve the resilience of water resources and associated mountain ecosystems. SPCR interventions will also build upon other lessons learned concerning mechanisms for achieving long-term sustainability by establishing effective partnerships with all stakeholders (public sector and civil society, technical and financial partners, local governments, vulnerable communities, grass-roots organizations) to build climate resilience in water resource management and community development planning which will be replicated in other river systems and vulnerable communities.

3. *Comment:* The SPCR does not specify how the program will reach the local beneficiaries, leaving these details to be worked out during the project preparation stage. The method to identify vulnerable individuals, households and communities is not sufficiently grounded in the local contexts where vulnerabilities occur. The SPCR offers no method to identify the geographic regions (districts, VDCs and wards) most likely to be exposed to climate change, and those within that region likely to be most vulnerable to the impending changes. Who is vulnerable, why and where are questions that remain unanswered in the SPCR. As such, how the vulnerable within women, youth, small farmer or indigenous populations (page 14, 15) will be identified remains unclear.

Response: Component-specific locations and targeted beneficiaries have not yet been identified. As a first step in detailed component preparation, selection criteria will be agreed upon for geographical focus of project benefits. Downscaled climate change projections and scenarios are currently being prepared for Nepal under ongoing ADB-supported technical assistance, and this data will inform location selection. For Component 1, the PPG request says the first step will be to "identify and prioritize river basins / subbasins that are critical in terms of climate change and water resources, followed by a simulation of the impact of different watershed management interventions for 3 candidate "sample" watersheds. The project watersheds will be selected based on these learnings. The component 2 specific locations will be determined during detailed project preparation. The first step in Component 2 would be to determine the gaps in the existing hydromet system and the geographic spread and location of the communities especially vulnerable to floods in which the early warning systems will be piloted. For Component 4, the geographical location will be determined during the project preparatory phase based on climate vulnerability parameters. For Component 5, selection of mountain ecosystems and wildlife habitats will be based on research related to severity of climate change impacts and mapping (and gap analysis) of existing activities in mountain regions. Every effort will be made to avoid duplication of efforts with other climate change initiatives, and maintain synergy.

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4. *Comment:* The document does not suggest mechanisms to ensure quick and effective delivery of finance, services and knowledge to grassroots level, which is the key for transformational change and does not conceptualize such change within an institutional framework.

Response: The SPCR describes the overall program but does not delineate the implementation mechanisms and financing arrangements for specific components. These will be defined during detailed project preparation. The best mode of service, finance and knowledge delivery to community levels will be determined based on thorough assessments using the project preparation grants. NGOs and other civil society organizations are usually used for grassroots service delivery during project implementation in other development projects in Nepal, and local government units are the appropriate conduit of finance at the local level. We expect that each SPCR investment component will establish or build on existing multi-stakeholder coordination mechanisms at the local level to ensure integration with ongoing programs (especially adaptation programs led by NGOs), building on past learning regarding effective service delivery, and accountability for those administering project funding. Poverty and social assessments and plans will ensure women and other disadvantaged groups participate actively in decision-making.

5. *Comment:* The SPCR proposes to deliver service and finance through the existing mechanisms of the government. Climate vulnerable groups are in need of urgent and immediate services. Unless innovative, fast and effective service delivery mechanism(s) are put in place the 'business as usual' approach will increase risks rather than help those vulnerable to climate change.

Response: The SPCR proposes to use country systems and work through government agencies because these are proven to generate government ownership, be more cost efficient, and are more likely to be sustainable rather than working in parallel to government systems. The MDBs are committed to strengthening governance and government systems. Several sector agencies of GON have developed their own programs of assistance using the government's own resources and based on the learnings from MDB-financed projects. This demonstrates the effect that external assistance through government systems can have. Specific project service delivery systems will be determined through in-depth analysis and multi-stakeholder engagement during project preparation.

6. *Comment:* The document scarcely touches on the issue of remittances and other change processes that contribute to enhancing adaptive capacity. Neither the informal sector nor the autonomous responses within it are adequately addressed. In fact, the SPRC under-emphasizes the role autonomous adaptation plays in building resilience, and the ways resilience planning can enable individuals, households, communities and businesses to respond to the opportunities and constraints climate change is likely to present.

Response: We agree that the adaptive capacity assessment may not have adequately discussed autonomous adaptation responses and the broad range of change processes currently underway in Nepal. We think this level of analysis was not necessary to inform program planning. Detailed poverty and social assessments will be completed during project preparation for Components 1, 2, and 5 based on the demographics and challenges of targeted beneficiaries and their adaptive capacity, and using data from the Nepal Living Standard Survey.

7. *Comment:* The adaptive capacity assessment (pp. 13) identifies capacity gaps and needs and risk assessment of prioritized districts and municipalities, but information on capacity is presented at an aggregate level, whether national, regional, district and community, and falls short of locating gaps and needs within households.

Response: The SPCR planning process built upon the extensive information on vulnerability, risks and capacity that had been generated under the National Adaptation Programme of Action (NAPA) and National Capacity Needs Self Assessment (NCSA) processes, including information from GIS-based vulnerability assessments, desk reviews, extensive public consultations, and transect walks. The

assessments undertaken under the SPCR employed the same thematic working groups (TWG) formed under NAPA in whom this wealth of existing knowledge resides. A more extensive summary of the risks can be found in the Consultative draft of Nepal's Strategic Framework for Climate Resilience (see <http://www.ppcrnepal.gov.np/files-download/spcr/final%20report.pdf>) which was removed from the final document for the sake of brevity.

8. *Comment:* The SPCR does not analyze how climate change-related impacts will ripple through human-built systems and exacerbate vulnerabilities. Water is a case in point. While the document recognizes that stress levels will increase with the decrease in the availability of water, it does not adequately articulate linkages with drinking water and irrigation systems, and challenges of governing and managing these systems through user groups in order to achieve transformative changes.

Response: To implement projects in water supply and water resources management at the community level, water user groups are formed or empowered. Governance at the local level is very important for accountability and quality control during implementation, and effective operation and maintenance of the systems once installed. This will be explicit in project design.

9. *Comment:* The SPCR identifies learning as a key element, but under-emphasizes the importance of mechanisms providing systematic learning by multiple actors at different scales, which are crucial for building climate resilience. It contends that the government will do everything and accords less space for different views, challenges, critiques and peer reviews, and plural platforms.

Response: We agree that pluralistic learning platforms need to be put in place. GON is committed to facilitating dialogue. Although the concept notes for each component specify learning and knowledge management aspects, a cross-learning platform will be developed as the TA Component 3 is further designed and implemented. GON has already operated a climate change portal, and established the Climate Change Knowledge Management Center in Kathmandu and in Pokhara. The Climate Change Policy, 2011 emphasizes to establish Climate Change Center. These initiatives will play a strong role in learning and dialogue.

10. *Comment:* Component 4 (Investment Project 1) does not consider "conservation of agro-biodiversity" (pp. 46) while implementing the project, despite the dual stress agro-biodiversity already faces due to climate change and the promotion of exotic seeds by private companies.

Response: Our intervention targets the private sector participation on multiplication and distribution of high yield varieties and stress tolerant seeds. The relevant Government agency – Nepal Agricultural Research Council -- is responsible for research, development and certification of seeds.

Part II: Compliance with PPCR Investment Criteria

Climate risk assessment: To assess the climate risks, the SPCR exhaustively uses existing knowledge and research, particularly recent trend analyses and climate change scenarios. However, its treatment of uncertainties is limited and no attempt is made to communicate those uncertainties in the document. In addition, neither the kinds of climate models and scenarios are used to make risk assessments, nor assumptions about their validity are made explicit. Because climate change is a dynamic process, changes may occur quickly and dramatically over the course of the program period. A one-time risk assessment will not be enough to assess emerging risks.

Response: This is agreed. SPCR planning was built on climate scenarios developed during NAPA development (with limited information). As indicated above, downscaled modeling of climate change projections are underway and should inform subsequent vulnerability and risk assessments. The detailed design phase of each component will start with re-assessing climate risks for the beneficiaries in the targeted project areas.

Institutions and coordination: The SPCR addresses the coordination of efforts among different levels of government and donors well. Since many civil society organizations and national NGOs do possess expertise and skills that potentially complement the initiatives of the government, they can deliver services at the grassroot level. At the same time their involvement can raise voice and create counterbalance to minimize risks that irregularities. The role of civil society actors and NGOs is not well spelt out.

Response: We agree. The institutional framework for managing climate change is in its infancy and still under development. To foster integration of climate change into the national development planning and implementation process, GON's initial focus at the national level has been on fostering collaboration and multi-stakeholder coordination. The NAPA/PPCR thematic working groups (TWGs) served as multi-stakeholder fora during SPCR development, and will be mobilized based on the nature of initiatives that the government is going to work on climate change in future. The Multi-Stakeholder Climate Change Initiatives Coordination Committee (MCCICC) was constituted in April 2010 to serve as the key national platform for ensuring regular dialogue and consultations on climate change related policies, plans, finance, programs/projects, and activities. The MCCICC is comprised of all six TWG coordinators, key government ministries, two representatives of national and international NGOs, academe, representatives of local government associations along with development partners (donors providing technical and financial resources, and implementation partners). The Climate Change Council formed in July 2009 under the chairmanship of The Rt. Hon. Prime Minister includes eight experts apart from the key government ministries. Voices of the civil society will be continuously accommodated during climate change programming and implementation.

Also at the national level, NGOs are already engaged heavily in climate change technical assistance projects. They are conducting downscaled modeling, vulnerability assessment and adaptation planning tool development, training and educational curriculum development and implementation, and knowledge generation. The technical assistance Component 3 cannot be implemented without the engagement of civil society organizations.

At the local level, LAPA (Local Adaptation Plan of Action) planning has been made by involving local and national NGOs, village development committees, and district development committees. LAPA framework and manual has been drafted and is under stakeholder consultations. During the detailed planning and implementation of SPCR components, relevant NGOs will be engaged heavily for service delivery and local-level technical assistance.

Prioritization of projects: While most of the programs are well thought out, a few require a more in-depth analysis. For example, the analysis of the investment projects of Component 4: Building Climate-Resilient Communities through Private-Sector Participation (pp.50-51) is not appropriately grounded in the dynamics of regional hydrology and geomorphologic processes, or technological suitability and in making linkages with climate vulnerable communities tangible even though it does articulate the interlinked nature of climate risks (pp. 49). The use of the term dyke for channeling water for irrigation and drinking purposes, for example, is inappropriate and proposal to use daily pondage in hydropower plants built by the private sector does not analyze the fact that Nepal Electricity Authority has refused to pay a higher tariff for peak energy, or that the lack of an incentive for the private sector could lead to operational dysfunction. The sedimentation risks in the Himalayan rivers need more nuanced assessment.

Response: It is important to understand that the list of potential investment opportunities provided in the SPCR reflected the priorities identified by private sector actors during the stakeholder consultations held as a part of the preparation process. In fact, the resulting list of opportunities exceeds the resources available and will be refined following subsequent financial and technical feasibility assessment during the detailed project preparation phase. This assessment has been budgeted as part of the project preparation process and will include a full assessment of regulatory, technical and market risk. We are aware of the fact that Nepal Electricity Authority does not presently have a provision to pay higher tariff for peak energy. In response to

this and other barriers to private sector investment, IFC has initiated in parallel an initiative that focuses on 1) removal of barriers to entry/operation for private participation in the power sector, and 2) facilitating greater direct private participation in the supply of power. The project will work with the government to address the regulatory issues in the power sector. However, we recognize that actual reform may be a long process, and therefore the success of the PPCR investment program is not dependent upon any single initiative identified in this preliminary list, including the daily poundage opportunity referenced by the reviewer. As noted, the actual investment plan will identify a refined list informed by the market feasibility assessment.

We acknowledge the reviewer's reference to the inappropriate use of the term "dyke" and will replace it with "water storage and delivery for irrigation purposes".

Stakeholder engagement and participation: Forty percent of the participants in the community consultations were women (pp.15), and the SPCR claims to have included disadvantaged and marginalized in the consultation. The SPCR does not bring in the Ministry of Women, Children Social Welfare or the National Commission on Women in its formulations to enable the mainstreaming of gender concerns.

Response: The SPCR preparation team met with the chief of the women development office (under the Ministry of Women, Children, and Social Welfare) in five districts, and also consulted with women parliamentarians at the national level.

Part III: Recommendations

The reviewer provided many recommendations to address during SPCR implementation. We found the principles and approaches suggested to be helpful, and are committed to sharing them widely as the program is implemented. It was agreed during the meeting between GON, MDBs and the reviewer that the reviewer's recommendations would be distributed to stakeholders during the early stage of project/component preparation so as to frame the discussions, and ensure that the principles are incorporated into project design taking into consideration the broader framework of the SPCR principles and guidelines.